



Chilterns Area of Outstanding Natural Beauty

# Management Plan 2008 - 2013

## Delivery Plan



an Area of Outstanding Natural Beauty

## Introduction

1. The Chilterns AONB Management plan sets out an ambitious vision for the Chilterns which could be realised by the implementation of its policies and actions. Many actions are proposed and they will require the application of resources from many organisations, businesses and individuals in addition to those of the Chilterns Conservation Board. The Board itself does not have either the resources or powers to implement all the actions in the delivery plan.
2. The Board will contribute by using its own resources including its members, staff, expertise and funds. It will provide leadership in its role as a champion for the AONB. There are many others with skills and resources and the Board will endeavour to co-ordinate their activity and encourage collaboration.
3. The owners and managers of land and the communities of the Chilterns are the most important players in conserving and enhancing natural beauty. There is a long history of local people caring for the Chilterns who volunteer in large numbers often with organisations such as The Chiltern Society, National Trust and Wildlife Trusts. The Conservation Board is also fortunate to be able to call on many skilled and enthusiastic volunteers to help with its work and, in particular, to work with the public.
4. There are many other public bodies which aim to care for the environment several of which have considerable resources and legal powers. The Board aims to work with them all and to seek their support for the aims of this plan for the Chilterns.
5. This Delivery Plan lists those organisations whose involvement is thought to be essential for its implementation. This list is not intended to be exhaustive as there are many others, especially smaller community and voluntary groups which will want to take part. With practically all actions there is a role for private landowners, individuals and businesses. Equally those listed cannot necessarily give their commitment to implementation of those actions for the duration of this plan as their priorities will change over time as will their access to resources.
6. The Conservation Board intends to publish a more detailed annual work programme to complement this 5 year delivery plan. It will explain in more detail which actions will go ahead listing the partners and where possible indicate the resources allocated to it. This will become a rolling plan which will also review the progress made in the previous year.

## Monitoring

7. Monitoring the effectiveness of the plan requires a baseline on the condition of the Chilterns against which progress can be monitored.
8. No such baseline exists for the special attributes of the Chilterns, but there is considerable information available for some attributes, but not always specific to the Chilterns. A particular challenge during the period of this plan is to produce a meaningful baseline to enable the regular publication of a State of the Chilterns Environment Report. To reach that stage will require considerable co-operation and assistance from organisations set up to gather environmental data, notably DEFRA, Natural England, the Forestry Commission and the Environment Agency. Local authorities and wildlife trusts also have much useful information.
9. Ideally for each key attribute of the Chilterns an indicator can be identified and information gathered on a regular basis to enable its condition to be assessed. Where that exists it has been included in this plan. Where it does not a proxy indicator has been selected. This range of indicators on the state of the environment will be complemented by indicators showing the progress of implementing actions in the management plan. They are designed to achieve the aims for the AONB and if properly implemented should enhance the condition and enjoyment of the Chilterns.
10. **To help with this task a State of the Environment forum has been established. It will advise on the selection of indicators, help compile the information, interpret the data and prepare conclusion and action plans. The indicators included in the management plan are intended as a starting point and will be continually reviewed by the forum. On behalf of the forum the Board will publish an annual State of the Environment Report**

## **Proposed headline condition indicators**

### **Landscape and Biodiversity**

- Length of hedge in good condition using DEFRA condition criteria.
- Area of high quality calcareous grassland included in Biodiversity Action Plans.
- Number of agreements and area of land covered by the Environmental Stewardship Scheme.
- Area of woodland covered by England Woodland Grant Scheme agreements
- Area of land managed for equestrian purposes (as defined by Chilterns Conservation Board land use survey). **This is an indicator of poor quality**
- Area of SSSIs in favourable condition
- Quality of water in rivers
- Length of main river unaffected by low flows
- Water vole population and numbers of rivers and canals with water voles.
- Countryside Quality Counts status (maintained or enhanced)

### **Social and Economic**

- Number of visitor attractions which have published information on access by public transport.

- Number of businesses registered with the Green Tourism Business Scheme

### **Understanding and Enjoyment**

- Area of land with statutory or voluntary open access
- Visitor satisfaction on rights of way and use of the countryside (Local Authority Citizens Panels).

### **Development**

- Percentage of planning applications approved in line with Conservation Board comments
- Length of overhead power lines put underground

### **Historic Environment**

- Listed buildings (grade I/II\*): Total number/Number at Risk
- Registered Historic Parks: Total number/Number at Risk
- Scheduled Ancient Monuments: Total number/Number at Risk
- Conservation Areas: Total number/Number with Appraisal reviewed within last 5 years (info would need to be obtained from conservation officers)

The following abbreviations are used in the action table.

|                |  |
|----------------|--|
| <b>BRE</b>     | Building Research Establishment  |
| <b>BTCV</b>    | British Trust for Conservation Volunteers  |
| <b>BW</b>      | British Waterways  |
| <b>CAA</b>     | Civil Aviation Authority   |
| <b>CABE</b>    | Commission for Architecture and the Built Environment                                    |
| <b>CCB</b>     | Chilterns Conservation Board   |
| <b>CCN</b>     | Chilterns Commons Network  |
| <b>CLBA</b>    | Country Land and Business Association  |
| <b>CMS</b>     | Countryside Management Service   |
| <b>Confor</b>  | Confederation of Forest Industries   |
| <b>CPRE</b>    | Council for the Protection of rural England  |
| <b>CSoc</b>    | Chiltern Society   |
| <b>CWP</b>     | Chiltern Woodland Project  |
| <b>EA</b>      | Environment Agency   |
| <b>EEDA</b>    | East of England Development Agency   |
| <b>EH</b>      | English Heritage   |
| <b>ERCs</b>    | Environmental Records Centres  |
| <b>FC</b>      | Forestry Commission  |
| <b>FWAG</b>    | Farming and Wildlife Advisory Group  |
| <b>HA</b>      | Highways Agency  |
| <b>LAs</b>     | Local Authorities including district, borough, county, unitary town and parish councils. |
| <b>LBP</b>     | Local Biodiversity Partnerships  |
| <b>LRP</b>     | Local River Partnerships   |
| <b>Mus</b>     | Local Museums  |
| <b>NE</b>      | Natural England  |
| <b>NWDAONB</b> | North Wessex Downs AONB  |
| <b>NFU</b>     | National Farmers Union   |
| <b>NT</b>      | National Trust   |

|              |                                       |
|--------------|---------------------------------------|
| <b>PCT</b>   | Primary Care Trusts                   |
| <b>PC</b>    | Pond Conservation                     |
| <b>RDAs</b>  | Regional Development Agencies         |
| <b>RTBs</b>  | Regional Tourist Boards               |
| <b>SEEDA</b> | South East England Development Agency |
| <b>TVW</b>   | Three Valleys Water                   |
| <b>TWU</b>   | Thames Water Utilities                |
| <b>WdT</b>   | Woodland Trust                        |
| <b>WTs</b>   | Wildlife Trusts                       |

## CONSERVE AND ENHANCE NATURAL BEAUTY

### Landscape

| <b>Action</b>   | <b>Key Agencies</b>               | <b>Outcomes</b>   |
|---|-----------------------------------|---|
| 1. Undertake a comprehensive, integrated, Chilterns-wide landscape assessment and publication of associated management guidance.  | CCB, LAs, NE                      | Published assessment and guidance leading to improved management of the landscape.  |
| 2. Work with adjacent urban local authorities to undertake more detailed landscape sensitivity studies of the urban hinterland to identify measures to conserve and enhance the special qualities of the landscape. | CCB, LAs, NE, C Soc               | Identification of areas vulnerable to landscape change and scope for improvements   |
| 3. Promote and support green infrastructure planning for new areas of development and to better link existing settlements with surrounding countryside.   | CCB, LAs, NE, CSoc, NT, FC        | Integration of green space in planning of new development and improved links between existing settlements and surrounding countryside |
| 4. Undertake a regular survey to identify trends in land use change and their causes.   | CCB                               | Identification of changes in land use and associated landscapes, assisting with monitoring of landscape condition.                    |
| 5. Undertake a five yearly survey of public perception and views on changes in the landscape.   | CCB                               | To establish public views on landscape change and action they would like to be taken.   |
| 6. Publish good practice guidance for land managers and target new owners of land and those involved in equestrianism and other non traditional uses of land.   | CCB, NFU, NE, LAs, FWAG, CLBA     | Improved management of land in line with objectives for the AONB  |
| 7. Assess planning applications and development proposals for their impact on the landscape.  | CCB, LAs, NE, CSoc, NT            | New development is sympathetic to the character of the Chilterns and maintains or enhances environmental quality                      |
| 8. Promote the Chilterns Building Design Guide and other relevant guidance to ensure all new development respects and enhances the landscape.   | CCB, LAs, CSoc                    | New development is sympathetic to the character of the Chilterns and maintains or enhances environmental quality                      |
| 9. Support provision of training in the skills needed by land   | CCB, NFU, NE, Training Providers, | Appropriate land management can take  |

|     |  |  |  |
|-----|--|--|--|
|     | managers to conserve and enhance the landscape.  | FWAG, CWP  | place as there is a supply of a trained and experienced workforce.   |
| 10. | Support initiatives which help local people and visitors understand and enjoy the landscape.   | CCB, LAs, C Soc, NE, Tourist Boards, NT, FC, Mus | All visitors enjoy a high quality visit and their level of understanding is enhanced.  |
| 11. | Develop a better understanding of the likely impacts of climate change on the landscape and support mitigating and adaptive action.  | CCB, LAs, NE, FC, WTs                            | The causes of climate change are addressed and appropriate adaptation measures are implemented to conserve and enhance landscape quality in the long term. |
| 12. | Campaign actively to prevent fragmentation of the countryside (e.g. by division into small plots) where this results in unacceptable impacts on the landscape and other forms of natural beauty. | CCB, LAs, C Soc                                  | Fragmentation into small, unmanageable plots is avoided  |
| 13. | Promote targeting and uptake of environmental stewardship schemes generally, and actively lobby for provision of options most appropriate to the AONB.   | NE, CCB, LAs, FWAG                               | The area of land managed sympathetically is maximised and the schemes are well suited to the Chilterns.  |
| 14. | Support management of trees, woodlands, chalk grassland, commons, hedges, chalk streams and other characteristic landscape features.   | NE, FC, FWAG, LAs, CCB, WdT, CWP, WTs            | Landscape features and types are well managed.   |
| 15. | Publish guidance and provide training for designers and managers of highways to enable them to conserve the landscape and remove unnecessary roadside clutter.                                   | CCB, LAs, HA                                     | Road corridors are free from clutter and are more sympathetically blended into the surrounding landscape.  |
| 16. | Develop working arrangements with the North Wessex Downs AONB local authorities and Environment Agency and others to conserve and enhance the River Thames and its landscape corridor.           | CCB, EA, C Soc, NWDAONB, LAs                     | A more integrated approach is taken to the management of Thames Valley landscape.  |
| 17. | Encourage the implementation of high quality landscape design and management which respects and enhances the landscape, particularly in and around settlements of all sizes.                     | CCB, LAs, C Soc                                  | The quality of landscape design and management is enhanced particularly along the urban fringe.  |

|   |                              |   |
|---|------------------------------|---|
| 18. Implement the recommendations of the Chilterns Historic Landscape Characterisation. | LAs, CCB, EH, NT, CWP, C Soc | The importance of the historic environment is given full weight in all relevant decision making and landscape management. |
|---|------------------------------|---|

## CONSERVE AND ENHANCE NATURAL BEAUTY

### Farming and Forestry

| Action   | Key Agencies                            | Outcomes   |
|--|---|--|
| 1. Undertake and publish a regular survey of land use and analysis of land use change.   | CCB                                     | Identification of changes in land use and associated landscapes, assisting with monitoring of landscape condition. |
| 2. Update the 1990 Ancient Woodland Inventory by undertaking a new survey to include all woodlands under two hectares.   | FC, NE, CWP, CCB, LAs                   | All ancient woodland is identified and recorded for protection and management purposes                             |
| 3. Support the provision of advice and training to promote management of woodlands especially those in public ownership and under 20 hectares.   | FC, CWP, LAs, NE, CCB, WdT, WTs, ConFor | Woods have management plans and relevant management is in place  |
| 4. Promote uptake of environmental stewardship and woodland management schemes particularly where they contribute to landscape and biodiversity gain.  | CCB, NE, FWAG, LAs, FC, Confor          | Improved management of land in line with objectives for the AONB.  |
| 5. Promote the sustainable production of timber and other woodland products especially where this helps achieve multiple objectives e.g. PAWS, Biodiversity Action Plan, local landscape design plans. | FC, CWP, WdT, Confor, LAs, WTs, CCB     | Where appropriate sustainable production of timber and other products are an objective of management.              |
| 6. Organise regular fora on issues of concern and interest to farmers and foresters.   | CCB, FC, NFU, LAs, CLBA, CWP            | Promote networking, cooperation and information sharing between land managers.                                     |
| 7. Support the survey, identification and conservation of archaeology in woodland, including provision of training for owners and managers.  | FC, CWP, WdT, LAs, EH, CCB              | Archaeology in woodland is identified and appropriate management is in place.                                      |
| 8. Publish regular information on climate change and how it could  | CCB, FC, NE, LAs, WTs                   | Land managers have information to help   |

|  |   |   |
|--|---|---|
| affect the landscape in the Chilterns.   |   | them cope with climate change and measures can be put in place to maintain the quality of landscape character |
| 9. Organise, support and coordinate activities which help the public to understand better and appreciate the impact of farming and forestry.   | CCB, LAs, CSoc, FWAG, NFU, FC, WdT, CWP, NT | Increase public awareness of the importance of traditional land management to the landscape.                  |
| 10. Encourage appropriate management of landscape features and habitats, in particular chalk grassland, chalk streams, ponds, ancient and semi natural woodlands and hedgerows.            | NE, FC, FWAG, LAs, CCB, WdT, CWP, WTs       | Landscape features and types are well managed.  |
| 11. Encourage appropriate management of commons especially by grazing and other beneficial farming and forestry activity.  | CCB, LAs, NT, WTs                           | Commons continue to offer biodiversity landscape, recreational and community benefits.                        |
| 12. Support the identification, celebration and management of special trees and woods.   | CWP, WdT, FC, LAs, CCB                      | Trees and woods valued by the public are identified, recorded and celebrated                                  |
| 13. Promote the development of appropriate infrastructure to support traditional land management practices, for example local abattoirs and sawmills.                                      | CCB, LAs, NFU, CLBA, NE, C Soc, FC, WdT,    | Fragmentation into small, unmanageable plots is avoided.  |
| 14. Scope the likely impact of biofuels in the Chilterns and develop an action plan to ensure they are produced in a way consistent with the AONB's landscape and biodiversity objectives. | CCB, FC, NE                                 | The production of biofuels does not damage the AONB's landscape and biodiversity.                             |
| 15. Encourage collaboration and networking between farm and woodland enterprises to maintain viable businesses particularly those contributing to habitat management.                      | SEEDA, EEDA, CCB, LAs, NFU, CLBA, FC, CWP   | Habitats are managed by viable farm and woodland businesses.  |
| 16. Actively discourage owners and agents from sub-dividing farmland and woodlands into small plots  | NE, FC, FWAG, LAs, CCB, WdT, CWP, CSoc      | Fragmentation into small, unmanageable plots is avoided.  |
| 17. Support the identification, management and planting of new hedgerow and in-field trees.  | CCB, FWAG, LAs, CWP                         | Important landscape and biodiversity features are maintained.   |

## CONSERVE AND ENHANCE NATURAL BEAUTY

### Biodiversity

| Actions   | Key Agencies  | Outcomes   |
|---|---|--|
| 1. Develop projects to implement Biodiversity Action Plans, and ensure continuity across county boundaries.   | LBPs, CCB, ERCs, Farmers and other land managers,                                       | Biodiversity Targets achieved, in particular in relation to habitats and species of significance in the Chilterns.               |
| 2. Support and develop landscape scale initiatives and green infrastructure projects which extend and connect fragmented habitats and sites.          | LBPs, CCB, Green Infrastructure Groups  | Fragmented habitats and sites are linked, buffered and extended.   |
| 3. Support and promote expansion of the area of chalk grassland in appropriate management.  | NE, NT, LAs, WTs, CCB, FWAG, Farmers and other land managers.                           | Existing chalk grassland sites are in good conservation management.  |
| 4. Support and promote efforts to conserve farmland birds and rare arable flora.  | RSPB, NE, WTs, CCB, Farmers and other land managers, ERCs                               | Farmland birds and rare arable flora populations are conserved and enhanced.   |
| 5. Conserve and enhance biodiversity on common land through development of a Chilterns Commons Project.   | CCB, CCN, WTs, NT, LAs, NE, CSoc, landowners, common rights holders, ERCs, local groups | Funding is secured for a commons project with a dedicated officer; common land is restored and enhanced for wildlife and people. |
| 6. Develop training programmes and disseminate best practice to land managers.  | CCB, WTs, NE, LAs, NT, FWAG, Farmers and other land managers, RSPB, BC                  | Improved management of land in line with objectives for the AONB   |
| 7. Obtain and collate information on extent, condition and management of key habitats and species so that baseline data is available across the AONB. | ERCs, LBPs, CCB   | Improved baseline data assists with setting priorities for management of key habitats and species.                               |

|  |  |  |
|--|--|--|
|  |  |  |
| 8. Monitor and develop actions to prevent any further losses of priority habitats or species.  | ERCs, LBPs, CCB                                | Priority habitats and species are monitored and conserved.   |
| 9. Monitor the spread of pest species and invasive non-native species and develop strategies for control where appropriate to minimise negative impacts.               | NE, EA, Defra, CCB, ERCs, landowners/managers. | Adverse impacts of non-native and pest species are minimised.  |
| 10. Develop and support initiatives to involve more local people in wildlife conservation in the Chilterns and support existing community environmental activity.      | CCB, CSoc, LAs, NT, WTs, local groups          | More local people are involved in and supportive of wildlife conservation in the Chilterns.  |
| 11. Identify relevant climate change indicators for the Chilterns and develop a monitoring programme.  | CCB, ERCs, LBPs                                | Local impacts of climate change on Chilterns wildlife are tracked, and used to inform future habitat management planning and public awareness campaigns. |
| 12. Develop approaches to monitor visitor impacts on sensitive habitats and support initiatives to relieve pressure on the most sensitive sites and wildlife habitats. | LBPs, CCB, NT, ERCs                            | Sensitive habitats and sites are not significantly affected by impacts of visitors.  |
| 13. Work with urban communities adjacent to the AONB to raise awareness and understanding of the management needs of wildlife in the Chilterns.                        | NT, Groundwork Trust, LAs, CCB                 | Increased awareness of Chilterns wildlife amongst urban populations adjacent to the AONB.  |
| 14. Improve interpretation of Chilterns wildlife and countryside management.   | CCB, CSoc, site managers                       | Increased public support for countryside management in the Chilterns.  |

## CONSERVE AND ENHANCE NATURAL BEAUTY

### Water Environment

| Action  | Key Agencies            | Outcomes   |
|---|-------------------------|--|
| 1. Support the delivery of sustainable abstraction, through the Environment Agency's Catchment Abstraction Management Strategy.                                   | EA, TWU, TVW            | Abstraction in Colne catchment to be reduced by 5Ml/d by 2012. Licensing also to be reduced.   |
| 2. Provide site-specific advice and support for management of chalk rivers, particularly targeting areas with UK BAP priority species such as water voles.        | BBOWT, H&MWT, FWAG, EA  | Best practice riparian management adopted by landowners. Existing water vole populations increase in range and size.   |
| 3. Support management of important riverside trees, especially willow pollards.   | CWP                     | River valley landscapes enhanced, trees brought into management, willow planting schemes identified to give river channels more prominence in landscape.                 |
| 4. Develop and implement management plans for scarp slope streams.  | EA, CS, FWAG, NE        | Improved condition of scarp slope streams.   |
| 5. Prepare and implement landscape and wildlife management plans for all major rivers.  | EA, FWAG, LAs, NE       | Degraded sections identified, river habitat improved through river restoration schemes. More natural flow regimes restored.  |
| 6. Work with local authorities and wildlife trusts to identify and designate new chalk river sites as County Wildlife Sites.                                      | LAs, WTs                | River stretches and wetlands protected through notification and appropriate management.  |
| 7. Promote education and interpretation programmes to enhance understanding of chalk rivers and to promote water efficiency.                                      | CS, TWU, TVW, LRPs      | Raised awareness of chalk streams amongst local communities. More children from urban areas learning about chalk streams, wildlife conservation, water resources issues. |
| 8. Encourage the management of existing ponds – particularly those on farmland and commons - to enhance their biodiversity and support the creation of new ponds. | NE, WTs, PC, LAs        | More existing ponds brought into good management. Biodiversity enhanced. New ponds created to provide valuable habitat for aquatic and amphibious wildlife.              |
| 9. Encourage the involvement of local communities in the management of their local streams, rivers and ponds.   | LAs, EA, PC, BTCV, LVGs | Awareness of chalk streams raised. Sense of ownership instilled in local communities. Condition of urban river sections improved and maintained. Profile of Chalk rivers |

|     |  |  |
|-----|--|--|
|     |  | raised.  |
| 10. | Support measures to promote environmentally-sustainable recreation and tourism initiatives based on local rivers and canals. | LAs, BW, CS<br>More people enjoying rivers and their valley landscapes.                                  |
| 11. | Collate existing data on ponds in the AONB and support further pond survey initiatives.                                      | LAs, WTs, PC<br>Knowledge of the distribution and status of ponds in the AONB increased.                 |
| 12. | Oppose proposals which reduce the environmental quality of the river channel and water.                                      | EA, LAs,<br>Habitat destruction reduced, continuity of river banks maintained. Water quality maintained. |

## CONSERVE AND ENHANCE NATURAL BEAUTY

### Historic Environment

| Action  | Key Agencies                 | Outcomes  |
|---|------------------------------|---|
| 1. Publish best practice guidance for management of locally important sites for community groups, landowners and managers.  | CCB, EH, LAs, NE             | Published guidance leading to improved management of sites and the wider landscape.   |
| 2. Publish best practice guidance for use by agencies and other groups (e.g. utilities) whose activities fall outside of planning controls and draw their attention to their responsibilities towards the conservation of the historic environment. | CCB, EH, LAs, NE, Utilities  | Published best practice guidance leading to improved management of the historic environment.  |
| 3. Implement the <i>Environmental Guidelines for the Management of Highways in the Chilterns</i> , to help protect the historic character of highways and adjacent land.  | CCB, LAs, HA                 | Conservation and enhancement of the historic character of highways and their settings which are more sympathetically blended into the surrounding landscape.                              |
| 4. Identify and promote opportunities to improve the management of important and threatened historic parks and gardens, or other scheduled monuments in public ownership.   | CCB, EH, NT, LAs             | Improved management of threatened historic parks and gardens or other scheduled monuments in line with AONB objectives  |
| 5. Undertake research and survey work to improve knowledge and understanding of the historic environment in order to identify important and locally distinctive historic landscapes and features.   | CCB, EH, NT, CWP, C Soc, LAs | Report of research and survey work and its promotion and identification of important landscapes and features leading to improved knowledge and understanding of the historic environment. |
| 6. Contribute to any maintenance or updating of the Chilterns Historic Landscape Characterisation.  | CCB, EH, LAs, C Soc, NT      | Up to date published report and increased awareness of the historic landscape.  |
| 7. Undertake an “historic environment risk assessment and management project” to assess risks and identify opportunities for enhanced access and limits of acceptable change.   | CCB, EH, LAs, CSoc, NT, CWP  | Published assessment and report of project and promotion of results leading to better access and acceptable changes.  |
| 8. Implement a programme to raise public awareness of the historic environment including provision of information, holding  | CCB, NT, LAs, CWP            | Developed programme, publication of information and events held leading to  |

|  |                         |  |
|--|-------------------------|--|
| of events and improving physical access to suitable sites.   |                         | raised awareness of the historic environment.  |
| 9. Undertake a survey of all settlements to identify the character of their built environment.               | CCB, LAs                | Published survey and methodology and its use in planning and other decision-making.  |
| 10. Develop and offer training programmes for land managers and local communities.                           | CCB, C Soc, NE, NT, CWP | Implemented training programmes resulting in better managed sites and greater understanding of the historic environment.           |
| 11. Support a programme to develop the visitor appeal, based on the historic environment, of suitable sites. | CCB, RTBs, NT, EH       | Publication of information, promotion of specific sites, increased awareness of, and sustainable visitor numbers at, chosen sites. |

## CONSERVE AND ENHANCE NATURAL BEAUTY

### Development

| Action  | Key Agencies            | Outcomes  |
|---|-------------------------|---|
| 1. Comment on significant planning applications which would affect natural beauty or its enjoyment.   | CCB, LAs                | New development that is sympathetic to the character of the Chilterns and maintains or enhances environmental quality.  |
| 2. Review and comment on all relevant planning strategies and policies which would affect the Chilterns.  | CCB, LAs                | Development plans and other strategies that incorporate appropriate policies and which help to achieve AONB objectives.   |
| 3. Produce and promote revisions to The Chilterns Buildings Design Guide, particularly to take account of climate change, renewable energy and farm and other rural employment buildings. | CCB, LAs, NE            | Revised Buildings Design Guide which is a material planning consideration leading to new development that is sympathetic to the character of the Chilterns and maintains or enhances environmental quality. |
| 4. Continue to promote the Supplementary Technical Notes on Chilterns Building Materials (flint, brick and roofing materials) and review, as appropriate.                                 | CCB                     | Increased use of local building materials leading to better forms of development that enhance the built environment.  |
| 5. Develop a monitoring system for the built environment to enable an assessment of changes.  | CCB                     | Monitoring system and contribution to better forms of development.  |
| 6. Produce guidance that seeks to lessen the impact of telecommunications developments.   | CCB, NE, LAs, Utilities | Approved guidance and developments that achieve AONB objectives.  |
| 7. Continue to press for the undergrounding of overhead powerlines.   | CCB, NE, Utilities, LAs | Removal of overhead powerlines that have a detrimental impact leading to enhancement of the landscape.  |
| 8. Support the local planning authorities in their efforts to bring about the provision of Green Infrastructure.  | CCB, LAs                | New development that is sympathetic to the character of the Chilterns which maintains or enhances environmental quality and provides for the needs of new residents.  |

|   |                     |   |
|---|---------------------|---|
| 9. In conjunction with others (Building Research Establishment and the Commission for Architecture and the Built Environment for example) publish guidance on how building design should reflect the need to adapt to climate change. | CCB, BRE, CABE, LAs | Published guidance and improved building design and development which takes greater account of the need to adapt to climate change.   |
| 10. Promote the use of The Environmental Guidelines for the Management of Highways in the Chilterns.  | CCB, LAs, HA        | Greater use of the Guidelines and conservation and enhancement of the character of highways and their settings which are more sympathetically blended into the surrounding landscape. |
| 11. Contribute to studies undertaken to assess tranquillity in the AONB.  | CCB, CPRE, C Soc    | Published studies, greater awareness of tranquillity, better understanding of how development impacts upon it and developments that achieve AONB objectives.                          |
| 12. Seek a reduction in noise pollution from road traffic in particular the M40 and all trunk roads.  | CCB, HA             | Use of tranquillity studies to influence decisions about the road network leading to reduction in noise.  |
| 13. Encourage the use of low noise surfacing in connection with all new roads and any re-surfacing work.  | CCB, LAs, HA        | Use of tranquillity studies to influence decisions about the road network leading to reduction in noise.  |
| 14. Encourage highway authorities to switch off street lights in appropriate circumstances.   | CCB, LAs            | Use of tranquillity studies to influence decisions about the road network leading to reduction in light pollution.  |
| 15. Seek a reduction in the noise pollution created by over-flying aircraft and a reduction in the number of over-flying aircraft of all types.   | CCB, CAA            | Use of tranquillity studies to influence decisions about flight paths leading to reduction in noise and number of over-flying aircraft.   |

## UNDERSTANDING AND ENJOYMENT

| Action   | Key Agencies   | Outcomes  |
|--|--|---|
| 1. Implement a Countryside for All promotional campaign to encourage those groups currently under represented.   | CCB, LAs, NE, CSoc   | Greater participation in countryside activities by under represented groups through targeted promotion, guided walks and events.      |
| 2. Enhance provision of on-site information and interpretation where appropriate. Develop an on-going and co-ordinated events programme with broad appeal. | CCB, LAs, CSoc, NE, NT, FC, NTrails, WT's.                   | Greater enjoyment and appreciation of the Chilterns AONB.   |
| 3. Promote investment in access and recreation facilities on appropriate sites to improve the quality of visitor experience.                               | CCB, LAs, NE, NT, FC, NTrails, WT's.                         | A better visitor experience by improving the quality, spread and accessibility of visitor facilities.                                 |
| 4. Develop improved access links between town and country, in particular where new development is proposed through green infrastructure initiatives.       | CCB, LAs, NE, CSoc   | Integration of greenspace in planning of new development and improved links between existing settlements and surrounding countryside. |
| 5. Enhance management of common land to provide public benefits including recreation, access, healthy lifestyles and education.                            | CCB, LAs, user groups, healthy walking groups.               | Greater awareness, enjoyment and use of common land for recreation by local communities.  |
| 6. Enhance accessibility of suitable sites and routes through physical improvements and provision of information.  | CCB, LAs, CSoc, user groups, local access forums.            | Encourage more people with limited mobility to visit the Chilterns countryside.   |
| 7. Identify and bridge gaps in the public rights of way network.   | CCB, LAs, user groups, BHS, local access forums.             | A more integrated rights of way network offering greater access opportunities.  |
| 8. Improve collaboration between site managers and other providers of countryside services.  | CCB, site managers, LAs, landowners.                         | Improved management of countryside sites for visitors.  |
| 9. Develop a Countryside Close to Home initiative to encourage non car-based visits.   | CCB, site managers, LAs, public transport service providers. | Reduce the number of car-based visits and increase the number of people walking or  |

|   |  |   |
|---|--|---|
|   |  | cycling from home.  |
| 10. Create the Chilterns Cycleway with linked network of shorter routes.  | CCB, CTC, CSoc, LAs, Sustrans.                                 | Increase interest and participation in leisure cycling in the Chilterns. Increase the cycling short break market.         |
| 11. Identify and resist activities and development which would reduce tranquillity arising from, for example noisy sports, vehicle and aircraft traffic, and railways.                | CCB, LAs, CPRE.  | New development is sympathetic to the tranquillity of the Chilterns.  |
| 12. Promote social and economic activities based on sustainable visits to the countryside.  | CCB, LAs, Tourist Boards, SEEDA, TSE.                          | The local economy benefits from higher levels of spending by visitors.  |
| 13. Actively promote the health and other well-being benefits of visiting the countryside and quiet leisure activities.   | CCB, LAs, user groups, CSoc, healthy walking groups.           | Greater awareness of the health benefits of walking and other activities in the countryside and increased participation.  |
| 14. Provide educational resources and support for field visits and organisation of special events.  | CCB  | Educational visitors enjoy a high quality visit and their level of understanding is enhanced.                             |
| 15. Promote the Ridgeway and Thames Path National Trails, The Chiltern Way and other promoted walking and cycling routes, including the Chilterns Country series.                     | CCB, National Trails, CSoc, LAs, NE, NT, EA, BW, CMS, FC, WTs. | The Chiltern's promoted routes provide visitors with a high quality experience and an increased appreciation of the AONB. |
| 16. Maintain and develop the Chilterns AONB website incorporating information on the Chilterns for all types of visitor and all types of visits compatible with the AONB designation. | CCB  | Greater awareness and use of the Chilterns AONB web site as an information source for all visitors.                       |
| 17. Publish a range of literature to assist visitors to plan their visits.  | CCB, LAs, CSoc   | Visitors are able to plan a high quality visit and their level of understanding is enhanced.                              |
| 18. Work with local authorities and other appropriate bodies to identify noisy activities and diminish their impact – to include the impact of over flying aircraft.                  | CCB, LAs, NE, CPRE   | Main threats to the peace and tranquillity of the Chilterns countryside are identified and their impact is reduced.       |
| 19. Raise awareness of open access land and public rights of access   | CCB, LAs, landowners, NE                                       | Greater enjoyment and appreciation of open access land and public rights of access.                                       |

| <b>SOCIAL AND ECONOMIC WELL-BEING</b>  |  |   |
|--|--|---|
| <b>Action</b>  | <b>Key Agencies</b>  | <b>Outcomes</b>   |
| 1. Provide information on public transport especially to reach sensitive recreation sites.   | CCB, LAs, NT, FC, WdT, WTs, NE, public transport service providers | More visits are made by public transport resulting in fewer car journeys and lower carbon dioxide emissions                                 |
| 2. Provide support and advice to enable sensitive diversification of the rural economy.  | LAs, CRC, RDAs, Business Link                                      | New rural business enterprises are created which contribute to the local economy and are based on the principles of sustainable development |
| 3. Actively promote local products which benefit the local environment.  | CCB, C Soc, NT, WTs, LAs, RDAs                                     | The local economy and environment both benefit from the production and purchase of local produce.   |
| 4. Encourage the adoption of local procurement policies which benefit the environment of the Chilterns.  | CCB, C Soc, NT, WTs, LAs, RDAs                                     | Major local purchasers favour high quality local products which will benefit the environment  |
| 5. Promote the Chilterns as a visitor destination to local people and potential tourists from further afield   | CCB, C Soc, NT, LAs, Tourist Boards                                | The local economy benefits from a higher levels of spending by visitors   |
| 6. Assist local business to green their activities and develop marketing and activities sensitive to the local environmental heritage.   | CCB, RDAs, LAs, Business Link, EA                                  | More businesses adopt environmentally sensitive practices.  |
| 7. Actively seek the introduction of policies and measures which conserve tranquillity by restricting noise pollution from all sources and, in particular, from road traffic, railways and over flying aircraft. | CCB, LAs, C Soc, NE, HA, CAA, Network Rail, Train operators        | Noise levels are reduced thus conserving and restoring tranquillity   |
| 8. Develop initiatives to encourage volunteering, participation and local pride in the Chilterns environment.  | C Soc, CCB, NT, CWP, WTs, LAs                                      | More people are volunteering their time and skills to help with environmental work  |
| 9. Support appropriate activities in the countryside which promote good health and a sense of well-being, such as health walks and conservation work projects.   | LAs, PCTs, NE, CCB, C Soc, BTCV, NT,                               | More people undertake exercise in the countryside and environmental work which improves their health and a sense of well being              |

# Climate Change

## Assessment of possible impacts and role of the Chilterns Conservation Board

Initial assessment of potential impacts of climate change on key characteristics of the Chilterns

**This assessment is based on the predicted medium to long term changes in climate - hotter drier summers and warmer wetter winters. In practice the climate is likely to show considerable variation within each year and between years.**

| Special Features and Qualities of Chilterns AONB  | Relevant Aspects of Climate Change | Nature of Impacts                   | Impact     |           | Response   |   | CCB role                                      |
|---|------------------------------------|-------------------------------------|------------|-----------|------------|---|---|
|   |                                    |                                     | Short Term | Long Term | Mitigation | Adaptation  |   |
| <b>Chalk Grassland</b>  | Hotter and drier summers           | Changed growing seasons             | Low        | Medium    |            | Provision of water supply to enable grazing.                | Monitoring                                    |
|   | Earlier spring                     | Disrupted ecological relationships. |            |           |            | Link sites to facilitate species migration                  | Support for grazing related infrastructure    |
|   | Wetter and warmer winters          | Changed species composition.        |            |           |            | New varieties of grazing stock                              | Support for site planning and management      |
|   |                                    | New species of invertebrates        |            |           |            | New habitat management regimes for "new species".           | Promotion of appropriate reversion techniques |
|   |                                    | Grass fires                         |            |           |            | Review areas suitable for habitat recreation and reversion. |   |
| Year round breeding of rabbits – increased grazing pressure.<br>Changes in micro climates |                                    |                                     |            |           |            |   |   |

|  |   |   |            |           |                   | Improve site linkages to enable species migration   |   |
|--|---|---|------------|-----------|-------------------|---|---|
| Special Features and Qualities of Chilterns AONB | Relevant Aspects of Climate Change  | Nature of Impacts   | Timescale  |           | Response          |   | CCB role  |
|  |   |   | Short Term | Long Term | Mitigation        | Adaptation  |   |
| <b>Woodland</b>                                  | <p>Earlier spring</p> <p>Hotter and drier summers</p> <p>Fewer frosts (timing)</p> <p>More frequent gales</p> <p>Wetter winters</p> <p>Increased CO2 in atmosphere.</p> | <p>Drought stress/soil moisture deficits</p> <p>Periodic water logging</p> <p>Windblow</p> <p>Reduced growth rates/crown and root die back</p> <p>More disease/pests</p> <p>Change in species composition - reduced suitability for beech in particular</p> <p>Changing associated flora and fauna – both losses and gains</p> <p>Increased risk of scrub fires</p> | Low        | High      | Woodland creation | <p>More careful species selection.</p> <p>Promote demand for wood fuel</p> <p>Link woods to facilitate species migration.</p> | <p>Information (e.g. potential impacts according to soil types)</p> <p>Monitoring</p> <p>Promote and assist with preparation of long term management plans</p> <p>Promote adherence to the Forestry Commission's guidance on managing ancient and native woodland</p> |

|  |  | CO2 concentration will affect growth rates of some species.<br><br>Warmer and wetter summers may lead to higher growth rates for some species   |            |           |            |   |   |
|--|--|---|------------|-----------|------------|---|---|
| Special Features and Qualities of Chilterns AONB | Relevant Aspects of Climate Change   | Nature of Impacts   | Timescale  |           | Response   |   | CCB role  |
|  |  |   | Short Term | Long Term | Mitigation | Adaptation  |   |
| <b>Water Resources/ Chalk Streams</b>            | Variable rainfall patterns but probably wetter winters and drier summers<br><br>Hotter Summers | Erratic Flows.<br><br>More frequent and unpredictable periods of drought and flood.<br><br>Longer growing seasons may reduce percolation to the aquifer<br><br>Variable impact on selected species - ecological balance will be affected.<br><br>Reduced water quality (e.g. due to heating, lower oxygen levels, pollution run off).<br><br>Changed species balance and growth rates | High       | High      |            | Reduce demand for water<br><br>Reduce Abstraction<br><br>Protect Stream Bed and banks<br><br>Channel and floodplain restoration<br>Flood Management<br><br>Promote water storage<br><br>Promote use of grey water | Information<br><br>Lobby for reduced abstraction and demand reduction<br><br>Help protect channel in times of prolonged drought<br><br>Promote flood prevention plans<br><br>Promotion of design of development to reduce run off, including Sustainable Urban Drainage Systems |

|  |   | Changed channel profiles   |            |           |  | systems                                      |   |
|--|---|--|------------|-----------|--|--|---|
| Special Features and Qualities of Chilterns AONB | Relevant Aspects of Climate Change                | Nature of Impacts  | Timescale  |           | Response                               |  | CCB role  |
|  |   |  | Short Term | Long Term | Mitigation                             | Adaptation                                   |   |
| Farmland   | Hotter Summers                                    | Longer growing seasons   | Medium     | Medium    | Reduce use of fertilisers              | New crops                                    | Monitor changes   |
|  | Milder, wetter Winters                            | Variable and unpredictable yields                                    |            |           | More targeted use of fertilisers       | Avoid crops requiring irrigation             | Support promotion of local markets and procurement policies |
|  | Fewer frosts                                      | Opportunities to grow new crops including biofuels                   |            |           | Conserve soil organic matter.          | Water storage                                | Provide guidance on growing biofuels                        |
|  | Drought   | New pest species and greater abundance of pests                      |            |           | Reduce food miles – seek local markets | Reduce vulnerability to erosion and leaching |   |
|  | Winter run off                                    | Summer drought stress for crops                                      |            |           |  | New production methods                       |   |
|  | Variable weather with more extreme weather events | Soil erosion (winter run off) and water logging at any time of year. |            |           |  | Different breeds of                          |   |

|   |  |   |                   |                  |   |   |  |
|---|--|---|-------------------|------------------|---|---|--|
|   |  | Leaching of nutrients from soils<br><br>Summer drought stress for livestock<br><br>Demand for water to irrigate crops<br><br>Hedgerows and field trees subject to drought stress. |                   |                  | Grow biofuels and biomass                               | livestock.<br><br>Target agri-env support to increase ecological connectivity |  |
| <b>Wet Grassland</b>                                    | Hotter and drier summers   | Soil moisture deficits<br><br>Changed species composition<br><br>Changed hydrology  | Medium            | High             |   | Safeguard sites in times of drought.<br><br>Promote links between sites       | Monitoring<br><br>Advice<br><br>Site identification  |
| <b>Special Features and Qualities of Chilterns AONB</b> | <b>Relevant Aspects of Climate Change</b>                                      | <b>Nature of Impacts</b>  | <b>Timescale</b>  |                  | <b>Response</b>   |   | <b>CCB role</b>  |
|   |  |   | <b>Short Term</b> | <b>Long Term</b> | <b>Mitigation</b>                                       | <b>Adaptation</b>   |  |
| <b>Acid Grassland/Heath</b>                             | Hotter and drier summers   | Associated species may benefit e.g. reptiles<br><br>Heath fires   | Low               | Medium           |   | Encourage spread of heath and links to other sites.                           | Monitoring<br><br>Advice<br><br>Site identification  |
| <b>Built Environment</b>                                | Hotter summers<br><br>Heavy rain<br><br>Milder winters<br><br>Increased number | Buildings will be hotter in summer<br><br>Winter damp may be more of a problem<br><br>Vulnerability to flooding   | Low               | Medium           | Enhanced energy efficiency<br><br>Reduced energy demand | Change design of houses/all buildings<br><br>Retro fitting of energy          | Publication of guidance<br><br>Lobbying for higher building standards – aiming for carbon neutrality for new buildings |

|  |                           |  |  |  |   |  |  |
|--|---------------------------|--|--|--|---|--|--|
|  | of extreme weather events | <p>Response to climate change will result in further environmental impact, e.g. design of housing and installation of renewable energy technology</p> <p>Installation of solar panels and wind turbines</p> <p>Increase in timber boring insects.<br/>In crease in subsidence especially on clay soils</p> <p>Drainage capacity/flooding</p> <p>Demand for air conditioning</p> <p>Flooding of roads</p> <p>More pollution events from run off.</p> <p>Road verge fires</p> <p>Storm drains overwhelmed resulting in pollution incidents</p> |  |  | <p>Installation of renewable energy capacity</p> <p>Use of building materials with low embodied energy.</p> <p>Use of permeable surfacing to reduce run off</p> | <p>efficiency measures</p> <p>Bigger rainwater goods</p> <p>Rainwater storage</p> <p>Re-design gardens to use less water.</p> <p>Porous surfaces</p> <p>Use of vegetation provide shade/cooling</p> <p>Cutting of road verge vegetation to reduce fire risk</p> <p>Storm drains with bigger capacity</p> <p>More regular maintenance</p> | <p>Promotion of energy efficiency</p> <p>Promotion of local building materials</p> <p>Promotion of water conservation, "blue infrastructure" and grey water systems.</p> <p>Promotion of Sustainable Urban Drainage systems.</p> |
|--|---------------------------|--|--|--|---|--|--|

|  |  |  |  |  |  |  |  |
|--|--|--|--|--|--|--|--|
|  |  |  |  |  |  | <p>of drains to remove blockages</p> <p>Promote garden design which are more tolerant of climate change- e.g. require less or no irrigation.</p> |  |
|--|--|--|--|--|--|--|--|

| Special Features and Qualities of Chilterns AONB | Relevant Aspects of Climate Change                                | Nature of Impacts   | Timescale  |           | Response   |  | CCB role |
|--|---|---|------------|-----------|--|--|----------|
|  |   |   | Short Term | Long Term | Mitigation   | Adaptation   |          |
| <b>Historic Environment</b>                      | Hotter Summers<br><br>Heavy rain<br><br>Extreme weather events    | Erosion of soil covering sites.<br><br>Windblown trees damaging sites<br>Growing more cereals and biofuels may result in more ploughing damage.<br><br>Appearance of historic parks may change if significant trees die.<br><br>May not be possible to maintain water features in historic parks and gardens<br><br>All year breeding by rabbits resulting in more burrowing. | Low        | Low       |  | May need to import soils and divert recreation uses<br><br>Remove trees which may cause damage if wind blown |          |
| <b>Enjoyment and Understanding</b>               | Hotter Summers<br><br>Milder winters<br><br>Unpredictable weather | Hot summer weather may deter visits.<br><br>Mild winter weather may lead to increased number of visits.<br><br>Some sites and routes will be damaged –water   | High       | High      | Promote visits without use of car – close to home.<br><br>Promote public | Give greater weight to weather dependency at planning stage of events, e.g. avoid hottest months,            |          |

|                |   |  |  |  |   |   |                         |
|----------------|---|--|--|--|---|---|-------------------------|
|                |   | <p>logging in winter and erosion in summer.</p> <p>May be more holidays taken in UK if sunnier, drier and hotter. There may be fewer holidays taken in the UK if summer weather is either poor or unpredictable.</p> <p>Unpredictability of weather may deter holding of outdoor events.</p> <p>Wet weather and water logged footpaths may result in shorter and fewer visits.</p> |  |  | <p>understand<br/>ing of how<br/>their<br/>actions can<br/>lead to the<br/>way they<br/>use and<br/>enjoy the<br/>natural<br/>environme<br/>nt</p>  | <p>provide under<br/>cover areas</p> <p>Hold events<br/>in, and visits<br/>to, shady<br/>woodland.<br/>Cover may<br/>be need<br/>because of<br/>heavy rain<br/>events.</p> <p>Water logged<br/>ground may<br/>affect site<br/>suitability for<br/>public events</p> |                         |
| <b>Economy</b> | <p>Seasonal<br/>variability</p> <p>Hotter summers</p> <p>Milder winters</p> | <p>Opportunity to introduce<br/>new crops and livestock<br/>breeds</p> <p>Expanded demand for<br/>wood and other biofuels.</p> <p>More visitors in winter</p> <p>Promotion of local food</p> <p>Promotion of local<br/>building materials.</p> <p>Trend for more UK based<br/>holidays although wet<br/>summers may reduce</p>   |  |  | <p>Promote<br/>local<br/>produce.</p> <p>Develop<br/>tourism<br/>profile as<br/>an<br/>alternative<br/>to long<br/>distance<br/>destination<br/>s</p> <p>Develop<br/>wood fuel<br/>market</p> | <p>Give greater<br/>weight to<br/>uncertainty of<br/>weather in<br/>business<br/>activity</p>   | Promotion of the issues |

|  |  |   |  |  |                                      |  |  |
|--|--|---|--|--|--------------------------------------|--|--|
|  |  | number of UK holidays.<br>Possibility of disruption to economic activity and loss of assets |  |  | Develop markets for new crops/breeds |  |  |
|--|--|---|--|--|--------------------------------------|--|--|