

Chilterns Area of Outstanding Natural Beauty

State of the Chilterns Environment 2011



Chilterns Conservation Board
The Lodge, 90 Station Road
Chinnor
Oxon OX39 4HA Telephone: 01844 355500

Email: office@chilternsaonb.org
Web: www.chilternsaonb.org



All maps: © Crown copyright and database rights [2011] Ordnance Survey Licence no. 100044050

Cover photo: Across the Thames from Hartslock Nature Reserve

Photographs by CCB, John Morris, Shaun Pope, Natural England (Tina Stallard), Ross Osborn

State of the Chilterns Environment 2011

Contents

	Page
Foreword	
 LANDSCAPE AND BIODIVERSITY	
Overview	1
1. Environmental Stewardship: number of agreements/ area of land covered	5
2. English Woodland Grant Schemes: number of agreements/ area of land covered	8
3. Area of Sites of Special Scientific Interest (SSSIs) in good condition	11
4. Percentage of Local Sites and commons in positive conservation management	14
5. Livestock numbers	18
6. Water vole populations and numbers of rivers and canals with water voles	20
7. Quality of water in rivers and length of main river unaffected by low flows	22
8. Length of hedge in good condition using DEFRA condition criteria	24
9. Area of land managed for equestrian purposes	27
10. Area of chalk grassland in positive conservation management	30
 HISTORIC ENVIRONMENT	
Overview	32
11. Listed buildings (Grade 1/11*): total number/ number at risk	34
12. Registered historic parks and gardens: total number/number at risk	37
13. Scheduled Monuments: total number/ number at risk	38
14. Conservation Areas: total number/ number at risk	41
 SOCIAL AND ECONOMIC	
Overview	43
15. Number of visitor attractions which have published information on access by public transport	45
16. Number of businesses registered with the Green Tourism Business scheme	46
 UNDERSTANDING AND ENJOYMENT	
Overview	47
17. Participation in Health Walks	50
18. Area of land with statutory or voluntary Open Access	51
19. Visitor satisfaction on rights of way and use of the countryside	52
 DEVELOPMENT	
Overview	54
20. Number of appropriately designed and sustainably constructed affordable rural needs houses provided	56
21. Length of overhead power lines put underground	57
Conclusions	58
Appendix: Countryside Quality Counts	59

Foreword

On the face of it little has changed since last year. This may be a cause for muted celebration in view of the difficult financial climate, but there are storm clouds ahead as our collective capacity to look after gains made in recent years is destined to decline sharply.

It is a reminder, if one was needed, that the well being of our natural world is greatly dependent upon our ability to look after it, usually by direct intervention of some sort in order to reduce the malign influence of man and enable nature to flourish.

Dramatic changes to the organisations which work for the environment have been underway for some time and weren't just triggered by the last general election, but that has certainly accelerated what had begun. The end result is that the capacity of many organisations to help is much diminished, not least those which work directly with landowners to help steward the land.

Those managers are not just having to contend with all sort of changes to the support services they have been able to rely on in recent years but volatile markets and a climate which seems to have gone haywire. In the last twelve months we have had arctic conditions in early winter, a rainless but sunny spring, followed by a gloomy summer finished off by a warm and sunny autumn.

The unpredictability of the weather is likely to be something we simply have to get used to. The capacity of many environmental bodies to maintain their support is equally difficult to predict other than that it will decline over the next few years, but by how much and in what ways?

More than for many years the voluntary sector, community groups and individual landowners will have to show the way ahead. That means some of those environmental indicators which largely depend upon the availability of public finance and expertise provided by publicly funded bodies may not fare so well in the short term, but we are involved in a long term game and it should be the long term trends which concern us most. Many of those give more cause for optimism. For example, we may well find that the growing demand for firewood brings into management long neglected woodlands.



Steve Rodrick
Chief Officer
Chilterns Conservation Board

LANDSCAPE AND BIODIVERSITY

Context

The Chilterns AONB was designated for the natural beauty of its landscape, and its natural and cultural heritage.

Special qualities of the AONB's natural environment include its;

- steep chalk escarpment with concentrations of wildlife-rich downland
- extensive ancient woodland, including internationally important beech woods
- rich mosaic of farmland habitats including arable plants communities, ancient hedgerows, ponds and orchards
- river valleys with chalk rivers, a globally scarce habitat and home to some of the UK's most threatened species
- remnants of heath, acid grassland and wood pasture - often associated with common land

There are many influences on the condition of the landscape and wildlife of the Chilterns, including for example global wheat prices; changes in farming and forestry practices; pests, diseases and invasive species; development pressures and growth in leisure and amenity land use; decreasing livestock numbers,

availability of funding, and climate change and its potential long term impacts.

The policies of the AONB Management plan seek to address the consequences of these and other impacts in order to conserve and enhance the natural environment of the Chilterns.

Efforts to enhance the management of landscapes and habitats and to link and extend ecological networks are on-going and achieving some successes at local level with the support of grant funding from a variety of sources.

The AONB is clearly not immune to the pressures that have resulted in ongoing declines in biodiversity at national and regional levels¹ and in future reports it is hoped to provide an overview of how populations of key groups of species are faring in the AONB alongside the more general data provided below on land use, land management, protected sites and key habitats.

Robust data will be particularly important to underpin decisions about future activity in this era of increasingly constrained public expenditure.



Dunstable Downs

¹ Lost Life: England's Lost and Threatened Species, Natural England 2010

Landscape and Biodiversity Condition Indicators - key findings for 2011

This section of the State of the Environment report looks at 10 condition indicators selected to provide an insight into the condition across a broad range of aspects of the natural environment of the AONB. Inevitably a number of these - for example uptake of grant schemes (indicators 1 and 2) - are a proxy for data on condition, but nonetheless will provide a useful

insight not least into emerging trends in land management in the AONB.

The table below lists each indicator in this section and shows whether there is an update in data in the current year (2011). For those indicators which have not been updated in full this year a brief commentary is provided.

Condition Indicator	Detailed update 2011?	Key findings	Condition and Trend
1. Environmental Stewardship Scheme (ES) - number of agreements and area covered	Yes - see page 5 for details	<p>2011 297 agri-environment agreements in place covering 66.8% of the farmland in the AONB</p> <p>2010 315 agri-environment agreements are in place on holdings covering 69.7% of the farmland in the AONB.</p> <p>2009 295 agri-environment agreements were in place on holdings covering 76% of the farmland in the AONB.</p>	Overall coverage of agri-environment schemes is relatively high, however, the trend is declining.
2. English Woodland Grant Scheme (EWGS) - area covered	Yes - see page 8 for details	<p>2011 6,504 ha (36%) of woodland in the AONB covered by English Woodland Grant Scheme (EWGS)</p> <p>2010 5,321 ha (30%) of woodland in the AONB covered by the English Woodland Grant Scheme (EWGS).</p> <p>2009 3,585 ha (20%) of woodland in the AONB covered by EWGS</p>	Uptake of EWGS increasing.
3. Sites of Special Scientific Interest - area in good condition	Yes - see page 11 for details	<p>2011 98.6% of the total SSSI area in the AONB is in favourable/ unfavourable recovering condition.</p> <p>2010 97.5% of the total SSSI area in the AONB is in favourable/ unfavourable recovering condition.</p> <p>2009 94.4% of the SSSI area in the AONB in favourable / unfavourable recovering condition.</p>	Continued progress and national targets more than met in the AONB.

Condition Indicator	Detailed update 2011?	Key findings	Condition and Trend
4 a) Local Sites - percentage in positive conservation management	Yes - see page 14 for details	<p>2011 39% of Local Sites in the AONB known to be in positive conservation management</p> <p>2010 39% of Local Sites in the AONB known to be in positive conservation management</p> <p>2009 29% of Local Sites in the AONB known to be in positive conservation management</p>	It is a concern that improvement in this indicator has stalled at a relatively low level.
4b) Commons - percentage in positive conservation management	No - to be reviewed in the 2012 report	<p>2011 4 year Chilterns Commons HLF project launched. The project will contribute directly to better management of 10 - 15 commons across the Chilterns, and provide support to site managers and local groups across the area.</p> <p>There are currently agri-environment or woodland grant schemes in place on a total of 40 commons across the AONB</p> <p>2009 97% of common land designated SSSI is in favourable condition.</p> <p>73% of common land designated Local Wildlife Site is in positive conservation management.</p>	More detailed analysis to follow in 2012.
5. Livestock numbers	Yes - 2010 data, see page 18 for details	<p>2000- 2010 18% decline in cattle numbers; 18% decline in sheep numbers.</p>	Overall decline since 2000 a cause for concern, but a slight recovery in beef cattle numbers since 2007.
6. Water vole population and numbers of rivers and canals with water voles	Yes, 2011 survey data on R. Chess see page 20 for details	<p>2011 Water voles found on 2 rivers in the AONB. Population on the Chess fully recovered to 2001 levels</p> <p>2009 Water voles are found on 2 water bodies in the AONB - the River Chess and the Ewelme Brook. Population on the R. Chess recovered to 87% of 2001 population.</p>	Population recovering well on the River Chess and stable on the Ewelme Brook.

Condition Indicator	Detailed update 2011?	Key findings	Condition and Trend
7. Quality of water in rivers and length of main river unaffected by low flows	No new data available. An update is not expected until 2015.	2009 Of the 9 rivers which flow through the AONB none were assessed as attaining good ecological status or potential.	The status of the Chilterns chalk streams as assessed under the Water Framework Directive remains a cause for concern. No trend data available.
8. Hedges - length in good condition using DEFRA condition criteria	No new data available.	2006 - 8 38% of hedgerows surveyed in the AONB were found to be in good condition across all five DEFRA criteria. A further 42% met all but one of the five condition criteria.	No trend data available. More work is still needed to promote good management of hedges in the Chilterns, and this should include attention to field margin management as well as direct hedgerow management.
9. Equestrian land use - area of land managed for equestrian purposes	Yes - see page 27 for details	2008 - 2010 7.4% of the AONB used for horse grazing. This represents around 26% of AONB grassland resource. Intensive equestrian use on 2.8% of AONB 2007 - 2009 7.2% of the AONB has been used for horse grazing. This represents around 25% of the AONB grassland resource. Intensive equestrian use accounts for 2.5% of the AONB. 2006 - 2008 6% of the AONB used for horse grazing	Equestrian land management continues to be a prominent component of the land use of the AONB. Intensive equestrian land use remains at high - and increasing - levels. Concerns about intensive equestrian land include impacts of associated infrastructure and fragmentation of historic field patterns on the landscape.
10. Chalk grassland - area in positive conservation management	Yes - see page 30 for details	2011 97.6% of SSSI units where chalk grassland is the main habitat are in favourable (32.9%) or unfavourable recovering (64.6%) condition. 2010 95% of SSSI units where chalk grassland is the main habitat are in favourable (32.5%) or unfavourable recovering (62.5%) condition. 2009 86% of SSSIs where chalk grassland is the main habitat are in favourable or unfavourable recovering condition.	Continued improvement. Chalk grassland sites remain over-represented in SSSI units in unfavourable condition within the AONB. Maintaining the momentum on 'recovering' sites will be crucial.

Indicator 1: Number of agreements and area of land covered by Environmental Stewardship Scheme

297 agri-environment agreements² are in place on holdings covering 66.8% of the farmland in the AONB³. This is slightly reduced from coverage in 2010 and includes live agreements under Environmental Stewardship - the current scheme - and its predecessor, Countryside Stewardship.

Summary of key data

- 257 Environmental Stewardship (ES) agreements cover 31,284 ha (63%) of the farmland in the AONB.
- This figure includes 60 Higher Level Stewardship (HLS)⁴ agreements on 13.3% of the farmland in the AONB - slightly above national and regional averages⁵.
- There has been a slight net reduction in Entry Level Stewardship (ELS) coverage (taking organic ELS and ELS together) since 2010. Of the 119 ELS agreements expiring over the past 18 months, 16 (13%) have not so far been renewed.
- There has been a significant reduction in area under Organic ELS, but an increase in Organic HLS. Overall since 2010 there has been a slight reduction in area under organic schemes.
- Countryside Stewardship Scheme (CSS) coverage has fallen to 7% of farmland in the AONB as schemes come to an end. 12% of former CSS agreement land⁶ is no longer in any agri-environment scheme. (The target for transfer from CSS to ES is 80%. The national transfer rate of 90.4%).

Table 1: Agri-environment schemes - live agreements (green = increasing trend; in red - decreasing trend)

Scheme	Land area hectares		Number of agreements		% of farmland in the AONB	
	2011	(2010)	2011	(2010)	2011	(2010)
ENVIRONMENTAL STEWARDSHIP (current scheme)						
ELS	23,024	(22,805)	189	(192)	46.1%	(45.6%)
Organic ELS	1,377	(2,311)	8	(11)	2.8%	(4.6%)
ELS combined (ELS and OELS)	24,401	(25,116)	197	(203)	48.9%	(50.2%)
HLS	5,714	(4,235)	54	(38)	11%	(8.5%)
Organic HLS	1,169	(264)	6	(4)	2.3%	(0.5%)
Total	31,284	(27,821)	257	(219)	63%	(55.7%)
COUNTRYSIDE STEWARDSHIP SCHEME (1991 - 2004)						
	2011	(2010)	2011	(2010)	2011	(2010)
Countryside Stewardship	3,353	(9,522)	50	(70)	7.0%	(19.0%)
Total area covered by either ES or CSS⁷	33,374	(34,823)	297	(315)	66.8%	(69.7%)

² Area of holdings with either ES or CSS agreements or both as at August 2011

³ Farmland area based on data from Chilterns Land Use Survey

⁴ Including Organic Higher Level Stewardship, (OHLS) agreements

⁵ Agri-environment Performance Report for Agri-Environment Stakeholders' Group (Data 4.1.11), Natural England

⁶ CSS data 2007

⁷ Totals do not add up as some holdings have both CSS and ES agreements on them

Take up of a selection of HLS options is shown in Table 2 below.

Selected HLS options	2011	2010	2009
Maintain species-rich grassland (ha)	454	302	90
Restore species-rich grassland (ha)	558	249	108
Creation of species-rich grassland (ha)	226	157	113
Protection of in-field trees (no. trees)	230	not reported	not reported

The indicator in context

- Environmental Stewardship is an agri-environment scheme that provides funding to farmers and other land managers to deliver effective environmental management. The scheme replaced Countryside Stewardship in 2004, and consists of two levels - Entry Level (ELS), the basic scheme, open to all, and Higher Level (HLS) which aims to deliver significant environmental benefits in high priority situations and areas.
- Priorities for HLS within the Chilterns include options relating to chalk downland, old meadows and pastures, farmland birds, archaeological and historic features (including historic buildings and landscapes) hedgerows and educational access.
- HLS efforts focus upon those landholdings offering the most opportunity for realising the objectives of ES. Budget constraints have meant restricted scope for new agreements over the past year and increased targeting at higher value landholdings.

Interpretation of data

- This year has seen a considerable reduction in area covered by Countryside Stewardship agreements, which is to be expected as agreements expire and some are





transferred to the current scheme (Environmental Stewardship).

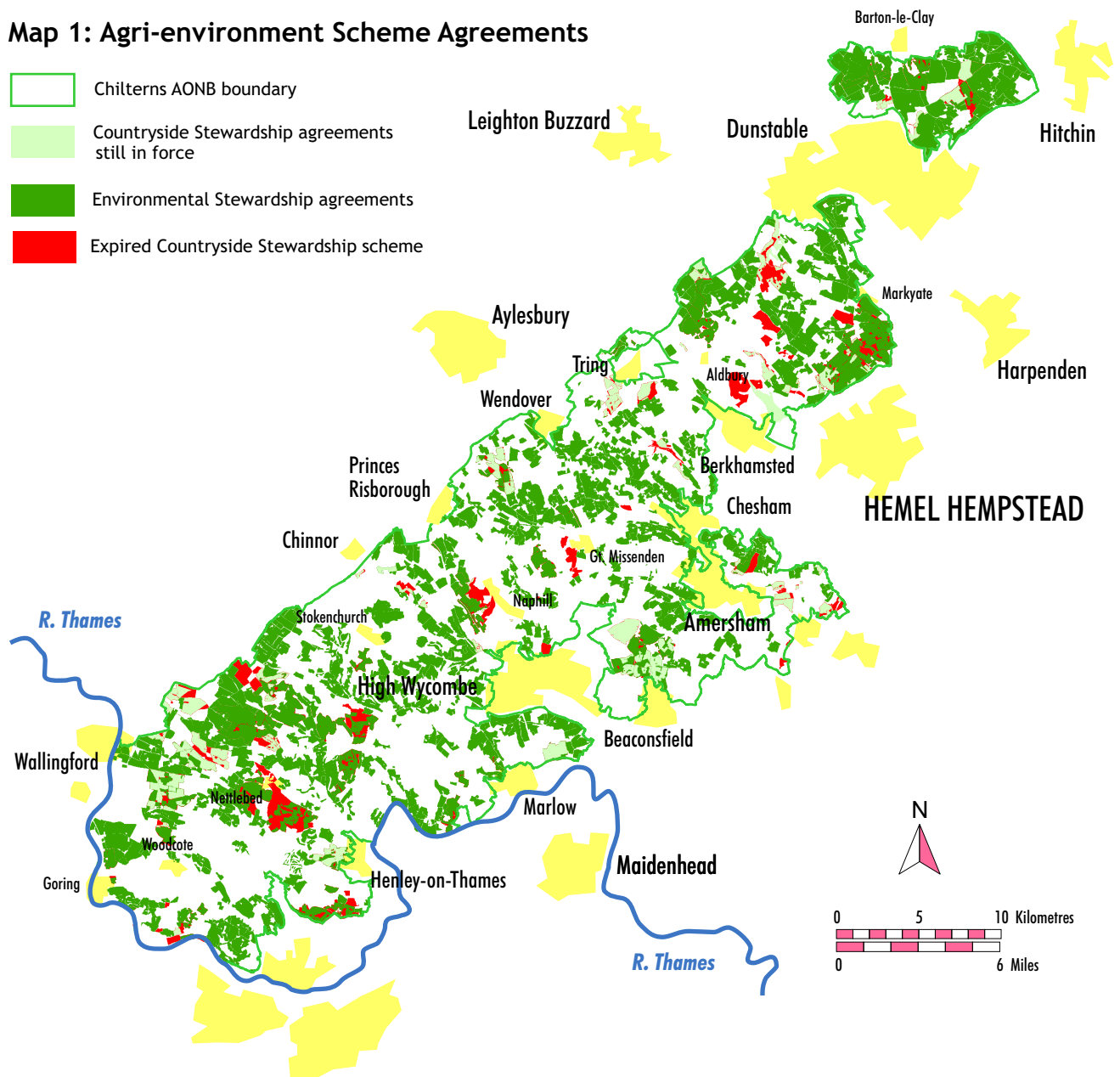
- The first Environmental Stewardship agreements came up for renewal in 2009/10. The slight net reduction seen in coverage of ES is likely to be accounted for in part by the lag between expiry and renewal. It is also reported by Natural England that increases in the value of meat and cereal and uncertainty around reform of Common Agricultural Policy (CAP) in 2013 may be causing some landowners to delay entering or renewing schemes.
- It should be recognised that take up of agri-environment schemes does not necessarily translate into good environmental management on the ground, but it is a useful proxy measure.
- The figures reported are based on total area of land holding (clipped to the AONB boundary). Whilst this provides a convenient baseline, it is proposed to also monitor the take-up of a number of specific options as shown in Table 2 above.

Conclusions

- Overall coverage of agri-environment schemes in the AONB is relatively high with agreements in place on just under 67% of farmland and it is encouraging to see that HLS coverage is slightly above national and regional averages, thus helping to conserve the special character of the AONB.
- Of more concern is the overall reduction in coverage of agri-environment schemes over the past year. This reduction results from some ES schemes not being renewed and some CSS schemes not transferring to ES. Whilst the trend is broadly in line with the national and regional picture it will be important to continue to monitor the on-going impacts of reduced funding for new HLS agreements, uncertainty about CAP reform and prices of meat and cereals.

Map 1: Agri-environment Scheme Agreements

-  Chilterns AONB boundary
-  Countryside Stewardship agreements still in force
-  Environmental Stewardship agreements
-  Expired Countryside Stewardship scheme



Indicator 2: Area of woodland covered by English Woodland Grant Schemes

6,504 ha or 36% of woodland in the AONB is covered by English Woodland Grant Scheme agreements (EWGS). This has increased from 20% coverage in 2009.

Summary of key data

Table 3:

Grant type	Woodland area in AONB (ha) 2011	(2009)
Woodland Grant Scheme III (WGS III) (1995 - 2005)		
Total area managed under scheme	9,501	
English Woodland Grant Scheme (EWGS) (2006 - present)		
Creation	32	(21)
Planning ⁸	1,518	(1,404)
Felling only following approved plan ⁹	1,507	(666)
Management	2,171	(1,640)
Improvement	2,611	(1,345)
Regeneration	462 ¹⁰	(1,088)
Total area under EWGS ¹¹	6,504	(3,585)
Total area under EWGS or WGS III ¹²	10,700	(10,314)
Management for benefit of woodland under felling license ¹³	1,912	
Forestry Commission owned land	1,560	

- 56% (5,304 ha) of the area formerly covered by WGSIII agreement has now transferred to the current scheme (EWGS).

The indicator in context

- The Chilterns is one of the most heavily wooded parts of the country, with 21.5% (17,888 ha) of the AONB being woodland.¹⁴ Over half this area is ancient woodland.¹⁵

- The English Woodland Grant Scheme (EWGS) is the Government's suite of grants designed to develop the co-ordinated delivery of public benefits from England's woodlands.
- The same caveats apply to this indicator as were elaborated in last year's report -
 - Coverage by schemes is a proxy measure, not necessarily an accurate reflection of management on the ground. Some managed woodlands will not be included in these figures, including those, including woodlands managed under agri-environment (Higher Level Stewardship) options, as well as those managed without any grant support. Some woods are managed under felling licenses rather than through grant schemes, and hence data on felling licenses has been included in the figures above.
 - Figures for area covered by EWGS are based on grants approved not schemes implemented.
 - There are known inaccuracies and omissions in the National Woodland Inventory - the basis for the figure for total area of woodland in the AONB.

On this latter point, there is work underway in the Chilterns to review the Ancient Woodland Inventory, adding woods under 2ha and revising the maps. This should be available for the 2012 reporting cycle.

⁸ Figure represents only those planning grants approved in the last 12 months (April 2010 - March 2011)

⁹ Felling license within EWGS only (10 yr license following creation of approved plan, no additional grant activity shown)

¹⁰ Overlaps in area removed - overlaps can occur where a second WIG is in place on the same site e.g. for deer management.

¹¹ Figures for individual grant types do not add up to total area under schemes as some areas are covered by multiple options. Excludes planning grants more than 12 months old. Includes area with felling license as part of scheme.

¹² Area under EWGS plus area under WGSIII not covered by EWGS

¹³ Includes all categories of felling license except clear fell unconditional

¹⁴ Forestry Commission Woodland Inventory 2002

¹⁵ Forestry Commission Woodland Inventory

- The last of the WGSIII agreements in the Chilterns ended in January 2010. The area which was covered by WGSIII is still reported here since management activity over the past 10 - 15 years will still be impacting on the woodland. Undermanaged woodlands are considered to be those having missed 2 management cycles, which in the case of deciduous woodlands would be around 20 years in total.

Interpretation of data

- There has been good progress this year in take up of EWGS, in particular of Woodland Improvement Grants (WIG) where coverage has increased by over 1,200 ha or 50% since 2009. This is no doubt in part a reflection of the targeted Chilterns woodland improvement grant introduced in 2009 offering a higher rate of match funding. These grants are still available and support activity such as infrastructure improvements and control of rhododendron, bracken and deer. Woodland Management

Grant scheme coverage has also increased over this period, by over 500 ha.

- It is hoped that the new Wood Fuel WIG will help bring many woodlands back into good management. The grant will provide support for the sustainable production of wood fuel and other timber products. It is targeted at under managed woodlands (those out of management for at least 2 forestry cycles). The grant will assist with the cost of roads, tracks and other infrastructure to assist extraction of timber from woodland, and costs associated with managing harvesting contracts.

Conclusions

- It is good to see the increase in uptake of EWGS and in particular woodland improvement grants and woodland management grants in the Chilterns. The introduction of the Wood fuel WIG will bring a welcome focus to bringing under managed woodlands back into good management.



Seer Wood

- Pests and diseases continue to be a real concern with Britain's trees facing 'unprecedented threats' which are expected to increase in the future as a result of climate change. Of particular concern for the Chilterns woodlands are:
 - Deer and grey squirrel
 - Acute Oak Decline (Concentrated in the Midlands but recent reports from south-east England).
 - Oak processionary moth (nearest sighting, Pangbourne, Berkshire 2010)
 - Phytophthora
- Consideration will be given to reporting on pests and diseases as a supplement to the woodland management indicator in future reports, subject to availability of data.



Bellingdon Brickworks wood kiln

Indicator 3: Area of Sites of Special Scientific Interest (SSSIs) in Favourable Condition

The total area of SSSIs in favourable or unfavourable recovering condition¹⁶ within the AONB is 3,165 ha or 98.6% (by area). This compares with 97.5% in 2010.

Summary of key data

- There are 64 SSSIs wholly or partially within the AONB, covering a total of 3,208 ha (3.9% of the AONB by area).
- Overall there has been relatively little change in assessed SSSI condition within the AONB over the past 12 months.

Table 4 gives the breakdown of SSSI condition for the AONB.

Table 5 gives details on SSSI condition by county within the AONB

Table 4: SSSI condition across the AONB

Condition	% of SSSI area within AONB		
	2011	2010	2009
Favourable (F)	65	67.1	55.2
Unfavourable recovering (UR)	33.6	30.4	39.2
Total F + UR	98.6	97.5	94.4
Unfavourable no change (UNC)	1.1	1.2	5.6
Unfavourable declining (UD)	0.3	1.2	

Table 5: SSSI condition by county

	Area of SSSI (Ha)	% F condition	% UR condition	% F or (UR) ¹⁷	% UNC condition	% UD condition
Beds	463.8	45.4	54.6	100 (95)	0.0	0.0
Herts	563.1	69.2	28.4	97.6 (96)	2.4	0.0
Bucks	1224.1	66.7	32.5	99.2 (97)	0.0	0.8
Oxon	958.9	69.8	30.2	100 (100)	0.0	0.0

Table 6 below shows condition by broad habitat.

Table 6: SSSI condition by broad habitat

Condition	Lowland calcareous grassland		Acid grassland / neutral grassland		Mixed beech and yew		Earth heritage	
	No. units ¹⁷	% of lowland calcareous grassland units	No. units	% of acid/neutral grassland units	No. units	% of mixed beech & yew units	No. units	% of earth heritage units
F	27 (26)	32.9	1	10.0	53	85.5	7	87.5
UR	53 (50)	64.6	6	60.0	8	12.9		
UNC	1 (2)	1.2	3	30.0	1	1.6	1	12.5
UD	1 (2)	1.2	0					
total	82		10		62		8	

¹⁶ Area in Favourable or unfavourable recovering condition is reported on here as this is the basis for national reporting in relation to the Public Service Agreement target.

¹⁷ Figures in brackets are 2010 data.

The indicator in context

- Sites of Special Scientific Interest are a representative sample of the country's best wildlife and geological sites.
- Natural England has responsibility for identifying and protecting SSSIs under the Wildlife and Countryside Act 1981 (as amended).
- SSSI management is the responsibility of the land owner or manager.
- SSSIs cover around 7% of the land area of England, and 3.85% of the AONB.

Interpretation of data

- The 2010 Public Service Agreement target on SSSI condition has been met in all four counties across the AONB. (95% of SSSI units in favourable or unfavourable recovering condition).
- An assessment of unfavourable recovering condition can be based on there being an appropriate and achievable management plan in place which is likely to be implemented. It is important therefore to continue to monitor successful transition from unfavourable recovering to favourable condition.
- Whilst the total area of SSSIs assessed as in either favourable or unfavourable recovering condition is above 97% in each of the 4 counties, this year's data again showed a marked difference between counties in the balance between favourable and unfavourable recovering condition within these figures. For example 45.5% of the SSSI area in Bedfordshire (in the AONB) was assessed as being in favourable condition compared to 69.8% in Oxfordshire. This reflects in part the recent progress getting Bedfordshire grassland sites into better management which will take some years to result in habitat being in favourable condition.

- Looking at the data on SSSI condition by broad habitat type - see Table 7 - it is clear that, as in previous years, a disproportionately high number of SSSI units in unfavourable condition (whether unfavourable recovering, no change or declining) are grassland habitats.
- The main reason for unfavourable condition on these sites is under-grazing and scrub encroachment.
- It is important to recognise that, whilst most wooded SSSIs in the AONB are considered to be in favourable or unfavourable recovering condition, concerns remain about pronounced declines in woodland species - for example woodland birds and butterflies - and it will be useful to look in more detail at species data in future reports. Assessment of SSSI condition relates only to those features which are designated.
- It is also important to acknowledge that, as with any site, habitat condition may be dependent on factors outside the control of the site manager e.g. climate change, surrounding land use, recreational pressure.

Conclusions

- It is encouraging to see that progress in this indicator has largely been maintained across the AONB over the past 12 months, with improved condition or management arrangements reported on particular sites most notably in Bedfordshire.
- It will continue to be important to monitor the efforts to maintain what has been achieved over future years, and in particular to see that those sites assessed as being in unfavourable recovering condition progress to favourable condition in due course.
- SSSIs with predominantly grassland habitats continue to be over-represented in those sites which are in unfavourable condition.

Indicator 4a): Percentage of Local Sites in positive conservation management

39% of Local Sites in the AONB are in positive conservation management¹⁸. This figure is unchanged from last year.

Summary of key data

- Over 60% of Local Sites in the AONB are either not in positive conservation management or else not enough is known about them to determine either way.
- Out of 466 Local Sites in the AONB, 180 are assessed as being in positive conservation management. This is unchanged from last year.

As Figure 1 (right) indicates, over the past 12 months progress on this indicator within the AONB appears to have stalled. The exception to this is in Buckinghamshire.

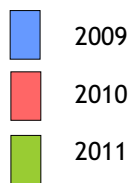


Figure 1: Local Sites in Positive Conservation Management (PCM) in the AONB

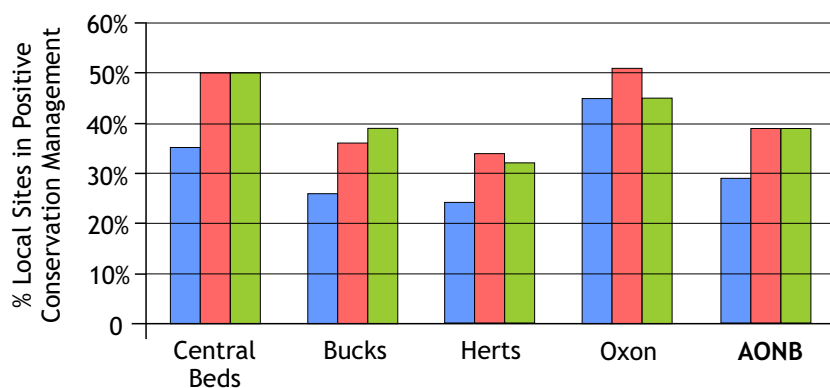


Table 8: Local Sites in Positive Conservation Management (PCM) 2010 - 11 within the AONB and within counties/ unitary authorities as a whole.

	Within the AONB			Whole county/unitary
	Number of local sites in AONB	Number of sites in PCM	% of sites in PCM	% of sites in PCM
Central Beds	54	27	50%	57%
Bucks	219	86	39%	44%
Herts	146	46	32%	25%
Oxon	47	21	45%	49%
AONB	466	180	39%	

¹⁸ PCM - Positive Conservation Management means that there is evidence of appropriate management which contributes to maintaining or enhancing the features of interest for which a local site has been selected and designated

The indicator in context

- Local Sites are non-statutory sites, identified for their contribution to biodiversity or geological conservation, to complement the national and internationally designated sites. In 2006, national guidelines were issued which standardised their identification, selection and management¹⁹ and put their selection onto a more rigorous footing. It is important to recognise that whilst Local Sites do not have the statutory protection of Sites of Scientific Interest (SSSIs), they will in some cases be of an equivalent quality, as SSSIs were only ever intended to be a representative sample of each habitat.
- Local authorities are required to report to central government on the proportion of Local Sites where positive conservation management has been or is being implemented (formerly national indicator 197, now one of the data sets on the single data list).
- Organisational change, pressures on staffing and funding made 2010 - 11 a challenging year for Local Sites Projects, although full impacts of budget reductions will not be felt until next year.
- In many cases, sites are assessed as being in positive conservation management on the basis of being in an appropriate Government grant scheme such as Environmental Stewardship. In Hertfordshire the reduction in availability of funding for new schemes has been cited as part of the rationale for a reduction in 2011 - 12 improvement targets.
- In Buckinghamshire, it is interesting to note that the progress reported across the county as a whole this year would appear to be based more on management guidance and advice than other factors.

Interpretation of data

- 2008 - 9 was the first year of reporting by Local Authorities on this indicator.
- In the majority of cases where a site is not assessed as being in positive conservation management it is because there is insufficient information on which to base an assessment, rather than management being known to be poor.
- It is important to recognise that direct comparisons cannot be made between the figures provided by different Local Authorities, as there are variations in the approach used to identify sites as being in positive management. Trends over time within each county and across the AONB as a whole are more useful to consider.

Conclusions

- Progress on this indicator within the AONB has plateaued over the past year.
- Despite constraints this year, the trend in this indicator is stable. Nonetheless the fact that after three years of reporting only 39% of Local Sites are known to be in positive conservation management is a real cause for concern.
- Local Sites cover an area of 7,394 hectares or 8.9% of the AONB. These sites make a potentially significant contribution to delivering Biodiversity and Geodiversity Action Plan targets and are a crucial component of the ecological networks of the Chilterns.
- The need for management advice and monitoring of Local Sites - and for additional resources to support this is recognised in the AONB Management Plan (2008 - 2013).
- Increased protection and recognition of Local Sites would also make a valuable contribution to conserving and enhancing the characteristic landscapes and biodiversity of the AONB.

¹⁹Local Sites - Guidance on their Identification, Selection and Management, Defra. 2006

4b) Percentage of commons in positive conservation management

998 ha of the registered common land in the AONB is designated a Local Wildlife Site. Of this, 73% is in positive conservation management²⁰.

620ha of the registered common land in the AONB is designated a Site of Special Scientific Interest. Of this, 97% is in favourable or unfavourable recovering condition²¹.

Summary of key data

- Covering 2.4% of the AONB and 187 sites, common land is one of the defining characteristics of the Chilterns landscape and a major ecological, community and historic resource.
- 53 of the commons are designated for their wildlife or geological interest as LWS and/or SSSI. Data is available for these 53 sites and has provided the basis for this indicator. Little data is currently available regarding the condition or management of the remaining sites.

The indicator in context

- Commons have long been at the heart of community life in the Chilterns, and are one of the defining elements of the Chiltern landscape, rich in cultural, archaeological and natural heritage.
- Registers of commons are maintained by County Councils, detailing all commons registered under the 1965 Commons Act.
- Common land was once far more extensive across the Chilterns²⁵. Three quarters of the 187 registered commons are less than 5 ha in area, representing a fragment of their former extent. There remain areas known locally as 'common' but which are not on the registers.

Table 9: Registered commons

	Number of sites	Area (ha)	% of total common land area	Area in positive conservation management (ha) ²²	% in positive conservation management
Registered commons in the AONB	187	2002.2	100	n/a	
Registered commons which are also ²³ Local Wildlife Sites	35	998.2	49.8	728.1	73
Registered commons which are also ²⁴ Sites of Special Scientific Interest	18	620.0	31	604.0	97

- The wildlife interest of the common land that remains tends to be concentrated in the larger sites²⁶
- The biodiversity and landscape value of the commons has declined over the post war period. Many of the commons would historically have been significantly more open in character, traditionally used for rough grazing and fuel. The loss of traditional management - notably grazing - has led to scrub and bracken encroachment and the establishment of secondary woodland on many of the commons.

²⁰ Data from Local Authorities - April 2009

²¹ Natural England - April 2009 data

²² Includes local sites in positive conservation management and SSSIs in favourable or unfavourable recovering condition

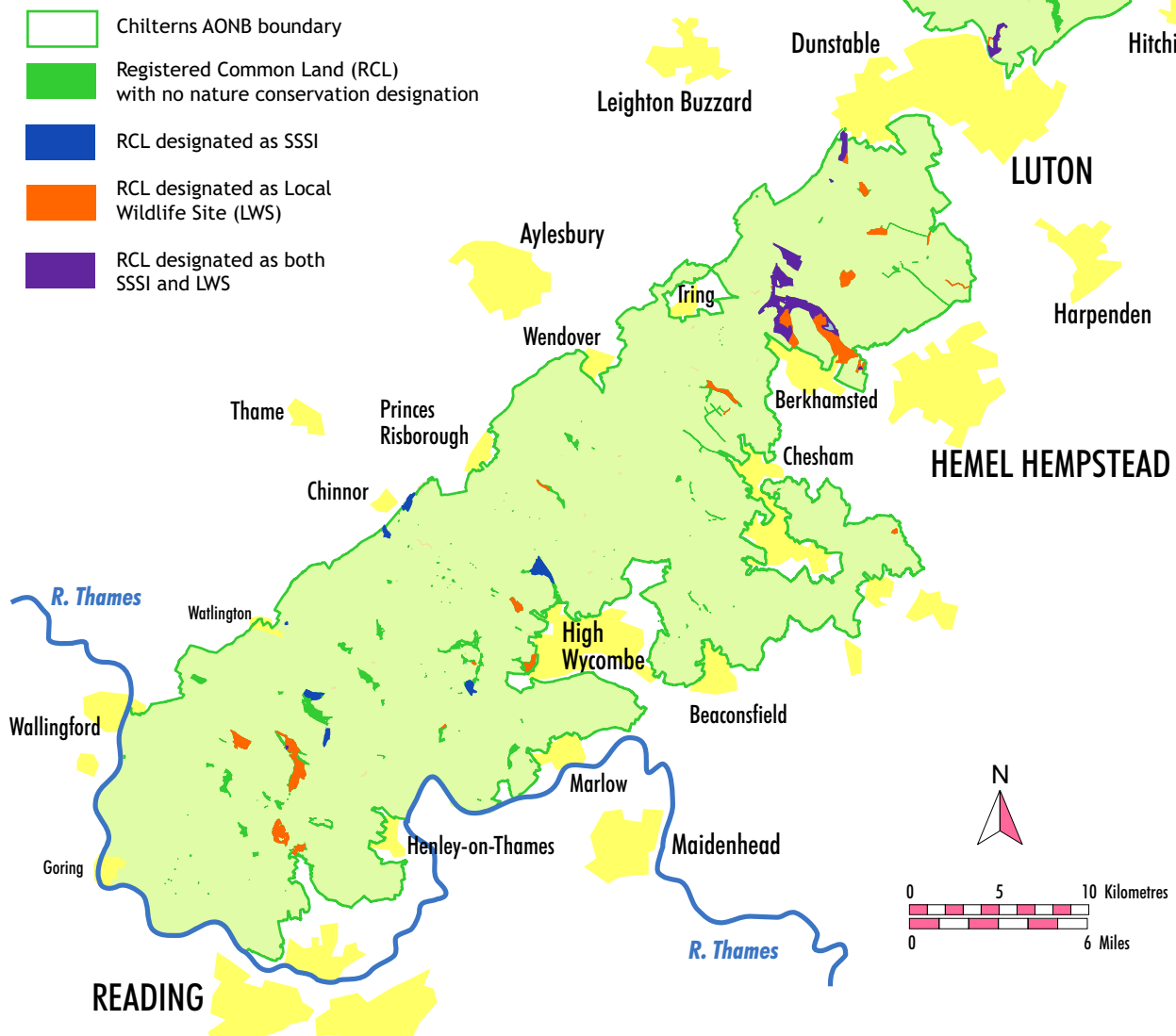
²³ At least in part

²⁴ At least in part

²⁵ Chilterns Historic Landscape Characterisation. Since 1885 there has been a 43% reduction in the area of commons heaths and greens in the AONB.

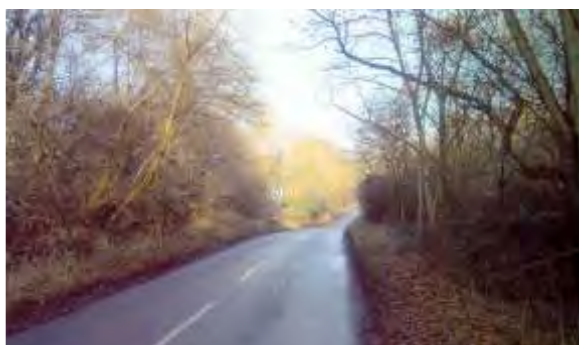
²⁶ Audit of Biodiversity Data for Chilterns Common 2007

Map 3: Registered commons



Interpretation of data

- There is some overlap in Bedfordshire and Hertfordshire between Local Wildlife Sites and SSSIs, and it has not been possible to arrive at an overall figure for the area which combines LWS and SSSI data.



Moorend Common, 2005

Conclusions

- There is currently no data available on the management of those commons which are not designated sites (SSSIs or LWSs). The data assessed for this indicator only covers 53 (28%) of the commons in the AONB. Hence, whilst available data is encouraging, no firm conclusions can be drawn on the condition of this indicator at present.



Moorend Common, 1930s

Indicator 5: Livestock numbers

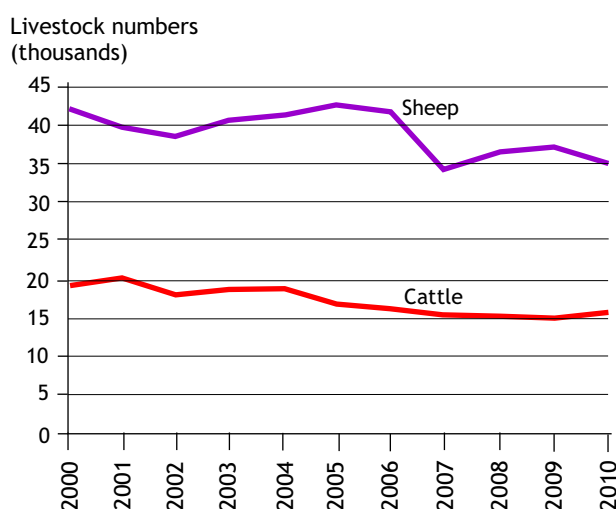
Cattle numbers declined by 18% between 2000 and 2010.
 Sheep numbers declined by 18% between 2000 and 2010.

Summary of key data

Table 10: Livestock and holding²⁷ numbers

		2000		2007		2010	
		Number of animals	Number of holdings	Number of animals	Number of holdings	Number of animals	Number of holdings
Cattle ²⁸	Beef	3,077		2,526		2,825	
	Dairy	4,002	29	2,022	17	1,662	8
	Total	19,030		15,161	168	15,728	155
Sheep		41,908		33,560	163	34,591	145
Cattle and/or sheep	Total				281		251

Figure 2: Livestock numbers 2000 - 2010



The indicator in context

Some of the most characteristic landscapes and habitats of the AONB, such as chalk downland, and some of the open habitats associated with Chilterns commons, rely on grazing livestock - particularly sheep and cattle - to maintain them in good condition. Much of the farmed landscape has also been created and maintained by grazing.

Interpretation of data

- The data mirrors the fortunes in the cattle and sheep sectors over recent years. Both have suffered with beef being hardest hit. Beef cattle were the most heavily supported sector of the agricultural industry prior to the introduction of the Single Farm Payment in 2005/6 and the decoupling of subsidies from production. The removal of direct support payments was not replaced by an increase in the market price and many farmers lost too much money to continue with this enterprise.
- There is some evidence that prices have improved in recent years which has led to a partial recovery in beef numbers.
- Dairy farming continues to show a year on year decline in both stock and holding numbers. Elsewhere, market trends are favouring larger dairy units but soil type, topography and planning restrictions all militate against such large intensive units within the AONB.

²⁷ Figures taken from the DEFRA June agricultural survey of commercial holdings. Figures relate to 'commercial holdings'. Previous to 2010, June Survey Results included a larger number of holdings, now excluded from the survey. DEFRA have applied to the new threshold criteria back to 2007 to aid comparison.

²⁸ Beef and dairy cattle numbers are for female stock over 2 years old with offspring. Calves and other cattle are not separated into these different categories but are included in the total cattle numbers.

- Sheep numbers actually rose to over 36,000 in 2008 and 2009 before dropping back in 2010.
- The DEFRA survey 2010 shows a marked decrease in the total number of commercial holdings since 2007 though the numbers of large farms (over 100ha) has remained stable. Smaller units continue to become less viable with a trend towards larger farms taking on management of more land - either by direct ownership or on a contract farming basis. At the same time we should not ignore the significant numbers of lifestyle/hobby farmers - possibly with householders owning a small number of fields - not classified as commercial holdings and therefore not reflected in the DEFRA results. Both larger farm units (with larger machinery) and small lifestyle/hobby units (which may have limited flexibility for stock management and limited access to

machinery) have implications on land management and, therefore, the landscape.

Conclusions

- Although overall beef numbers may have recovered slightly, concerns remain over the limited availability and flexibility of suitable grazing animals for the many and varied sites of landscape and wildlife habitat importance.
- Without appropriate grazing, valuable open habitats such as chalk grassland and acid grassland will revert to scrub and secondary woodland. It should however be noted that there are many individuals and organisations working to re-establish or sustain conservation grazing on sites across the AONB with some degree of success in recent years.



Sheep grazing at Aston Rowant nature reserve, Oxfordshire

Indicator 6: Water vole population and numbers of rivers and canals with water voles

Water vole population on the River Chess has recovered to 100% of its 2001 level.

Summary of key data

- **River Chess:** A population decline of 97% was recorded between 2001 and 2003. By 2009 this had recovered to 87% of the 2001 population, following the implementation of an integrated habitat enhancement and mink control strategy. The 2011 survey found that the population had fully recovered to its 2001 level, with an estimated 345 voles along the river.
- **Ewelme Brook:** Water vole populations have remained stable over the period 2002 - 2008 - the date of the last survey - with the colony concentrated within the headwater section.²⁹
- **R. Misbourne** has a water vole colony outside the AONB boundary, but none within the AONB.³⁰
- **R. Ver, Gade, Bulbourne, Wye, Grand Union Canal (including the Wendover Arm)** - no water voles have been found. Surveys were last conducted on the Bulbourne and upper Gade in 2002, and on the Ver in 2007.³¹

The indicator in context

- The water vole is found throughout Britain, confined mainly to lowland areas near water. Once common and widespread, this species has suffered a significant general decline in numbers and distribution since 1900. In 1998, only 11% of known water vole sites remained in Britain.³² The most recent review of surveys carried out in 2005, show that water vole populations continue to decline although at a reduced rate.

- The primary factors responsible for the decline in water vole numbers are: habitat fragmentation, degradation and loss; variations in water level; predation from the non-native North American mink; pollution and persecution.
- Water voles inhabit a wide variety of water bodies. They require natural banks to dig their burrows into and favour locations with extensive reed beds and marginal vegetation.

Interpretation of data

- In view of their habitat requirements, in areas where a population exists, water voles can be considered as a good indicator of riparian health.
- However, there are limitations to using water voles as indicators of habitat quality. Watercourses may not support water vole populations despite the fact that there may be suitable habitat available. This could be because of habitat breaks, such as culverts or over grazed banks that serve to isolate these reaches from adjacent vole populations. Certain types of good quality riparian habitat such as woodland for example, are unfavourable for water voles. Also the distribution of voles throughout the Chilterns is as much a consequence of predation by mink as it is the distribution of suitable habitat.

²⁹ Ewelme Brook Water Vole Project update 2008 (BBOWT)

³⁰ River Misbourne Water Vole Survey report 2009 (BBOWT)

³¹ R. Gade, Bulbourne and Ver Water Vole Survey reports 2002 (CCS Project) and Ver Water Vole Survey report 2007 (Herts and Middlesex Wildlife Trust)

³² Water Vole Recovery Project, Guide for Land Owners (BBOWT)

Conclusions

- It is very good to see the population recovery on the River Chess. It will be important to maintain mink control efforts and good habitat management.

The data collated on rivers with water vole populations is valuable in helping to determine the ongoing health of habitat and the success of recovery strategies.

- However, water vole populations within the AONB are restricted to two rivers. This patchy distribution limits the use of water voles as an indicator of the state of the Chilterns environment.



River Chess: ideal water vole habitat

Indicator 7: Quality of water in rivers and length of main river unaffected by low flows

Following discussions with the Environment Agency it has been decided to utilise the assessment of rivers as set out in the Water Framework Directive as the measure of the quality of rivers in the Chilterns

Of the nine rivers which flow through the AONB none are assessed as attaining good ecological status or potential. At the present time, only one river, the Bulbourne, has been assessed for its chemical status.

Summary of key data

- Of the nine watercourses, only two are expected to reach good ecological status by 2015, the remainder are expected to attain good ecological status or potential by 2027.
- The single most common reason for the Chilterns' rivers being expected to fail to reach good status by 2015 is low flows. High phosphate levels and poor invertebrate and fish communities are also highlighted as factors. The justification as to why good status will not be achieved by 2015 in the majority of cases is cost benefit.

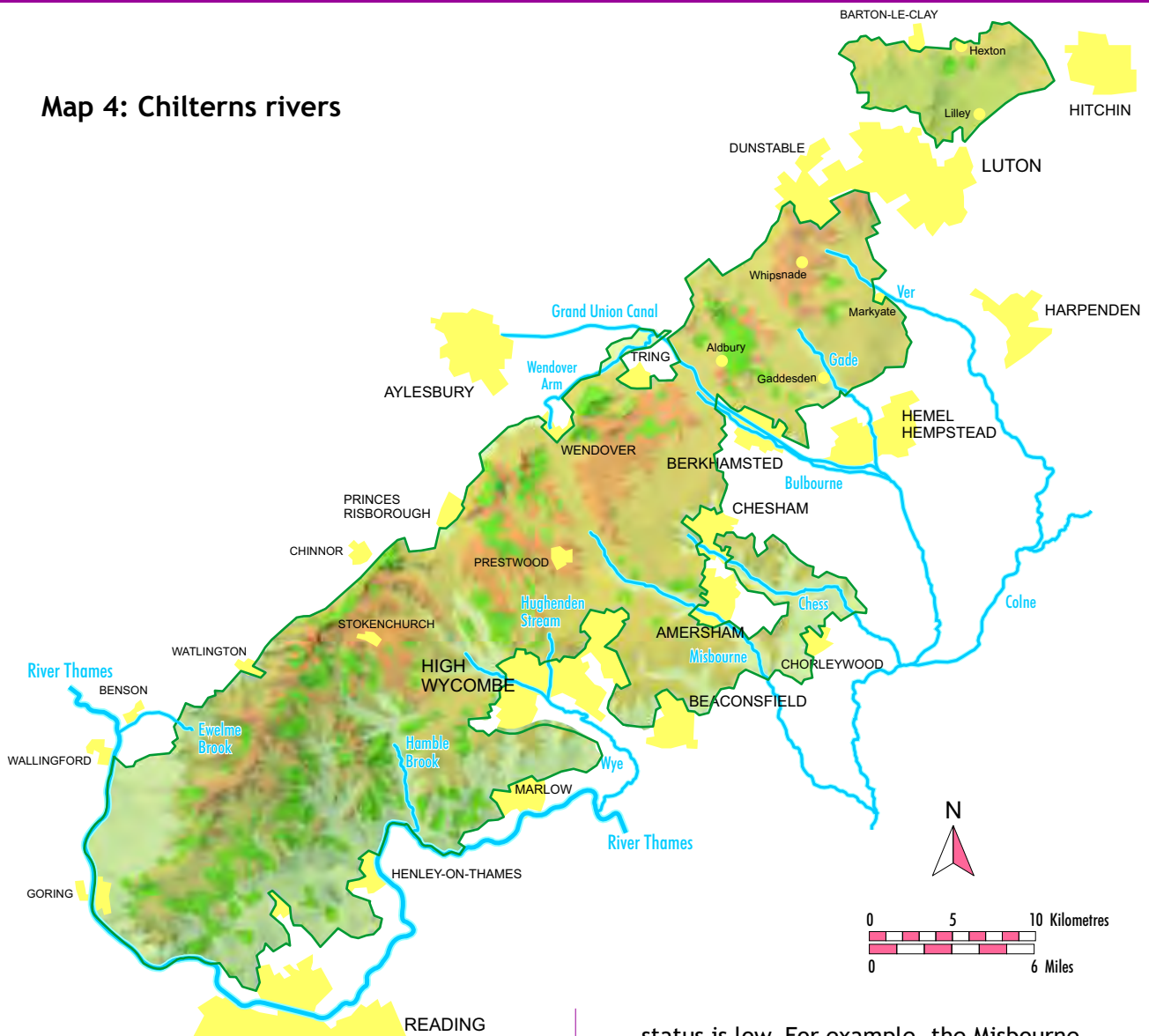
Table 11: Current state of Chilterns rivers

River	Current Ecological Status or potential	Current Chemical Status
Ver	Bad	Does not require assessment
Gade (upper)	Moderate	Does not require assessment
Bulbourne	Moderate	Good
Chess	Moderate	Does not require assessment
Misbourne	Moderate	Does not require assessment
Hughenden Stream	Poor	Does not require assessment
Wye (upper)	Moderate	Does not require assessment
Hamble	Poor	Does not require assessment
Ewelme Brook	Moderate	Does not require assessment

The indicator in context

- The European Water Framework Directive was introduced in 2000 to improve the chemical and ecological quality of all water bodies. It became UK law in 2003.
- The implementation of the Directive is being led by the Environment Agency through River Basin Drainage Management Planning. The Chilterns Chalk Streams all lie within the Thames River Basin Drainage District.
- Good ecological quality is defined as a slight variation from undisturbed natural conditions. Some heavily modified rivers cannot achieve this condition and the target for these rivers will be good ecological potential. All water bodies must have good chemical status.
- The Water Framework Directive requires member states to attain at least good status in all water bodies by 2015, or where this is not possible, good status should be achieved by 2027.
- The classification system uses the principle of 'one out, all out' - the poorest individual result sets the overall classification. This means that if a watercourse is classified as possessing good ecological status but poor chemical status, then its overall state will be defined as poor.
- Each water body is also assessed in terms of its physical state to determine whether it is heavily modified. If assessed as such, the water body will be required to reach 'good ecological potential' rather than 'good

Map 4: Chilterns rivers



ecological status. In the Chilterns, the Bulbourne, Misbourne, Hughenden Stream, Wye and Ewelme Brook are designated as heavily modified water bodies.

Interpretation of data

- Although the WFD assessment of rivers is extremely useful in providing an assessment of the quality of rivers, there are limitations that must be borne in mind:
 - i. The assessment process for determining the status of water bodies does not utilise standards specific to chalk rivers. Instead such rivers are assessed to the same standards as other lowland rivers. This means that chalk rivers will receive a higher assessment than is appropriate.
 - ii. The assessment of the current condition of Chilterns rivers is confused, in some cases, and the confidence in their assessed

status is low. For example, the Misbourne has been assessed as attaining Moderate Ecological Potential. However the confidence in this assessment is low.

iii. Where rivers are failing to achieve good status the justifications for failure are insufficiently detailed.

Conclusions

- Chalk streams are a globally scarce habitat and a key landscape feature of the AONB. Improving the ecological status or potential of those rivers currently assessed as poor or moderate (Rivers Ver, Gade (upper), Bulbourne, Chass, Misbourne, Wye and Hughenden Stream (upper) is crucial, as is completing the assessments of those rivers not yet assessed.
- It is a concern that the draft Thames RBD management plan indicates that improvement of these rivers over the next twelve years will be small.

Indicator 8: Length of hedge in good condition using DEFRA condition criteria

38% of hedgerows surveyed in the AONB over a 3 year period were found to be in good condition across all five DEFRA criteria.

A further 42% met all but one of the five condition criteria³³.

Summary of key data

The following table provides more detail on each of the condition attributes and the implications for failure in each category:

Table 12: Hedgerow condition

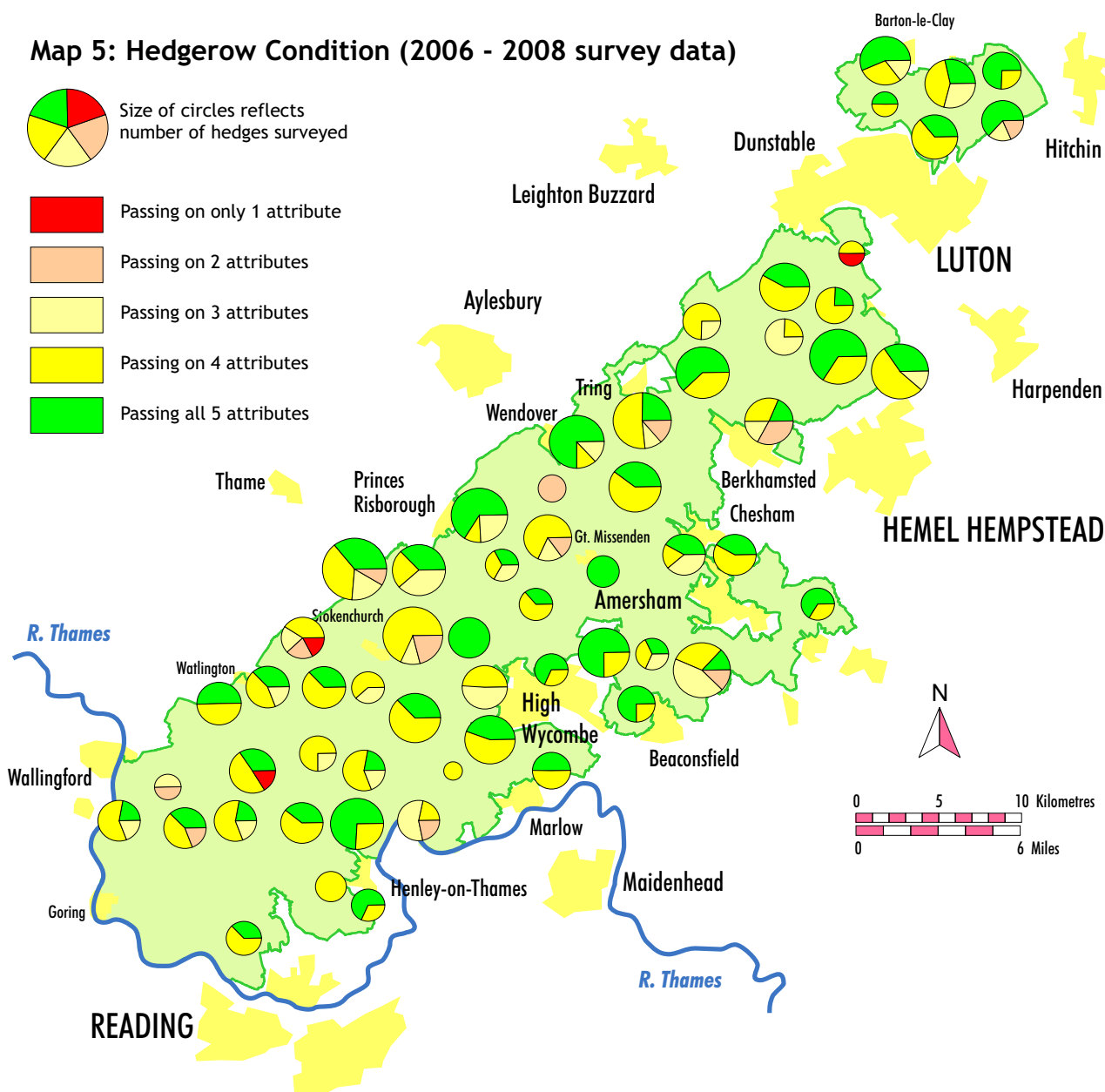
Attribute	Thresholds for favourable condition (all thresholds need to be passed)	Sections failing each threshold	Sections failing attribute overall	Conservation issue
Size	<ul style="list-style-type: none"> At least 1m height At least 1.5m width At least 3m² cross-sectional area 	0.3% 9.1% 10.3%	20%	Loss of shelter for fauna and, in particular, unsuitable nesting habitat for most birds.
Integrity/continuity	<ul style="list-style-type: none"> Gaps less than 10% of section length No gap greater than 5m wide Base of canopy less than 0.5m above ground for shrubby hedgerows 	15.2% 12.4% 18.5%	46%	Gaps at the base of the hedgerow mean that shelter for invertebrates, small mammals, amphibians and reptiles is lost, while gaps along the hedgerow reduce habitat continuity.
Width of undisturbed ground and perennial herbaceous vegetation cover	<ul style="list-style-type: none"> Width of undisturbed ground at least 2m Width of perennial herbaceous vegetation at least 1m 	15.8% 4.8%	21%	Management close to the hedgerow is likely to damage woody species, e.g. by harming their roots. Herbaceous vegetation is important as many animals rely on it for shelter, foraging and nesting.
Recently introduced, non-native species	<ul style="list-style-type: none"> Non-native herbaceous species less than 10% cover Non-native woody species less than 10% cover 	0% 5%	1%	Relatively recently introduced, non-native species can be very detrimental to the structure, diversity, ecological and landscape value of a hedgerow.
Nutrient enrichment	<ul style="list-style-type: none"> Combined cover of nettles, cleavers and docks should be less than 20% 	25.5%	25%	A broad indication that there is likely to be a species-poor ground flora, probably resulting from nutrient enrichment, e.g. from agricultural fertilisers being spread beyond the edge of the crop into the hedgerow base.

The indicator in context

- Hedgerows are a highly valued feature of the Chilterns, an integral component of the mosaic of woodland, arable and pasture that gives the landscape its character. They are important for landscape, archaeological, cultural and agricultural reasons and are a major wildlife habitat.
- The survey was carried out using the methodology in the latest Hedgerow Survey Handbook (Defra 2006). 330 hedgerow sections were surveyed across 53 one kilometre squares representing 6.4% of the AONB.

³³ Chilterns Hedgerow Survey, 2006 -2008

Map 5: Hedgerow Condition (2006 - 2008 survey data)



Interpretation of data

Reasons for poor condition

Five common reasons for failing to meet the threshold for favourable condition were identified.

1 The most common reason for a hedgerow to be classified in poor condition was the abundance of plant species indicative of nutrient enrichment in the hedgerow base. In grassland, nettles were particularly abundant, and in arable fields cleavers.

2 In many cases the base of the woody canopy was too high above the ground, in other words, the base of the hedgerow was

thin and leggy. This can be caused by livestock grazing the base or the use of spiral rabbit guards in newly planted hedgerows, causing a 'lollipop' effect on individual shrubs.

3 In a number of hedgerows the width of undisturbed ground between the hedgerow and the edge of ploughed or cultivated land was too small. This is caused by cultivation taking place too close or the effects of herbicide drift from the field.

4 The fourth most common reason for poor condition was the 'gappiness' of the hedgerow, with the result that it is no longer stock proof and valuable wildlife



Hedgerows near Chartridge, Bucks.

habitat has been lost. Gaps can be caused by annual flailing to the same height.

5 Finally another reason for a hedgerow to be classed in poor condition relates to its size. Only one of the surveyed hedgerows was too short, but 8% were too narrow to be classified in good condition. This is the result of the volume of the hedgerow being limited by the surrounding land management.

Conclusions

- It is encouraging that over a third of the hedgerows surveyed passed all five attributes, but clearly more work is needed to enhance the condition of the remaining 62%.
- Comparative data for other areas would be useful to help benchmark the AONB results. A national data set should become available from Defra shortly.
- Environmental Stewardship is the most obvious means to improving hedgerow

condition in the AONB. Survey results highlight the problem of nutrient enrichment in the hedgerow base. This would suggest that attention should be focussed as much on uptake of options relating to field margin management as to hedgerow management options.

- More work is needed to assess hedgerow condition and to promote good management of hedges on land managed outside of agriculture, which was not covered in depth in this survey.



Gappy hedge

Indicator 9: Area of land managed for equestrian purposes

7.4% of the AONB has been used for horse grazing at some point over the period 2008 -2010. This represents 26% of the total AONB grassland resource³⁴.

Intensive equestrian use³⁵ and sub-division of historic fields into paddocks remains relatively high, at around 2.8% of the AONB - equivalent to more than twice the chalk grassland in the Chilterns. Over 5 years this figure has fluctuated between 2.4% - 3.0% of the AONB.

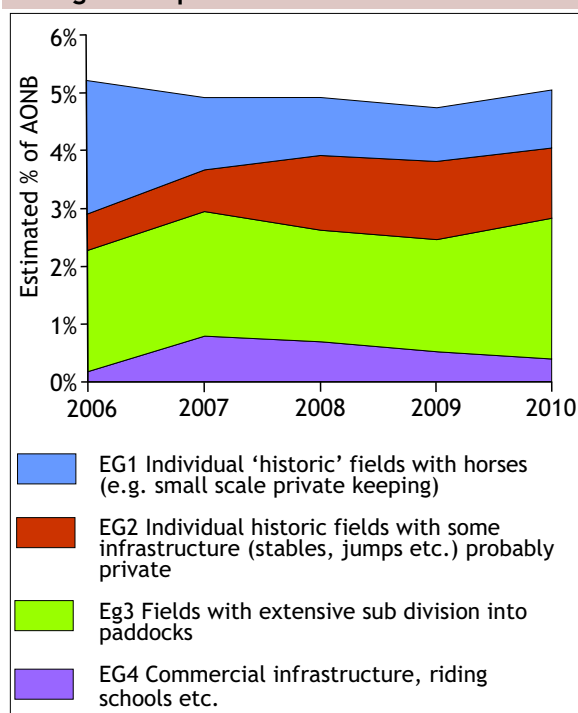
Summary of key data

Table 1 provides a breakdown of the different categories of equestrian land use - from low key horse grazing through to intensive uses - as a percentage of the AONB.

Table 13: Equestrian land use in the AONB

Category of use	% of AONB	
	2006	2010
EG1 (single historic fields, no infrastructure)	2.32%	0.91%
EG2 (as EG1 but with jumps, stables etc)	0.66%	1.14%
EG3 (historic fields subdivided into paddocks)	2.13%	2.27%
EG4 (commercial uses - riding schools, livery yards, extensive infrastructure)	0.18%	0.37%
EG (other equestrian use)	0.30%	0.16%
Total	5.59%	4.85%

Figure 3: Changes in equestrian use from 2006 -2010

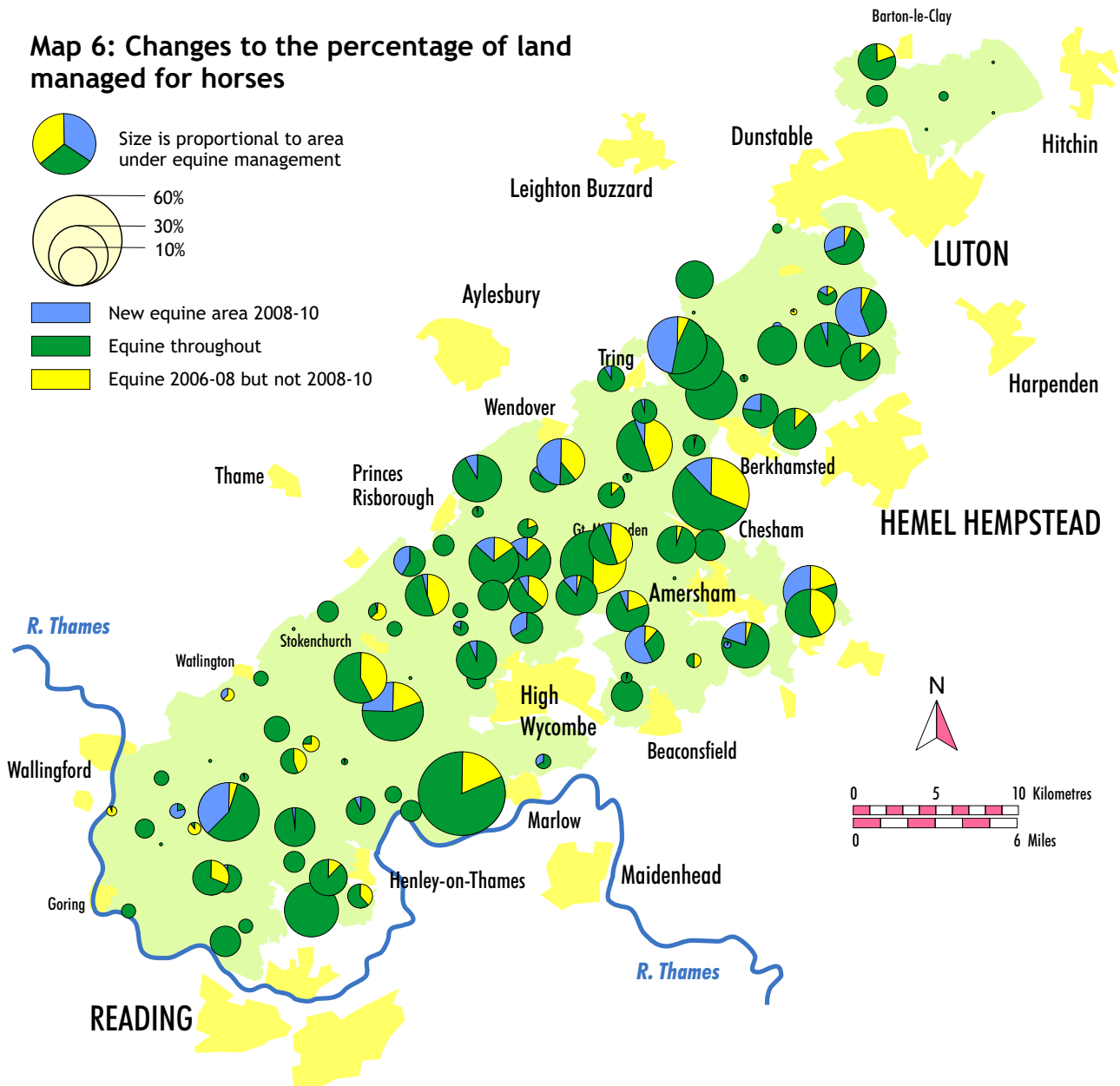


Historic fields sub-divided into paddocks, with associated infrastructure

³⁴ Chilterns Land Use Change Survey 2006 - 2010

³⁵ Intensive equestrian land being the sum of EG3, EG4 and associated buildings and yards

Map 6: Changes to the percentage of land managed for horses



Interpretation of data

- The 2010 data has to be treated with some caution as there was no survey in 2011 and so the usual process of data validation with reference to the next year's findings could not be undertaken.
- It is important to acknowledge that the area of land managed for equestrian purposes cannot be used as a simple proxy for condition of the landscapes and biodiversity of the AONB. Carefully managed horse grazing can be a valuable tool for management of conservation grasslands, and the horse industry is reported to be one of the biggest employers in the rural economy.
- However, the more intensive equestrian uses, associated infrastructure and the subdivision of historic fields - (categories EG3 - EG4 on the chart above) do potentially impact negatively on the landscape. The 2010 survey findings indicate an increase in fields being sub divided into paddocks (EG3) to the highest level since the survey began in 2006.
- Survey data suggests a fairly high degree of volatility in land use year on year, with individual fields switching, for example, between horse grazing and sheep grazing between years. This is to be expected as part of good animal husbandry. It does

mean however that a more accurate picture of the purposes for which an area is being managed is provided by taking a longer view

- This high turnover between grassland managed for horses and for other purposes is illustrated in Map 6. The data suggests that much of the land recently brought into equestrian use - for example around Tring, Wendover, Chenies, Fingest, and Stoke Row - is located on formerly arable land which may be more conducive to larger scale equestrian use than the more intimate small fields around settlements where pony paddocks have more traditionally been found.
- Changes of land use from agricultural to equestrian may require planning permission even in cases where there is no additional infrastructure involved. In view of the increasing area of land being used for more intensive equestrian use, it

remains important that planning authorities ensure that due process is followed for all such proposals.

- The Defra Agricultural Census for 2010 also indicates that after a general decline in horse numbers in 2009, there has been a partial recovery in 2010.

Conclusions

- Equestrian land management continues to be a prominent component of the land use of the AONB, with intensive equestrian land use - and associated landscape impacts - remaining at high levels and a continued concern.
- The data indicates that the spatial distribution of equestrian land use is changing - it would be useful to investigate this trend and the underlying causes of this further, and to look at this in relation to the planning system.



Horses and ponies can play a valuable role in conservation grazing

Indicator 10: Area of chalk grassland in positive conservation management

97.6% of SSSIs³⁶ where chalk grassland is the main habitat are in favourable or unfavourable recovering condition.

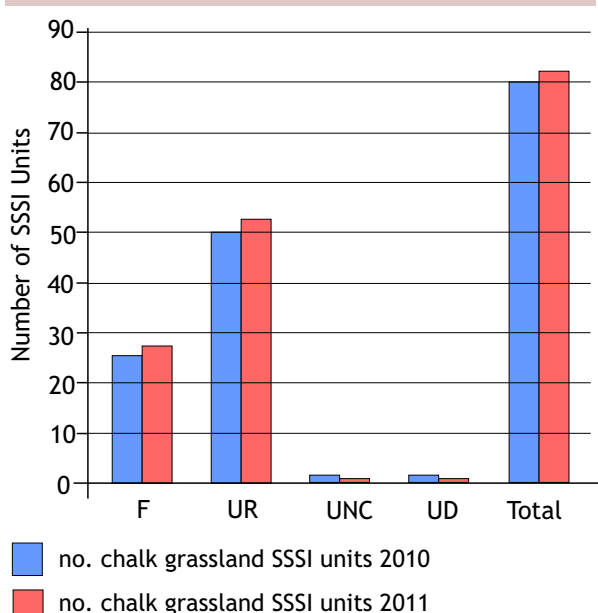
Summary of key data

- There are around 700 hectares of chalk grassland mapped in the AONB³⁷.
- This is likely to be an underestimate of the total resource, excluding for example scrubbed former chalk grassland sites in need of restoration or arable reversion sites 'en route' to becoming chalk grassland.
- Of this total area, 64% is within a Site of Special Scientific Interest (SSSI) and the vast majority of the remainder is within a Local Wildlife Site.
- Table 1 below gives the number and percentage of chalk grassland SSSI units³⁸ in the AONB in each condition category.
- Comparison of the condition of chalk grassland SSSI units with those where the main habitat is broadleaved mixed and yew woodland shows a very much higher proportion of wooded SSSI units in favourable condition (85.5%) compared to the chalk grassland units (32.9%).

Table 14: Chalk grassland SSSI condition in the AONB

Favourable		Unfavourable Recovering		Unfavourable No Change		Unfavourable Declining	
No. Units	% of chalk grassland units	No. Units	% of chalk grassland units	No. Units	% of chalk grassland units	No. Units	% of chalk grassland units
27	32.9%	53	64.6%	1	1.2%	1	1.2%

Figure 4:
Chalk grassland SSSI condition 2010 - 2011



The indicator in context

- Chalk grassland in the Chilterns supports unique and rich plant communities and a specialised and diverse invertebrate fauna including butterflies such as the chalkhill blue and sliver spotted skipper and other invertebrates such as the bloody nosed beetle.
- The chalk grassland is predominantly associated with the steep scarp slopes of the Chilterns chalk outcrop and dry valley slopes.
- Traditionally, chalk grassland would have been grazed by sheep and occasionally cattle and horses to produce a close-cropped sward. This management, together with the particular conditions of the soil

³⁶ Number of SSSI units

³⁷ Chilterns Chalk Grassland Audit 2008 (Chilterns Conservation Board)

³⁸ SSSI units where the main habitat is lowland calcareous grassland

have created the characteristically dense, springy, well-drained turf.

- The greatest current threat to the habitat in the Chilterns is gradual loss due to under-grazing and scrub encroachment. A scrub survey carried out by English Nature in 1996³⁹ indicated that a majority of chalk grassland sites in the Chilterns Natural Area had in excess of 25% scrub cover.

Interpretation of data

- It had been proposed that this indicator be assessed largely on the basis of data from SSSI condition assessment and National Indicator 197 assessments of the conservation management status of local sites. Unfortunately it has not been possible to analyse data on local sites by habitat to date, due to a number of issues including data consistency across different counties, so this report is based again on SSSI condition data only.

- There would appear to have been continued progress since the 2009 and 2010 reports reflecting efforts on the ground to tackle under-grazing and scrub encroachment.

Conclusions

- Analysis of the condition assessment data suggests progress on chalk grassland SSSI units over the past 2 years.
- Nonetheless, chalk grassland SSSI units - along with other grassland sites - remain over-represented amongst SSSI units in unfavourable condition in the Chilterns.
- Maintaining the momentum and continuing to monitor condition on the 64.6% of sites assessed as unfavourable recovering will be crucial over the coming years.



Ivinghoe Hills

³⁹ Chilterns Natural Area Chalk Scrub Survey (1996) L J Redgrave, English Nature

HISTORIC ENVIRONMENT

Context

The Chilterns AONB is a landscape that possesses evidence of human occupation and influence from all eras from pre-history through to the twentieth century. This ancient landscape helps to define a sense of place and because there has been relatively little intensive cultivation much survives. However, modern agricultural practices, reduced management of woodland, scrub invasion, constrained budgets for maintenance and the pressure for development can all have impacts on the historic environment.

The Chilterns AONB Management Plan details the special qualities of the historic environment of the Chilterns and aims to ensure that these are conserved and enhanced for the benefit of current and future generations. The policies of the Management Plan seek to protect the historic environment whilst improving the public's understanding.

Key findings for 2011

- By their very nature the resources that make up the historic environment do not generally increase or decrease in number from year to year. However, the quality of the resource could vary markedly with different management arrangements in place. All of the data used to assess the indicators in this section comes from the English Heritage 'Heritage at Risk' publications. In 2011 these publications were produced in mid-October and they

have been interrogated to provide an up to date position.

- In its fourth year, the Heritage at Risk Register now includes Grades I and II* listed buildings, listed places of worship, scheduled monuments, registered parks and gardens, registered battlefields, protected wreck sites and conservation areas known to be at risk as a result of neglect, decay or inappropriate development. This year, for the first time, English Heritage has published a list of 'priority sites': important heritage at risk sites where resources will be focussed to secure their futures. There are no priority sites in the AONB.
- In 2011 English Heritage has taken a closer look at industrial heritage. The findings show that though Britain has a wealth of industrial heritage many industrial sites have been lost or are at risk due to functional redundancy. The survey showed that the percentage of listed industrial buildings at risk is three times greater than the national average for listed buildings at risk. New guidance is being provided by English Heritage and a new Architectural Heritage Fund grant scheme is being supported which aims to encourage local groups to take on industrial buildings. The National Heritage Protection Programme (2011-2015) will be used to shape an industrial designation programme and this will be closely followed by the Board.

Condition Indicator	Detailed update?	Key findings	Condition and Trend
11. Listed Buildings (Grade I or II*); total number /number at risk.	Yes - see page 34 for details	<p>2011 4 out of 140 grade I or II* buildings in the AONB are considered to be at risk.</p> <p>2010 2 out of 140 grade I or II* buildings in the AONB were considered to be at risk.</p>	Good, declining.
12. Registered Historic Parks : total number/ number at risk.	Yes - see page 37 for details	<p>2011 1 out of the 19 Registered Historic Parks in the AONB is at risk (Fawley Court and Temple Island).</p> <p>2010 1 out of the 19 Registered Historic Parks in the AONB is at risk (Fawley Court and Temple Island). With new owners at this site and works being undertaken to formulate more sympathetic management plans it is hoped that this situation will improve in the future.</p>	Good, improving.
13. Scheduled Monuments (SMs): total number/number at risk.	Yes - see page 38 for details	<p>2011 14 out of the 113 SMs in the AONB are at risk.</p> <p>2010 13 out of the 113 SMs in the AONB were at risk.</p>	Not good, declining.
14. Conservation Areas: total number/number at risk.	Yes - see page 41 for details	<p>2011 Of those Conservation Areas in the AONB which have so far been subject to the national survey of conservation areas, none have been found to be at risk.</p> <p>2010 Of those Conservation Areas in the AONB which have so far been subject to the national survey of conservation areas, none have been found to be at risk.</p>	Good, stable. However, on the basis of the data available it is difficult to reach a firm conclusion on the state of this aspect of the AONB's environment. It is encouraging that no Conservation Areas in the AONB were identified as being at risk in those areas included so far in the national survey by English Heritage.

Indicator 11: Listed buildings (grade I/II*): Total number/Number at Risk

There are 140 grade I and II* listed buildings in the AONB, of these 4 are recorded as being at risk⁴⁰.

Summary of key data

- English Heritage publishes the 'Heritage at Risk' register on an annual basis and the data for 2011 was interrogated.
- There are 4 listed buildings at risk within the AONB. One listed building, the main house which is Grade I, at Fawley Court and Temple Island (which is also a Grade II* registered park and garden and a Conservation Area) is described as being at risk. There are actually 17 other listed buildings at risk at Fawley Court though these are understood to be Grade II.
- According to the register Fawley Court and Temple Island is an early C18th garden and pleasure grounds surrounding a 1680s house set within a park landscaped by Lancelot Brown. Most of the estate and park are in separate ownership. Discussions between English Heritage and the new owner of the house and pleasure grounds are underway. English Heritage has agreed to works to improve the vegetation structure within the gardens but requested a landscape Conservation Management Plan that engages with the other key owners, before agreeing to any further major works. A joined up approach to management is

considered to be essential. This work appears to have stalled for the time being.

- The other building at risk in the AONB in 2010 was the fernhouse, archway, gateway and walls at The Street, Mapledurham (Grade II*). This remains on the list in 2011.
- The register for 2011 records two new entries. These are the Church of St Mary the Virgin, Fawley Green, Fawley which is Grade II* and in poor condition and the other is the Church of St Peter and St Paul at Checkendon. This building is described as a Listed Place of Worship of Grade I, is in a Conservation Area and is in poor condition. Extensive repairs are required to roofs, drainage and water disposal and remedial works are required to be undertaken on the walls and wall paintings. English Heritage has offered a Repair Grant for Places of Worship to support these works.



Church of St Mary the Virgin, Fawley Green

⁴⁰ See <http://risk.english-heritage.org.uk/>

The indicator in context

A listed building is a building or other structure designated as being of special architectural, historical or cultural significance. A listed building may not be demolished, extended or altered without permission from the local planning authority.

There are three types of listed status (in descending order of "importance"):

- Grade I: buildings of outstanding architectural or historic interest.
- Grade II*: particularly significant buildings of more than local interest.
- Grade II: buildings of special architectural or historic interest.

There are approximately 373,000 listings in place, of which 343,000 (92%) are Grade II, 20,500 (5.5%) are Grade II*, and 9,300 (2.5%) are Grade I.

Listed Buildings 'at risk'

- English Heritage have published a Register of Heritage at Risk which includes Grade I and II* listed buildings as well as structural scheduled monuments which are at risk and vulnerable.
- The risk arises through neglect and/or decay and is also considered when an asset is known to be vulnerable to becoming at risk.
- English Heritage is committed to securing a year-on-year reduction in the number of heritage sites at risk as part of its national plan for the protection of England's historic environment (see 'National Heritage Protection Plan 2011-2015'). English Heritage recognises that this will be challenging given the number of assets on the Register.
- Within the AONB there are 2,149 listed buildings in total. Those listed buildings at risk therefore represent a very small fraction of the total number, and they represent less than 2.9% of the Grade I and II* buildings. Nationally 3.0% of Grade I and II* buildings are at risk. In the east and

south east regions there are 193 Grade I and II* listed buildings at risk (1.8%). Overall this number has decreased since 2010. However, though 21 sites have been removed 15 have been added.

- English Heritage has previously assessed only a small proportion of the 14,500 listed places of worship. The number identified so far as being 'at risk' is small. As more places of worship are assessed this is likely to increase and is partly reflected in the increase in the numbers of listed buildings at risk this year.

Interpretation of data

- According to the 2011 Heritage at Risk Registers for the East and South East 50% and 52% respectively of buildings that were on the 1999 Register have been saved. This compares to a figure of 53% nationally.
- These two regions received grants to the value of £1.36m which were given to 14 sites. This compares to a total of £5.2m for 71 sites nationally.
- In the two regions covering the AONB 74 listed places of worship have been added to the Register and it is estimated that the cost of repairing these buildings would be £15.7m.
- When monitoring was undertaken for the previous management plan it was discovered that 15 listed buildings were on the at risk register, though this included grade II buildings as well as grades I and II*. Even though this data is out of date it would appear to show that the most important listed buildings within the AONB are generally in a better state now than in 2003.
- In addition to the listed buildings at risk within the AONB, there are also 12 listed buildings at risk just outside the AONB boundary at Pirton near Hitchin (grade II*), Putteridge Bury near Luton (6 listed buildings without grades being identified) and Halton House near Wendover (5 listed buildings without grades being identified within part of a Conservation Area).

Conclusions

- On this indicator the state of this part of the AONB's environment is considered to be good, though with more listed buildings now being at risk than last year the trend is declining.
- This is a cause for concern as budgets are increasingly becoming constrained and ongoing maintenance and repairs may not be undertaken.
- With large numbers of Grade II listed buildings not being included in the overall

assessment it is difficult to know if there is a hidden picture. Currently only London's Grade II listed buildings are assessed for risk and detailed in the Heritage at Risk publications from English Heritage. It is understood that some of the Chilterns' local planning authorities undertook their own monitoring of Grade II buildings at risk and details from such surveys may add some more detail to future state of the environment reports.



Fawley Court

Indicator 12: Registered Historic Parks and Gardens: Total number/Number at Risk

There are 19 registered parks and gardens and 1 of these is at risk⁴¹.

Summary of key data

- The one registered park and garden that is at risk is Fawley Court. This is registered as a Grade II* park and garden. It is understood that there are multiple owners which has led to a complicated situation in connection with maintenance and repair.
- The condition of the site is described in the Heritage at Risk register as being generally unsatisfactory with major localised problems. Its vulnerability remains high though the trend is listed this year as stable, whereas previously this was listed as deteriorating. Clearly some work has been done to arrest the decline.
- The key concern arises from the fact that landscape management has been unsympathetic and poorly resourced. With new owners of part of this site and works being undertaken to formulate more sympathetic management plans it is hoped that this situation will continue to improve in the future.

The indicator in context

- There are 1,610 designed landscapes on the current English Heritage Register of Historic Parks and Gardens of Special Historic Interest. These registered landscapes include private gardens, public parks and other green space, country estates and cemeteries. They are valued for their beauty, diversity and historical importance.
- Nationally 103 of the 1,610 registered parks and gardens are at risk. This is an increase from 6.2% (99 sites) in 2010 to 6.4% this year. Nationally 6 sites have been added and 2 removed. There has been no change in the south east but in the east one site has been added and one removed.

- In the south east and eastern regions there are 579 registered parks and gardens. In the east 8 sites out of 211 are at risk (3.8%) and in the south east 24 sites out of 368 are at risk (6.5%).
- Within the AONB the 19 registered parks and gardens occupy a total of 2,517 hectares which represents 3% of the AONB. At 76.57 hectares Fawley Court represents 3% of the area covered by registered parks and gardens.

Interpretation of data

- Fawley Court is one of 7 Grade II* parks and gardens that are at risk in the south east and it clearly represents a significant resource and its condition therefore causes great concern, particularly when this is considered alongside the number of listed buildings that are also at risk at the same site. With new owners and plans being put in place for the restoration of the parkland it is hoped that this situation will continue to improve in the future.
- In addition to the one registered park and garden that is at risk within the AONB there are also two just outside the AONB. One is at Halton House, Halton and is listed as Grade II and is also partly within a Conservation Area and has 5 listed buildings. The second is at Putteridge Bury, Offley which is also Grade II and contains 6 listed buildings. These are two of 16 Grade II parks and gardens that are at risk in the region.

Conclusions

- In general terms the condition of this indicator is good. With the trend recorded at Fawley Court changing from deteriorating to stable the trend for the indicator is considered to be improving.

⁴¹ See <http://risk.english-heritage.org.uk/>

Indicator 13: Scheduled Monuments: Total number/Number at Risk

There are 113 Scheduled Monuments and 14 are at risk.

Summary of key data

- Each of the monuments at risk is examined in connection with: the principal vulnerability to decline, its ownership, its condition and the trend.
- Most of the monuments at risk have been the same for a number of years, with the same associated data and condition. However, in 2010 two entries were taken off the register (bowl barrow at Molin's Works, Bledlow cum Saunderton and an 875m section of Grim's Ditch at Shire Lane, Buckland) and a new entry was added (a bowl barrow near Nettleden Lodge, Nettleden with Potten End). Last year's new entry is in private ownership and its

condition was described as generally satisfactory but with significant localised problems. The trend was stable and it was vulnerable to metal detecting. In 2011 this entry is described as declining rather than stable with vandalism being the principal vulnerability rather than metal detecting.

- The data for 2011 shows that a new site has been added to the register. This is the motte and bailey castle, a moated site and Roman villa immediately to the east of All Saints Church at Kimble. Its principal vulnerability is extensive stock erosion and the trend is declining. This has been added to the table below.

Table 15: Schedule Monuments at risk, their condition and vulnerability

Site name	Condition	Principal vulnerability	Trend	Ownership
Dray's Ditches, Streatley	Generally satisfactory but with significant localised problems	Dumping	Stable	Private
Dray's Ditches, Luton	Generally satisfactory but with significant localised problems	Dumping	Stable	Local Authority
Bowl barrow 950m SSW of Nettleden Lodge, Nettleden with Potten End	Generally satisfactory but with significant localised problems	Vandalism	Declining	Private
Roman settlement at the Cow Roast Inn, Northchurch	Generally satisfactory but with significant localised problems	Arable ploughing	Declining	Private
Bell barrow 260m WNW of Slough Glebe Farm, part of the Saunderton Lee barrow cemetery, Bledlow cum Saunderton	Extensive significant problems	Arable ploughing	Declining	Private
Bowl barrow 140m WNW of Slough Glebe Farm, part of the Saunderton Lee round barrow cemetery, Bledlow cum Saunderton	Extensive significant problems	Arable ploughing	Declining	Private

Site name	Condition	Principal vulnerability	Trend	Ownership
Two bowl barrows 450m north west of Slough Glebe Farm, part of the Saunderton Lee barrow cemetery, Bledlow cum Saunderton	Extensive significant problems	Arable ploughing	Declining	Private
Roman villa east of Lodge Hill Farm, Bledlow cum Saunderton	Extensive significant problems	Arable ploughing	Declining	Private
Bledlow Cross, Bledlow cum Saunderton	Generally unsatisfactory with major localised problems	Scrub / tree growth	Declining	Private
Motte and bailey castle, moated site and Roman villa immediately to the east of All Saints Church at Great and Little Kimble	Generally unsatisfactory with major localised problems	Extensive stock erosion	Declining	Private
Roman villa north of Yewden Lodge, Hambleden	Extensive significant problems	Arable ploughing	Declining	Private
Bix Old Church, Bix, Bix and Assendon	Very bad	Scrub / tree growth	Declining	Religious organisation
North Stoke henge and ring ditch site, Crowmarsh	Extensive significant problems	Arable ploughing	Declining	Private
Camp on Bozedown, Whitchurch on Thames	Extensive significant problems	Arable ploughing	Declining	Private

The indicator in context

Scheduled monuments are our most valued archaeological sites and landscapes, designated because they are of national importance. They include prehistoric burial mounds, stone circles and hillforts, Roman towns and villas, medieval settlements, castles and abbeys and the structures of our more recent industrial and military past.

Although protected by law, scheduled monuments are still at risk from a wide range of processes. They are vulnerable to development and can be exposed to intense pressures beyond the scope of the planning system, including agricultural intensification, forestry and some natural forces, such as erosion. It is the pressures which are not controlled by the planning process which pose the greatest threat to the majority of scheduled monuments.

- Nationally there are nearly 20,000 scheduled monuments. Just over 3,300 of these are at risk (16.9% this year compared to 17.2% in 2010).
- In the south east and eastern regions there are about 4,300 scheduled monuments and 464 are at risk (455 in 2010). The proportion of monuments at risk in the eastern region is greater than the south east, these being 12.4% (12.1% in 2010) compared to 9.9% (9.4% in 2010).
- Within the AONB 12.3% of scheduled monuments are at risk and this has also increased compared to 2010, when 11.5% were at risk.
- In the south east 6 sites have been removed from the register but 8 sites have been added. In the east 17 sites have been removed and 23 added.

Interpretation of data

- Since the launch of the Monuments at Risk register by English Heritage about 70 scheduled monuments have been removed from the 'at risk' category in the regions covering the AONB. This success should not lead to complacency.
- Though the proportion of monuments at risk in the AONB is significantly lower than the national picture it does not compare favourably with the overall regional picture (the vast majority of scheduled monuments at risk in the AONB are in the south east region).
- With most of the monuments that are at risk being in a state of decline it will be necessary for significant work to be done to address this and to arrest the decline. This will continue to involve a dialogue with owners, most of whom are private individuals, to try and address the key concerns. These concerns relate mainly to arable ploughing and unrestricted plant, scrub or tree growth.
- As part of the National Heritage Protection Plan - which sets out English Heritage's commitment to safeguarding heritage up to 2015 - the 'Conservation of Scheduled Monuments in Cultivation' project will be rolled out nationally from 2011 onwards. It is hoped that this can build on the success of trials in other regions.
- It has been accepted that dissemination of information and small changes in management can often do much to improve condition. However, securing the future of a significant proportion of monuments will require further study, partnership working and resources. This cannot be achieved overnight.

Conclusions

- A close examination of this indicator shows that the state of this part of the AONB's environment is still not good and the trend appears to be a declining one. This is evidenced by the addition of one monument to the register and the declining trend in connection with most of those sites that are at risk.
- With limited resources being directed at this there is real concern that the number of monuments on the 'at risk' register may not decrease and their condition may well continue to decline further in the future.



Earthworks at Great and Little Kimble

Indicator 14: Conservation Areas: Total number/Number at risk

There are 94 Conservation Areas within (or partly within) the AONB and none have been found to be at risk⁴²

Summary of key data

- English Heritage publishes the 'Heritage at Risk' register on an annual basis and the data for 2011 was interrogated.
- The national survey of Conservation Areas at risk was still not complete in the 2011 Heritage at Risk reports. However, for those Conservation Areas surveyed within the AONB none were reported as being at risk in 2011.

The indicator in context

- A Conservation Area is an area (usually urban) the character or appearance of which is considered worthy of preservation or enhancement because of its special architectural or historic interest. In Conservation Areas, it is the protection of the quality and special interest of the area as a whole that is intended, rather than specific buildings.
- For example, the layout of boundaries, roads, vistas and viewpoints, trees and green features, street furniture and surfaces, the characteristic building materials of the area, the mix of different uses, and the design of shop fronts may all be taken into account when deciding whether an area has a particular special architectural or historic interest.
- There are additional planning controls over certain works carried out within a Conservation Area. For example, demolition of buildings or structures over a certain size within Conservation Areas requires consent. The designation does not preclude development from taking place, but does require that developments preserve or enhance the historic character of the area.

- Trees in Conservation Areas have some extra protection, though not as much as if they were covered by a tree preservation order.

Conservation Area Appraisals

- English Heritage asked every local authority in England to complete a survey of its Conservation Areas, highlighting current condition, threats and trends, and identifying those that are expected to deteriorate, or are already in very bad or poor condition (and not expected to change significantly in the next three years), as being at risk.
- The methodology for assessing Conservation Areas at risk was refined after the first survey in 2008/2009. The information collated in 2011 provided a more detailed assessment of each Conservation Area and an overall category for condition, vulnerability and trend is included for each Conservation Area on this register.
- Conservation Areas are removed from the register once issues have been identified, plans put in place to address them and positive progress is being made.
- Nationally, 288 local planning authorities (86% compared to 81% in 2010) provided information with 91 authorities from the regions covering the AONB returning data.
- A total of 516 Conservation Areas (6.6%) are identified as being at risk in 2011 (compared to 549, which was 7.4% in 2010), with 109 (4.5%) being in the regions covering the AONB (compared to 134, which was 5.9% in 2010). However, an examination of the data has shown that none of these were within the AONB,

⁴²See <http://risk.english-heritage.org.uk/>

though it is not clear which authorities returned data. Until a 100% return is achieved and recorded this will be difficult to properly assess.

	National	South East/ East of England	AONB
Total number of Conservation Areas (CAs)	9,600	data not available	94
Number of CAs on which at risk information is available	7,841	2,393	data not available
% of CAs on which at risk data is available	79%	data not available	data not available
Number (%) CAs at risk (from available data)	516 (6.6%)	109 (4.5%)	0 (0%)

Interpretation of data

- In the past a number of Conservation Areas were subject to appraisal. The new reporting regime, through the returns in connection with the Heritage at Risk register, should provide a more robust method of identifying problems and then seeking ways of overcoming these.
- At present, it is not possible to identify from the data how many of the 94 Conservation Areas within the AONB have been reported on, however, nationally 86% of all local authorities have provided information and there would appear to have been a good level of participation from authorities within the south east and east regions (80% and 75% respectively).
- It is interesting to note that there are no Conservation Areas assessed as being at risk within the AONB. Last year, 3 Conservation Areas just outside the AONB (at Dunstable, Chesham Old Town and Chesham Town Centre) were considered to be at risk. None of these Conservation Areas remain on the register.

- The Heritage at Risk report also details that some Conservation Areas within and adjacent to the AONB contain listed buildings, parks and gardens and scheduled monuments that are at risk, but the Conservation Area itself is not assessed as being at risk.

Conclusions

- On the basis of the data available, and because this is a new indicator, it is difficult to assess what the state of the AONB's environment actually is. The fact that no Conservation Areas within the AONB have been identified as being at risk is encouraging, albeit it is not clear how many have been reported on in total.

SOCIAL AND ECONOMIC

Context

The Chilterns Area of Outstanding Natural Beauty is home to 80,000 residents and is a destination for 55 million leisure visits every year. Over a million people live close to its boundary in major towns including High Wycombe, Luton, Dunstable, Hemel Hempstead, Hitchin and Reading.

Approximately 10 million people live within an hour's travelling time. This landscape was, and still is, being shaped by people's everyday activities of work, leisure and movement, in addition to those whose business is that of managing the environment.

The Conservation Board has a statutory duty to foster the social and economic well-being of local communities when pursuing its primary aim of conserving natural beauty. This is a recognition that much of the natural beauty of the Chilterns derives from the activities of local people at work and play, and that much of that activity in its turn is dependent on the environmental assets of the Chilterns.

The Chilterns AONB Management Plan has identified a number of key issues relating to the social and economic well-being of the

Chilterns. These include a need to improve the green credentials of tourism businesses and the problem of high traffic levels on local roads which affects the tranquillity of the countryside and makes roads less attractive to walkers, cyclists and horse riders. These issues informed the two indicators which have been developed for this section:

- Number of visitor attractions which have published information on access by public transport
- Number of businesses registered with the Green Tourism Business Scheme

Whilst these indicators are providing useful information, neither are direct measures of the health of the Chilterns' rural economy. A new indicator under consideration for this section is the number of farm shops in the AONB and the number of Farmers' Markets in and close to the AONB. These figures would provide an indication of the number of local producers and the level of support from communities for buying locally-produced food. A start has been made on collecting data for this new indicator for inclusion in next year's report.



Farmers Market at High Wycombe

Key findings for 2011

In 2009 34% of 68 countryside attractions in the Chilterns had information on their websites about how to reach them by public transport. This had increased to 66% in 2011.

The total number of businesses within or close to the Chilterns AONB registered with the Green Business Tourism Scheme is 13, an increase of 4 compared to 2009.

Condition Indicator	Detailed update?	Key findings	Condition and Trend
15. Number of visitor attractions which have published information on access by public transport	2011	<p>2011 66% of 68 countryside attractions in the Chilterns had information on their websites on how to reach them by public transport</p> <p>2009 34% of 68 countryside attractions in the Chilterns had information on their websites on how to reach them by public transport</p>	Improving, showing good increase in online information.
16. Number of businesses registered with the Green Tourism Business Scheme	2011	<p>2011 13 businesses within and close to AONB are registered.</p> <p>2009 9 businesses within and close to AONB are registered.</p>	Poor, showing gradual improvement.

Indicator 15: Number of visitor attractions which have published information on access by public transport

Out of 68 countryside attractions in the AONB 45, or 66%, have published information on their websites on how to reach them by public transport.

Summary of key data

- 68 visitor attractions within the Chilterns AONB were selected from the list of attractions on the AONB website. A comprehensive trawl of all the websites run by the organisations which own the attractions was carried out. From this trawl information on access by public transport was found for 45 of the attractions.
- A number of sites do not have information on public transport but have a link to the relevant page on the Sustrans site showing a map of the area with any National Cycle Network routes highlighted (e.g. BBOWT Warburg and Dancers End reserves, National Trust Pitstone Windmill).

Interpretation of data

- The overall figure of 66% of attractions publishing online information on accessibility by public transport is a great improvement on last year's figure of 37% and shows a very encouraging upward trend. Improvements in information provision have come from local authorities, voluntary organisations and a business. The main reason for the big increase is the new www.visitwoods.org.uk website which lists woods owned by the Forestry Commission, Woodland Trust, RSPB, National Trust and Wildlife Trusts. The entry for each wood is linked to a website providing tailored information on how to reach it by public transport.
- The information available on how to access attractions by public transport remains variable. Perhaps not surprisingly, the larger attractions with more infrastructure and staff, such as stately houses and animal farms, generally have more

information available than the smaller attractions such as nature reserves. The smaller ones are also less likely to have their own dedicated website or webpage. Of those attractions which still have no online information about public transport, three are located in isolated rural areas where travel by car is the only realistic way of reaching them.

- There may be some merit in publicising an example of best practice, or devising a fictitious example, to encourage improvements in the quality of information.

Conclusions

- The increase in online information is an indicator of general improvements in the availability and quality of website information on countryside sites.
- It would be worthwhile doing more research into the kind of information being published on public transport, how useful and up-to-date it is and crucially what impact it has on people's behaviour. It is clear that there are great variations, from simply publishing a link to a national website with public transport information, to producing tailored information for a particular site on local bus and train services. A system of grading the information provided would be helpful in understanding the quality of what is on offer to the public.



Chiltern line at Great Missenden

Indicator 16: Number of businesses registered with the Green Tourism Business Scheme

Three businesses within the AONB are registered with the Green Tourism Business Scheme. One of these has achieved a Gold grading and one a Silver grading.

Summary of key data

Of the 13 businesses in or close to the AONB registered with the GTBS, 2 have achieved a Gold grading, 7 have achieved a Silver grading, 3 have Bronze and 1 is awaiting grading.

Table 16: Businesses within the AONB

Red indicates changes since last year.

Name of business	Type of business	Location	GTBS grading
Roald Dahl Museum and Story Centre	Visitor attraction	Great Missenden	Silver
Henley Business School	Conference venue	Henley	Gold
Whipsnade Zoo	Visitor attraction	Whipsnade	Awaiting grading

Indicator in context

- The GTBS has been running since 1997 and has over 2000 members across the UK. It was first established in Scotland and has a large number of members there. It is the principal scheme in the UK proving accreditation to tourism businesses which are implementing measures to operate sustainably. In recent years there have been regional and sub-regional initiatives to roll the Scheme out in England, including the South West, Kent and Sussex. In November 2005 an event was held by the Chilterns and North Wessex Downs AONBs to launch the Scheme to local businesses. Otherwise there has not been a major push on the Scheme in the Chilterns area.

Interpretation of data

- The number of businesses registered with the GTBS within the AONB is extremely low, and there is great scope to increase this. There is evidence that once businesses have joined the Scheme it is a lengthy process to become graded. This may have some bearing on the low number that have joined, however, the relative lack of publicity for the Scheme in the Chilterns area may also be a factor.

Table 17: Businesses close to the AONB

Red indicates changes since last year.

Name of business	Type of business	Location	GTBS grading	Proximity to AONB
Ramada Jarvis Hotels	Corporate office	High Wycombe	Silver	1.5km
Byways	B & B	Milton Common, Oxon	Silver	7.5km
Chilterns Conservation Board	Corporate office	Chinnor	Gold	0.5km
Ramada Hemel Hempstead	Hotel	Hemel Hempstead	Silver	2km
Best Western Watermill Hotel	Hotel	Bourne End, Berkhamsted	Bronze	0.5km
Best Western Menzies Hotel Strathmore	Hotel	Luton	Silver	3km
Hilton Luton Gargen Inn	Hotel	Luton	Silver	1km
Marlow Tourist Information Centre	TIC	Marlow	Bronze	1km
P. Risborough Tourist Information Centre	TIC	Princes Risborough	Silver	1km
Oxford Belfry Hotel	Hotel	Milton Common	Bronze	7.5km

Conclusions

- The total number of businesses within or close to the AONB which are registered with the GTBS has increased by 4 since last year. Of those 13 which are registered, 4 are new additions since last year which indicates there is still take-up of the Scheme, albeit at a very low level, in the area. For the first time there is a business with a Gold grade within the AONB (Henley Business School).
- The overall effectiveness of the GTBS in encouraging and increasing the sustainability of tourism businesses is still being assessed. As the main national scheme for encouraging sustainability in the tourism industry however it should continue to be promoted throughout the Chilterns.

UNDERSTANDING AND ENJOYMENT

Context

- The Chilterns Area of Outstanding Natural Beauty (AONB) is one of the largest and most popular rural areas for informal recreation in the UK, attracting 55 million leisure visits every year. There are over 2,000km of rights of way in the Chilterns, a wide range of promoted routes, two national trails (the Ridgeway and the Thames Path) and several other long distance walking and cycling routes.
- The Chilterns AONB Management Plan aims to ensure that high quality and enjoyable recreation and access opportunities are available to all.
- Anecdotal evidence suggests there has been an increase in organised walking and cycling events in the Chilterns, ranging from charity challenge events to walks and rides offered by clubs. The Ramblers Association reported that the Chilterns Weekend Walkers group is the fastest-growing group in the UK.
- Countryside sites with formal visitor facilities are more popular than ever. Since College Lake opened its new visitor centre in May 2010 visitor numbers have increased from 10,000 to around 40,000 visitors.
- Participation in niche countryside activities such as bush craft, Nordic walking and geo-caching has increased. In addition, formal countryside education projects such as the Forest Schools programme are flourishing. There are many more groups and activities now on offer.

Enjoying one of the new circular walks around Ivinghoe Beacon



- The future of the Chilterns Rambler bus service in 2010 was looking uncertain due to funding cuts. The Chilterns Conservation Board provided a Sustainable Development Fund grant to help with the running of a slimmed-down service for the 2010 season operated by Community Action Dacorum, with the proviso that a review of the service and other options for running it more sustainably were undertaken at the end of the season.
- The removal of stiles in the Chilterns continues, despite local authority cuts, with a great deal of work carried out by the Chiltern Society. The Chiltern Society are about to celebrate the installation of the 100th gate in the Oxfordshire Chilterns. The Chilterns is already well ahead of other protected landscapes in terms of physical accessibility, but there are still locations where landowners have not agreed to stile-removals and efforts to improve accessibility continue, particularly on promoted routes and close to urban centres.
- Physical access improvements benefiting users of wheelchairs/mobility scooters have taken place in a number of locations in the Chilterns, including two new circular walks accessible for off-road mobility scooters around Ivinghoe Beacon and at Steps Hill open access land, and a new

Key findings for 2011

The table below shows both existing indicators and whether there is an update in the current year, along with a summary of key findings.

Condition Indicator	Detailed update 2011	Key findings	Condition and Trend
17. Participation in Health Walks	Yes - see page 50 for details	In 2010/11 total attendance figures for health walks in the Chilterns was 40,787, a 20% increase over the previous year.	The health walks programme in the Chilterns is very strong and growing steadily, despite funding pressures.
18. Area of land with statutory or voluntary Open Access	Yes - see page 51 for details	<p>2011 The amount of statutory open access is unchanged but there has been an increase in the amount of voluntary access through Defra's Environmental Stewardship scheme (both open access and linear access).</p> <p>2009 There are 8225 hectares of Accessible Natural Greenspace in the AONB - 10% by area. This includes statutory and voluntary open access land, as well as other areas providing both public access and potential wildlife habitat.</p> <p>Quality of the open access land was more of an issue but harder to measure.</p>	There is good provision and spread of open access land in the Chilterns. There has been a slight increase in new voluntary access over the past year, which has provided some important strategic links and enhanced provision close to urban populations.
19. Visitor satisfaction on rights of way and use of the countryside	Yes - see page 52 for details	<p>2007 87% of survey respondents⁴³ rated way marked paths as good or very good.</p> <p>2011 96% of survey respondents had used a right of way in Oxfordshire in the last 12 months ⁴⁴</p>	Visitor satisfaction with rights of way and countryside sites is generally high, which is particularly encouraging given high usage levels.

⁴³ Source: Chilterns Leisure Visitor Survey, 2007

⁴⁴ Source: Oxfordshire Voice Survey, Chilterns analysis

Emerging issues, challenges and priorities

- If the proposed HS2 route is developed it would have a major impact on the rights of way network, countryside sites and rural tourism. A total of 25 rights of way would be severed and some sections of rights of way located in the railway corridor would be destroyed. At least 16 promoted routes would be affected (3 national routes including the Ridgeway National Trail, 7 regional routes and 5 local promoted routes). In addition 7 countryside sites would be affected, either through the impact on views and tranquillity, or directly due to the HS2 corridor passing through the site and severing access. Finally a number of popular visitor gateway towns and villages would be adversely affected, namely Wendover, the Lee, Great Missenden, Little Missenden and Amersham.
- Local authority funding cuts have had an impact on the work of the rights of way and countryside departments. Basic rights of way maintenance has continued but the reduction in staffing levels and funding has put many access projects on hold and the future delivery of the rights of way improvements plans is uncertain. The Chiltern Society and other volunteer groups have stepped in to help local

authorities with maintenance work, stile-removals and installation of gates, but there are many projects which cannot be carried out by volunteers. The challenge will be in keeping the Rights of Way Improvement Plans at the forefront of local government thinking when it comes to managing budget cuts.

- In Bucks, a major Planning Environment & Development Service re-organisation is due to take effect from 4th December 2011. The current proposal is to merge the Service with Transportation; reduce the number of Area Rights of Way Officers from four to two and transfer the path maintenance function to Ringway-Jacobs.
- Natural England is undertaking another review of National Trails which should be completed by March 2012 and the recommendations rolled out during 2012/13. For 2011/12 Natural England has been unable to fund any direct marketing work on The Ridgeway and Thames Path due to central government's spending freeze on marketing and advertising-related activity, and their grant for the Trails was reduced by 28%. The current website contract, which it was feared would end in September 2011, has been extended for a further 18 months until March 2013.



Dunstable Downs multiuser trail

Indicator 17: Participation in Health Walks

There is a very active health walks programme in the Chilterns, with nearly 41,000 health walk attendances in the last 12 months. The health walks programme has shown steady growth over the last few years and plays a vital role in encouraging less confident walkers and those with mobility or health issues.

Summary of key data

- The last year has seen a further expansion of the popular health walks programme. In 2010/11 total attendance figures for health walks in the Chilterns was 40,787 (see Table 1), a 20% increase over the previous year.
- The health walks programme is going from strength to strength, with a steady upward trend in the number of people attending health walks and with participants walking more regularly. Bucks Simply Walk has introduced additional slower walks to the regular walks programme.
- Cuts in local authority funding mean that the resourcing of the health walks programme is continually under threat. Bucks Simply Walk has been successful in generating additional funding from Parish Councils, Town Councils, walker donations and other sources, which has reduced the funding shortfall. This shows the importance of the health walks programmes to local communities and their willingness to help fund its continuation.

Table 18: Number of health walk attendances in the Chilterns (includes repeat visits)

	1 Aug 2009 to end July 2010	1 Aug 2010 to end July 2011
Oxfordshire	9,020	11,999
Dacorum and Hitchin	8,140	11,359
Bucks Simply Walk	15,887	16,507
Bedfordshire	900	922
Total	33,947	40,787



Dunstable Downs disabled ramblers walk 2011

Indicator 18: Area of land with statutory or voluntary Open Access

There is a good provision and spread of open access land in the Chilterns. This includes 2883 ha statutory Open Access land⁴⁵, 794 ha of open access woodland⁴⁶ and 141 ha voluntary access through Environmental Stewardship schemes.

Summary of key data

- The amount of open access through the Countryside and Rights of Way Act and through dedications is unchanged from the 2009 report.
- In Oxfordshire access improvements have been made at Gatehampton Manor near Goring, with the dedication of a permanent strip of access land between the island sites which will create a much more connected and useable network in what is a popular walking area.
- The large publicly owned open access sites generally provide a high standard of open access and welcome visitors to their site with good physical access and information. For example in Buckinghamshire, seventeen stiles and small refuge kissing gates have been replaced with British Standard pedestrian gates at the popular Ivinghoe Beacon and Steps Hill open access sites, providing easier access and a greater choice of areas available for users of mobility scooters to explore. However site visits and reports from the public reveal that some of the privately owned open access sites in more remote locations are fairly inaccessible, with no open access signage, no clear entry points and no paths through waist-high grassland
- Voluntary access through Defra's Environmental Stewardship schemes has seen some changes, with an overall increase in provision. There is an additional 40.2ha of open access (40% increase from 2010) and an additional 36.2km on linear paths (105% increase from 2010). The major new sites with Environmental Stewardship access arrangements are at Smithcombe,

Table 19: Voluntary Access through Defra's Environmental Stewardship schemes⁴⁷

	Aug 2010	Aug 2011	Increase
Open access area (ha)	100.9	141.1	40%
Length of walk (km)	34.4	70.6	105%

Sharpenhoe and Sundon Hills in Bedfordshire.

- In 2010 Defra announced changes to the new environmental stewardship schemes which means they are no longer able to pay landowners for providing open or linear access. This is likely to have an impact on access in the future. The Educational Access programme is unaffected.

Conclusions

- The total area of statutory Open Access land is not expected to change over the short - medium term.
- Although the quantity of new voluntary open access generated over the past 12 months is small in relation to the total area of open access/length of walks in the Chilterns, it nevertheless provides some important strategic links and new pockets of access close to urban populations where they are most needed.
- There is still low awareness of open access land and there is little signing or on-site information for all but the large publicly-owned open access sites. The accessibility of some of the smaller, more remote open access sites is an issue, with unclear points of entry.

⁴⁵ under the Countryside and Rights of Way Act 2000

⁴⁶ dedicated ⁴⁷ Source: Defra

Indicator 19: Visitor satisfaction on rights of way and use of the countryside

Site surveys in the Chilterns show high levels of visitor satisfaction with rights of way and countryside sites.

Summary of key data

- Site surveys⁴⁸ in the Chilterns show high levels of visitor satisfaction overall. At Bedfordshire sites, over 90% of users at four key sites (Dunstable Downs, Sundon Hills, Totternhoe Knolls and Whipsnade Heath) rated the sites very good, good or average.
- The Chilterns Leisure Visitor Survey 2007 showed that 87% of respondents rated waymarked paths as being good/very good. Other elements of the visitor experience were also highly rated (see table). The main complaints (apart from poor weather) related to dog fouling/lack of dog bins and litter.

Table 20: Visitor satisfaction ratings

	Poor	%	Fair	%	Good	%	Very Good	%	Can't say/ not used	%
Car parks	42	4	145	15	471	49	307	32	71	7
Information boards	28	5	89	15	335	56	143	24	441	43
Local pubs	3	1	22	7	145	48	134	44	732	71
Picnic sites	12	4	29	9	158	51	109	35	728	70
Public transport	2	40	-	-	1	20	2	40	1,031	99.5
Toilets	26	10	39	15	103	39	98	37	770	74
Visitor centres	2	1	19	9	76	36	117	55	822	79
Waymarked paths	11	1	92	11	497	59	238	28	198	19

Source: Chilterns Leisure Visitor Survey 2007

- Over the last few years the CCB has seen a growth in use of the Chilterns AONB web site and the number of leaflets downloaded. This has levelled off in the last couple of years, perhaps because there are few new promoted walks for regular web visitors to download. In 2010/11 a total of 11,750 Chilterns Country walk leaflets were downloaded from the Chilterns AONB web site, an 8% decrease from the previous year.
- Citizens Panels looking at visitor satisfaction on rights of way have been carried out in Oxfordshire, Hertfordshire and Buckinghamshire. These are generally repeated every 2-3 years. However only Oxfordshire County Council (OCC) has gathered postcode data, allowing for a Chilterns-specific analysis.

⁴⁸ Chilterns Leisure Visitor Survey 2007 (includes 11 key visitor sites) and Bedfordshire User Survey covering four key visitor sites in the Bedfordshire Chilterns.

- The most recent survey of Oxfordshire residents (Oxfordshire Voice) was carried out in 2010, showing very high use and satisfaction with Oxfordshire's countryside (see below). A Chilterns analysis was possible for a small sample of 46 Chilterns postcodes. The survey revealed:
 - A very high proportion of people use the countryside and public rights of way in Oxfordshire. Nearly all respondents had used the countryside for leisure in the last twelve months and nine out of ten had used public rights of way. A Chilterns analysis showed that 96% of Chilterns residents used public rights of way in Oxfordshire.
 - A very high value is placed on Oxfordshire's countryside - nearly all respondents rated it as either very important or quite important. 100% of Chilterns residents rated it as either very important (93%) or quite important (7%).
 - Good satisfaction with provision and management of access - between over a half and over three quarters of respondents were either very satisfied or fairly satisfied with various aspects. Satisfaction levels were higher amongst Chilterns residents, with 93% being satisfied or very satisfied.
 - 90% of respondents were happy to download and print off walking or riding information and maps from the internet at home.

- The other local authorities have not captured postcode data through their Citizens Panels, but county-wide data shows that:
 - 87% of users in Bucks were satisfied with rights of way (Bucks Residents Survey 2007)
 - 74% of Hertfordshire residents were either very or fairly satisfied with rights of way (Herts CC Annual Tracking Survey 2008).
 - 94% of visitors to Bucks County Council owned parks and greenspaces are satisfied with their visitor experience (on-going visitor satisfaction survey carried out by Bucks CC).

Interpretation of data

- User Surveys in the Chilterns are primarily based at the main countryside sites which have a good range of visitor facilities such as large car park, toilet, refreshments, marked trails, information boards etc. This is not representative of the smaller, informal countryside sites which have few or no visitor facilities and attract a different visitor profile.
- The Chilterns Leisure Visitor Survey is only carried out every 10 years (next one due in 2017).

Conclusions

- There is potential for the CCB to work with some of the Local Authorities when planning their Citizens Panels, to ensure future surveys capture postcodes.

Visitor satisfaction is generally high, which is particularly encouraging given the high levels of usage of the rights of way and countryside sites in the Chilterns.

DEVELOPMENT

Context

The attractiveness of the Chilterns AONB landscape stems from the combination of the natural, built and cultural environments. The countryside is home to many people and businesses in villages, hamlets and more isolated buildings. The AONB is surrounded by large towns and is very close to some major cities which increase the pressure for development. The Chilterns AONB is also characterised by high house prices and a lack of affordable housing. Certain local building materials dominate which produces a locally distinctive architectural style.

The Chilterns AONB Management Plan details the special qualities of the built environment of the Chilterns and aims to ensure that these are conserved and enhanced and improved where they are degraded. Where development does take place it should conserve and enhance the special qualities of the Chilterns and any negative aspects should be reduced. The policies of the Management Plan seek to protect and reinforce the local distinctiveness of the built environment, promote the highest standards of development and encourage the use of traditional local building materials whilst trying to reduce the impacts of existing developments which may have detrimental impacts.



Affordable housing at Winchmore Hill, acceptable design though difficult to assess in terms of the sustainability of construction

Key findings for 2011

The table below shows both existing indicators and whether there is an update in the current year, along with a summary of key findings.

Condition Indicator	Detailed update?	Key findings	Condition and Trend
20. Number of appropriately designed and sustainably constructed affordable rural needs houses provided	Yes - see page 56 for details	2011 No sustainably constructed affordable rural needs houses have been provided.	On the basis of the data available the condition of the AONB in connection with this indicator is poor. Because this is a new indicator it is not possible to provide trend data at present.
21. Length of overhead power lines put underground	Yes - see page 57 for details	2010 1,000 m of overhead power lines have been put underground at Little Missenden.	Good, stable. Enhanced landscape in the area with each scheme that is implemented.

- In previous years Indicator 19 had recorded the percentage of planning applications decided in line with the Conservation Board's comments. Though this is not now being used as an indicator, it was felt that the information that was provided was useful nonetheless. For 2011, the Board was consulted on 152 planning applications and made formal representations on 20.

Of the 19 applications that have been decided 68% were determined in line with the Board's comments. This represents a further decrease from 2010 (75%), which in turn had been a decrease compared to 2009 (82%). This trend is being closely monitored even though it is not a specific indicator for the State of the Environment Report.

Indicator 20: Number of appropriately designed and sustainably constructed affordable rural needs houses provided

No sustainably constructed affordable rural needs houses have been provided in 2011

Summary of key data

- No sustainably constructed affordable rural needs houses have been provided this year and this is considered to be a reflection of the state of the economy and the development industry in particular.

The indicator in context

- Discussion took place last year about a more appropriate indicator that could show how the AONB was fairing in connection with development that took place.
- One issue that had been raised as part of the discussions, and which has historically been difficult to address, is the provision of affordable, rural needs housing within the AONB. Though some schemes may come forward it has historically been the case that the Board has responded to some applications with negative comments about design and building materials. Such applications should still conserve and enhance the natural beauty of the AONB and be of the highest quality.
- Affordable housing is that which is provided with a subsidy to enable the price or rent to be lower than the prevailing market prices or rents and includes 'social rented and intermediate housing, provided to specified eligible households whose needs are not met by the market' (current Planning Policy Statement 3, Annex B).
- It was resolved that the current indicator should be introduced and this is therefore the first year that data has been sought. It has been gathered from the local planning authorities within the AONB.

- There has been little development taking place over the last couple of years and this is reflected in the limited number of housing completions within the AONB and the result that no affordable rural needs houses have been provided.

Interpretation of data

- With no affordable houses being provided there is no data to interpret. However, any data provided in the future will be monitored in order to produce trends.
- When applications are made in the future one of the key areas that will be looked at will be design and use of local materials. In the first instance reference will be made to the Chilterns Buildings Design Guide and the supplementary technical notes on local building materials. In addition planning application details will be examined to try and determine, with the help of the local planning authorities, how proposals measure up to wider sustainability criteria (using advice and guidance such as the Code for Sustainable Homes for example).

Conclusions

- On the basis of the data available the condition of the AONB in connection with this indicator is poor. However, growth pressures still exist and it is likely that in future there will be data to populate this indicator.

Indicator 21: Length of overhead power lines put underground

1,000 metres of overhead power lines have been put underground.

Summary of key data

- In 2010 1,000 metres of 11,000 volt overhead power lines were put underground to the west of the church at Little Missenden as part of the OFGEM scheme to underground up to 5% of the overhead power lines in protected landscapes.
- The work involved the removal of 11 wooden poles, the replacement of 2 pole mounted transformers with 2 ground mounted substations. As part of the works the River Misbourne had to be crossed by directional drilling. The scheme was completed in August 2010.

The indicator in context

- The Board's Planning Officer sits on a steering group that covers the northern half of the AONB. The steering group had authorised funding for various schemes within the protected landscapes in the east and south east and one scheme was within the Chilterns AONB.

- The funding for this scheme comes from a pot of money that runs to the end of March 2015. Though most of the funds have already been committed it is hoped that other schemes will be approved and completed prior to the end of the period.
- The rest of the AONB is covered by a network operator that has decided not to take an active interest in the OFGEM scheme until at least 2015.
- Other schemes that the Board is made aware of outside this funding stream will be reported on when known.

Interpretation of data

- Once the overhead power lines and associated poles have been removed the landscape in the area will be enhanced. It is considered that this will lead to an improved visitor experience. The photograph shows a possible candidate for a future scheme.

Conclusions

- There can only be long-term gains for the environment of the AONB with each scheme that is implemented and this will be reflected in later years' monitoring exercises.



Dunstable Downs - overhead wires that are a good candidate for removal

Conclusions

This is the third year of publishing the State of the Chilterns Environment report, and it is interesting to look at emerging trend data.

There are inevitably important aspects of the state of the Chilterns environment that are not readily reduced to a series of indicators - for example climate change and tranquillity - which are nonetheless likely to have an increasingly significant bearing on the quality of the Chilterns environment.

It is good to see improving trends across a number of indicators, including:

- take up of English Woodland Grant Scheme increasing, particularly woodland improvement grants and woodland management grants.
- increased number of SSSIs in favourable condition, with some progress on condition of chalk grassland SSSIs.
- water vole population on the R. Chess fully recovered back to 2001 levels.
- high and increasing numbers participating in health walks.

There are concerns about deteriorating trends or stalled progress in number of areas however, including:

- continued high levels of intensive equestrian land use and associated landscape impacts
- coverage of Environmental Stewardship is declining, albeit from a relatively high level.
- % of local sites known to be in positive conservation management remains low (39%) and no progress from 2010.
- long-term declines in livestock numbers, giving rise to concerns over availability of suitable grazing animals for conservation sites.

- slight increases in numbers of listed buildings (grade 1/11*) and scheduled monuments at risk.

2 new indicators have been included in this report around health walks and affordable housing. This process of refinement of indicators continues and will continue to do so over time.

The overriding purpose of the report is to influence the future management of the AONB in order to conserve and enhance the Chilterns environment. In these difficult economic times with reducing resources available to many of the organisations involved in delivering the AONB Management Plan objectives, there are inevitably concerns about how to sustain progress and halt further declines in condition of some indicators. At a time of huge shifts in organisations and resources it is important that the Board and its partners continue to keep a close eye on long-term trends on the ground.

Sustaining and enhancing the outstanding natural beauty of the Chilterns will rely more than ever on the efforts of a wide partnership not least landowners, farmers and voluntary sector organisations.

Appendix: Countryside Quality Counts

Countryside Quality Counts (CQC)⁴⁹ was a national initiative set up by the Countryside Agency in 2002 with the aim of constructing an indicator of change in landscape quality across different parts of the country (Joint Character Areas) and to assess the significance of those changes for each area.

The AONB Management Plan proposed the findings of the CQC for the Chilterns as one of the headline condition indicators for the AONB. However, it has subsequently been decided that this would not be appropriate since the CQC findings are in themselves a combined measure of State of the Environment, and there are significant limitations on the data. Instead, it was decided to include a brief report on the findings as an appendix.

Key findings:

Landscape element	Assessment
Woodland and Trees	The AONB has a higher woodland cover than the surrounding landscapes, and the management of the woodlands appears to be better than these areas. The wooded character has been maintained or possibly strengthened
Boundary	Marked increase in Countryside Stewardship uptake for boundary features since 1998, especially for hedgerow restoration and planting although rates at or below national averages. Boundary features probably maintained at best.
Agriculture	The mix of farm cover types has been stable. Sheep numbers have declined by about 44% since 1990. Pig numbers have been higher; they have declined by about 60% since 1990. The mix of farm types has been stable. There is a tendency towards larger farm units. The agricultural character has probably been maintained.
Settlement and development	Lower rates of development compared to surrounding areas. Settlement character maintained.
Semi-natural habitats	Countryside Stewardship payments around national average for annual agreements relating to features measured in ha, although performance relative to other protected areas is lower than the average for all AONBs. Particular focus on calcareous grasslands management. Probably maintained at best.
Historic Environment	Insufficient data to make a judgement
River and Coast	Insufficient data to make a judgement

The Indicator in context

- The work combined analysis of evidence about the changes associated with a series of landscape features with information about the preferred nature and direction of change obtained from stakeholder consultation.

- The landscape features covered were : trees and woodland, agriculture, boundaries, semi-natural features, settlement and development, historic features, and river and coastal elements
- The study covered two periods, 1990-1998, and 1999-2003.
- More recent work⁵⁰ has extended this type of analysis to AONBs, through a re-working of the original data.

Interpretation of the data

- The most recent data on which the study is based dates back to 2003, more recent trends are not covered.
- The original CQC assessments related to Joint Character Areas (JCA), rather than protected landscapes such as AONBs. Whilst the data has now been cut to the AONB boundary as far as possible, the contextual data which informs the assessment of results presented has not been re-worked. The results are not considered to be a definitive assessment about the nature of landscape change in protected areas.

Conclusions

- The findings broadly concur with those of the relevant indicators in this report.
- Whilst limitations apply to the findings, they do give rise to a number of issues worthy of further investigation, including the lower than average uptake of agri-environment scheme options relating to hedgerow restoration and field based options.

⁴⁹ Haines-Young, R.H. (2007) Tracking Change in the Character of the English Landscape, 1999-2003. Natural England, January 2009
⁵⁰ Duncan Cheshire & Roy Haines-Young, University of Nottingham



Bluebells in Cowleaze Wood

The Chilterns Area of Outstanding Natural Beauty (AONB) was designated in 1965 and covers 833 sq kms. It is one of 47 AONBs in the UK which, together with National Parks, are protected as the finest landscapes in the country.

The primary purpose of the Chilterns Conservation Board is to conserve and enhance the Chilterns AONB. It also aims to increase

awareness and understanding of the Chilterns and to foster the social and economic well-being of local communities. The Board is an independent, statutory organisation established by Parliamentary Order in 2004.



To find out more about the AONB and the Board visit www.chilternsaonb.org

