

Exmoor's Moorland

Where next?



A report to The Exmoor Society
by Rural Focus Ltd, April 2016



Foreword

Since its designation as a National Park in 1954, the story of Exmoor has been dominated by its moorland: in the earlier decades over moorland loss, more recently as being undervalued and in fragile condition, and now attacked by some as a “sheep-wrecked desert”. The seminal 2004 ‘Moorlands at a Crossroad’ report, commissioned by The Exmoor Society, acted as a catalyst for different groups to take forward many of its recommendations. These ranged from fostering appreciation of the overall value of moorland to coordinating best practice in moorland management.

Twelve years on, this new report by the same author shows that there have been many successes, notably further moorland research, greater public involvement and education, and large scale landscape restoration projects at the Valley of the Rocks, Hawkcombe Head and Hoar Oak. Moorland is better understood, and while the iconic moorland landscape ‘continues to dominate the Park, physically and aesthetically’, it is now valued for the wide range of public benefits it provides locally, nationally and internationally. These include appreciation of its history and archaeological sites, contribution to ecosystem services, and as a location for ground-breaking scientific enquiry.

Although the moorland faces significant changes, the new report sets out a clear ten-year agenda for dealing with issues arising as there is much good practice, new opportunities, and a passion to secure Exmoor’s future. Five major themes are identified: planning for environmental change; deepening public involvement; building on what has been achieved; improving the effectiveness of moorland management; and strengthening new values from Exmoor’s landscapes. Underlying the fifteen recommendations, three messages stand out.

First is the need to plug the knowledge gap required for better understanding the capacity and sensitivity of the moorland landscape to withstand change. Considering the research already undertaken, there remains a surprising lack of key baseline data needed to monitor changes in landscape quality, vegetation cover, moorland extent (compared with the 1990 Section 3 Map), loss to woodland (thought to be 8.6% of Winsford Hill since 2002), recreational activities, and public preferences regarding Exmoor’s use. Evidence from monitoring these changes should lead to a bolder policy approach, such as allowing greater flexibility between moorland edge areas and woodland, also between the moorland blocks and farmland and, crucially, with no overall loss of moorland.

Second, the deep-rooted frustrations felt by farmers over prescriptive moorland management need to be overcome. These frustrations are a block to good practices, even though nowadays there is better dialogue between the farming community and statutory bodies responsible for environmental policy. It is unhelpful when criteria for assessing SSSI biological condition are changed, having led to a decline of moorland in favourable condition from 34 per cent to 10 per cent between 2002 and 2014. Recent acknowledgement by Natural England that livestock grazing continues to be the best way to deliver integrated outcomes, now with its outcome-focussed approach, is to be welcomed. The concept of co-production should be examined further to address the feeling of powerlessness by those managing the land, and include recognition of, and public payments for, the wider environmental, economic and social benefits provided by traditional farming practices.

Third, moorland and other landscapes such as woodland and coast will give rise to new opportunities and values not necessarily appreciated today. At its heart is awareness that fundamental to the concept of National Parks is the natural beauty of relatively wild country – glimpses of wildness, openness and tranquillity rarely found elsewhere in the English countryside – and not on the scale of wilderness areas overseas. However, wilderness is not just an ecological concept; it also refers to human experience and runs deep in the roots of our culture. By highlighting the special experiences people can enjoy from the

moorland landscape, their health and wellbeing can be enhanced while natural life support systems are maintained. At the same time, there are opportunities to develop the local economy through ecological, heritage, food, and educational tourism, not least by encouraging a challenge event for young people similar to Dartmoor's Ten Tors.

The publication of this important report is timely, because its recommendations fit closely with the Government's recent 8-Point Plan for National Parks with themes of inspiring natural environments, drivers of the rural economy, and national treasures. The challenge now is for the statutory bodies, private and charitable sectors, and the farming community to decide which of the recommendations to take forward and how, so that Exmoor, a small National Park, continues to provide a spectacular, sublime and holistic landscape for the benefit of everyone.

Rachel Thomas CBE

Chairman of The Exmoor Society

34 High Street, Dulverton TA22 9DJ

01398 323335

info@exmoorsociety.com

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The photographs on the front cover (© Exmoor Society) are taken from Cow Castle (OSGR SS 7939,3732) overlooking the River Barle and looking south to Great Ferny Ball. The top photograph was taken by Richard Harper and, although undated, is estimated to be circa 1955. The bottom photograph was taken by Robert Deane on 10 April 2016.

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Rural Focus (UK) Ltd. Registered in England and Wales (No. 9533053)
Shuffshayes, Langford, Cullompton, Devon EX15 1RQ
www.rural-focus.co.uk

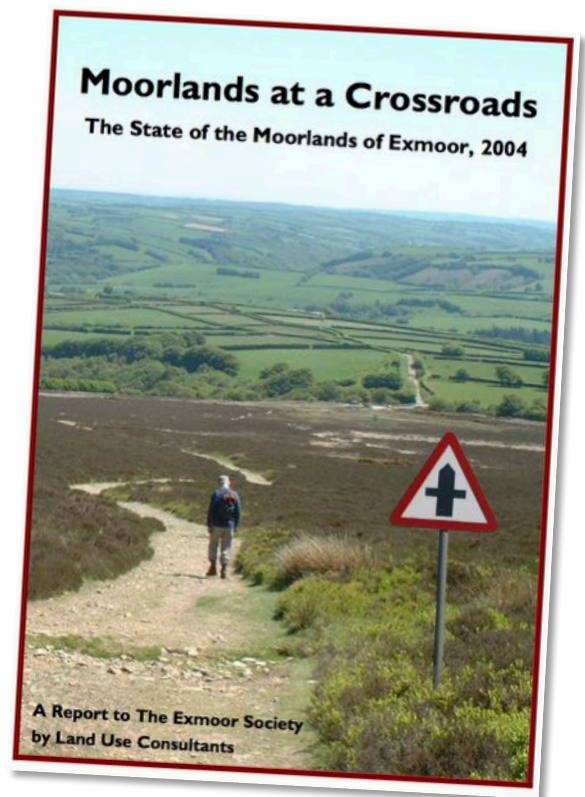


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1. Introduction

Purpose

- 1.1. It is now over ten years since The Exmoor Society published the Moorlands at a Crossroads report¹ which it had commissioned to support the Golden Jubilee celebrations of the designation of Exmoor National Park. The report identified that the special qualities of the moorland, which had been the primary reason for the designation, were undervalued and in a fragile condition; and it highlighted that appropriate agricultural management by grazing and burning faced an uncertain future. The report proved to be a catalyst for action on many fronts and much has been achieved in the last ten years.
- 1.2. Exmoor's moorland is once again facing a period of significant change. New agricultural payment schemes are being introduced which will affect the viability of moorland farming. The completion of the £1.2 million Heart of Exmoor Scheme, coupled with the National Park Authority's tight financial settlement, are likely to mean that there will be less money available for projects on moorland. The National Park Partnership Plan (the statutory Management Plan) will be revised in 2016, providing an opportunity to reassess the threats and opportunities facing the moorland and the policy priorities that should address these.
- 1.3. This report seeks to do two things.
 - **Firstly**, it looks back over the activities and achievements that have taken place since 2004 and the key triggers of change that have affected the moorland's special qualities and how they are understood.
 - **Secondly**, it looks forward to the challenges and need for action over the next ten years, suggesting the priorities for future policies and projects to safeguard and enhance the moorland's special qualities².



Context

- 1.4. With the benefit of hindsight, it is helpful to review briefly the key issues that faced the management and interpretation of Exmoor's moorland in 2004. This can be done firstly by considering how moorland was perceived and valued through its special qualities and secondly by considering the external forces that were acting on the moorland.

¹ LUC (2004)

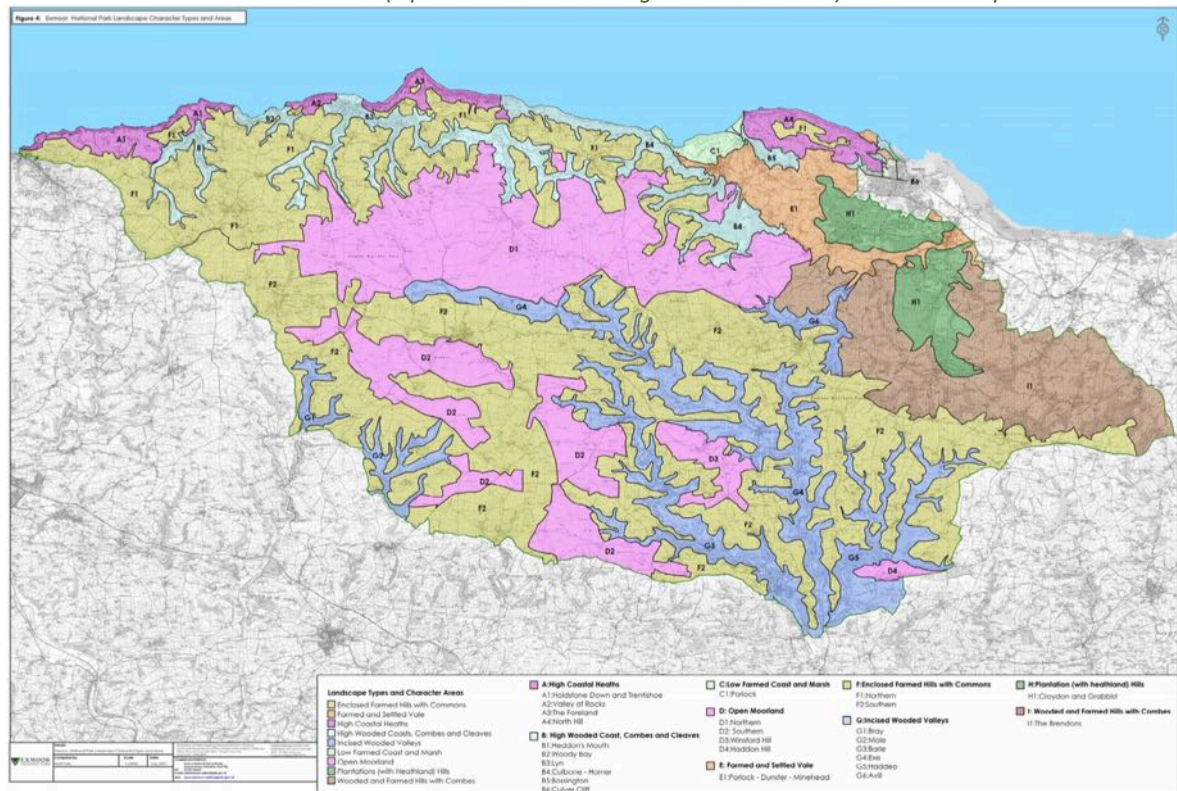
² The term 'special qualities' is used in this report to describe the features and characteristics of the moorland that are of international, national or outstanding local importance and which contribute to the purposes of the National Park designation. It should be noted that the term special qualities is also used in the National Park Partnership Plan to describe a separate and wider set of characteristics (of which moorland is one).

Understanding of the moorland's special qualities

- The Moorlands at a Crossroads report highlighted the lack of up-to-date information on the contribution of moorland to the National Park's landscape character. A brief assessment of landscape character types in the National Park, commissioned during the study by the Authority, mapped two moorland-related types (unenclosed moorland and high coastal heaths), subsequently confirmed by the Landscape Character Assessment published in 2007 (**Figure 1**). Using existing data and a new survey of Society members, the report highlighted that it was the openness and views, peacefulness and wildness and the moorland landscape that were most highly valued by residents and visitors alike.
- The key priority for public policy was to protect and enhance the nature conservation value of the moorland Sites of Special Scientific Interest, particularly the dwarf shrub heath and mire habitats. Key objectives were to reduce stocking densities (particularly of sheep) and the frequency of unplanned burning that were seen to be suppressing heather and other dwarf shrubs. There was a long term ambition from conservation bodies to restore heather to the grass-dominated moors.
- There was growing evidence of the archaeological significance of the moorland (drawing particularly on the results of a field survey published in 2001³) including identification of 'Areas of Exceptional Historical and Archaeological Importance' on many of the moorlands⁴. It was felt that much remained to be discovered and the full history of moorland was still to be told.
- The report highlighted the fragility of moorland management, particularly the declining profitability and practicality of livestock grazing. There was a lack of 'buy in' by most farmers to conservation objectives which they felt were misdirected. Concern was expressed about the concentration of moorland grazing in fewer active farming businesses and the potential loss of a critical mass of labour and knowledge to deliver viable moorland management.

Figure 1. Landscape Character Areas on Exmoor – see also Figure 2 for moorland areas

The two moorland character areas (Open Moorland and High Coastal Heaths) are shown in pink



Source: Preece, E J (2007). http://www.exmoor-nationalpark.gov.uk/_data/assets/pdf_file/0006/583233/Landscape-Character-Assessment-maps.pdf

³ Riley H and Wilson-North R (2001)

⁴ These were drawn up by staff in the National Park Authority and English Heritage as a contribution to the report. See Wilson-North R (2004)

Figure 2. Location map showing the different classifications of moorland on Exmoor

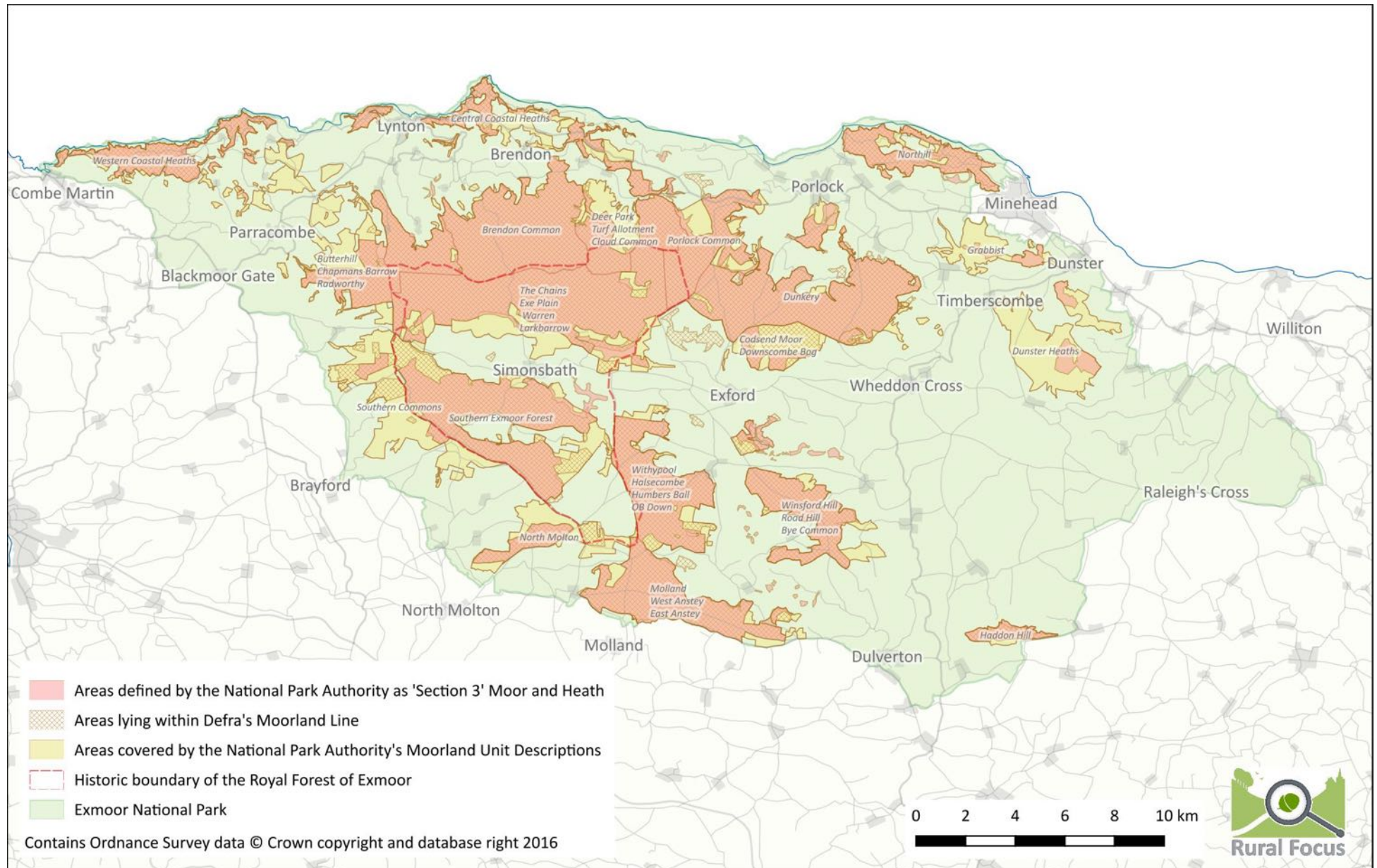
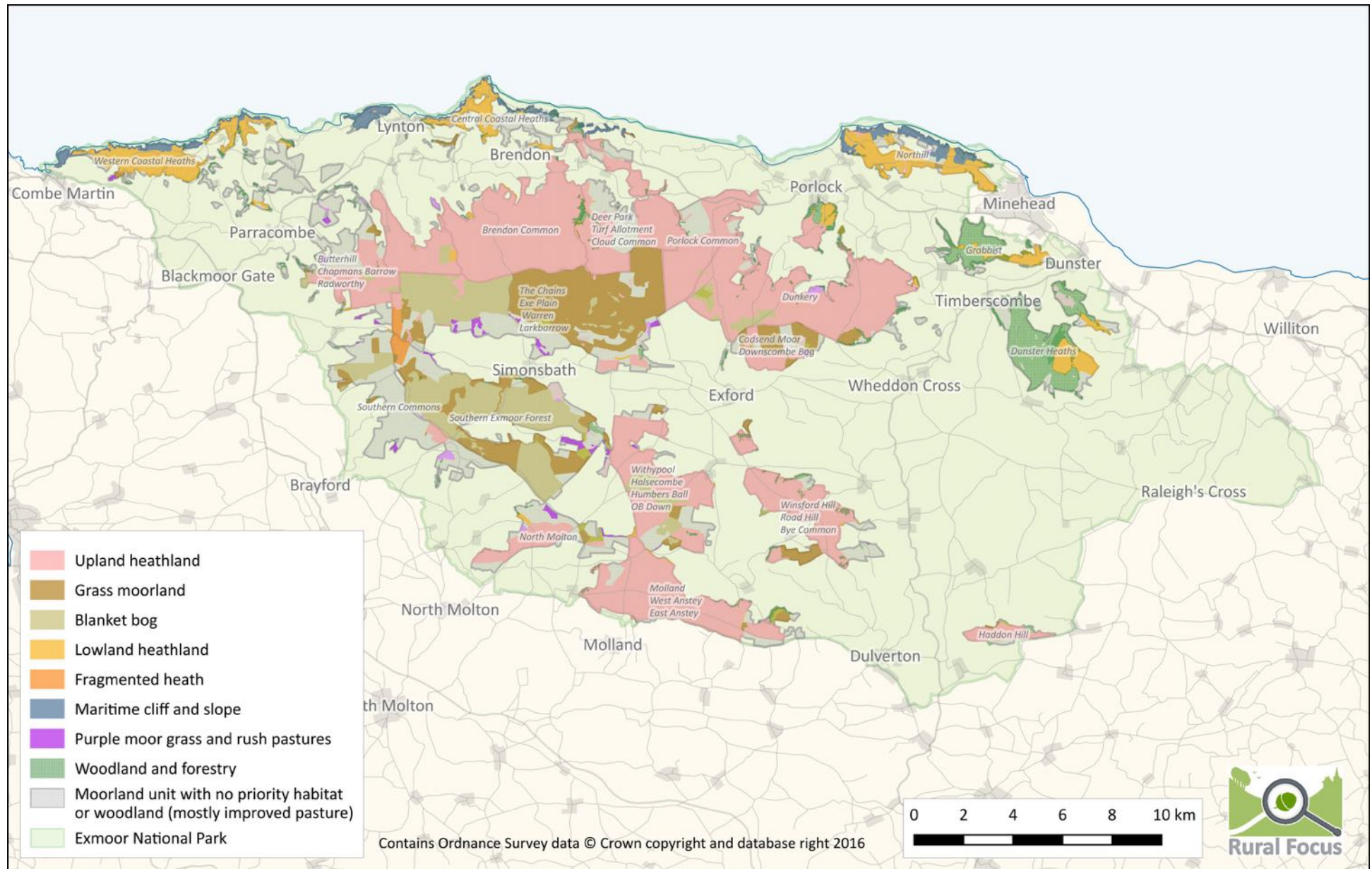


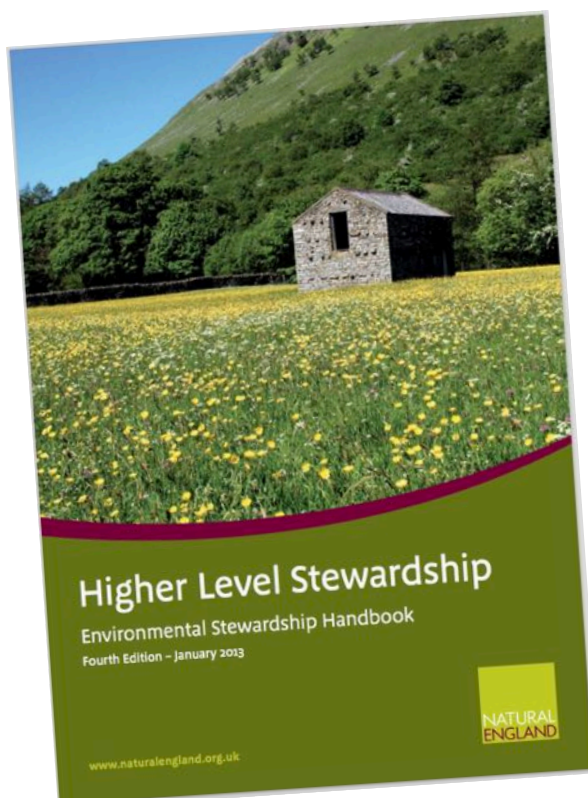
Figure 3. Priority Habitat and Woodland within the Moorland Units



External forces for change

- A number of natural drivers of change were anticipated, particularly a warmer climate with more volatile weather, encroachment of bracken and scrub and an increase in tick numbers and the associated Lyme Disease.
- The 'Mid Term Review' of the Common Agricultural Policy agreed in 2003 was due to replace the system of livestock headage payments received by farmers with the Single Payment Scheme and there was concern about a resulting loss of income to Exmoor farmers. A change to the additional support provided to hill farmers (through the Hill Livestock Compensation Allowance) was anticipated but nothing was known about its replacement at that time.
- The Exmoor Environmentally Sensitive Area (ESA) Scheme, which had been making payments to moorland owners and graziers who followed environmental management prescriptions since 1993, was starting to come to an end, to be replaced with the two tier Environmental Stewardship scheme. It was hoped that the Higher Level tier would deliver better conservation outcomes than the ESA.
- The Government had promised new legislation to support management of commons and it was hoped this would facilitate agreement on Exmoor's commons for more sustainable grazing regimes (only on Brendon Common had such agreement been reached in 2004).
- The open access provisions of the Countryside and Rights of Way Act had yet to be enacted, although the Provisional Map had been published for consultation in March 2004. It was not known what effect the new rights of access would have on recreational use of moorland.

1.5. As will be seen in this report, many of these concerns have been addressed by a raft of different initiatives, some covering the whole of the National Park and others focussing on particular sites. Not surprisingly, significant issues have occurred that were not anticipated in 2004, such as the impact that bovine tuberculosis (TB) has had on cattle farming. This report seeks to track the changes that have occurred and to identify what the priorities for Exmoor's moorland should be in addressing the challenges of the next ten years.



The Environmental Stewardship Scheme, which replaced the Environmentally Sensitive Area Scheme on Exmoor, was expected to deliver improved environmental outcomes on moorland

The structure of the report

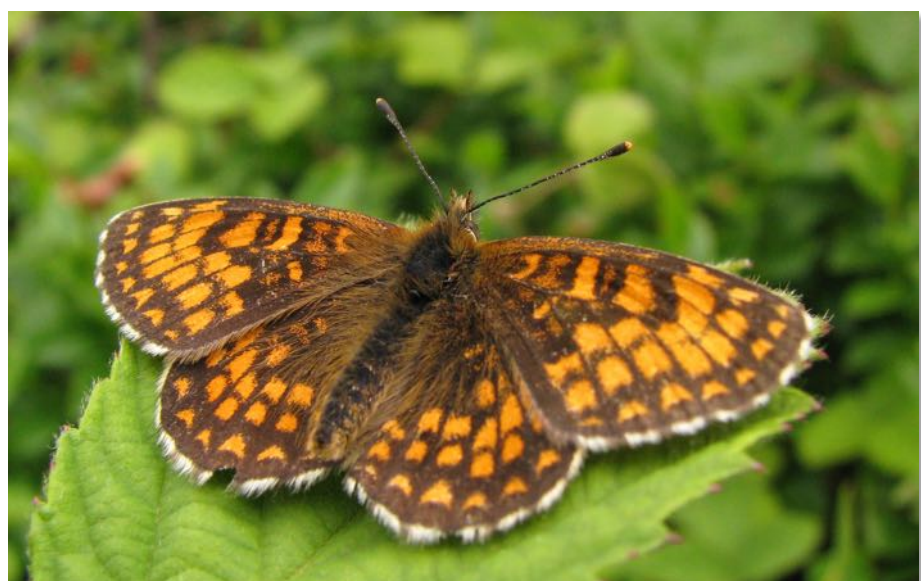
- 1.6. The remainder of this document consists of four chapters, the first of which (Chapter 2) looks back over the activities and achievements on Exmoor's moorland since 2004. Chapter 3 looks forward to the next ten years and beyond, anticipating what are likely to be the pressures influencing how the moorland is understood, enjoyed and managed. The final two chapters return to the present and examine the choices that face us about how the future challenges should be addressed (Chapter 4) and what the priorities and recommendations for action should be (Chapter 5).
- 1.7. This study has been conducted over a seven month period, from September 2015 to March 2016. It has involved reviews of project reports, research papers and policy documents and has included interviews with many of the people who own, manage, regulate or care for Exmoor's moorland.
- 1.8. The author is grateful to the Trustees of The Exmoor Society for the opportunity to revisit and update the 2004 *Moorlands at a Crossroads* report and also to the many people who have passed on their knowledge, hopes and concerns for the moorland. This is an independent report and the conclusions and recommendations are those of the author alone.

2. Review of progress

- 2.1. This chapter looks back at what has happened on Exmoor's moorland over the last ten years. It starts by comparing the scenarios and predictions described in the 2004 report with the changes that have actually taken place. It then examines whether and how each of the 15 recommended actions in the 2004 report have been taken forward and describes other initiatives that have affected Exmoor's moorland. The Chapter concludes with an overall assessment of progress.

Change measured against the scenarios described in 2004

- 2.2. The Moorlands at a Crossroads report envisaged two potential scenarios for the ways in which moorland might change, each painting a polarised picture based on a different set of underlying assumptions.
- The first scenario explored the consequences of the abandonment of moorland as a result of the converging pressures of the withdrawal of grazing, declining recreational use and a lack of public interest.
 - The second scenario explored the potential for moorland to expand, both in terms of its public profile and physical extent, as a result of increasing public demand for the qualities and products of moorland and a resurgence of interest and investment.
- 2.3. These scenarios were not intended to be mutually exclusive. Indeed, it was suggested that whereas one trend might occur on some areas of moorland, the other might occur on others. **Tables 1 and 2**, on the following pages, take each of the predictions in the two scenarios in turn and consider what has actually been observed in the intervening period. Paragraph references point to further analysis later in the report.



Heath Fritillary – Exmoor's sheltered heathland combes are one of its two remaining strongholds in the UK © J.P.Ball

Table 1. Outcomes from the abandoned and uncontrolled moorland scenario

Predicted change (2004)	What has occurred (2015)
Declining numbers of farmers with moorland management skills, combined with falling farming profitability, will result in the agricultural abandonment of some moorland areas.	There is no evidence of out-right abandonment of any moorland areas (probably due to High Level Scheme agreements). Concerns about falling farm labour and skills remain (para. 2.55).
Reduced grazing pressure will lead to encroachment by scrub which will prove uncontrollable on steep slopes.	There is strong anecdotal evidence (backed by some data) that scrub has increased on some areas such as Winsford Hill and North Hill (para 2.25).
As a result of reduced grazing open moorland species (e.g. merlin and lapwing) will decline while species more suited to thicker cover (e.g. red deer and Dartford warblers) will increase.	This trend has been observed although the picture is complicated by other factors likely to be influencing species populations such as climate change.
Declining laying and coppicing of the beech hedges will result in the gradual loss of the wide views up to moorland from Exmoor's minor roads.	Compared to the period 1993 to 2003 there has been much less hedge laying and coppicing and in places previously open views of the moorland from roads have started to become obscured.
Longer vegetation will lead to further increases in populations of sheep ticks and result in moorland getting an unfavourable reputation with walkers and riders.	There is heightened public awareness of Lyme disease. The level of risk seems to vary. In some areas such as Withypool Common, graziers report that higher tick numbers are putting off walkers.
The increasingly wild character of the moorland will attract people seeking more challenging and remote forms of recreation. Increases in illegal use of vehicles on moorland will reduce their peacefulness and wildness.	Although large organised 'challenge' events held on the moorland have probably increased, these are not considered to present a problem. Illegal use of vehicles and other antisocial activities are contained and not a major issue (para 4.24).
Climate change will see the areas of blanket bog shrink further and flash flooding will cause gullying on steep paths and other bare land.	This has not occurred. The blocking of grips by the Mires Project has had the opposite effect, rewetting moorland and reducing run-off (para. 2.57 <i>et sequ.</i>).
Overall: Landscape change on moorland, producing a wilder less managed environment, brings about a major change in the character of Exmoor as a whole.	Although the increase in scrub and bracken to some areas of moorland is starting to effect a subtle change in landscape character, this has not produced a major change over Exmoor as a whole.

Table 2. Outcomes from the re-invigorated and expanding moorland scenario

Predicted change (2004)	What has occurred (2015)
Gradual growth in the demand for active but quiet recreation by a more affluent population leads to increased public interest in moorland.	Although there is no evidence of increased visitor numbers, the Heart of Exmoor Scheme has significantly increased public interest.
Financial contributions from members of the public to moorland management, both through spending with tourism providers and through publicly subsidised schemes, grows.	The Authority's CareMoor for Exmoor scheme invites donations which are used to fund conservation work. However the sums collected are modest (around £5,000 in 2015) and most funded work is not on moorland.
Increased recreational use leads to problems of congestion on narrow roads during peak holiday periods and erosion of footpaths and tracks becomes significant. Action to restrict public access to the most popular sites proves controversial.	There is no evidence that traffic congestion on moorland roads has become worse. Path erosion at 'honeypot' locations such as Dunkery Beacon has probably increased but restriction of access has not been necessary.
Moorland farmers will become progressively more engaged and enthusiastic about the opportunities available from providing the high quality environment sought by recreational users and public sector bodies.	Dialogue and understanding has improved as a result of initiatives such as the Moorland Initiative Board, NPA meetings on swaling, the Farming Network and Graze the Moor project. However disagreements remain (paras 2.6, 2.16, 4.21 etc).
Sustainable grazing levels, heavily dependent on support payments, are maintained across the moorland areas. The role of moorland in a viable stock management system is maintained.	Most moorland graziers have continued to stock moorland, supported by Higher Level Stewardship agreements. Disagreement remains about what is 'sustainable', particularly the role of winter grazing. For most graziers, use of moorland is not an integral part of their grazing system (para. 2.53 <i>et sequ.</i>).
Niche markets for high value moorland products grow, (e.g. wild venison and moorland honey) providing a further financial incentive for improved management.	There is no evidence of an increase in sales of products from moorland and they are likely to have a negligible benefit on management.
Higher Level Stewardship agreements, together with heather establishment projects, gradually increase the botanical diversity of the grass moors.	Moorland rewetting through the Mires Project has enhanced diversity where grip blocking has taken place (para 2.60). Elsewhere there is little evidence of change (Para 2.15 and Box 2) – but ten years is a short period for botanical change.
Successful blocking of moorland drainage ditches on the Chains and reductions in the burning around blanket bog results in active accumulation of sphagnum moss and restoration in blanket bog.	The Exmoor Mires project has succeeded in re-wetting significant areas of blanket bog which should make these areas more resilient to the anticipated effects of climate change (para. 2.57 <i>et sequ.</i>).
Reductions in the intensity of agricultural management on the land adjoining moorland enable reestablishment of large scale open landscapes, particularly between the Northern Heather Moors and Coastal Heaths.	The National Trust has successfully removed fence lines along the A39 Countisbury corridor. However, this agenda has not been pursued actively in other parts of the National Park (para. 2.49).
Successful first steps with the clearance of plantation forestry on Grabbist Hill result in larger areas on the Brendon Hills being returned to heather moorland.	Maintaining cleared areas of heathland on Grabbist Hill has proved expensive. The work has not been repeated elsewhere on Exmoor.

Predicted change (2004)	What has occurred (2015)
Further archaeological discoveries increase the reputation of Exmoor's unique cultural heritage, bringing a source of visitor interest and spending.	Field survey and research has greatly enhanced the historic environment record, particularly in paleo-ecology, and the archaeological significance of moorland (paras 2.33 and 3.13). There is less evidence of impacts of visitor numbers and spending.
Overall: Greater public appreciation of the special qualities of Exmoor and its moorland will bring a renewed sense of purpose to its management.	The moorland areas are certainly better understood, and have become intellectually richer and 'busier' places. There is greater consensus over the objectives for moorland management. However, disagreement lingers about how best to achieve these objectives and there is now less ambition to undertake significant enhancement of moorland landscape and habitats.

Achievement of the actions proposed in the 2004 report

- 2.4. The 2004 report recommended 15 actions which were designed to address three overall outcomes. These were to create a stronger consensus on future objectives for moorland management (Actions 1 to 5); gather evidence to inform management (Actions 6 to 10); and facilitate for sustainable management (Actions 11 to 15). The majority of actions were proposed for immediate implementation whereas a few were identified for medium term or long term development.

Creating a consensus on future objectives

- 2.5. An important finding of the 2004 report was that there was a lack of agreement between the different interests on what the objectives for managing Exmoor's moorland should be. It was suggested that ways needed to be found to create a greater clarity of purpose. Most importantly the landowners and graziers who manage moorland must feel their practical experience was being listened to and their long term interests were being taken into account in public policy. Five actions were proposed.

Action 1. A re-invigorated Moorland Forum

- 2.6. It was suggested that the National Park Authority should initiate a rejuvenated, more responsive and representative Moorland Forum. This has been achieved by the establishment of the Moorland Initiative Board. Whereas the previous Moorland Forum lacked a specific purpose and could only influence the actions of other bodies, the Board has had responsibility for advising the National Park Authority on its response to the 2004 report and its subsequent activities. The Board has met regularly, usually quarterly, chaired by a moorland farmer and attended by representatives of national and local bodies with an interest in moorland. The meetings have received progress reports from other initiatives such as the Moorland Landscape Partnership Scheme and Mires Project and provided an opportunity for structured debate. While farmer representation at meetings has sometimes been thin, particularly at busy times on the farm, members of the Board feel that the Board has improved the co-ordination of activities and provided a good forum for interested parties to raise concerns or extend their support.
- 2.7. To support the work of the Board, the National Park Authority has held other meetings to plan and monitor moorland management such as annual meetings to plan swaling activities. Although the swaling programme itself has struggled to keep to its targets (see para. 2.44), the meetings have been considered a success, leading to a better understanding between landowners and the statutory bodies and fire service over the objectives of swaling.

Action 2. Proactive engagement by moorland farmers

- 2.8. In 2004 representation of moorland owners and graziers took place through trade bodies such as the National Farmers Union (which held a regular Hill Farming Forum) and through Commons Associations on the main commons (e.g. Brendon, Withypool and Dunkery). The report found that, with notable exceptions, farmers had become accustomed to reacting to change imposed on them rather than actively engaging with and seeking to shape local policy affecting moorland. It was suggested farming and landowning bodies, led by the NFU, should agree a statement setting out the vision and objectives that moorland owners and graziers have for the future of their moorland.
- 2.9. Although the proposed statement did not come about, closer co-ordination and involvement of farmers has been achieved through the Exmoor Hill Farm Project and by its successor, the Exmoor Hill Farming Network. The Hill Farm Project was one of three initiatives across the South West's uplands established with funding from the Rural Development Programme. The Network has funding for 2014 to 2016 from the National Park Authority and the Prince's Countryside Fund. It is farmer-led and supported by a full-time project officer who is hosted by North Devon+. The Network disseminates information to its farmer members, organises training courses and study visits and offers farm business support.
- 2.10. Although the Hill Farm Project and Hill Farming Network have brought about more vibrant dialogue and dissemination amongst Exmoor farmers, moorland management issues have featured relatively rarely. This is largely due to the fact that of the 380 or so commercially active farm holdings on Exmoor⁵, a small proportion (maybe 60⁶) are actively involved as moorland owners or graziers. It may also be a reflection of the fact that, during the last ten years, most of the major issues facing Exmoor farmers (such as bovine TB, volatile lamb and beef markets and reforms of the CAP) have not been specific to moorland.
- 2.11. Staff at the National Park Authority have worked closely with moorland owners and graziers to assist and co-ordinate moorland management, particularly swaling. Finally, the Graze the Moor Project (see **Box 4** on page 20) deserves special mention for the initiative shown by the land owner, supported by the grazing tenants, on Molland Moor for opening up debate and trialling solutions to long standing moorland management issues.

Farmers at a gorse management seminar in 2011



Photo from the Heart of Exmoor Scheme © J.P.Ball

Action 3. Foster appreciation of the overall value of moorland

- 2.12. The 2004 report suggested that the overall significance of moorland tended to be lost in the detail of individual initiatives. It called for a better understanding of the 'whole landscape' and natural beauty significance of Exmoor's moorland to deliver integrated outcomes. Although aimed at all organisations involved with moorland, it suggested this 'joined-up' approach should be championed by both The Exmoor Society and Natural England (which, in 2004, was just being established from the merging of English Nature and the Countryside Agency).
- 2.13. This was a somewhat nebulous ambition and it is difficult to give a conclusive assessment. However, most consultees to this study felt that the full value of moorland on Exmoor was now much better understood. The main mechanism by which this has occurred is the Exmoor Moorland

⁵ As recognised by the Hill Farming Network

⁶ Estimated by this study

Landscape Partnership and its Heart of Exmoor Scheme (see **Box 1**). The Partnership has used its £1.2 million funding to address the lack of connection between moorland and local communities. It has used a range of projects to involve 5,000 volunteer days, 550 trainees in moorland management skills, 2,700 people participating in wildlife events, 7,000 school visits and 11,000 visitors. It has funded several large moorland events such as the Exmoor Pony Festival, the Bogtastic celebration of moorland and local community archaeology projects.

Box 1. The Exmoor Moorland Landscape Partnership Scheme

One of the main responses of the National Park Authority to the Moorlands at a Crossroads report was the formation of the Exmoor Moorland Landscape Partnership with 11 other partners. The Partnership, which was chaired by The Exmoor Society, developed a bid for funding from the Heritage Lottery Fund's Landscape Partnership Programme Scheme. The bid sought to address three landscape-scale disconnections that: 1) cut off moorland from the local traditions and ways of life that have historically connected moorland to local communities and farming; 2) produced poor public understanding and appreciation of the rich natural heritage on the moorland; and 3) physically separated the moorland blocks and their wildlife.

Following the preparation of the Programme documents between 2005 and 2007, the Heritage Lottery Fund approved its funding in April 2008. However, the National Park Authority held the Scheme under review during 2008 and 2009 while it considered the impacts of reductions in its core funding from Government. Following agreement over a reduced range of projects, the Heart of Exmoor Scheme was launched in January 2011 with a total budget of £1.2 million. It has operated through three main programme elements (Reconnecting people with moorland, Reconnecting livelihoods and Reconditioning moorland). The initial Scheme covered a three year period with funding for 15 projects which was extended, with the reinstatement of four projects, by a further two years. The Scheme came to an end in December 2015.

The HLF has been the majority funder of the Scheme (£662,500), supported by the National Park Authority and its Partnership Fund, Western Somerset Local Action and Leader 4 Torridge and North Devon (the latter two part of the Rural Development Programme for England). Individual projects were supported financially by a number of partners including The Exmoor Society, English Heritage, Environment Agency, Exmoor Trust and Malcolm MacEwen Trust.

Action 4. A better understanding of the conservation objectives for moorland SSSIs

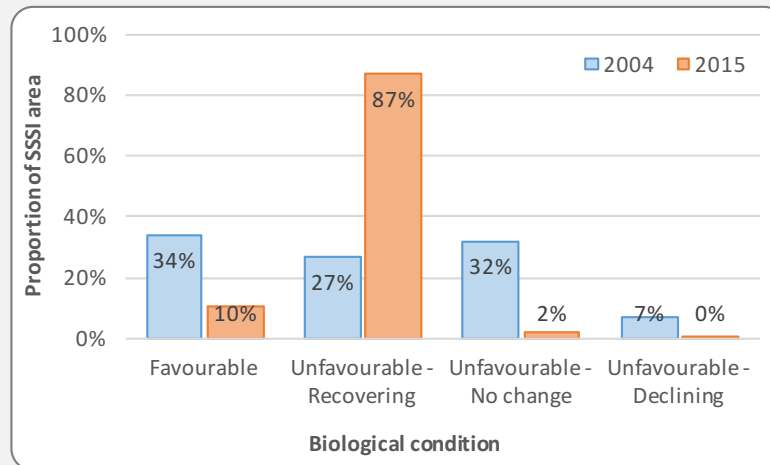
- 2.14. Around 87% of the Section 3 moor and heath on Exmoor is designated as SSSI and around 57% is also designated as a European Special Area of Conservation (neither proportion has changed since 2004). In 2004, English Nature was engaged in reviewing the conservation objectives of each SSSI unit (of which there are 136 on Section 3 moor and heath) against which their biological condition was assessed. This was a rigorous and objective process which gave the opportunity for discussion with owners and graziers about how the target conditions could be delivered. This process was completed and Natural England (as it had become) staff sought to communicate the objectives to site owners.
- 2.15. In the last ten years, the condition of the units has been reassessed (most units twice). As **Box 2** shows, the change recorded over this time is complex, having as much to do with changes in the criteria used to assess condition as with actual habitat change on the ground. The assessment criteria measured in the field set a particularly high bar for 'mosaic' habitat sites such as upland moorland (requiring all the different vegetation types present in a given area to meet the required characteristics). In 2015, Natural England were engaged in another process of revising the criteria to make them more specific to the climatic and other circumstances of the South West uplands.
- 2.16. SSSI owners and graziers have welcomed the review, having long argued that the previous conservation objectives were unrealistic, being based on national criteria that reflected the less productive circumstances found in more northern uplands. However, it remains the case that the

process by which the conservation objectives for these SSSIs are generated is still not well understood by owners and graziers and, as a result, they have little faith in the management prescriptions in the Higher Level Stewardship agreements that are designed to deliver the objectives.

Box 2. Change in the biological condition of SSSIs since 2004

The chart shows the categorisation of moorland SSSI areas into the four main categories of biological condition assessed by Natural England in 2004 and 2015. The changes are complex and require explanation. Three factors are likely to be responsible. These are (i) 'real' changes in the condition of habitats as assessed by Natural England staff on site; (ii) judgements made on the potential for improvements as a

result of land being in suitable agri-environment agreements; and (iii) the way favourable status is now assessed by Natural England. The first two factors are responsible for the improvements in condition shown by the movement of areas classified as being in 'Unfavourable No Change' and 'Unfavourable Declining' to 'Unfavourable Recovering' condition. The third factor is responsible for about a quarter of the SSSI area being reclassified from 'Favourable' to 'Unfavourable Recovering' condition due to more stringent field surveying of habitat condition.



Action 5. Establish objectives and needs for each of the moorland units

- 2.17. In acknowledgement of the large variation of character across Exmoor's moorland, the 2004 report divided the moorland area into 22 separate units, describing each of them in the Technical Annex to the report. It was suggested that this approach should be further developed by the National Park Authority, consulting partner organisations and the owners and managers to establish the management objectives for each unit and drawing up a brief action plan as a live electronic document to guide management decisions. It was acknowledged that this was likely to be a significant task requiring dedicated staff time (estimated at 40% of a full-time post for a year).
- 2.18. The National Park Authority took forward this suggestion, initially preparing a 'survey map' for each unit that recorded the key designations and other significant features. In November 2008, the Moorland Initiative Board recommended that the work be checked to ensure it was up to date and that a process of consultation with owners and managers should be undertaken. As a result of comments received, the maps were simplified and key issues and opportunities were added. The boundaries of the units were revised, adding areas that were thought to have been moorland in the last 100 years, and which retained elements of moorland character and were considered to have potential for future restoration. Eventually in 2011, a document 'The Moorland Units of Exmoor' was published containing an 'opportunity map' and brief supporting text for each unit. An example of one of the opportunity maps is shown in **Figure 4**.
- 2.19. This process was considered to have been onerous by the staff involved and consultees to this study have questioned whether the level of detail shown on the maps (for instance, showing areas suitable for creating 'natural links' and landscape restoration) is helpful. At the time of writing, a review of the issues and potential actions needed in each unit is ongoing. However, the response to the questionnaire circulated to moorland owners and managers has been low.

Figure 4. Example of the opportunity maps prepared for each Moorland Unit



Gathering evidence to inform management

- 2.20. The 2004 report found that the quality of information on the state of Exmoor's moorland was extremely variable (with relatively good information on biological condition compared to other special qualities) and suggested that quality monitoring information would be needed to ensure good decisions were made on moorland management. Five actions were proposed.

Action 6. Monitor changes in vegetation cover

- 2.21. In 2004 there was anecdotal evidence that scrub and bracken were encroaching onto moorland and it was suggested that analysis of aerial photographs and other remote sensing should be undertaken to create a baseline of recent change which could be updated periodically. It was suggested that this should be undertaken by the then Rural Development Service as part of agri-environment monitoring.
- 2.22. This proposal was not acted upon formally and, at the time of writing, there remains a lack of reliable evidence of the nature and scale of the changes that have taken place to moorland vegetation. In February 2016, the National Park Authority started to map and analyse vegetation change since WWII using aerial photography and it is understood this work will be complete in the summer of 2016. It should be noted that the Authority's Wildlife Research and Monitoring Framework⁷ includes a section on moorland but the actions focus on improving management or monitoring species of conservation concern, neglecting the 'big picture' changes. The recently started aerial photography analysis should address this weakness.
- 2.23. Despite the current lack of authoritative monitoring data for moorland as a whole, the patterns of change are revealed from several sources of evidence. The most extensive data come from the surveys of breeding birds on Exmoor's moorland in 2008 and 2014, undertaken by the RSPB. These

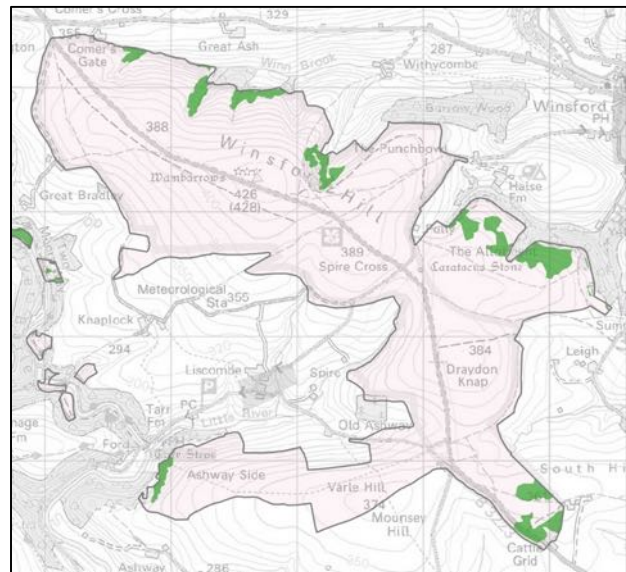
⁷ ENPA (2014)

included an assessment of ‘environmental variables’ including vegetation height and cover of bracken, gorse and scrub at each survey site. The maps in Appendix 3 of the 2014 report⁸ show complex patterns of change across the 200m² grid that covers all of the moorland. Overall this survey suggests that between 2008 and 2014 vegetation height reduced in more areas than it increased and that bracken, gorse and scrub declined in more areas than they increased (with a marked pattern of lower scrub cover around the edges of many moorland blocks) and grazing pressure increased across large areas of moorland. It also shows a net reduction in heather cover and a net increase in purple moor grass (*Molinia*) cover across the moorland. Further detailed evidence of the vegetation change that has occurred on Molland Moor comes from work by David Boyce for the Graze the Moor project (see **Box 4**), based on surveys over the last 30 years. This has revealed very significant decline in heather condition on that moor.

- 2.24. These are important findings which have perhaps not yet had the attention they deserve and which may merit further spatial analysis. At least in part, the RSPB data appear to contradict the personal experience and perceptions of many people, particularly moorland graziers, who report that gorse and other scrub has increased and vegetation has grown taller, as livestock numbers have fallen since the end of CAP headage payments and the adoption of Higher Level Stewardship agreements. Winsford Hill is often cited as an area which has seen increased scrub (gorse and young trees) cover in the last ten years, to the extent that it is starting to change the character of this moorland area.
- 2.25. To test this perception, brief GIS analysis was undertaken as part of this study, comparing the assessment of scrub and woodland cover measured by the Forestry Commission’s National Inventory of Woodland and Trees (dated 2002) with its National Forestry Inventory (dated 2014), both of which are derived from analysis of satellite imagery. Although there are differences in methodology between the two national woodland surveys (particularly a smaller minimum area recognised in the National Forestry Inventory), the analysis suggests that there has been a real net increase in moorland areas classified by these surveys as wooded of 292 ha. Around 40 ha of the net increase is new conifer planting, mostly in Units 20 and 21 (the Dunster heaths) on areas which arguably should not be classified as moorland in the first place. This leaves 252 ha, equivalent to 1.4% of the moorland area, which the interpreted satellite imagery shows as being ‘newly wooded’ over the last 12 years. The large majority of this (nearly 80%) is classified as broadleaved in character. Moorland areas that appear to have seen the greatest increase (relative to their total area) are Winsford Hill (8.6% appearing to be ‘newly wooded’ – see **Figure 5**), the Brendon heaths (4.9% ‘newly wooded’ excluding conifer planting) and the coastal heaths (4% ‘newly wooded’). In contrast, some areas have seen no net increase in woodland cover such as The Chains and Exe Plain, Brendon Common and Lannacombe, Warren and Larkbarrow.
- 2.26. A further test was undertaken during this study to see what changes in vegetation could be discerned from old photography held in The Exmoor Society’s archive. **Figures 6 and 7** show the same view from the edge of Furzehill Common (SS 7374,4493) looking over the Hoar Oak valley and

Figure 5. Scrub growth on Winsford Hill

Areas in green are remote-sensed woodland shown on the National Forestry Inventory (2014) and not on the National Inventory of Woodland and Trees (2002)



Source: Analysis by this study

⁸ RSPB (2014)

Cheriton Ridge towards Scob Hill. **Figure 6** was taken by Richard Harper sometime during the years preceding 1958⁹ and **Figure 7** was taken by the author in April 2016. Although care needs to be taken interpreting photographs that are likely to have been taken at different times of the year, a number of conclusions can be drawn. The most striking changes are in the foreground with the absence of the standing stone (HER MDE1312), which now lies horizontally in the grass a few metres away, and the erection of the fence. The heather shown in the foreground in the 1950s has now almost completely gone. On the flanks of the Cheriton Ridge, the patches of a dull brown vegetation (probably heather) in the 1950s are no longer evident and the large areas of orange-coloured vegetation (bracken) in the 1950s have spread to cover most of the slope in 2016. The linear patches of dark brown in the 2016 photograph are stands of gorse which was completely absent from that area in the 1950s. These conclusions, which span a period of some 60 years (the age of the National Park designation), reinforce the evidence from other areas of moorland that there has been a loss of heather and spread of bracken and gorse.

Figure 6. View over the Hoar Oak Valley to the Cheriton Ridge from Furzehill Common, 1950s



Figure 7. The same view, April 2016



⁹ The precise date is now known but Richard Harper's photographs were used by the Exmoor Society to oppose afforestation proposals in 1958.

- 2.27. Putting together these different sources of evidence suggests that there has been a complex pattern of change over the last ten or so years. Across the majority of moorland, the height of vegetation and occurrence of scrub has probably been reduced as a result of increased grazing pressure. Despite what many people would regard as this environmentally beneficial change, over large areas of moorland heather has continued to decline and *Molinia* and bracken have increased. However, these overall trends mask significant local differences such as an increase in scrub, and decline in open moorland character, on some of the lower lying and steeper moorland areas away from the central moorland core of Exmoor.

Action 7. Evaluate the evolving condition of the moorland landscape

- 2.28. The 2004 report noted that there had been no detailed assessment of the quality and condition of Exmoor's landscape character since the 1980s. It recommended that the National Park Authority should undertake an assessment of the changing condition of the moorland landscape within the context of the whole National Park. The work should also consider the capacity of the wider landscape Park for expanding the visual extent of the moorland qualities of wildness and openness.
- 2.29. During the 2004 study, the Authority commissioned a brief mapping exercise of the Landscape Character Types present on Exmoor and this was followed in 2007 by a full Landscape Character Assessment of the National Park¹⁰. This included an evaluation of the character and condition, landscape issues and objectives for each of the nine Character Types. The Exmoor Society lobbied to ensure that the Character Assessment was adopted as a material consideration in the Local Plan.
- 2.30. With The Exmoor Society, the National Park Authority established a Landscape Advisory Group which has raised the priority given to landscape character as one of the National Park's primary special qualities, as reflected in the National Park Management (Partnership) Plan. The National Park Authority followed the Character Assessment with a Landscape Action Plan (2010-2013) which took a more detailed approach to describing the issues facing each of the Character Types. It put forward objectives to addressing the issues and set out 'potential responses' (actions) and key partners. Significant issues for the two moorland Character Types (Open Moorland and High Coastal Heaths – See Figure 1) included scrub and bracken encroachment leading to a reduction in the openness, expanse and distant views of moorland; loss of tranquillity through provision of car parking and interpretation boards; and path/track erosion creating landscape scars. It is worth noting that two cases drew attention to the impact of development on moorland character (**Box 3**). As well as reacting to these ongoing threats to landscape character, the document also identified a need to proactively enhance the openness and scale of moorland by "restoring moorland fringe to Open Moorland character". As noted earlier (para. 2.17 and **Figure 4**), the Moorland Unit Descriptions published in 2011 identified, at a fine level of detail, the locations of issues and potential actions.

Box 3. Notable cases of planning proposals affecting moorland on Exmoor since 2004

Two particular cases arose during the last ten years that focussed attention on the impact of development on the setting of the moorland landscape. The first was the proposal by the National Park Authority to purchase the buildings at Blackpits on moorland north of Simonsbath with a view to removing the buildings and re-landscaping the area back to open moorland. This was strongly opposed by local community and business groups on the grounds of cost and a reduction in local-use housing and the proposal was dropped¹¹.

The second situation was the proposal to erect a large windfarm at Three Moors and Bickham Moor just outside the southern boundary of the National Park. This was successfully opposed by North Devon and Mid Devon District Councils, with The Exmoor Society and Campaign for the Protection of Rural England (CPRE) providing additional evidence on the negative impact it would have on the setting of the National Park when viewed from the southern moors (Molland Moor and Anstey Common).

¹⁰ Preece EJ (2007)

¹¹ A benefit arising from this case was that money that had been raised to build two affordable houses if the proposal to remove Blackpits had gone ahead was instead channelled through the Heart of Exmoor Scheme to fund three large landscape restoration schemes.

- 2.31. Most recently a Seascape Character Assessment of the National Park and North Devon coastline has been published that includes the coastal heaths. It is understood that the National Park Authority is planning to review and update the Landscape Character Assessment of the National Park in 2016.
- 2.32. There has therefore been considerable work to describe the landscape character of the moorland, addressing a lack of knowledge since the 1980s. However, critically, in relation to the action proposed in the 2004 report, little has been done to evaluate changes to landscape condition¹². No robust baseline assessment has been made of landscape condition and there has been no systematic attempt to measure change over time. The National Park Authority has previously considered using fixed point photography (but felt it was not sufficiently objective or reliable); nor have existing indicators such as the changing biological condition of SSSIs been examined as evidence of change in landscape condition. As noted above (para 2.22), the results of aerial photography analysis of vegetation change since WWII should be available in the summer of 2016. To date, the lack of monitoring of landscape condition and vegetation change has been a significant failing in the use of evidence to support moorland management.

Action 8. Assess the condition of the archaeological resource

- 2.33. This action had already been started when the 2004 report was published. The 48 Areas of Exceptional Archaeological and Historical Importance (AEAHIs) that were identified as evidence for the 2004 report were consolidated in 2008 to 37 AEAHIs as part of the preparation for the Moorland Landscape Partnership Scheme. Following a similar process that had taken place on Dartmoor, the National Park Authority used the 37 AEAHIs to designate Principal Archaeological Landscapes (PALs), undertaking field work between 2012 and 2014 to evaluate the condition and issues affecting the condition of the 37 PALs that cover areas of moorland (several extending into adjacent farmland or woodland)¹³.
- 2.34. The principal components of these PALs are largely the same as those described in the original AEAHIs, with one notable addition. One of the thematic studies that were funded as part of archaeological protection and mitigation work for the Exmoor Mires Project (para. 2.57), has now identified that the moorland soils provide an outstanding record of past land use and environmental conditions, with layers of volcanic ash or tephra (from various global eruptions) providing precise 'date stamps' in the stratigraphy. This paleo-ecological record is understood to be of national importance and is currently perhaps the best recorded in the UK.
- 2.35. The condition survey of the PALs identified nine main issues affecting their condition. By far the most significant (affecting 28 of the 37 PALs) is the encroachment of bracken and scrub onto the moorland which has the effect of obscuring the archaeology and potentially causing root damage to remains below the ground. The report commented that "*in most cases the current regime of scrub control is effective in reducing or eliminating this impact*" but that this work will need to be maintained¹⁴. Other issues included human or livestock erosion of archaeology (affecting 16 PALs) and changes in land management (12 PALs).
- 2.36. It is worth noting that the National Park Authority has taken a well-evidenced strategic approach to research and monitoring of the historic environment, publishing a Research Framework covering the period 2010-2015¹⁵ and using archaeological mitigation funding from the Exmoor Mires Project to undertake proactive research into areas of archaeological importance on moorland.

¹² The distinction between landscape character (an objective description) and condition (applying judgements on the quality of the landscape) should be noted.

¹³ Balmond F (2015)

¹⁴ Ibid.

¹⁵ ENPA (2010)

Action 9. Monitor public access to moorland

2.37. In 2004 there were concerns that the provision of open access to moorland under the Countryside and Rights of Way Act would increase recreational use to unsustainable levels, particularly at key 'honeypot' sites such as Dunkery Beacon and North Hill. Regular monitoring of the number of users and their activities and motivations was recommended using automatic people counters and surveys.

2.38. The National Park Authority has continued to undertake surveys of visitors to the National Park (the most recent being in 2012) but these have not included a particular focus on moorland. There has been no co-ordinated collection of data on visitors using particular sites.

Wildlife watchers 'on safari'



2.39. Anecdotal evidence suggests that there has been no significant increase in people using moorland and none of the people consulted during this study

felt that recreational activities were unsustainable or causing long term issues. Indeed many recognised the significant economic contribution that visitors who are attracted to moorland make to the region and also the health and wellbeing benefits that many people gain from spending time on moorland.

2.40. Specific issues that have been identified are as follows:

- Off-road driving by 4x4 vehicles has required occasional action by landowners and National Park rangers but is not considered to have grown as a problem on moorland
- High numbers of walkers along the most popular routes such as the main path up to Dunkery Beacon continue to cause damage to vegetation and soil erosion but these are generally felt to be containable
- Erosion caused by hunt supporters' vehicles at a few moorland edge sites appears to have declined as an issue (although the area around the Froude Hancock memorial stone on West Anstey Common remains damaged)
- Similarly, use of unauthorised paths across moorland by riding stables (damaging vegetation and causing erosion) seems to have diminished
- The popularity of North Hill for dog walking (unleashed) effectively prevents sheep grazing but cattle grazing has recently been reintroduced without incident
- Exmoor remains a popular location for large organised (corporate or charity) recreational events such as The Ironman event based at Wimbleball Lake and these can cause local disruption while they take place, although their impact on moorland is likely to be small

Action 10. Co-ordinate best practice in moorland management and restoration

2.41. The 2004 report suggested that there was a need to learn lessons and share best practice on moorland management issues, disseminating experiences from other upland areas in the UK as well as within Exmoor.

2.42. At an organisational level, the Moorland Initiative Board has provided a general forum for information sharing and co-ordination with a number of other initiatives taking a more practical approach, many of them facilitated during the last five years by the Heart of Exmoor Scheme.

- 2.43. A complaint voiced by many people involved with the management of Exmoor's moorland is that national guidelines and regulations tend to be derived from experience of the harsher climate of moors in northern England and are unnecessarily restrictive on Exmoor (and indeed on the other South West uplands). The stocking densities advocated by Natural England and the period and size of areas allowed for swaling (see below) are often cited as examples. This issue is being addressed by the Graze the Moor project on Molland Moor which developed from an initial case study project and will run until March 2019 (**Box 4**).

Box 4. The Graze the Moor Project, Molland Moor

For many years, the Molland Estate has been concerned about the difficulty of managing its moorland to a high standard, with the unsuitability of national guidelines on stocking regimes being a particular issue. Vegetation mapping on Molland Moor has shown a dramatic loss of heather over the last 60 years and its replacement by coarse grasses and scrub which have lower conservation and livestock feed value.

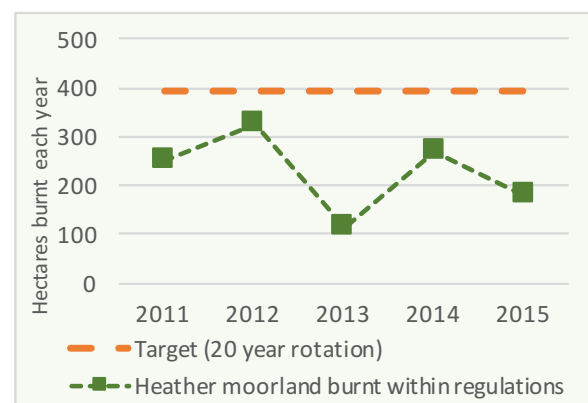
A two-year case study (2012-13) led to the five year (2014-2019) Graze the Moor Project with funding from the National Park Authority's Partnership Fund which is matched by the Molland Estate and other partners and administered by the Heather Trust. The project has a number of components, including the following:

- Trialling and monitoring the impact of locally-adapted approaches to moorland management, including winter cattle grazing and control of *Molinia*
- Comparing the economic viability of farms that make full use of the moor using hardy hill stock, with those that operate a more intensive, lowland system
- Assessments and management of animal health issues including ticks, redwater fever and bovine TB
- Encouraging dialogue and publicity of the results of the work as it develops

There is potential for the Project to be adopted as a national pilot of moorland management techniques by Natural England and as a demonstration site for the national Uplands Alliance.

- 2.44. Swaling, or rather the lack of it, has been a continuing concern throughout the last ten years (controlled burns being necessary to maintain the vigour of heather and other dwarf shrubs) and the National Park Authority has taken a lead in developing a long term plan for swaling with other moorland owners and partners such as Natural England and the Fire Service. On most moorland areas, the National Park rangers have taken the lead in organising burns. In recent years, annual meetings have been held to review progress, seeking to increase both the average plot size of burns and the number of moorland areas covered. Despite this more planned and co-ordinated approach, controlled burning continues to fall behind the targets set¹⁶. As **Figure 8** shows, the swaling achieved over the last five years is still along way short of meeting a sustainable long term rotation. This is due to a combination of the scarcity of suitable weather conditions and lack of labour during the period allowed by the regulations (1st October to 15th April).

Figure 8. Swaling achieved 2011-15



Source: ENPA report on swaling 2015

¹⁶ On a more positive note, illegal or accidental burns have been relatively rare and burning of *Molinia* moorland has almost ceased.

Facilitating more sustainable management

- 2.45. The final group of suggested actions sought to influence management directly by assisting moorland owners and managers to deliver the agreed objectives.

Action 11. The employment of 'moor keepers'

- 2.46. The 2004 report proposed that the concept of 'moor keepers' that had been discussed on Exmoor in the 1990s should be resurrected and piloted. It was suggested that these should be "*part-time posts, drawn from the existing farming community, who would act as local 'eyes and ears' of landowners and graziers, helping to deliver agreed livestock and recreational management on the ground and working closely with the NPA rangers and National Trust wardens*". This was taken forward as one of the projects of the Heart of Exmoor Landscape Partnership Scheme, with funding allocated to employ three local farmers or agricultural contractors for one day a week each (on average over the year) to cover the Minehead moorlands, Holdstone Down and Molland Moor.
- 2.47. In the first two areas, it proved harder than anticipated to sell the concept to graziers and other moorland managers and the role has evolved to suit the requirements in each area. Common tasks include organising scrub control, co-ordinating swaling, keeping an eye on stock numbers and monitoring recreational use (particularly anti-social activities). It had been hoped that the five year pilot would demonstrate the value of the posts and the concept might be taken on by moorland owners and graziers with money from their agri-environment agreements. However, as the Heart of Exmoor Scheme ends, the future of the concept is unclear.

Swaling taking place on Molland Moor



Photo from the Heart of Exmoor Scheme ©J.P. Ball

Action 12. Flexible and targeted agri-environment funding to expand moorland

- 2.48. The 2004 report noted that "*A key challenge for the new scheme (Environmental Stewardship) is the expansion of the moorlands in ways that enhance their contribution to Exmoor's wider landscape, restore biodiversity and increase protection of the archaeological resource*". It was suggested that payments should be made under Environmental Stewardship to extend moorland landscape character to surrounding farmland by removing fencing and reducing the intensity of management of this land, focussing particularly on the farmland between the Coastal Heaths and Northern Heather Moors and on the western and southern edges of the Grass Moors of the Centre.
- 2.49. As noted above (para. 2.19), the Moorland Unit descriptions identified moorland fringe areas suitable for landscape restoration and 'natural links'. However, these opportunities were not taken forward by landowners through Environmental Stewardship because the payments on offer were felt to be insufficient and because of concern that once restored it would not be possible to return the land to improved grassland. A Moor Links project was proposed as part of the Exmoor Moorland Landscape Partnership Scheme in 2007 but this was dropped from what became the Heart of Exmoor Scheme in 2011 because of concerns over the availability of matched funding.
- 2.50. As a result, action to extend and restore moorland character to surrounding land has been very limited. The removal of fencing on moorland beside the A39 at Countisbury by the National Trust

has been heralded as a success, giving a strong visual impression, but this lead has not been followed in other areas.

Action 13. A moorland management infrastructure grant

- 2.51. It was proposed that a proportion of the National Park Authority's Sustainable Development Fund should be ring-fenced for grant aiding equipment to assist moorland management such as cattle grids and mobile sheep dips. Although this did not take place, funding was allocated from the Heart of Exmoor scheme for the purchase of equipment such as a bracken bruiser, water bowser and spraying equipment and for funding small-scale moorland management tasks. The Scheme also put money into three larger restoration projects at the Valley of Rocks, Hawkcome Head and Hoar Oak Cottage.

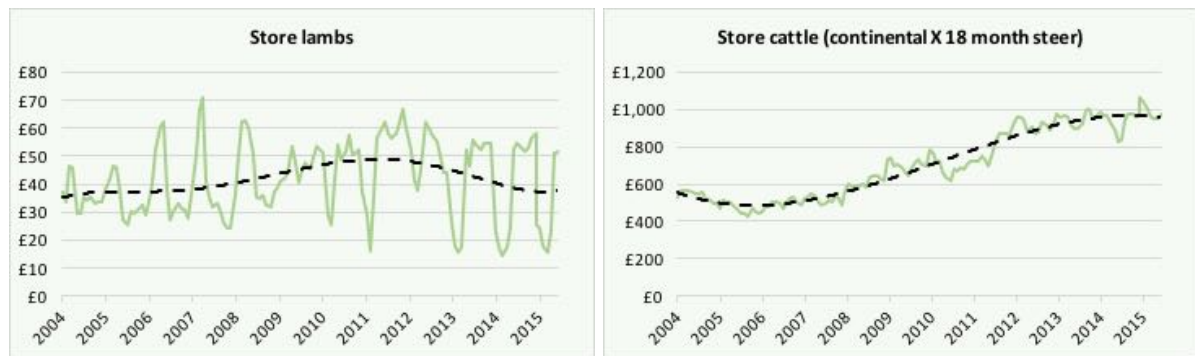
Action 14. A new Moorland Challenge Fund

- 2.52. In order to stimulate innovative 'home-grown' approaches to tackling moorland issues, it was proposed that the National Park Authority should establish a Challenge Fund "*open to moorland owners, managers of other businesses and voluntary bodies to establish novel ways of delivering public benefits on the moorlands*". This was dependent on the Authority obtaining additional external funding. In the event, the necessary funding was not available and the proposal was not taken forward.

Action 15. The future support to moorland farms

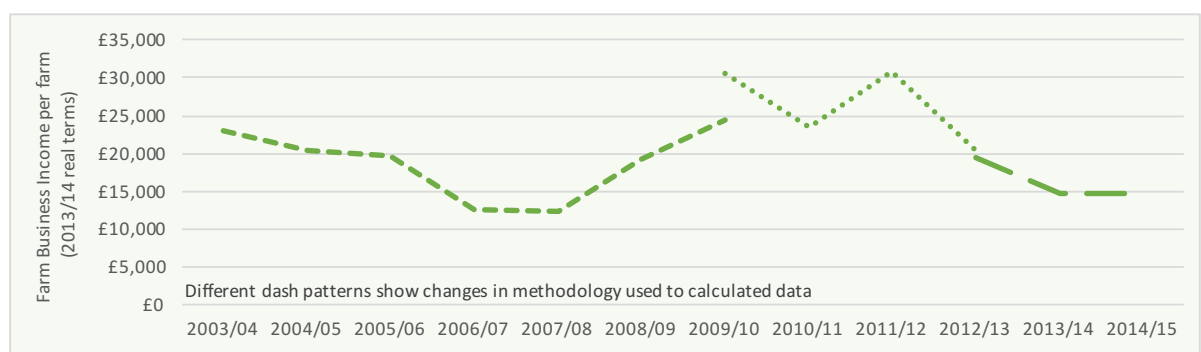
- 2.53. The 2004 report highlighted the uncertain future of financial support for hill farming following the replacement of Hill Livestock Compensatory Allowances (HLCAs) with the Hill Farm Allowance and it called for the continuation of national payments that recognise the economic and cultural benefits of moorland farming. In the event, the Hill Farm Allowance Scheme ended in 2011 and the economic and social disadvantage of hill farming in England no longer attracts payments to farmers.
- 2.54. The impact of the reforms to agricultural support on moorland has been complex. The change from headage payments to the Single Payment Scheme and from HLCAs to the Hill Farming Allowance have disadvantaged moorland farmers. However, the change from the ESA to Environmental Stewardship has brought significant additional funding (rising from an estimated £785,000 a year under the ESA in 2004 to £3,060,000 a year for Environmental Stewardship in 2015).
- 2.55. For most moorland farmers, income from the sale of their livestock has been less significant than the money they receive from the farm subsidies and agri-environment schemes. Nevertheless, market prices have influenced livestock numbers and types. As **Figure 9** shows, lamb prices have changed little over the last ten years whereas store cattle prices have increased by about 40%. The improvement in cattle prices relative to sheep has ensured that the fear expressed by many in 2004 of the imminent demise of beef suckler herds on Exmoor has not taken place, although sheep now predominate. For many cattle farmers on Exmoor, high levels of bovine tuberculosis have been a major discouragement to keeping cattle. When set against sharp rises in most farm input costs (such as energy, fertiliser and machinery), the economics of livestock production on Exmoor is now even more dependent on public subsidy and payments than it was. As **Figure 10** shows, farm business income received by upland livestock farmers in England has varied but in real terms is lower now than it was ten years ago and significantly less than five years ago.

Figure 9. GB store cattle and lamb prices 2004-2015



Source: Defra Monthly Livestock prices. <https://www.gov.uk/government/statistical-data-sets/commodity-prices>

Figure 10. Changes in farm business income for English LFA livestock farms 2003/04 to 2014/15







Source: Defra. <https://www.gov.uk/government/statistical-data-sets/farm-business-income-net-farm-income-and-cash-income-time-series>

- 2.56. Concern over the viability of farming on Exmoor and Government policy to address this prompted The Exmoor Society and Dartmoor Preservation Association to prepare briefing papers and hold a Parliamentary Reception on this topic in 2008. In 2015, the Exmoor Hill Farming Network, with funding from North Devon +, commissioned research into the State of Farming on Exmoor¹⁷. Despite the poor financial performance, a survey conducted as part of the research found generally high levels of optimism amongst farmers, with a welcome number of younger farmers taking over larger holdings from their parents. Overall, the report concluded “*that Exmoor farms show a good degree of resilience at present, despite major challenges*”.

¹⁷ Dwyer et al (2015).

Table 3. Summary of delivery of the actions in the 2004 report

Actions proposed in the 2004 report		Commentary on success	
Create consensus	1. A re-invigorated Moorland Forum		A new and enhanced Moorland Initiative Board has overseen the NPA's work on moorland, improving dialogue and understanding between parties involved in moorland management
	2. Proactive engagement by moorland farmers		The Exmoor Hill Farm Project and subsequently the Hill Farming Network have included co-ordination and engagement by farmers including through site visits, training events and business support
	3. Foster appreciation of the overall value of moorland		The Exmoor Moorland Landscape Partnership Scheme has introduced moorland to many thousands of people through events, volunteering activities and school trips
	4. A better understanding of the conservation objectives for moorland SSSIs		Natural England has reviewed the conservation objectives and condition assessment criteria (ongoing) but moorland owners and graziers remain unclear about the objectives and unconvinced about the suitability of management prescriptions
	5. Establish objectives and needs for each of the moorland units		Considerable work has been undertaken by the NPA to prepare maps and descriptions of the 21 Moorland Units
Gather evidence	6. Monitor changes in vegetation cover		Although not formally acted upon, the RSPB's Moorland Breeding Birds Survey recorded vegetation change between 2008 and 2014. Detailed mapping of change on Molland Moor has shown dramatic losses of heather. The NPA is current analysing change since WWII from aerial photographs
	7. Evaluate the evolving condition of the moorland landscape		The NPA has prepared a Landscape Character Assessment and a Landscape Action Plan. However, to date, there has been no systematic monitoring of landscape change on moorland
	8. Assess the condition of the archaeological resource		Significant work has taken place through the Mires Project and Heart of Exmoor Scheme, to assess the condition of the 37 Principal Archaeological Landscapes and individual sites
	9. Monitor public access to moorland		The Exmoor Local Access Forum has advised the NPA and other bodies on public access issues but there has been no co-ordinated collation of data on recreational use of moorland
	10. Co-ordinate best practice in moorland management and restoration		The Heart of Exmoor Scheme and Graze the Moor Project have held events and the annual review of swaling is regarded as valuable. But fundamental disagreements remain over best practice in livestock management
Support management	11. The employment of 'moor keepers'		Three moor keepers have been funded, as a pilot project, through the Heart of Exmoor Scheme. With the end of the Scheme, the future of the concept is in doubt
	12. Flexible and targeted agri-environment funding to expand moorland		Higher Level Stewardship agreements now cover almost all moorland areas and have brought significant income to moorland farmers. However, there has been little work in practice to expand moorland (e.g. through 'rewilding' the moorland fringe)
	13. A moorland management infrastructure grant		The Heart of Exmoor Scheme funded enhancement in areas such as Valley of Rocks and Hoar Oak Cottage. Lack of capital funding in Higher Level Stewardship has limited other work
	14. A new Moorland Enterprise Challenge Fund		The proposal for a challenge fund to support innovative 'home grown' approaches was not taken forward
	15. The future support to moorland farms		There have been major changes to support payments. All government support to hill farms in England is for environmental rather than social objectives and the Government's support for hill farming <i>per se</i> is unclear

Initiatives not anticipated in the 2004 report

Peatland restoration

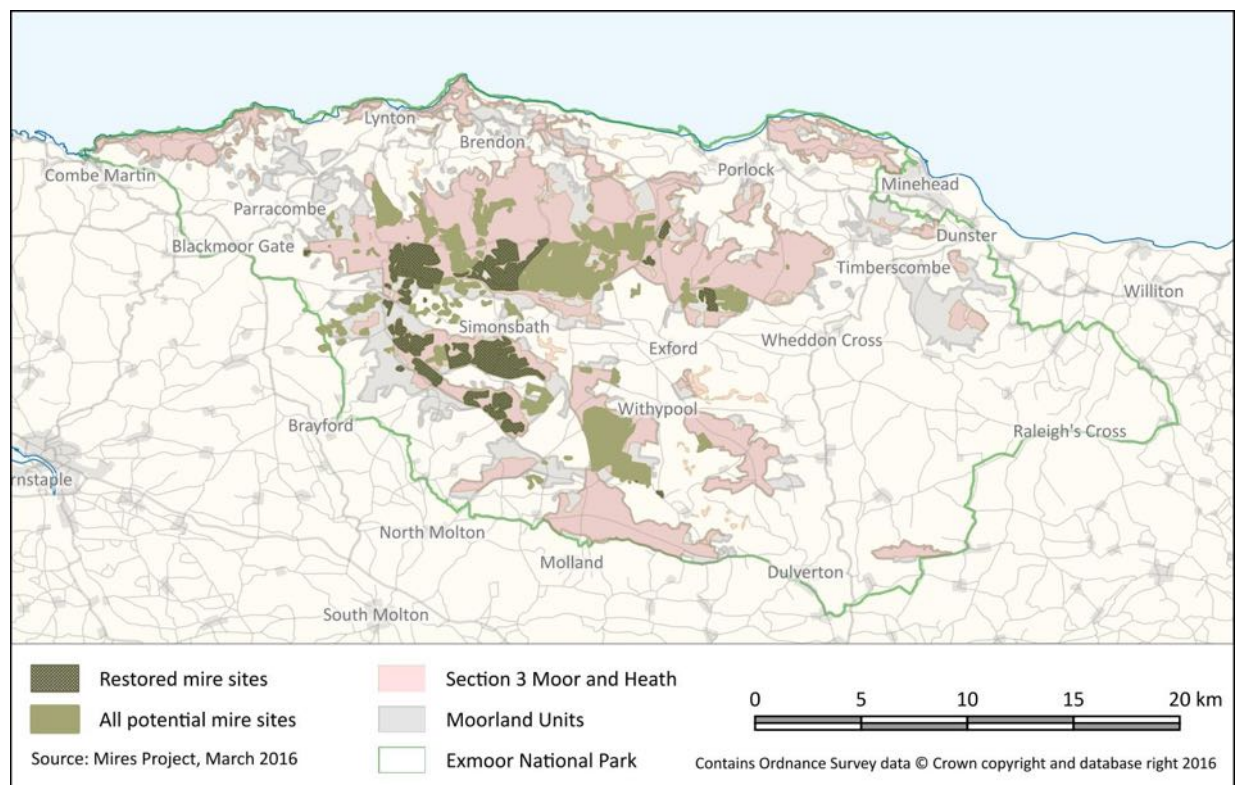
- 2.57. A significant omission from the 2004 report was the work that had already started to restore the mire and bog habitats on Exmoor by blocking the ditches previously cut into the moorland and allowing the peat soils to 'rewet'.
- 2.58. Peatland restoration was initially piloted on Exmoor in 1998 and has grown in scale to its current phase of the Exmoor Mires Project (2015-2020). This is a partnership project made up of South West Water, Exmoor National Park, Natural England, Environment Agency and Historic England, with representatives from local farming and community groups. It is part of South West Water's Upstream Thinking project, a river catchment based approach to water management. It has involved a significant investment by South West Water, funded from its Ofwat-approved investment programme, and parts of the Project have been supported financially by the Environment Agency, Natural England and Exmoor National Park Authority. Key financial and policy drivers of the Project are the need to improve water quality (avoiding the high cost to South West Water of removing the brown colour from tap water arising from oxidising peat), increase river base flows during periods of low rainfall (avoiding the high cost of pumping water between catchments) and improving the biological condition of designated sites.
- 2.59. As **Box 5** shows, the objectives of the most recent programme (2010 to 2015) have been broad, covering improvements to water storage, water quality, biodiversity, carbon storage, the historic environment, landscape quality and public knowledge. The Project is also engaged in the development of a Payments for Ecosystem Services revenue return and developing options for carbon trading using the UK Carbon code.

Box 5. Objectives of the Exmoor Mires Project 2010-2015

1. **Hydrological regime change:** the re-establishment of natural stream flows in the headwater tributaries of the Exe and associated Exmoor catchments.
2. **Hydrochemical process change:** changes to patterns of run-off and improvements in water quality of surface waters i.e. suspended solids, colour, turbidity, pH, metals, nutrients, organics.
3. **Wetland habitat and biodiversity:** a more natural hydrology, active peat growth, reduced erosion, increased habitat extent and biodiversity, and wetting of previously drained wetland.
4. **Riverine habitat & aquatic ecology:** re-establishment of natural stream flows, reduction in bank and peat erosion and rewetted marginal vegetation.
5. **Global warming/climate change mitigation and adaptation:** reverse the role of damaged peatlands from net CO₂ producers into net CO₂ accumulators, achieve net stability in methane production.
6. **Historic environment protection and enhancement:** better knowledge of the historic environment and better preservation of palaeo-environmental deposits.
7. **Partnership working:** effective collaboration between land managers, partners and other stakeholders.
8. **Education and knowledge transfer:** enhanced understanding and information on hydrological, hydrochemical and ecological process interactions
9. **Socio-economic reward:** sustainable funding for land managers to provide incentives for restoration of moorland wetland.
10. To maintain the key characteristics of **open moorland landscapes** and restore sites where landscape condition is eroded
11. To provide **economic benefit** to South West Water customers

- 2.60. The Project has blocked 133 km of ditches, leading to the rewetting of nearly 1,400 hectares of moorland on Exmoor, with more than 1,000 hectares of this since 2010, the large majority of it owned by the National Park Authority (**Figure 11**). It is funding monitoring and research into the effects of this work on water quality, flow, biodiversity, agriculture, and greenhouse gas exchange, as well as the impacts on the historic environment and landscape. Although it is early days, initial results are showing that characteristic mire vegetation is responding to the wetter soil conditions with increases in *Sphagnum* moss and other indicators such as star sedge and marsh violet. Another significant impact of the Project has been improved archaeological and paleo-ecological knowledge arising from thematic studies (funded as part of mitigation work), site surveys and observations at restored sites. However, some of the moorland graziers affected by the Project feel that the impact of rewetting on their livestock management has been more significant than they were told it would be and this has been a source of friction.

Figure 11. Restored mires sites on Exmoor



- 2.61. The Mires Project has been the most developed example of a Payment for Ecosystem Services (PES) scheme on Exmoor, and is amongst the vanguard of such approaches in the UK. However, so far, the promise of a long-term non-Exchequer source of funding that recognises the public benefits provided by moorland managers has not been convincingly delivered. To date, the main incentive mechanism continues to be agri-environment payments from Higher Level Stewardship.

The protection and appreciation of free-living Exmoor ponies

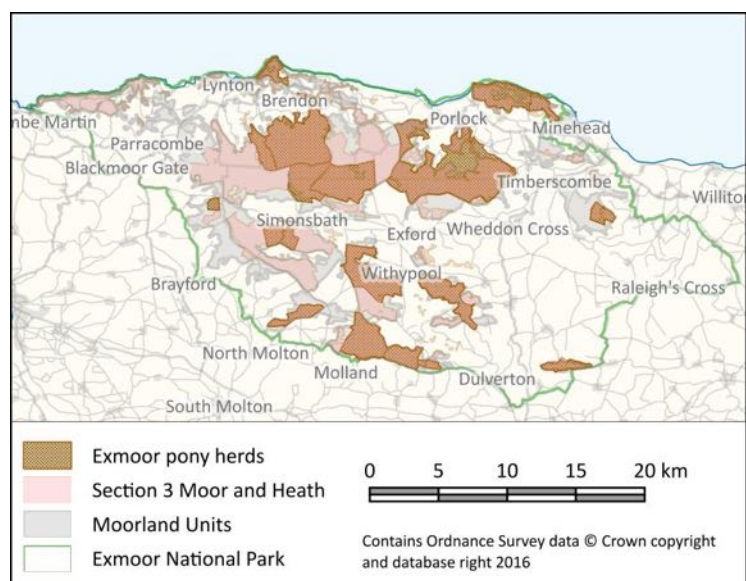
- 2.62. The 2004 report acknowledged that Exmoor's pony herds were nationally and possibly internationally significant cultural assets, being thought by many people to be a direct descendant of the prehistoric wild ponies that roamed the uplands of Britain at the end of the last Ice Age. It also pointed out that the sight of ponies being gathered up on moorland in October is one of the most distinctive features of the Exmoor year. However, Exmoor ponies (and also the red deer which are a similarly iconic species of moorland) were not specifically included in any of the recommendations in the report.
- 2.63. Recent scientific advances have critically examined claims about the ponies' origins and it is now known that they are not direct living descendants of prehistoric horses but nevertheless an important and rare regional native breed (see **Box 6**). They are recognised as a Rare Breed under UK and EC regulations and are considered to be a valuable genetic resource under the terms of Defra's Farm Animal Genetic Resources (FAnGR) criteria.

Box 6. New evidence on the origins of the Exmoor pony

The development of genetic sequencing during the last 20 years has enabled the origins of the Exmoor pony to be explored scientifically. The equine genome was fully sequenced in 2009 and analysis of the DNA of European pony breeds since then has examined their relationship to each other and to wild horses. Archaeological research has also examined the historical record for evidence of ponies on Exmoor. A report from local vet, Peter Green, commissioned by the Exmoor Moorland Landscape Partnership in 2013 concluded that Exmoor ponies share a common ancestry with other regional pony breeds in England, being descended from domesticated ponies introduced to Britain by man¹⁸.

- 2.64. There are 21 free-living herds of Exmoor ponies distributed across the moorland encompassing about 500 individual animals. Concern has been expressed in recent years about the fragility of these herds (with a small population and limited genetic variation, coupled with the threat of inbreeding with other ponies living on moorland) and the additional burden placed on herd owners by recent equine passport regulations overseen by Defra and by the DNA parentage testing required by the Exmoor Pony Society. These issues were addressed in the report by Peter Green for the Exmoor Moorland Landscape Partnership¹⁹ and the recommendations of the report are being followed up by bodies such as the Exmoor Pony Society and National Park Authority.

Figure 12. Pony herd territories



Source of data: ENPA

- 2.65. One of the projects in the Heart of the Exmoor Scheme focussed on 'Promoting Exmoor Ponies' and, amongst other things, led to the establishment of an annual Exmoor Pony Festival, now being run by a dedicated Exmoor Pony Festival Trust to promote better understanding and enjoyment of the ponies on Exmoor. The 2014 Festival was attended by over 3,000 people.

¹⁸ Green P (2013)

¹⁹ Ibid.

Overall summary of progress

- 2.66. The 2004 report put forward two polarised scenarios of change. Not surprisingly neither of these have dominated and the picture is a mixed one. However, of the two alternatives, one of abandonment, the other of renewal, the balance is in favour of the latter.
- **Public appreciation and involvement** has certainly increased, through notable projects with local schools and trainee teachers and developing public archaeology projects on moorland. There has been a large increase in volunteer work surveying and conserving moorland heritage, which has made effective use of their skills and interests. Although numbers of recreational users have probably not increased significantly overall (although there is lack of data to substantiate this), awareness of moorland heritage amongst young people and families living in and close to Exmoor has almost certainly increased.
 - **Dialogue and understanding** between moorland farmers and statutory bodies has improved as a result of initiatives such as the Moorland Initiative Board, the Hill Farming Network and Graze the Moor Project. The detailed descriptions prepared for Moorland Units have helped pin down management objectives, even if the process proved onerous. However, there remains a lack of confidence by many graziers in the moorland conservation practices they are being encouraged to follow.
 - There has been a significant lack of systematic work across moorland as a whole to monitor **changes in vegetation and landscape condition** which is disappointing given the growing concern about environmental change on Exmoor's moorland. The situation appears to be complex. Many people's perception, backed up by some evidence, is that bracken and scrub have been spreading, diversifying habitats and diminishing the open uniform character of the moorland landscape. There appears to have been a significant loss of heather from some areas. But there is also evidence that other areas have become more closely grazed and on many sites there has been action to control scrub, addressing the environmental objectives for these areas.
 - Actions to **ecologically restore moorland and extend its landscape character** have been mixed. Aspirations to extend moorland landscape character to surrounding farmland (the moorland fringe) were not adopted to any significant extent by landowners and there has been very little change in the area of moorland character. Similarly, aspirations to reintroduce heather into grass-dominated moorland such as the Royal Forest have not been taken forward. However, the Exmoor Mires Project has been successful in improving the condition of blanket bog and soils on over 1,400 ha and it would appear that the biological condition of many areas of moorland SSSIs has improved (although Natural England's condition assessment data is difficult to interpret due to changes in the methodology).
 - **Knowledge of the moorland's prehistory** has improved significantly through research and community involvement, helping to paint a far richer picture of the long history of human influence on the moorland landscape and of the way the climate and vegetation cover has changed.

3. Future opportunities and threats

- 3.1. The remainder of this report looks forward to the future. In the same way that the 2004 report looked at potential future scenarios for Exmoor's moorland over the following ten years, this chapter anticipates what the next decade and beyond may hold. It examines what are likely to be the key drivers and influences affecting the way we perceive moorland and the resources we have to protect and manage it. Some of these factors of change will provide new potential for enhancing and broadening the moorland's special qualities and others will present a challenge to be resisted or adapted to. The following headings are used in this chapter:
- Moorland management objectives and broader land use policy
 - The ecosystems approach – recognising and paying for public benefits
 - Farming policy and agri-environment schemes
 - Government's priorities for National Parks
 - Ways of working – partnerships and public involvement
- 3.2. Before considering each of these issues, it is important to note that this report was prepared in the months preceding the UK referendum on its future in the European Union. **It goes without saying that the impacts of a decision to leave the EU would be very significant and far reaching, with ramifications for Exmoor's moorland.** Direct impacts would arise from the repatriation of agricultural policy as well as possible changes to domestic environmental policy. No attempt has been made in this chapter to anticipate what these would mean for moorland.

Moorland management objectives and broader land use policy

- 3.3. Public policy objectives for Exmoor's moorland relate mainly to conserving and enhancing its environmental quality (compared for instance to its economic productivity). There are two overriding environmental objectives that will influence the way Exmoor's moorland is managed and used: for biodiversity and for water quality. Other important environmental objectives will be landscape quality and the historic environment and there are also wider issues of how the uplands fit within the context of national land use.

Biodiversity

- 3.4. The international significance of Exmoor's moorland for biodiversity, as recognised by the Special Area of Conservation designation that covers around 61% of the moorland, will ensure that a mixture of incentives and regulation continue to be directed to protecting and enhancing this significance. As noted earlier (para. 2.14 and Box 2), Natural England measures success in this regard through a rigorous process of condition assessment for all Sites of Special Scientific Interest.
- 3.5. Until 2011, Natural England's target was for 95% of SSSIs to be in Favourable or Recovering Condition but a much tougher standard was introduced in the Government's Biodiversity 2020 Strategy requiring 50% of SSSIs to be in Favourable Condition by 2020 (although the percentage target has fallen, most SSSIs are currently in Recovering Condition only so moving them to Favourable Condition will be a challenge). As noted earlier, achieving Favourable Condition for Exmoor's moorland will be especially difficult because of the way the assessment process requires all the different elements in a matrix of habitats such as moorland to reach the required standard. Although 'fine-tuning' the criteria for Favourable Condition so that they reflect local ecological conditions (rather than cruder national conditions) will help, meeting the Biodiversity 2020 target on Exmoor will not be easy.

- 3.6. An understanding of the challenges facing biodiversity on Exmoor's moorland is provided by the Exmoor Heaths Site Improvement Plan which has been prepared by Natural England to guide its work with landowners and partners. It identifies a number of pressures and threats to the designated features and proposes the measures necessary to address these (**Table 4**). Agri-environment agreements with owners and managers (through the new Countryside Stewardship scheme) will be a key mechanism for delivering many of the proposed measures.

Table 4. Pressures, threats & measures affecting the Exmoor Heaths Special Area of Conservation

Pressure or threat	Proposed measure
Air pollution	Control and reduce the impacts of atmospheric nitrogen deposition
Drainage	Restore more natural hydrological conditions
Inappropriate pest control	Investigate and put in place measures to reduce the impact of Heather Beetle
Agricultural management	Negotiate and provide advice on grazing regimes to negate undergrazing
Invasive species	Continue to control invasive species
Managed rotational burning	Evaluate the impact and effectiveness of locally agreed burning guidelines
Change in land management	Through negotiation increase the uptake of management agreements so that there is complete coverage of the SAC
Direct impact from third party	Investigate and where necessary develop and implement management plans for illegal vehicle use and pony trekking

Source: Natural England (2014)

Water quality

- 3.7. The EU Water Framework Directive will continue to be a key driver of environmental policy through its targets for surface water bodies to be in good ecological status and groundwater to be in good chemical status. Monitoring and assessment is done by the Environment Agency in River Basin Management Plans over 6 year cycles starting in 2009, with the second cycle (2015-2021) about to start. The good news is that the Environment Agency has anticipated that almost all the rivers that rise on Exmoor's moorland would be in good ecological status (exceptions being the Horner Water and the Avill, both in the moderate status) by 2015²⁰. Nevertheless, maintaining this status will continue to affect targeting of agri-environment agreements and other measures.

Landscape quality

- 3.8. The high quality of the moorland landscape is one of the defining features of the National Park (recognised as the first of the special qualities described in the statutory management plan²¹), and a primary reason for its designation in 1954. The Landscape Character Assessment prepared for the National Park in 2007 recommended an approach, in the form of a matrix, for enhancing landscape quality based on assessments of the strength of different elements and their condition. The National Park Authority intends to refresh its landscape strategy during 2016 and this matrix could form the basis of a new assessment of the condition of the moorland landscape, including the development of indicators that can be used to monitor changes in landscape condition.
- 3.9. The Landscape Action Plan which was prepared by the National Park Authority in 2011²² assessed the issues, objectives and potential responses facing the different landscape character types on

²⁰ Environment Agency (2009)

²¹ ENPA (2012)

²² ENPA (2011)

Exmoor. Those for the Open Moorland landscape type are shown in **Table 5** (the High Coastal Heaths type is also covered in the Action Plan but is not shown in this table).

Table 5. Landscape issues, objectives and responses for Open Moorland

Landscape Issues	Objectives	Potential response
Agricultural improvement in the past has reduced and fragmented moorland area with subsequent loss of openness and scale	Restore moorland fringe to Open Moorland character	Work through Landscape Partnership Scheme and Higher Level Stewardship (HLS) to develop landscape restoration opportunities
Loss of simple open heather moorland through encroachment of scrub	Conserve and enhance continuous tracts of open heather moor	Identify priority areas for scrub control; target management through HLS and Moorland Unit maps; ensure appropriate levels of swaling and grazing
Loss of sense of openness, expanse and distant views	Reinstate open views to improve visibility across heath and restore visual connectivity with other moorland areas	Clear scrub through HLS / other incentives and ensure appropriate swaling / grazing
Path/track erosion creating landscape scars	Restore visual integrity of heather moorland	Identify significant areas of erosion through Moorland Unit Mapping; mitigate visual impacts of paths and tracks; control erosion
Loss of condition and damage of heather through the effect of heather beetle	Maintain healthy heather cover	Encourage positive management, monitoring and research and apply best management practice

Source: ENPA (2011)

- 3.10. The priorities for maintaining and enhancing moorland landscape quality that were described in the Action Plan, all of which remain relevant, can be summarised as follows:
- Enhance the expansive and large scale character of moorland by expanding and connecting unenclosed areas through the moorland fringe
 - Maintain the open and relatively uniform character of the heath / grass vegetation by removing encroaching scrub and bracken
 - Protect (and restore where under threat) key views to and from moorland by preventing (removing) visual detractors
 - Maintain the tranquil and wild character of moorland by avoiding unnecessary infrastructure and other intrusions such as signage and car parks, and by fixing erosion scars from paths and tracks
- 3.11. Addressing these priorities will involve working with landowners and managers (through agri-environment and other schemes), using the planning system to ensure development is suitable and maintaining the quality and suitability of public infrastructure.
- 3.12. These priorities relate to maintaining and enhancing the existing characteristics of the moorland landscape, based on the perceptions and values that people have. However, **our appreciation of landscapes is not static and given the environmental changes that are taking place, as well as changes in people's relationship with the environment, it will be important to monitor how values and perceptions of the moorland landscape are evolving**, using surveys similar to those

undertaken by The Exmoor Society in 2004 (to inform the 2004 report) and by the National Park Authority and Exmoor Society in 2011²³.

The historic environment

- 3.13. As noted earlier, the last decade has seen dramatic improvements in our understanding of the moorland's past use, particularly in prehistory. Relatively few of the key heritage assets on Exmoor's moorland are protected as Scheduled Monuments and there may be merit in reviewing whether some of the more fragile and nationally important sites (such as assemblages of small stone rows) should be scheduled.
- 3.14. The Principal Archaeological Landscapes (para. 2.33) will continue to provide the basis for protecting and improving our knowledge of the historical environment. As noted earlier (para 2.35), the main threat to these areas has been identified as the growth of bracken and scrub which obscures features and damages buried structures.
- 3.15. In terms of the priority for future investigation and protection, the value of the paleo-ecological record preserved in moorland soils (the evidence of, and ability to precisely date, past environments), which has come to light in the last decade, could be a focus for further work. The historical development of Simonsbath and the story it tells about the agricultural reclamation of the Exmoor Forest in the 19th century (and on into the 1980s) may be something which the National Park Authority wishes to pursue. Finally, there may be merit in recording and celebrating the many cultural associations (for instance in legend, literature and traditional practices) that local communities have with moorland and which may be forgotten by future generations.

The concept of natural capital

- 3.16. At a national level, the term 'natural capital' is being used to describe the elements of the natural environment which provide valuable goods and services to people such as clean air, clean water, food and recreation. It is closely related to the ecosystems approach (see below). The Natural Capital Committee for England, established by Government in 2012, has produced three reports on the state of natural capital and the actions needed to develop better knowledge and improved stewardship of this capital.
- 3.17. The concept has not yet been used widely in the context of Exmoor's moorland. However, there is a **growing recognition amongst conservation organisations that a more unified approach to setting objectives for moorland management is needed**. This needs to take account of all the benefits provided by moorland rather than following the more fragmented approach that has been typical in recent decades, where conservation objectives have been pursued in separate siloes.

Broader land use policy

- 3.18. Looking further ahead, it is likely that rural land use policy in the UK will need to adapt to take account of the rising global population and climate change (**Box 7**) and to meet domestic policy considerations. Increasing production of food and energy from the land is predicted to be a growing priority. The Government has already shown interest in the concept of 'sustainable intensification'²⁴ as the most efficient means of optimising production from the most capable land. If, over the next decades, high quality farmland is to be worked harder to produce 'provisioning' ecosystem services (see below) such as food and energy, this will place a greater emphasis on intrinsically less productive spaces to provide the regulating and cultural services.
- 3.19. This means that, in the not too distant future, **Exmoor's moorland may have an even greater value than it does now both as open space where people can appreciate levels of wildness and tranquillity that have become rare in an increasingly crowded and busy countryside and also as**

²³ Fyfe (2011)

²⁴ See Defra's Sustainable Intensification Research Platform launched in December 2014. <http://www.siplatform.org.uk>

an ecosystem where our natural life support systems (for water, biodiversity and carbon storage) are given the highest priority.

Box 7. The Changing Climate

The anticipated changes to the UK's climate will have far-reaching impacts, affecting Exmoor's moorland in a variety of ways. The latest UK Climate Change projections²⁵ suggest that the South West will experience a rise in average temperatures of around 3°C by the end of the century, 20-40% reductions in summer rainfall but increases in storms, particularly in winter. This is likely to give rise to the following changes on Exmoor's moorland²⁶:

- Drying out of the mire habitats, leading to oxidation and loss of peat soils, and lower summer base flows in rivers (possible 17% reduction in summer river flows by 2050)
- Increased vegetation growth (potentially 12-33% increase in agricultural yields by 2020s) leading to reduction of heather and increases in grasses and shrubs
- Changes in distribution of species, with the loss of some species at the southern edge of their range and increases in species at their northern edge. Some increasing species may be regarded as pests or weeds
- Potential severe flash flood events from rivers rising on Exmoor (similar to the 1952 Lynmouth flood)
- Increased risk of wild fires (40-50% by the 2080s)

The 'rewilding' debate

- 3.20. There have been recent calls for a much more radical approach to the management of the UK's uplands. Debate about the balance between human management (mainly livestock farming) and natural succession in the uplands is not new²⁷. However, the threats placed by climate change have introduced a new urgency to this topic.
- 3.21. The thesis advanced most forcefully by environmental journalist, George Monbiot²⁸, is that the UK's great uplands are being over-managed in the name of nature conservation and traditional farming, with livestock (principally sheep) creating an ecological desert that is artificial, impoverished and aesthetically boring. He calls for 'nature to be allowed to reassert itself' (preferring the term 'self-willed' to rewilded landscapes), replacing farmed livestock with top predators such as wolves and leading by natural succession to a wilder, more diverse and more wooded landscape. Other people, including the National Park Authorities and local residents²⁹, have argued that this vision is too simplistic and takes no account of the cultural qualities of existing upland landscapes and the range of services provided by habitats that are maintained by grazing. Areas such as Exmoor, they argue, already have large areas of woodland, and the remaining areas of open moorland are too precious to be 'abandoned' to nature.
- 3.22. This debate goes to the core of how we value uplands such as Exmoor. **Some change to the landscape and habitats is inevitable in the face of the changing climate and the deep social and economic changes affecting farming. There are important policy choices to be made about whether these changes are to be ignored, resisted or adapted to** (considered further in the following chapter).

²⁵ United Kingdom Climate Projections 2009 (UKCP09).

²⁶ Figures in the following bullets are taken from Climate South West (2012) which quotes data from the Government's Climate Change Risk Assessment Report (2012).

²⁷ See for instance Countryside Commission (1990) and Council for National Parks (1997)

²⁸ Monbiot's thesis was advanced in his presentation to the UK National Parks Conference on Dartmoor on 14th October 2015 and repeated on Exmoor in the BBC SW Inside Out programme on 13th January 2016. See his book 'Feral' (Monbiot, 2013) for a fuller exposition.

²⁹ See for instance the response to George Monbiot by North Devon resident, Mary Breeds, in a letter to local papers dated 18 January 2016.

The ecosystems approach – recognising and paying for public benefits

- 3.23. The ecosystems approach has been embedded in Government's policy towards the natural environment since the Natural Environment White Paper was published by the coalition Government in 2011³⁰. It involves the concept of ecosystem services (defined as "*the benefits people obtain from ecosystems*"³¹) which are fundamental to the health and well-being of humans and the sustainable functioning of our society. The words 'ecosystem services' have not been used much in the context of Exmoor's moorland (understandably so given their rather technical and abstract nature). However, the last ten years have seen a much greater appreciation of the different public benefits that moorland provides, particularly the so-called 'regulating services' of water and carbon storage and water quality (through the Mires Project) and the 'cultural services' of the sense of history, recreational use and education (through the Heart of Exmoor Scheme).
- 3.24. Whereas ten years ago, the prevailing public perception of Exmoor's moorland was as a wild, empty and forbidding place, our greater knowledge means it can now be appreciated as a historically richer, intellectually busier and functionally active place. This is undoubtedly a good thing although it would be a shame if our knowledge of the many benefits moorland provides crowds out the more primeval and spiritual sentiments of wildness and natural beauty which seem to be in such short supply in the modern world.
- 3.25. On this theme, it should be noted that one of the 'services' that moorland can provide in ample quantities, that of emotional and physical well-being, has perhaps not yet received the attention it deserves. **The growing concern about obesity and mental health and the interest in holistic medical therapies and preventative healthcare (as well as the financial squeeze on the NHS) suggests that the 'natural health service' that Exmoor's moorland and other semi-natural landscapes such as woodland and the coast can provide deserves more attention in future.**

Payments for Ecosystem Services (PES)

- 3.26. One of the policy objectives implicit in the ecosystems approach is to instil a better understanding of the true value to society of areas such as moorland in commercial markets and public policy. New mechanisms are being sought to recognise this value, providing ways of paying for the costs of these services.
- 3.27. The concept of payments for services delivered by the water environment has been an important element of the Exmoor Mires Project (para. 2.58). The theory goes that paying moorland owners and graziers for rewetting their moorland (storing more water of a better quality) is preferable to paying for water to be pumped into reservoirs at periods of low river baseflows and for treating water to remove the brown colour caused by oxidation of peat. Ofwat (the water regulator) has permitted South West Water, through its 'AMP6' business plan, to take a small levy from its customers to pay landowners and managers for these services. In this scenario, everyone, including the environment, wins.
- 3.28. In practice, the lesson of South West Water's Moorland PES Scheme (which is delivered by the Mires Project) has been less conclusive. The calculations undertaken by environmental economists have established the 'utilised value' of water to South West Water from restored mires at a figure of £4.00/ha/yr³². Recognising that this would be insufficient to attract many farmers into the scheme, South West Water has added a further £10.50/ha/yr in recognition of its customers' willingness to pay for the additional environmental benefits arising. The total payment of £14.50/ha/yr³³ compares to the moorland rewetting supplement under Higher Level Stewardship

³⁰ The Natural Environment White Paper *The Natural Choice: Securing the value of nature*, June 2011, which advocates the ecosystems approach and the concept of 'natural capital' as a means of focussing on the range of benefits that society gains from nature.

³¹ MEA (2005)

³² The methodology for calculating this figure is set out in South West Water's AMP6 plan. It takes account of the mitigation of low river flow pumping and water treatment costs and also enhancements in biodiversity.

³³ The figure of £14.50/ha/yr applies in the Exe catchment – a lower figure of £10/ha/yr applies in other catchments on Exmoor.

(HLS) of £10/ha. However, it remains much less than some other HLS supplements such as for the use of native breeds (£70/ha) which arguably involves lower costs over the lifetime of the agreement.

- 3.29. If a PES approach such as this is going to provide a viable long-term means of recognising moorland's value to society, ways will need to be found to cost-in other benefits that it provides. Possibilities include a payment for reducing flood risk to downstream businesses and residents (with water being released more slowly from restored moorland, reducing peak river flows) and paying for the carbon stored in peat soils. The Peatland Code, published in November 2015 by IUCN in the UK³⁴, has been designed to provide a verifiable basis for business corporate social responsibility (CSR) sponsorship of peatland restoration projects. This Code may provide an opportunity to increase PES income through the Mires Project (although the thinness of Exmoor's peat soils compared to those in areas such as the North Pennines and Scottish Highlands needs to be taken into account).
- 3.30. The lesson so far is that maintaining the many benefits that society wants from moorland is expensive and that PES schemes are very unlikely to provide all of this cost. These schemes have an important role to play but it is also essential that more benefit is derived from the large sums of public money allocated through agri-environment payments.**

Farming policy and agri-environment schemes

- 3.31. Although the future payments that farmers can expect to receive from the Common Agricultural Policy are difficult to predict (depending on the annual euro exchange rate, potential additional reforms as well as the UK's membership of the EU), it is likely that the management of moorland will continue to rely heavily on public subsidy and agri-environment payments.
- 3.32. The previous chapter noted that the payments received by most farmers grazing moorland fell significantly from 2004 onwards with the move from headage payments and Hill Livestock Compensation Allowances to the Single Farm Payment and Hill Farm Allowance. Over a similar period, the replacement of agri-environment agreements under the ESA scheme with those under Environmental Stewardship increased the income of most farmers signed up to these schemes. So at a time when when the overall income from public sources received by most moorland owners and graziers fell, their reliance on agri-environment payments increased.
- 3.33. The replacement of the Single Farm Payment with the Basic Payment Scheme in 2015 and of Environmental Stewardship with Countryside Stewardship from 2016 onwards will bring a number of significant changes.
- 3.34. Firstly, the area payments received by hill farmers from 2015 onwards has increased significantly (in euro terms anyway; the sterling conversion rate will vary annually) due mainly to the Government's decision to equalise payments in the non-moorland Severely Disadvantaged Area and the lowlands. As a result, the value of the entitlements for the Basic Payment Scheme on Moorland in England has increased by 64% (compared to a 3% increase for non-moorland SDA and a 17% fall for lowland land – See **Figure 13**).
- 3.35. This study calculates that in 2014 moorland was responsible for around 7% of the Single Farm Payments received in the National Park (estimated at £424,000 of the £6.4 million received by farmers) and that this percentage will increase to 10% in 2015 (£697,000 of the £6.8 million receipts).

³⁴ <http://www.iucn-uk-peatlandprogramme.org/peatland-code/code-information>

3.36. Secondly, Countryside Stewardship will no longer include the upland entry level tier (with payments in the National Park in 2014 from the Upland Entry Level of Environmental Stewardship estimated at £1.3 million). Instead, the scheme will focus most of its resources on the upper level which will be targeted to SSSIs and other nationally important areas. A smaller resource will be allocated to the new middle tier available outside these areas.

3.37. Overall, this suggests that, firstly, there will be a reversal in the earlier reduction in subsidies received by moorland owners and graziers and, secondly, that the relative value of moorland as a source of agri-environment funding will also increase significantly. **In other words, moorland farmers will receive more public money and for most of them moorland will be increasingly valuable as a source of income.** That is not to say that they will be richer as a result – farming costs are also increasing and other sources of farm income (livestock sales and diversified enterprises) may fall.

3.38. It is also likely that Government will seek to gain more benefit from its spending on Countryside Stewardship. It is widely regarded that the ESA scheme ‘held the line’ against environmental losses but did little to enhance the moorland habitat and landscape (excluding the capital payments for activities such as hedge laying which have had a lasting positive impact). Higher Level agreements under Environmental Stewardship have probably added more value where supplements (such as for bracken control, cattle grazing or moorland rewetting) have been involved, but, arguably, the large sums paid for the scheme options to maintain and restore moorland (estimated by this study at over £700,000 a year on Exmoor) have, at best, simply maintained the status quo.

3.39. The likely pace of the transition to Countryside Stewardship is shown in **Figure 14** which shows the proportion of moorland which comes out of Environmental Stewardship in each year from 2016. It is assumed that most moorland will be eligible to transfer into the upper tier of the new scheme. This shows that most moorland will remain in Environmental Stewardship until 2020 but that large areas will be eligible to move across to the new scheme in 2020, 2021 and 2023 (dependent on the review of Countryside Stewardship due in 2020).

3.40. The challenge for Natural England, which will administer Countryside Stewardship with fewer administrative resources than it has had in the past, is how to increase the environmental benefits delivered from agreements under the new scheme. As noted earlier (para. 3.5), the Biodiversity 2020 target of 50% of SSSIs in Favourable status will be a key driver of intervention. This might be done by tightening the existing management prescriptions (for instance being more

Figure 13. Farm subsidy entitlements 2014 & 2015

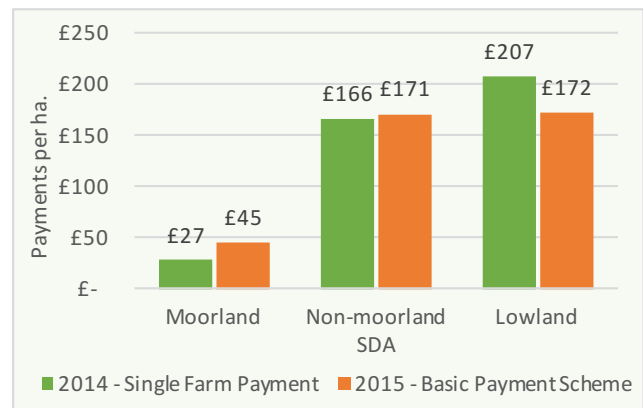
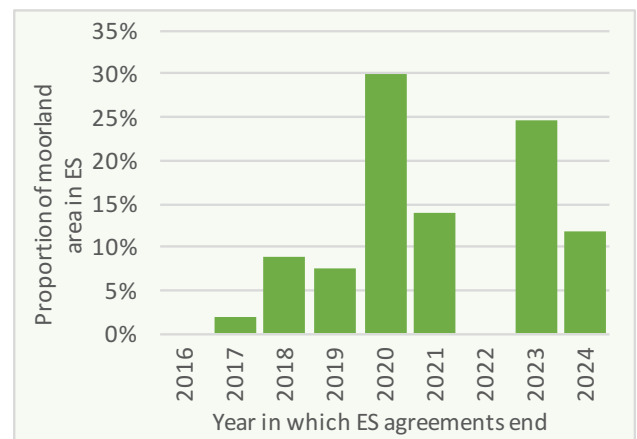


Figure 14. Moorland areas due to come out of Environmental Stewardship



Source: Analysis of NE data by this study

specific about the stocking densities required from different types of stock in each month of the year or making payments conditional on target areas of moorland being successfully burned).

- 3.41. There is also merit in examining how the social and economic value of agri-environment payments could be enhanced (the estimated £3 million paid annually through Environmental Stewardship agreements on moorland being a significant input to the local economy – para. 2.54). Under the ESA and during the early years of Environmental Stewardship, significant sums were paid for capital work such as hedge laying. This was directly recycled in the local economy through contractors, helping to stimulate countryside management businesses. Capital payments have been much less significant in recent years and there is less to show for the large revenue payments that farmers have received and which have probably been spent on general farming expenses in the regional or national economy.
- 3.42. Moorland owners and graziers consulted during this study would welcome two changes in the way agri-environment agreements are delivered. Firstly, they would like to see long term consistency (over at least 25 years) in the objectives and requirements of schemes in order to justify their commitment to long term changes to their businesses (for instance to livestock breeds and housing). Secondly, they would like to be given more flexibility and discretion in the detailed management decisions that they need to take to achieve the changes set out in their Scheme agreements, recognising that they have better experience about what works on their land than standard prescriptions dictated ‘from above’ that take little account of local conditions.
- 3.43. The first of these desires may be difficult to implement fully in view of the relatively short term (10 year) cycle of funding through the EU Rural Development Programme, although it should still be the case that Natural England will maintain consistent conservation goals. The second desire, of farmers being given more flexibility over how they achieve the overall goals set for their land, has been recognised by a pilot scheme that will be developed during 2016. Natural England has asked the National Park Authority to set up and monitor a trial of ‘outcomes focussed’ management agreements on two areas of moorland. Discussions are taking place with the moorland owners and graziers on Winsford Hill and Porlock Common to agree a vision for what should be achieved on these areas, and then devising the stocking and management regimes that will deliver this.
- 3.44. A lack of labour and co-ordination amongst moorland graziers during key periods such as the swaling season has also been identified as a constraint on delivering agri-environment agreements. The successful piloting of four moorkeeper posts through the Heart of Exmoor Scheme provides a practical way of addressing this. Funding (to the tune of around £6,000 per post per year, on a one-day-a-week basis) is an issue which might be addressed through agri-environment agreements (each agreement holder agreeing to set aside a proportion of their payments to fund the post). There is an opportunity for the outcomes focussed pilot to explore this.

Government’s priorities for National Parks

- 3.45. Before assessing recent policy decisions relating to National Parks, it is worth noting that the continuing cuts in public spending will be felt in a number of ways on Exmoor’s moorland. The national agencies such as Natural England, Historic England and the Environment Agency are facing tough spending reviews (Defra is facing 15% resource saving in real terms by 2019-20, delivered through increased efficiencies). It has already been announced that the budget for Countryside Stewardship will be less than that for its predecessor Environmental Stewardship (with 40% fewer agreements following the removal of the entry level tier). Reductions in Natural England’s budget are likely to mean less staff support and greater reliance on partners and applicants for the preparation of Countryside Stewardship agreements.
- 3.46. In the context of these cuts, the circumstances facing National Parks are more positive. In the November 2015 spending review, Defra announced that its grant to National Park Authorities in England would be maintained for the rest of the parliament (following substantial reductions in the grant over the last five years). In March 2016, Defra, together with National Parks England,

published an 8-Point Plan for England's National Parks³⁵ that replaces the earlier Government Circular for National Parks 2010 to 2015³⁶. **This Plan includes a broad range of commitments, many of which are relevant to Exmoor's moorland, and should provide 'hooks' for initiatives involving moorland over the period of Exmoor's next National Park Management Plan** (the revision of the Partnership Plan 2012-2017 is taking place during 2016).

Box 8. The 8-Point Plan for England's National Parks, March 2016

Inspiring Natural Environments	<p>The 8-Point Plan contains a number of commitments that are likely to be relevant to Exmoor's moorland, as follows:</p> <ol style="list-style-type: none"> 1. Connect young people with nature <ul style="list-style-type: none"> • Double the number of young people to experience a National Park by 2020 • Prepare a new package of teaching materials for schools • Engage with over 60,000 young people per year through schools visits by 2017/18 2. Create thriving natural environments <ul style="list-style-type: none"> • Champion integrated management of the natural environment, showcasing the benefits that designated landscapes can bring
Drivers of the Rural Economy	<ol style="list-style-type: none"> 3. National Parks driving growth in international tourism <ul style="list-style-type: none"> • Promote NPs as world-class destinations to visitors from overseas and the UK • Increase annual visitors from 90m to 100m, generating £440m for local businesses 4. Deliver new apprenticeships in National Parks <ul style="list-style-type: none"> • Double the number of apprenticeships in National Park Authorities by 2020 5. Promote the best of British food from National Parks <ul style="list-style-type: none"> • Deliver more Protected Food Names for National Park products, increasing exports • The Government will celebrate National Park produce
National Treasures	<ol style="list-style-type: none"> 6. Everyone's National Parks <ul style="list-style-type: none"> • Encourage more diverse visitors to National Parks • Promote volunteering in National Parks 7. Landscape and heritage in National Parks <ul style="list-style-type: none"> • Work with the Heritage Lottery Fund to achieve their objective of encouraging more fundable projects in the Natural Heritage sector • Enhance people's involvement in the interpretation of the historic environment and natural beauty in National Parks • Tell the story of cultural landscapes in England's National Parks 8. Health and wellbeing in National Parks <ul style="list-style-type: none"> • Promote innovative schemes for National Parks to serve national health • Realise the immense potential for outdoor recreation in National Parks

- 3.47. National Park Authorities, including Exmoor's, are responding positively to the Government's encouragement for them to take a stronger role as champions of private enterprise that supports the purposes of the designation (i.e. pursuing the socio-economic duty contained in the designation). Exmoor National Park Authority is increasing its understanding of the nature and 'levers' in the economy³⁷ and is seeking to work with the Heart of the South West Local Enterprise Partnership³⁸. **There is a challenge for how this work to create a more networked rural economy can be translated into more economically connected and vibrant moorland.**

³⁵ Defra (2016).

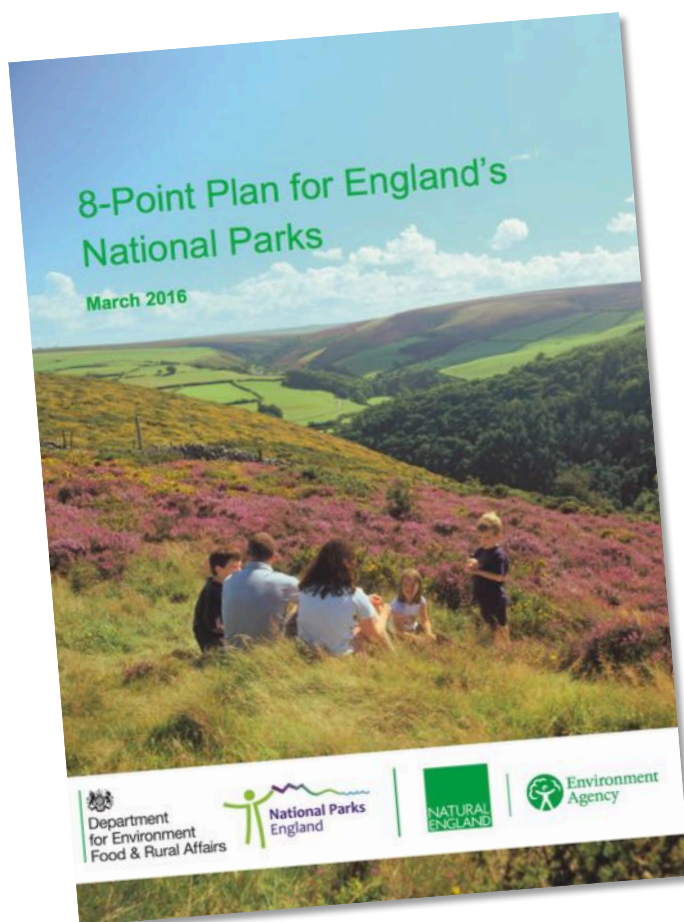
³⁶ Defra (2010)

³⁷ nef (2007)

³⁸ NPE (2015)

Ways of working – partnerships and public involvement

- 3.48. Partly as a result of resource constraints, but also as a means of delivering better and more joined-up policy, there is growing emphasis on public bodies working together in partnerships and on the public sector seeking to work more closely with the voluntary and business sectors. In the health and social care sectors, the concept of ‘co-production’³⁹ is being increasingly used to promote a more inclusive way of working between professionals and citizens, with the balance of influence shifting from the provider towards the user of services (‘bottom up’ rather than ‘top down’).
- 3.49. These approaches are already evident in the work that has been taking place on Exmoor’s moorland over the last ten years. The National Park Authority calls its statutory management plan the ‘Partnership Plan’, backed up by its ‘Partnership Fund’, and it seeks to work closely with its communities, businesses and organisations like The Exmoor Society. A notable feature of the Heart of Exmoor Scheme has been the way it has sought to involve volunteers in better understanding and care for moorland heritage, making good use of the specific skills and knowledge that volunteers can provide and giving them a strong personal stake in the work.
- 3.50. Nevertheless, there is still a sense that many of the objectives for Exmoor’s moorland are imposed from higher echelons of government or from outside the area and that the people who are the local providers (i.e. farmers) or consumers (local residents and visitors) are not sufficiently involved in deciding priorities or means of delivery. The objectives for SSSI condition and for agri-environment agreements are cases in point. **Addressing the sense of powerlessness and ‘not being listened to’ that many moorland owners and managers feel will be important in the future and the concept of ‘co-production’ might be examined as a means of doing this.** There is perhaps a role here for bodies like The Exmoor Society, which has a large membership of people who care about the future of moorland, to represent the broad public interest on these matters.



The 8-Point Plan, published by Defra with National Parks England in March 2016, includes a range of commitments that should enhance the use and appreciation of Exmoor’s moorland (see Box 8)

³⁹ See for instance Slay J and Stephen L (2013).

4. Challenges and policy choices

- 4.1. This chapter links together the earlier findings on what has been happening to Exmoor's moorland since 2004 and the forces that are now acting on the moorland. It focusses on the changes that are taking place now or are likely to take place in the near future and the choices that need to be made to secure the best future for the moorland.
- 4.2. The commentary and conclusions in this chapter are those of the author who has sought to focus attention on the difficult issues and potential solutions facing Exmoor's moorland. These are drawn together as a set of themed recommendations in the following final chapter.

Focussing on the moorland's special qualities

- 4.3. The 2004 report used the prism of the moorland's special qualities as a way of examining the state of the moorland as a whole. This next section takes each of the key special qualities in turn. It summarises their current condition and looks at the future threats and opportunities to this condition. Any significant policy or management choices that should be addressed are then identified. The special qualities covered are as follows:
- The experiential qualities that people receive from the moorland landscape
 - Wildlife, habitats and biodiversity
 - Natural resources of soil and water
 - Cultural heritage
 - Farming and traditional forms of moorland management
 - Recreation, tourism and the wider economy



Red deer hinds © ENPA

Experiential qualities that people receive from the moorland landscape

- 4.4. The experiential qualities that people receive from landscapes include their sense of place, beauty and history, inspiration, stimulation and/or tranquillity as well as specific leisure activities (the latter covered further below)⁴⁰.
- 4.5. The following table, which is repeated for each of the special qualities, summarises the current condition of Exmoor's moorland and the threats and opportunities facing the special quality.

Current condition	
<ul style="list-style-type: none"> • Openness (long views) and wildness remain primary public associations and are highly valued by residents and visitors alike. New audiences, especially young people and families, have been introduced to these qualities through the Heart of Exmoor Scheme • The tranquillity (e.g. absence of traffic noise and visual intrusions) that can be experienced is becoming increasingly precious in people's busy lives • Patterns of landscape change appear to be complex but there are strong local perceptions and some empirical evidence that scrub and bracken are encroaching in many areas, reducing the feelings of scale and openness • Recent increases in knowledge / interpretation have focussed on the functional uses of moorland, possibly making moorland feel intellectually 'busier' and more complex 	
Threats	Opportunities
<ul style="list-style-type: none"> • Continuing encroachment of scrub and bracken, likely to be concentrated on steep slopes where grazing pressure is low, risk diminishing the open character and scale of these areas • There remains a lack of baseline analysis on the condition of the moorland landscape and there has been no systematic approach to measure changes in landscape character and condition (currently being addressed in part through analysis of vegetation change) • Major development (principally but not exclusively outside the National Park) remains a threat to the visual setting of moorland, particularly (because of topography) the southern moors 	<ul style="list-style-type: none"> • Take advantage, and build on the legacy, of raised public awareness from the Heart of Exmoor Scheme through initiatives such as Exmoor's Dark Night Skies status • Promote spiritual and physical experiences of the moorland landscape that can reduce people's stress and improve their wellbeing and self-confidence (building on the NPA's 'Moor to Enjoy' project 2015-2017) • Develop better understanding of landscape change, particularly the flux between moorland, woodland and farmland • Use the 'rewilding' debate to develop consensus, leading to action, over how much change in landscape character is desirable • Use analysis of key views into and out of moorland to identify scope for expanding the large scale open character to surrounding farmland (e.g. removal of fences)

⁴⁰ For further explanation of the value of these qualities see Research Box (2009).

Policy choices for the experiential qualities of landscape

- 4.6. It seems that landscape change around the lower and steeper margins of much of the moorland is inevitable. Growth of bracken and gorse on slopes that livestock find more difficult to access and encroachment of birch and rowan from nearby woodland are likely to be increasingly costly to resist. The uncertain regulatory approval for the bracken herbicide Azulox adds to this difficulty.
- 4.7. It needs to be remembered that landscape character is not fixed and that less than a century ago areas now classified as moorland were being cultivated to crops like potatoes. Important decisions are needed about how much change should be resisted or whether, as proponents of large scale 'rewilding' are suggesting, this change towards a wilder and more diverse landscape should be embraced and a new vision for the moorland landscape should be developed.
- 4.8. Public dialogue needs to be an essential part of this process. Exmoor's landscape engenders deep passions from the many people that treasure it and, for many of them, change is likely to be seen as a threat rather than an opportunity. The recent media coverage of George Monbiot's vision for Exmoor (para. 3.21) provides a timely way of starting this dialogue.
- 4.9. The National Park Authority's State of the Park reporting, currently being completed to inform the next Partnership Plan for the National Park, provides the means to bring together existing knowledge about changing landscape character and condition on Exmoor and inform debate. While it may be too late, for this iteration of the State of the Park report, to prepare baseline indicators of landscape character on moorland (based on vegetation mapping and fixed point photography), this must surely now be a priority for the future. Artists' visualisations and photomontage images of moorland views in the future⁴¹ can also be powerful ways of stimulating discussion.



The wide open expanse of Exe Plain from Furzehill Common © R. Deane

⁴¹ See for instance LUC (2011) which uses a series of photomontage images to imagine landscape change on Exmoor and other upland landscapes under changed livestock grazing regimes.

Wildlife, habitats and biodiversity

Current condition	
<ul style="list-style-type: none"> SSSI condition is improving due to rewetting of mires (the Exmoor Mires Project) and higher level agri-environment agreements Habitats and species are changing in response to the warming climate and changes in grazing pressure (which are complex, increasing or being maintained in some areas and declining in others) Improved evidence of past changes (e.g. on Molland Moor) shows the extent to which some moorland areas degraded during the 20th century and the potential for restoration 	
Threats	Opportunities
<ul style="list-style-type: none"> The warming climate makes further, possibly accelerating, habitat and species change inevitable The grazing regime required by conservation bodies to achieve biodiversity goals seems unachievable / unviable from a farming point of view Lack of labour is a key constraint on heather management by swaling Insufficient use is being made of biological monitoring data collected by organisations like the Exmoor Natural History Society, although this may be addressed through the Wildlife Research and Monitoring Framework⁴² 	<ul style="list-style-type: none"> Develop the moorland rewetting programme (Mires Project) to improve resilience of priority sites to the impacts of climate change Use the ‘rewilding’ debate to develop consensus, leading to action, over how much habitat change (e.g. on the moorland fringe) is desirable Expand the Graze the Moor Project to other moorland areas (e.g. high grass moor, coastal heath etc) to demonstrate best practice and use the ‘outcomes focused’ pilot to deliver this Develop funding model using agri-environment payments to appoint Moorkeepers to all large moorland blocks

Policy choices for wildlife, habitats and biodiversity

- 4.10. A similar choice exists for biodiversity as that outlined above for landscape character, prompted by ecological responses to climate change and to the rewilding debate. The choices are perhaps starker for biodiversity because of the Government’s commitment to maintaining the international importance of the Exmoor Heaths Special Area of Conservation and the challenging targets that have been set for its ecological condition. If, as seems likely, there is a determination to ‘hold the line’ for the most important sites, this will have implications for the debate about landscape change and also for the management of natural resources (below). It also suggests that, faced with even more challenging climatic conditions, new and probably more costly (to the public exchequer) ways will need to be found to achieve the targets.
- 4.11. Another, perhaps more pertinent, choice is what practical means should be used to deliver the biodiversity goals and how far they should take account of the economic and social realities of farming and the public’s willingness to pay for goods and services through the market. The traditional systems of moorland management that gave rise to the ideal dwarf shrub heath and mire habitats (if they ever existed in a pure form) are becoming less and less viable without growing levels of public subsidy. It is possible to see the future of moorland management on Exmoor as a choice between prescription-rich regimes that are reliant on Government funding and prescription-light regimes that are more reliant on the market’s willingness to pay for services. This politically polarised choice might be summarised as ‘conservation gardening dictated by public policy’ versus ‘ecosystem farming dictated by market forces’.
- 4.12. Lost from the middle ground between these two choices is the notion, which has formed the basis for agri-environment policy over the last three decades, that environmentally sensitive farming

⁴² ENPA (2014)

provides social and cultural benefits delivered by family-run farms continuing generations of traditional practices. The cost of adopting either of the extreme positions would seem to be high and with risky outcomes. But, if the middle ground of a partnership between conservationists and farmers is to continue to be sought, more work is needed to ensure that biodiversity goals can be achieved in practical and cost efficient ways, particularly in view of the declining budgets of public bodies. This subject is returned to again below under the heading of farming.

Natural resources of soil and water

Current condition	
<ul style="list-style-type: none"> Improving condition of moorland soils and water due largely to the 1,400 ha covered by the Exmoor Mires Project 	
Threats	Opportunities
<ul style="list-style-type: none"> Warming temperatures and increased risk of summer droughts threaten to dry out wetland habitats, oxidising peat soils and reducing river baseflows Disquiet amongst some moorland owners whose land has been rewetted over its impact on their access and the payments they have received is undermining the 'good news story' The long term future (10 yrs +) of rewetted mires may be uncertain when current Higher Level Scheme agreements come to an end 	<ul style="list-style-type: none"> Develop evidence of long term benefits to water supply, reduced flood risk and carbon storage to lever new 'payments for ecosystem services' funding (but other areas with larger catchments and deeper peat soils will be competing for the same funding) Undertake further research and consensus building on the changes needed to favour more adaptive management that anticipates climate change

Policy choices for natural resources

- 4.13. The considerable activity that has taken place through the Exmoor Mires Project is very largely an unforeseen (by the 2004 report) success story. Improved biodiversity and greatly enhanced archaeological knowledge have been associated benefits of the work to improve water quality and storage on Exmoor's moorland.
- 4.14. While not wishing to undermine these achievements, it is nevertheless relevant to ask whether and how the priority given to water and peat soils on Exmoor should be maintained and developed. So far, the project has relied on capital costs met by South West Water, Natural England and the Environment Agency, with ongoing payments to moorland owners coming from the Higher Level of Environmental Stewardship (and significant 'spade work' by volunteers to maintain the peat and wooden dams).
- 4.15. Using the Water Framework Directive measures of ecological and chemical status, there does not appear to be a major problem with water quality at the present time. South West Water has an incentive to prevent peat discoloration which is expensive to remove from public water supplies but this is not a significant issue for water entering its Wimbleball Reservoir.
- 4.16. Downstream flooding is likely to be a growing issue as stormier weather events become more common and periods of drought will increase water stress in wetland habitats, suggesting a growing need to focus on water storage within moorland soils. The benefits provided by reduced flood risk are mainly gained downstream of the National Park (for instance Exeter) and monetising these benefits is notoriously difficult to calculate and even more difficult to recover from the beneficiaries (households and businesses in the flood plain). These would be worthy challenges for the Exmoor Mires Partnership to take up, should it choose to do so.
- 4.17. The development of a market to support peat conservation in the UK (through the IUCN Peatland Code) could provide another source of funding for mire management on Exmoor. However, it

remains to be seen how it would compete in a competitive market against similar projects in the much deeper peat soils of the uplands of Wales, the North of England and Scotland. It has to be recognised that Exmoor’s store of soil carbon is relatively small.

- 4.18. A challenge for the conservation of water and soils on Exmoor is therefore whether a clear rationale can be made to continue to extend mire rewetting based on payments for the broad range of ecosystem services delivered, supporting existing public policy commitments such as those for biodiversity and water quality.

Cultural heritage

Current condition	
<ul style="list-style-type: none"> • Knowledge of past environments and human uses of the moorland (particularly in prehistory) is much greater than 10 years ago, much of it arising from research funded through the Mires Project. It is now known that the paleo-ecological record preserved in moorland soils is nationally significant • Public involvement in archaeological exploration and protection has grown through well-publicised projects run by the Heart of Exmoor Scheme (such as Dig Porlock and the Longstone Landscape Project) • Many of the most significant archaeological sites are scheduled which affords a measure of protection. The condition of some of the Scheduled Monuments has been improved. The majority of historically significant sites are not scheduled and their protection relies on a range of other measures. • The recent cultural associations and traditions associated with moorland have perhaps not received the same degree of attention as the archaeological exploration of prehistory 	
Threats	Opportunities
<ul style="list-style-type: none"> • The end of the Heart of Exmoor Scheme risks the increased community involvement being dissipated – there is a need to maintain momentum • Increased spread of bracken (and gorse) threatens to obscure and damage buried and low archaeology 	<ul style="list-style-type: none"> • Capture knowledge and celebrate cultural associations of Exmoor’s moorland (e.g. legends, literature, traditional uses such as food and fuel) • Encourage and facilitate more community involvement through local history groups and work with schools (curriculum materials, awards and competitions) • Continue to use funding for archaeological mitigation work (e.g. from the Mires Project) on topics such as the paleo-ecological record present in moorland soils

Policy choices for cultural heritage

- 4.19. There is no obvious ‘either or’ choice facing cultural heritage on moorland. A decision is needed by the National Park Authority and its partners about whether and how it should maintain the momentum that has been achieved in public involvement and appreciation of heritage through the Heart of Exmoor Scheme (possibly involving another application to the Heritage Lottery Fund). Given the recent improvements in knowledge about the moorland’s prehistory, there might be merit in focussing attention on the medieval period of moorland settlement and farming which laid the foundations for current patterns of landuse on the moorland and moorland fringe.
- 4.20. There are new opportunities to capture and share some of the historically recent but now declining cultural associations that moorland has with local communities. There is an important role for bodies such as The Exmoor Society (within its archives) and local history societies. This could possibly involve the researching and publication of a microstudy by The Exmoor Society along the lines of those produced under Victor Bonham Carter, and could provide the theme for a series of talks and guided walks.

Farming and moorland management

Current condition	
<ul style="list-style-type: none"> • Livestock grazing and associated moorland management continues to be the most effective way of delivering integrated (environment, social and economic) outcomes that meet current objectives for moorland • Moorland farmers have shown strong resilience to the changes in agricultural policy and markets. Many are optimistic about their future and younger generations (in their 40s) are taking over the reins from their parents • Nevertheless, the viability of moorland grazing remains fragile and the pool of skills and experience amongst moorland owners and graziers is small 	
Threats	Opportunities
<ul style="list-style-type: none"> • Conservation regimes from the ESA onwards have tended to incentivise investment in in-bye farming, detaching many farms from their moorland • Uncertainty over future of agri-environment income with switch to Countryside Stewardship. Need for long term (25 yr) certainty in order to invest in suitable farming systems • Bovine tuberculosis remains a significant threat to cattle farming 	<ul style="list-style-type: none"> • Higher moorland payment in Basic Payment Scheme will make having moorland more attractive (movement of subsidy up the hill – but without requirement for management) and might provide justification for investment in labour and skills (e.g. Moorkeeper posts) • The piloting of outcome-focused management agreements should give more flexibility and encourage longer term commitments • More can be done to enhance the social and economic impacts arising from the large agri-environment payments received by moorland farmers

Policy choices for farming and moorland management

- 4.21. Reference has already been made to the tensions there are between conservation objectives (for biodiversity and water) and practical concerns of farmers who are expected to implement them. Great progress has been made on establishing common ground on Exmoor since the 1980s and it would certainly be an exaggeration to say that farmers and conservationists are at loggerheads over how moorland should be managed. But there remain deep seated frustrations from moorland owners and graziers that conservation objectives are developed without a sufficient understanding and 'common sense' over how they will be delivered on the ground. The case of winter grazing of cattle, which is discouraged from conservation management, but without which farmers cannot maintain hardy 'moorland-ready' cattle that are properly adapted to moorland grazing, is a case in point.
- 4.22. There are reasons for optimism in both the Graze the Moor Project and in the outcomes focussed pilot of Countryside Stewardship delivery which will be led by the National Park Authority. Both of these deserve a fair hearing and should lead to better moorland management. There is merit, if funding can be found, in extending the Graze the Moor Project from Molland Moor to other moorland areas which have different characteristics such as a high grass moor and an area of coastal heath.
- 4.23. However, the aim must surely be to listen to and trust farmers more in how they deliver conservation objectives, borrowing from the concept of *knowledge co-production* being used in the health service (para. 3.48). The overall goal of reintegrating moorland management with profitable in-bye farming, producing high quality livestock for the food chain at the same time as enhancing the special qualities of moorland, remains relevant and just about in reach.

Recreation, tourism and the wider economy

Current condition	
<ul style="list-style-type: none"> • The number of recreational users and their impacts appear relatively stable and sustainable • Organised events for families such as Bogtastic and the Exmoor Pony Festival have introduced new people, particularly families, to moorland • Anti-social activities are generally contained, but tend to be concentrated at certain sites (e.g. Dunkery Beacon and the Froude Stone on West Anstey Common) • The environmental impacts and potential economic benefits of large organised ‘challenge’ events affecting moorland needs to be kept under review 	
Threats	Opportunities
<ul style="list-style-type: none"> • Moorland may be becoming less ‘hospitable’ to walkers and riders due to bracken and gorse, ticks and wetter soils • Management of impacts at ‘hotspots’ needs to be sensitive and proportionate, avoiding remedial action (e.g. fencing and signage) that reduces landscape quality 	<ul style="list-style-type: none"> • Build on the positive legacy of the Moorland Landscape Partnership Scheme, familiarising young people and families to moorland experiences • Encourage business involvement in Caremoor for Exmoor and demonstrate benefits of investment in moorland management • Pursue other economic ways of engagement – moorland walkers/pony B&B. Specialist holidays e.g. deer and ponies, archaeology, corporate training and events

Policy choices for recreation, tourism and the wider economy

- 4.24. The recreational sector offers probably the greatest opportunity for increasing the economic contribution that moorland makes to Exmoor in ways that are consistent with its special qualities. There is certainly no evidence that current levels of recreation are harming moorland (accepting that impacts at hotspots require continuing attention). However it is difficult to monetise the key recreational attractions of moorland such as the ponies, deer, wild open spaces and evidence of history when access to all these is free. The evidence from visitor payback schemes (such as Caremoor for Exmoor) is that they are better at improving visitors’ appreciation of what National Parks offer than raising large sums to pay for their conservation⁴³.
- 4.25. Good work has been done by National Park Authorities in better understanding and promoting the different recreational experiences National Parks can provide (such as through the ‘Breathing Spaces’ campaign). There is an opportunity to re-examine the experiences that Exmoor’s moorland offers within the context of the whole of the National Park (ranging from watching wildlife from the comfort of a car to physically and mentally challenging yourself in a forbidding environment) and to build new and added-value paying activities around these.
- 4.26. In a broader economic context, concepts of win-win ‘ecological enterprise zones’⁴⁴ are worthy and certainly to be encouraged but the options to develop them on moorland are likely to be limited, requiring significant pump-priming investment and with a relatively high risk of failure. There is much more potential in stimulating the heritage economy across the whole of Exmoor and joining up the tourism (and countryside management) business opportunities that exist on moorland, woodland, high nature value farmland, the coast and rivers.
- 4.27. The Heart of the South West Local Enterprise Partnership (LEP) recognises the importance of the quality of the environment to the tourism economy but appears less aware of wider benefits to

⁴³ Reed et al (2013).

⁴⁴ O’Riordan (2015)

businesses and their employees⁴⁵. Dartmoor and Exmoor National Park Authorities are developing a proposal to Defra and the LEP for using the two National Parks as test beds for innovative approaches to boosting rural productivity. The challenge for the National Park Authorities, with the LEP, is to ensure that economic growth does not overlook or undermine the conservation of their moorland landscape, but takes advantage of the potential it offers.



Track enclosed by beech hedgebanks leading to moorland near Ilkerton Ridge © R. Deane

⁴⁵ Heart of the SW Local Enterprise Partnership (2014)

5. Overall conclusions and recommendations

- 5.1. This final chapter draws together the evidence and analysis presented in the report. It seeks to set out a new agenda for action that can unite all the organisations and individuals who care for and make use of Exmoor's moorland. It starts by summarising the positive gains that have been made since 2004 and the gaps and opportunities that exist for the future. It then makes 15 recommendations, structured under five themes.

Achievements since 2004

- 5.2. The National Park Authority's decision in 2004 to use the Golden Jubilee celebrations of the designation of the National Park to examine the state of its most precious asset – its moorland – has been a catalyst for considerable action over the last decade. The Exmoor Society's *Moorlands at a Crossroads* report was influential and many of the initiatives that have taken place have been responses to the recommendations made in that report. Compared to the decades preceding 2004, Exmoor's moorland has been a focus for much research, debate, public enjoyment and education.
- 5.3. Key achievements and positive changes can be summarised as follows:
- **Appreciation and involvement in moorland conservation** amongst people living close to Exmoor has increased, involving local schools, community local history groups and new volunteers through initiatives such as the Heart of Exmoor landscape partnership scheme. There is no evidence of change in the numbers of recreational users but the quality of many people's experiences of moorland is likely to have improved through greater familiarity and knowledge.
 - **Frictions over moorland management** between farmers and statutory bodies have been reduced and remaining points of difference are being addressed (although deep-seated frustrations remain) through initiatives such as the Moorland Initiative Board, the Hill Farming Network and Graze the Moor project. There is a growing willingness on all sides to explore and adopt management practices that suit Exmoor's unique conditions rather than prescribing a national blueprint.
 - **Knowledge of the moorland's prehistory** has improved significantly through research and community involvement, helping to paint a far richer picture of the long history of human influence on the moorland landscape and of the way the climate and vegetation cover has changed over the last two millennia.
 - **The ecological condition** of over 1,400 ha of moorland has been enhanced through a programme of rewetting by the Exmoor Mires project and it would appear that the biological condition of many other areas of moorland SSSIs has improved (although Natural England's condition assessment data is difficult to interpret due to changes in the methodology, resulting in its data, confusingly, showing an increase in the area classified as in Unfavourable Condition).

Gaps, barriers and opportunities

- 5.4. Notwithstanding these achievements, some of the issues that faced moorland in 2004 have not yet been adequately addressed and there remain significant future challenges and opportunities that should be planned for. These gaps and barriers can be summarised as follows:
- There has been a lack of systematic work to **monitor changes in vegetation and landscape condition**. This is particularly significant given the growing concern about the likelihood of accelerating environmental change and the impacts this will have on wildlife, the landscape and people's experience of moorland. In 1997, the National Park Authority prepared a Moorland Research Strategy⁴⁶ which included a commitment to a ten-year rolling programme of monitoring. A planned approach is being taken to researching Exmoor's wildlife and the historic environment⁴⁷ but neither address changes in landscape character or quality or monitor indicators of environmental change.
 - Exmoor's relatively small and fragmented moorland area makes it a particularly precious resource. Since 2004, large-scale action to **restore moorland ecology and extend its landscape character** has been limited (excepting the ongoing moorland rewetting programme). Concerns about the practical difficulties and expense means that reversing some of the losses of moorland experienced in the 20th century seems now to be a low priority amongst organisations on Exmoor. This is despite strong national policies promoting greater ecological resilience and enhancement.
 - As noted above, dialogue and trust between farmers and public bodies has improved and there is a willingness to develop workable solutions. However, there is still **a gap between aspiration and practical delivery** on management issues such as appropriate grazing levels, moorland rewetting and control of pests and diseases. The viability of many of the traditional management practices, particularly swaling, remains fragile. It is regrettable that a significant increase in the payments received by moorland owners and graziers (including more than a tripling in agri-environment payments since 2004) has not secured more stable and effective agricultural management. Open minds will be needed on all sides, involving the potential use of new technologies, local experimentation and more effective use of existing funding.
 - There are exciting developments in the way that the environment is being recognised as a key determinant of **people's health and wellbeing**. In the decades to come it is likely that areas such as Exmoor will have increasing value as reservoirs of natural beauty and inspiration in the context of a busier and more intensively managed countryside. However, despite its potential to provide character-building and health-improving experiences, moorland is often regarded by people as inaccessible and forbidding. These perceptions and physical barriers need to be overcome through organised activities that establish long-lasting personal experiences of moorland.
 - The moorland landscape continues to be a major attraction for visitors to Exmoor and it is an environmental asset that draws people and businesses to the south west region as a whole. Nevertheless, **recognising and strengthening its economic value** continues to be a challenge. In this regard, Exmoor's moorland cannot be viewed on its own and it needs to be more strongly connected through the businesses that manage and use it, increasing its contribution to wider economic activity and renewal.

⁴⁶ ENPA (1997) Moorland Research Strategy 1997-2002

⁴⁷ ENPA (2014) and ENPA (2010) respectively

Recommendations for future action

- 5.5. It is suggested that five themes should set the agenda for Exmoor's moorland over the next decade and beyond. Each of these themes contains three recommendations that it is hoped will be considered by the organisations and individuals that care for Exmoor's moorland.

A. Planning for environmental change

- 5.6. Environmental change is occurring and the pressures for change will accelerate as a result of the warming climate and also economic changes in farming. These are likely to lead to scrubrier and more diverse vegetation on moorland fringes and to drier and more fragile wetlands at their core. How far this change is resisted and how far it is embraced is an important topic for informed public debate in which many people have a valid stake.

A.1 Informed public debate

The change that is already occurring should be used to stimulate dialogue about the future of Exmoor's moorland. The debate should cover the full spectrum of possibilities from expanded areas of grazed heathland landscape to large-scale relinquishment of moorland to nature. Local media should be involved in the process, allowing the widest range of people to contribute. The debate should be enlightened by new illustrative material (for instance photomontages) comparing different trajectories of change.

A.2 Tracking change

It is essential that a process is established to monitor changes in landscape character, habitats and natural resources on moorland. This is now being started with aerial photography analysis of vegetation change since WWII (results expected in summer 2016) and should be supplemented in future by fixed point photography. Both should be regularly reassessed through the State of the Park reporting. A repeat of the earlier surveys of public perceptions of the moorland landscape should be undertaken to monitor any changes in how the landscape is valued. This work should develop a better understanding of the capacity and sensitivity of the moorland landscape and habitats to withstand change. Better co-ordination and sharing of monitoring data will be needed between organisations. The National Park Authority's Wildlife and Historic Environment Research and Monitoring Frameworks⁴⁸ will not achieve this on its own and a new strategy similar to the Moorland Research Strategy prepared by the National Park Authority in the 1990s⁴⁹ is needed.

A.3 Spatial planning

There will be a need to examine impacts and opportunities for specific areas of moorland, including the potential to enhance the moorland fringe landscape and to create ecological links between moorland blocks. The 20 moorland unit descriptions were ambitious and produced good analysis but preparing them was onerous. It is suggested that a simpler approach is taken in future, using the five moorland types originally developed by Geoffrey Sinclair⁵⁰ (the Coastal Heaths, Northern Heather Moors, the Royal Forest, Southern Heather Moors and Brendon Heaths). The 'Section 3' maps of moor and heath⁵¹ should be updated to record any changes in the moorland area since the current maps were prepared in 1990.

⁴⁸ ENPA (2014) and ENPA (2010) respectively

⁴⁹ ENPA (1997)

⁵⁰ Sinclair, G (1966)

⁵¹ These maps are referred to as 'Section 3' maps because they are a statutory requirement for all National Park Authorities under Section 3 of the Wildlife and Countryside (Amendment) Act 1985. They are required "to prepare maps of their parks showing areas of mountain, moor, heath,

B. Deepening public involvement

- 5.7. Public involvement in better understanding and managing moorland heritage has been particularly strong over the last ten years. The shrinking public sector both requires and provides positive opportunities for local communities and interest groups to take a more active role in aspects of public service delivery. There are new generations to be inspired and new residents who will be looking for ways to get involved. The key target audiences should remain the residents in the National Park and in nearby local towns (e.g. Minehead, Tiverton, Barnstaple, Bridgwater) and villages. The objective should be to increase people's personal stake in moorland, giving them opportunities to help shape the future, while also ensuring that regional and national interests are served.

B.1 An expanded role for the voluntary and charitable sector

The last ten years have seen local charities such as The Exmoor Society, Exmoor Trust, Moorland Mousie Trust and Exmoor Pony Society increase the value of their work on moorland. They have shown that they can harness local resources and interests, including through specialist knowledge and volunteering. These, and other bodies like them, should be given an increased role, particularly in enhancing public understanding and enjoyment of moorland. New ways of involving these bodies should be explored (beyond the tried-and-tested use of grants) such as through service level agreements to provide monitoring services, provide apprenticeships to young people or deliver walking for health initiatives. The new 'Get Involved' project on Exmoor, being led by the National Park Authority with its partners, might provide one of the vehicles to do this.

B.2 Maintain and enhance educational links

The Moorland Classroom project in the Heart of Exmoor Scheme was one of its most inspirational activities. Following the ending of this Scheme, it is hoped that the National Park Authority with its partners, such as the Field Studies Council and local schools and universities, can maintain the use of moorland by schools and for teacher training. This is likely to require a well-funded programme of refresher days for teachers and the updating of the online teaching resources.

B.3 Harnessing public interest in moorland history

Initiatives such as Dig Porlock and the Longstone Landscape Project, delivered by the Heart of Exmoor Scheme, marked a step-change in community involvement in uncovering the history of moorland. Initiatives of this kind provide an excellent way to increase public understanding of our historical relationship with the environment and how this is changing. Support should be provided to individuals and interest groups who can continue to spread public interest in the moorland's heritage, including 'softer' cultural associations as well as formal archaeology. Grants to develop community archives and local history groups should be part of this.

woodland, down, cliff and foreshore whose natural beauty it is, in the opinion of the National Park Authority, particularly important to conserve."
See Figure 2 of this report for a map showing the current Section 3 moorland areas.

C. Building on what has been achieved

- 5.8. Following a decade of significant investment and commitment, there is a risk that organisations will feel that the period of intense activity on moorland has been sufficient, that Exmoor's moorland has 'had its share' and that it is time for other priorities to take precedence. But it remains the case that the moorland landscape dominates the National Park, physically and aesthetically (being the primary reason for designation 60 years ago). It is nationally and internationally important for a number of special qualities (providing ecosystem services) and regionally important for others. Many of these special qualities are under threat from environmental change. Moorland also provides a large and still fundamentally untapped recreational resource that attracts visitors to Exmoor and contributes significantly to the local economy.
- 5.9. There is unfinished business and a range of new challenges (covered further below) which will require governance and partnership structures and sources of funding to address them.

C.1 A reinvigorated Moorland Initiative Board

The Moorland Board has done a good job in improving dialogue and co-ordinating activities but there is a sense that it has become tied down to the two issues of biodiversity and moorland management, to the exclusion of other topics which the 2004 report hoped it would provide leadership on. It is recommended that a fresh look is taken at its terms of reference, the way it conducts its business and its membership. The aim should be for the Board to stimulate more innovative and ambitious thinking, and give voice to new stakeholders including younger people and community interests.

C.2 A second Landscape Partnership Scheme

The Heart of Exmoor Scheme has provided much-needed external funding and has engendered energy and innovation. It is unusual for the Heritage Lottery Fund to consider a follow-on application from the same area but the 'mood music' in this case is good. The Landscape Partnership should examine the rationale for a new application on Exmoor, incorporating but not centred on moorland, perhaps focussing on Exmoor's heritage economy (a topic not addressed to any large extent in the Heart of Exmoor Scheme).

C.3 Engagement with the Local Enterprise Partnership

The Heart of the South West Local Enterprise Partnership's Strategic Economic Plan⁵² is big on rhetoric but small on detail for how the region's environmental assets can be sustained and contribute more fully to its economy. Exmoor, as a key tourism destination with moorland as its main environmental asset, must surely provide an acid test for growing the heritage economy and creating a virtuous 'ecological enterprise zone'⁵³. The National Park Authority's proposal, being developed with the Dartmoor NPA, to test the concept of 'rural productivity networks' in the two National Parks deserves to be supported by Defra and the LEP. The scope for networks that increase the economic (i.e. profitable business) and social (i.e. skills and employment) values of moorland services and functions to businesses and communities should be included in this project.

⁵² Heart of the South West Local Enterprise Partnership (2014)

⁵³ O'Riordan (2015)

D. Improving the effectiveness of moorland management

- 5.10. Traditional forms of agricultural management are under threat in all upland areas of the UK. The problems of falling market returns for upland livestock, the shrinking farm workforce, compliance with regulations and management prescriptions and pressure to improve productivity on other areas are all deep seated and challenging. However, it is not all doom-and-gloom on Exmoor. A new generation of younger farmers is ambitious and keen to find new solutions. And public bodies recognise that livestock grazing continues to offer the best way to deliver integrated outcomes, potentially fulfilling environmental, social and economic objectives.

D.1 Locally-derived management practices

Exmoor's more agriculturally productive conditions, compared to most other upland areas in England, have tended not to be recognised in the past, leading to inappropriate environmental prescriptions. This is now being corrected with greater local devolution of best practice. The Graze the Moor project on Molland Moor and the proposed 'outcomes focussed' trial of agri-environment measures should address this and deserve further support. There is an opportunity to extend these initiatives to recognise the variation within Exmoor, between the low southern moors, the high grass moors of the Royal Forest, the eastern heather moors and the steep coastal heaths. The model developed on Molland Moor, which brings together local 'know-how' with scientific rigour, should be replicated and expanded on an area of high grass moor and an area of steep coastal heath (potentially on land owned by the National Park Authority and National Trust). Additional funding and flexibility over agri-environment prescriptions should be provided by Defra/Natural England to enable this to happen.

D.2 Leadership and co-ordination by moorland managers

The Moorkeepers project piloted through the Heart of Exmoor Scheme showed that environmental management of moorland can be co-ordinated by local farmers and graziers, providing an effective alternative to co-ordination by National Park Authority rangers or National Trust wardens. For a relatively modest cost, compared to the large sums received in agri-environment payments, moorland managers can take responsibility on common land and shared-occupancy moorland for tasks such as organising swaling, controlling bracken and clearing scrub. Natural England should be encouraged to endorse and facilitate funding through the new Countryside Stewardship agreements for formalising these Moorkeepers responsibilities.

D.3 Increase the value gained from agri-environment payments

Environmental Stewardship payments on moorland provide a large input to the local economy but the objectives of the scheme do not currently value, or seek to maximise, the social and economic impacts that these payments provide. There is a need to better understand how different management options (for instance revenue payments, supplements and capital grants) can be used to optimise the sustainable development benefits of the successor Countryside Stewardship scheme, such as contributing to local employment and skills. There is also a need to ensure that scheme agreements are doing as much as possible to support ecosystem services such as flood risk management and recreational provision. It should be recognised that these benefits can arise both from the management inputs as well as the environmental outputs of the scheme. Natural England should be encouraged to establish agri-environment agreements that deliver the widest possible benefits.

E. Strengthening new values and benefits provided by moorland and other landscapes

- 5.11. The functions and services that moorland can provide are becoming better appreciated and will continue to grow in importance. For many of these services, the role of moorland cannot be viewed in isolation and action should be taken at the scale of Exmoor as a whole. For this reason, this final group of recommendations apply beyond moorland to the whole of Exmoor.
- 5.12. The services that are provided by moorland and other ecosystems on Exmoor and that deserve greater attention and support include the ‘natural health service’ providing mental and spiritual wellbeing against the backdrop of our increasingly crowded and stressful lives, and the ‘natural life-support’ systems of water cycling, reservoirs of biodiversity and soil formation.
- 5.13. Finding ways of properly valuing and paying for the provision of these services is a challenge for public policy, both in demonstrating cause and effect and in developing new ‘payments for ecosystem services’ supply chains so that beneficiaries can recompense providers. There is unmet potential to expand the environmental economy connected with the protection and delivery of these services, particularly through tourism and heritage management.

E.1 Address the growing national debate on the value of ‘natural beauty’

The life-shaping potential of landscapes such as Exmoor’s moorland is being better understood and valued, bringing opportunities for inward investment, greater community wellbeing and personal development. The Exmoor Society and National Park Authority should take a lead in debating and promoting the values of natural beauty, focussing on how the experiential qualities of moorland and other landscapes (para. 4.4) can be enhanced.

E.2 Initiatives to improve health and wellbeing

The opportunities to use Exmoor’s moorland and related landscapes such as woodland and the coast as a ‘natural health service’ deserve further exploration with partners such as the Health and Wellbeing Boards for Somerset and Devon, local GP commissioning groups and outdoor education providers such as the Field Studies Council (building on the National Park Authority’s current ‘Moor to Enjoy’ project). The potential for challenge events for young people using these landscapes (such as through the Duke of Edinburgh Award) should be explored.

E.3 Supporting local business to build the heritage economy

Engagement with the LEP (C.3, above) should produce new opportunities to add value to tourism and countryside management on Exmoor which support the special qualities of its landscapes. The Exmoor Society can use its Pinnacle Award to stimulate innovation and new enterprise connected with the heritage economy.

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