



**Strategic Environmental Assessment of the
review of the Chilterns Area of Outstanding
Natural Beauty Management Plan 2014-19**

**Scoping Report
Adopted Plan
April 2014**

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1. Background

1.1. Introduction

- 1.1.1. The Chilterns Conservation Board has embarked upon a review of the Chilterns Area of Outstanding Natural Beauty (AONB) Management Plan 2008 - 2013: A Framework for Action, which was published in November 2008. Under Section 89 of the Countryside and Rights of Way (CRoW) Act 2000, the Conservation Board must review the Management Plan within five years of the date of publication.
- 1.1.2. The AONB Management Plan exists to provide a common vision and agreed agenda of action to guide the efforts of the many local authorities and other bodies who work with the Conservation Board to secure the long term environmental, social and economic well-being of this exceptional countryside.
- 1.1.3. The Review of the Management Plan must be done in the light of a Strategic Environmental Assessment (SEA) prepared in accordance with European Directive 2001/42/EC. The process of SEA is not separate, but an integral part of the review process itself. The Review must also be subject to a separate formal assessment under another European Directive (92/43/EEC), usually referred to as the Habitats Directive, to establish that its proposals will not have a significant impact on any Natura 2000 site. This process is Habitats Regulations Assessment (HRA).
- 1.1.4. The Scoping Report represents the first stage of the review process. It describes how the Conservation Board proposes to undertake the SEA and the scope and level of detail to be included in the Environmental Report that will be published at the end of the review process. The Scoping Report is published for consultation and comment.

1.2. The Chilterns Area of Outstanding Natural Beauty

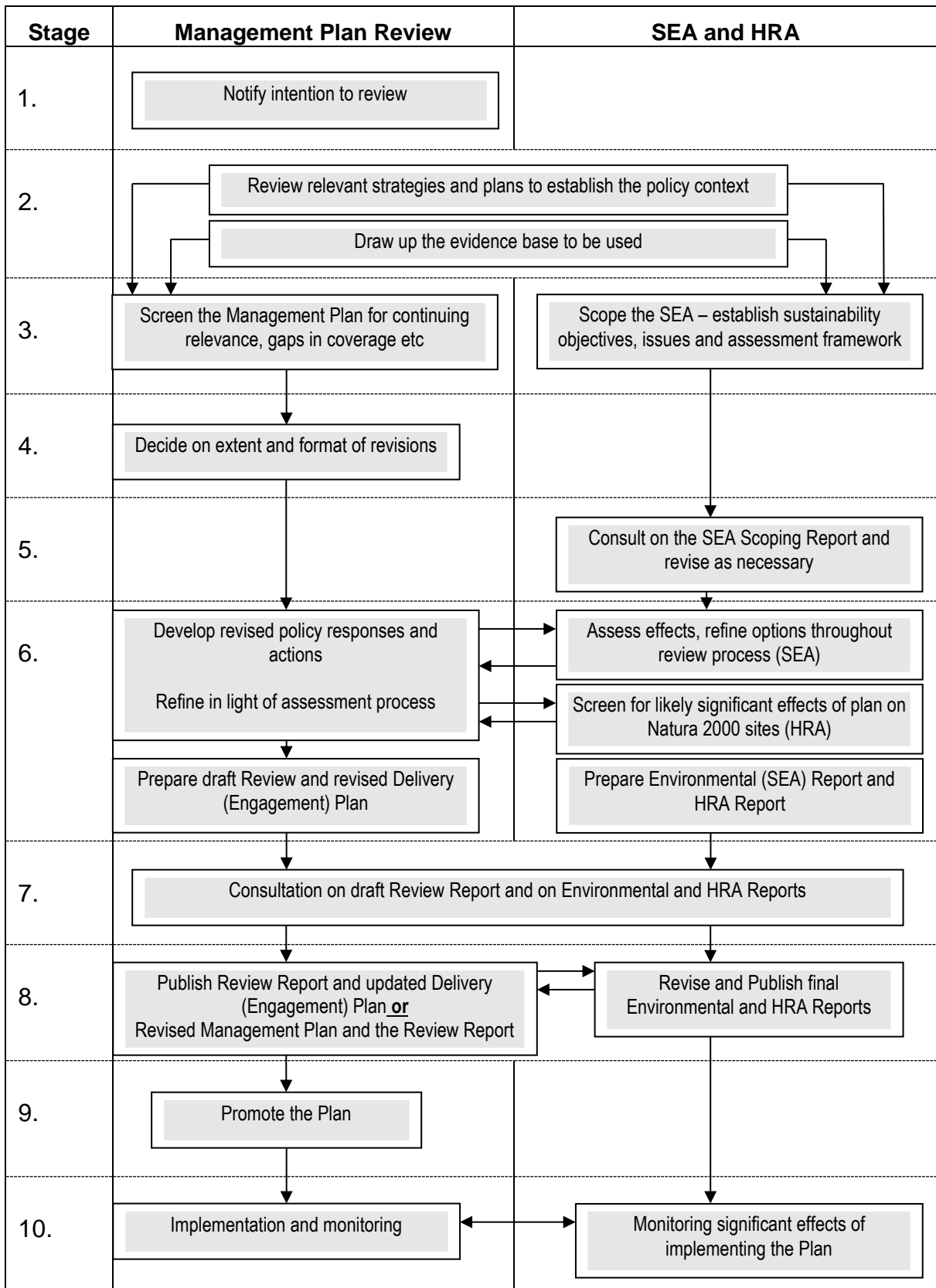
- 1.2.1. The Chilterns Hills was designated as an Area of Outstanding Natural Beauty (AONB) in 1965. The hills are formed by an outcrop of chalk, overlain by clay with flints, and comprise a steep scarp slope south and east of Aylesbury and a gradual dip slope falling towards the Thames valley. The AONB extends as a continuous area between Reading, at its south-western end, and Luton, and as a separate, detached block between Luton and Hitchin at its north-eastern extremity. It encompasses the most scenically attractive parts of the chalk escarpment, its rolling foothills and the heavily wooded south-east facing dip slope.
- 1.2.2. The AONB covers an area of 833 sq. kms (324 sq. miles) and includes parts of 13 local authority areas – three County Councils, two Unitary Authorities and eight District and Borough Councils.
- 1.2.3. The Chilterns were designated as an AONB in order to conserve and enhance those special qualities of the landscape which have long been recognised and appreciated. Of these, the most characteristic elements are:
 - the dramatic chalk escarpment, with its flower-rich downland and panoramic views;
 - woodlands, and especially the beech woods that to many people are the epitome of the Chilterns landscape;
 - hidden valley systems dividing the plateau with their ‘secret’, unspoilt character;

- the rich diversity of landscape patterns and features which provide a constantly changing scene;
 - the network of ancient, often sunken, lanes in tunnels of woodland or overgrown hedgerows;
 - scattered villages and farmsteads with their vernacular buildings in brick, flint, clay tile and dark timber;
 - the wealth of great houses and designed landscapes;
 - elusive chalk streams which make a special contribution to the landscape when flowing, and
 - the historic environment including hill forts and chalk figures.
- 1.2.4. These landscape qualities, and the wildlife and cultural heritage which are an intrinsic part of the area's natural beauty, are subject to intense development and recreational pressures, as well as being threatened by the many profound changes in land management policy and practice over the past century.
- 1.2.5. The purposes of AONB designation were established by the National Parks and Access to the Countryside Act 1949 and are as follows:
- The primary purpose of designation is to conserve and enhance natural beauty.
 - In pursuing the primary purpose, account should be taken of the needs of agriculture, forestry, and other rural industries and of the economic and social needs of local communities. Particular regard should be paid to promoting sustainable forms of social and economic development that in themselves conserve and enhance the environment.
 - Recreation is not an objective of designation, but the demand for recreation should be met so far as this is consistent with the conservation of natural beauty and the needs of agriculture, forestry and other uses.
- 1.2.6. Section 92(2) of the CRoW Act 2000 clarifies the reference to the conservation of the natural beauty of an area as including a reference to the conservation of its flora, fauna and geological and physiographical features.
- 1.2.7. Designation places a duty on public bodies including relevant local authorities. Section 85(1) of the CRoW Act states: "In exercising or performing any functions in relation to, or so as to affect, land in an area of outstanding natural beauty, a relevant authority shall have regard to the purpose of conserving and enhancing the natural beauty of the area of outstanding natural beauty".
- 1.2.8. When a Conservation Board is established, as in the Chilterns, as well as the duty detailed above a further duty is placed on the Conservation Board:
- The purpose of increasing the understanding and enjoyment by the public of the special qualities of the AONB.
- 1.2.9. Furthermore, a Conservation Board, whilst having regard to the purposes mentioned above, shall also seek to foster the economic and social well-being of local communities within the AONB, but without incurring significant expenditure in doing so.

1.3. The Management Plan Review Process

- 1.3.1. The Conservation Board has produced a Project Plan which describes the process it proposes to follow in reviewing the Management Plan. The Board intends to follow the model suggested in the Countryside Agency's *Guidance for the review of AONB management plans* (CA221), published in September 2006. This envisages a review process comprising ten broad stages from inception to monitoring the performance of the revised plan, incorporating SEA throughout.
- 1.3.2. The proposed process of review incorporating SEA and HRA is illustrated in Figure 1 below.

Figure 1 – The Review



Approach to Strategic Environmental Assessment

2.1. The Process

- 2.1.1. The European Directive 2001/42/EC, usually referred to as the Strategic Environmental Assessment, or SEA, Directive, requires that all plans and programmes whose implementation would have a significant effect on the environment must undergo assessment to ensure a high level of environmental protection. The objective of the SEA Directive is 'to provide for a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans...with a view to promoting sustainable development'.
- 2.1.2. The Directive requires that information be provided on the likely significant effects on the environment, including on issues such as:
- biodiversity;
 - population;
 - human health;
 - fauna;
 - flora;
 - soil;
 - water;
 - air;
 - climatic factors;
 - material assets;
 - cultural heritage including architectural and archaeological heritage;
 - landscape, and
 - the interrelationship between the above factors.
- 2.1.3. The Directive defines 'environmental assessment' as a procedure that comprises:
- preparing an Environmental Report on the likely significant effects of the draft plan or programme;
 - carrying out consultation on the draft plan or programme and the accompanying Environmental Report;
 - taking into account the Environmental Report and the results of the consultation in decision making, and
 - providing information when the plan or programme is adopted and showing how the results of the environmental assessment have been taken into account.
- 2.1.4. This strategic environmental assessment will be prepared in accordance with guidance provided by Natural England in *Guidance to English AONB Partnerships and Conservation Boards on Strategic Environmental Assessment of AONB Management Plans*, which in turn draws on *A practical Guide to the Strategic Environmental Assessment Directive* published by ODPM (now CLG) in September 2005. This scoping report has also drawn extensively on that previously prepared for the review of the management plan for the Cotswolds AONB.
- 2.1.5. The ODPM guidance identifies five key stages in the assessment process:

- Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope**
- Stage B: Developing and refining alternatives and assessing effects**
- Stage C: Preparing the Environmental Report**
- Stage D: Consulting on the draft plan and the Environmental Report**
- Stage E: Monitoring the significant effects of implementing the plan on the environment**

2.2. The Scoping Report

2.2.1. This scoping report represents Stage A of the assessment process. The Directive says that the Environmental Report shall include information on [inter alia]:

- *the “relationship [of the plan or programme] with other relevant plans and programmes” (Annex I(a))*
- *“the environmental protection objectives, established at international, [European] Community or [national] level, which are relevant to the plan or programme and the way those objectives and any environmental considerations have been taken into account during its preparation” (Annex I (e))*
- *“relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan or programme” and “the environmental characteristics of areas likely to be significantly affected” (Annex I (b), (c))*
- *“any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC and 92/43/EEC” (Annex I (d))*

“The authorities ... which, by reason of their specific environmental responsibilities, are likely to be concerned by the environmental effects of implementing plans and programmes ... shall be consulted when deciding on the scope and level of detail of the information which must be included in the environmental report” (Article 5.4 and 6.3).

2.2.2. The guidance identifies five tasks to be undertaken in the scoping stage of the assessment. These are summarized in the table below.

Stage A: Setting the context and objectives, establishing the baseline and deciding on the scope	
Task	Purpose
Identifying other relevant plans, programmes and environmental protection objectives.	To establish how the plan or programme is affected by outside factors, to suggest ideas for how any constraints can be addressed, and to help to identify SEA objectives.
Collecting baseline information.	To provide an evidence base for environmental problems, prediction of effects, and monitoring; to help in the development of SEA objectives.

Identifying environmental problems or issues.	To help focus the SEA and streamline the subsequent stages, including baseline information analysis, setting of the SEA objectives, prediction of effects and monitoring.
Developing SEA objectives.	To provide a means by which the environmental performance of the plan or programme and alternatives can be assessed.
Consulting on the scope of SEA.	To ensure that the SEA covers the likely significant environmental effects of the plan or programme.

2.2.3. These tasks are discussed in the remaining chapters of this scoping report.

2.2.4. Under section 12(5) of the SEA Regulations, the Conservation Board must consult Natural England, English Heritage and the Environment Agency in preparing the Scoping Report. A period of five weeks must be allowed for this consultation. Established good practice is to consult rather more widely at this stage and the views of the local authorities and other key stakeholders will also be sought. These are:

National and Regional Organisations

- Department for Environment Food and Rural Affairs (Defra)
- Regional Tourist Boards
- Forestry Commission
- Highways Agency

Local Government

- Local authorities in the Chilterns AONB
- County and/or Local Strategic Partnerships
- Local Enterprise Partnerships
- Local Nature Partnerships
- Town and Parish Council organisations in the Chilterns AONB

Others

- Chiltern Woodlands Project
- Chiltern Society
- National Trust
- NAAONB
- North Wessex Downs Partnership
- Cotswolds Conservation Board
- National Farmers Union
- Country Land and Business Association

- Wildlife Trusts
- Campaign to Protect Rural England
- Royal Society for the Protection of Birds
- Woodland Trust
- Canal and Rivers Trust
- Ramblers Association
- Cyclists' Touring Club
- British Horse Society
- Environmental Records Centres
- County Rural Communities Councils
- Health and Wellbeing Boards

3. Establishing the Context

3.1. Review of relevant policies, plans and programmes

- 3.1.1. The purpose of this task is to establish the policy context within which the Chilterns AONB Management Plan will operate. Activity in the Chilterns is influenced by a very wide range of laws, regulations, policies, priorities and funding programmes emanating from many different bodies operating at European, national, regional and local levels and directed at a range of environmental, social and economic objectives. The challenge for the Management Plan is to bring cohesion to these influences, to resolve any conflicts where possible and optimize their collective outcome for the AONB, including adding the value of the Conservation Board's contribution. Some issues may already have been dealt with entirely adequately by other plans and programmes, and need not be addressed further in the revised Management Plan.
- 3.1.2. Importantly, the Management Plan must be consistent with statutory requirements, such as those expressed through the land use planning system or environmental protection legislation at international, European and national level.
- 3.1.3. Analysis of the relationship between the AONB Management Plan and other policy documents will clarify opportunities and issues as well as potential conflicts between objectives or policies that may need to be addressed. The analysis helps to identify:
- environmental objectives that should be included in the environmental assessment framework;
 - external factors and sustainability issues that can be addressed by the Management Plan, and
 - any cumulative effects arising from Management Plan policies in combination with other plans or programmes.
- 3.1.4. The analysis of relevant policies, plans and programmes is contained in Appendix 1. The potential list of such documents is enormous. The analysis does not attempt to cover all the documents that may have some relevance to the Management Plan; only those whose influence is significant. For each, the analysis identifies relevant objectives and targets and highlights implications for the Management Plan and the assessment.
- 3.1.5. The key messages that can be drawn from this analysis for the Review as they relate to the SEA topics are summarised below.

Landscape
<p>European Landscape Convention - principally directed at the national level, but emphasises the importance of landscape as cultural as well as aesthetic asset. Calls for improved public involvement in landscape matters. Plan should facilitate integration of landscape considerations into Local Plans etc.</p>
<p>Rural Strategy - emphasises the importance of protecting the natural environment for this and future generations.</p>
<p>The National Planning Policy Framework (Conserving and enhancing the natural environment) - establishes policies for the management of development in and affecting AONBs. The Management Plan must acknowledge need for small-scale rural development and support its integration into the landscape.</p>

Statutory spatial and land use plans – the Management Plan should complement Local Plan policies on landscape, townscape, land use and the protection of agricultural land.

Biodiversity, fauna, flora

Habitats Directive – the Management Plan must not promote proposals that are likely to have an adverse effect on the conservation objectives of a Special Area of Conservation (SAC).

EU Water Framework Directive - The Management Plan should consider how the water environment can be protected and enhanced and one of the key principles of the Directive is the need to improve the ecological status of rivers.

Wildlife and Countryside Act - There are 3 NNRs and 54 SSSIs in the Chilterns and a number of plant, bird and animal species that enjoy specific legal protection under this Act. The Management Plan must recognise their statutory importance and strive to ensure they are adequately protected.

Natural Environment White Paper – The White Paper outlines the Government’s vision for the natural environment over the next 50 years, with proposals for actions to deliver the vision. The Management Plan should include consideration of the objectives and actions set out in the White Paper.

The National Planning Policy Framework (Meeting the challenge of climate change, flooding and coastal change) - Enhancing biodiversity and the conservation of the geological landscape are key considerations for the Management Plan.

Biodiversity 2020: A strategy for England’s wildlife and ecosystem services - the Management Plan should seek to contribute to realising Biodiversity 2020 targets.

A Living Landscape for the South East – the Management Plan should realize opportunities to contribute to the development of the regional ecological network.

Population

The Future of Transport White Paper - the Management Plan needs to reflect the Government’s transport vision for delivering improved personal mobility.

The National Planning Policy Framework (Promoting healthy communities) - Stresses the importance of green spaces in underpinning quality of life and as essential contributors to rural renewal, social inclusion and community cohesion, health and well-being, and sustainable development.

Human health

Healthy Lives: Healthy People – the Management Plan should promote national priorities to improve the health of all and in particular, the least well-off in all relevant policy areas.

Material assets
<p>Making the food and farming industry more competitive while protecting the environment – national policy for agriculture emphasises importance of building further environmental responsibility into farming and producing more sustainable, healthy food within a more market-based approach. The Management Plan should support this policy direction to provide maximum advantage to the Chilterns.</p> <p>Government Forestry and Woodlands policy and Sustaining and enhancing trees, forests and woodland – the Management Plan has a key role in delivering aims to expand and maintain a network of sustainably managed trees, woods and forests that are resilient to climate change, and to pests and diseases.</p> <p>Woodfuel Implementation Plan – the Management Plan should promote wood fuel production and marketing as a potentially important component of sustainable woodland management.</p> <p>The Energy Bill – the Management Plan should promote renewable energy resources compatible with the purposes of designation.</p> <p>The National Planning Policy Framework (Conserving and enhancing the natural environment and Supporting a prosperous economy) - Establishes policies for the management of development in and affecting AONBs. States that support should be given for development which helps to sustain rural areas. The AONB has a buoyant tourism market that plays a major role in the local economy. The Management Plan should reflect this and where possible, build upon the economic opportunities that tourism can offer the area, while properly considering associated pressures on the landscape.</p>

Cultural heritage including architectural and archaeological heritage
<p>The National Planning Policy Framework (Conserving and enhancing the historic environment) - The AONB contains a number of archaeological and historical sites and features that are of intrinsic importance and provide an attraction for tourists. The Management Plan should include measures or policies for the conservation and enhancement of the historic environment and heritage assets of the AONB.</p>

Climatic factors
<p>The UK Climate Change Programme and the Climate Change Act – the Management Plan must directly address the issue of climate change and its implications for the natural environment, acknowledge the increased likelihood of extreme weather events and localised flooding and promote the reduction of greenhouse gas emissions.</p>

Soil
<p>Safeguarding our soils – A strategy for England - Importance of soils in performing a wide range of functions has been generally under-acknowledged. The Management Plan should promote sustainable soils management.</p>

Water
<p>EU Water Framework Directive - The Management Plan should consider how the water environment can be protected and enhanced, including through encouraging sustainable use of water and good watercourse management.</p> <p>Catchment Abstraction Management Strategies – the Management Plan should acknowledge water resource status and complement actions proposed in the various CAMS including those for the Colne, Thame and South Chilterns and Thames Corridor.</p>

Air
<p>Air Quality Strategy 2011 - Direct relationship between Management Plan policies and air quality issues are likely to be small, but the Plan should promote appropriate land management practices that acknowledge current conditions and seek to improve same.</p>

3.2. The Environmental Baseline

Introduction

- 3.2.1. Reliable, up to date information is needed to understand the nature of the AONB environment and the attributes which make the area special, how the environment is changing and the forces of change at work, before an assessment of the potential impact of the policies and proposals contained in the Management Plan Review can be made.
- 3.2.2. More specifically, the SEA Directive says that the Environmental Report should provide information on:

“relevant aspects of the current state of the environment and the likely evolution thereof without implementation of the plan” and the *“environmental characteristics of the areas likely to be significantly affected”* (Annex I (b) (c)) and

“any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC (Birds Directive) and 92/43/EEC (Habitats Directive)” (Annex I (c))
- 3.2.3. Collating environmental baseline information for the SEA, together with the review of relevant policies, plans and programmes, assists the process of identifying the key environmental issues for the Management Plan and in developing the SEA objectives against which the Plan will be assessed and subsequently monitored.
- 3.2.4. A proper understanding of the environmental baseline is also of fundamental importance for the Management Plan review itself. The screening of existing objectives and policies for continuing relevance must be done in the context of a clear understanding of current environmental conditions and their likely evolution.
- 3.2.5. The focus of Strategic Environmental Assessment is to identify and mitigate any adverse impacts of the Plan on the environment. However, it is recognised that some of the policies and actions of the Management Plan, while directed at safeguarding and improving the environment of the AONB, are likely to have social and economic consequences. The SEA Directive includes among the list of environmental factors

- against which plans and programmes must be assessed, population, human health and material assets and the intention from the outset has been to develop an SEA Framework to ensure that any significant social and economic impacts of the Management Plan are properly recorded and assessed. This has meant the incorporation of selected socio-economic information in the environmental baseline.
- 3.2.6. A substantial amount of information about the Chilterns is included in or underpinned the current Management Plan. In the process of the initial review of objectives and policies, this has been reviewed, updated and supplemented under each chapter heading or 'theme' by the various Working Groups. The Conservation Board regularly undertakes or commissions surveys of environmental condition and land use in the AONB and these have provided information with which to update the information base.
- 3.2.7. An extensive range of other published sources of data have been used, including the annual Farming Statistics and *Tracking Change in the Character of the English Landscape* (the second assessment report from the Countryside Quality Counts project).
- 3.2.8. While there exists a reasonable evidence base on which to review the current Management Plan and to assess the environmental implications of new proposals, the Conservation Board is anxious to improve its databases. Two issues in particular have been highlighted in assembling the current evidence base. First, a great deal of information of key importance is held by geographical units that do not coincide with the boundaries of the AONB. This necessitates either some apportionment of the data to the AONB area or taking the wider areas for which information is available as a proxy for the AONB. Neither solution is really satisfactory, but that is the situation. The second issue concerns the lack of consistent time series data in some areas, making it difficult to track change and identify trends for the future.
- 3.2.9. In some topic areas, though information exists, it is sometimes not up to date and, though up to date information may become available shortly, there remains the question of how the new data can sensibly be interrogated.
- 3.2.10. One of the principal objectives of consultation on this scoping report is to establish whether consultees hold additional or better information than that set out here. All contributions and suggestions as to other sources will be gratefully received.
- 3.2.11. For the purposes of this SEA, the environmental baseline information has been organised around the topics specified in the Directive: i.e. landscape, biodiversity, fauna, flora, population, human health, material assets, cultural heritage, climatic factors, soil, water and air.
- 3.2.12. Appendix 2 contains an overview of the baseline information collected under these topic headings, together with trend information where available and data sources. The key characteristics of the Chilterns AONB as they relate to the SEA topics are outlined below

Landscape

- 3.2.13. Two of the most picturesque and aesthetically pleasing aspects of the Chilterns landscape are its complexity and diversity. The intricate mosaic of woodland, copses, enclosed pastures, arable fields, wooded and open heath and scattered farms and villages, overlying a complex landform of rolling hills and hidden valleys, presents a continually varying landscape. The most characteristic elements of the Chilterns landscape have been summarized above, in paragraph 1.2.3. Loss of this variety or a change in scale significantly alters the character of the landscape.

- 3.2.14. While the Chilterns as a whole can be identified as a distinctive area, there are variations in landscape character between different parts. Four broad regions have been identified: Scarp and Foothills, Plateau and Dipslope, the Arterial Valleys, and the Thames Fringes. The Chilterns Landscape Character Assessment divides these further into characteristic landscape types that have a coherent and recognisable identity.
- 3.2.15. The current Management Plan identifies a range of factors working to influence change in the landscape. Many of these relate to development under the town and country planning system or other statutory controls and are thus outside the direct influence of the Management Plan. But others, such as changes in agricultural and woodland management, management for recreation and tourism and the impacts of climate change are core issues for the Plan.

The Chilterns Landscape - Factors Influencing Change identified in The Framework for Action 2008-2013

- Pressure from development
- Growing population
- Increasing traffic levels
- Demands for road improvements and infrastructure, particularly at countryside sites
- Impacts on scarce water resources through increased consumption
- Changes in farming and woodland practice
- Reform of agricultural policy and agri-environment schemes
- Impacts of global market conditions on agricultural outputs
- Decline in livestock and dairy farming and impacts on grazing
- Continued decline in ‘commoning’
- Long term decline in market for UK timber leading to lack of management of Chiltern woodlands
- Change in emphasis of use of woodlands to recreation
- Increased use of wood as a renewable fuel
- Impacts of pests and diseases on woodlands
- Impacts of urbanisation close to the AONB (for example fly tipping and loss of tranquillity)
- Unpredictable impacts of climate change

- 3.2.16. The Countryside Quality Counts (CQC) project *Tracking Change in the Character of the English Landscape*, provides information on the scale and direction of change in each National Character Area (NCA) of England for the periods 1990-1998 and most recently, 1999-2003. The Chilterns is one such NCA. The NCA is almost twice the extent of the designated area of the AONB, so the results of the CQC project should be interpreted with some caution insofar as they relate to the AONB - but the AONB forms the core of the NCA. The overall CQC assessment for the Chilterns NCA for the period 1999 – 2003 is:

The changes are mixed, and while development continues to erode the character of the area locally, changes in the farmed and wooded landscape seem to have maintained the overall character.

	Consistent with vision	Inconsistent with vision
Stable	Maintained <ul style="list-style-type: none"> • Trees & woodland 	Neglected <ul style="list-style-type: none"> • Boundary features

	<ul style="list-style-type: none"> • Agriculture • Semi-natural habitats 	<ul style="list-style-type: none"> • Historic features • River and coastal
Changing	Enhancing	Diverging <ul style="list-style-type: none"> • Settlement and development

3.2.17. The CQC Assessment 1990-98 was “Some change inconsistent with character”, noting that:

Both agriculture and development show changes that appear to be inconsistent with aspects of existing character area descriptions. Woodland change appears to be largely consistent with existing character.

The CQC work will be superseded by the Character and Quality of England’s Landscapes (CQuEL) project which will provide evidence about the character and function of landscapes and the provision and quality of selected ecosystem services delivered by England’s natural environment.

Biodiversity, fauna, flora

3.2.18. Wildlife habitats in the Chilterns vary widely in their species composition and in their condition and nature conservation value. Some are considered to be of European or national significance and these receive statutory protection, while others are of importance in a regional, county or local context and receive recognition but are not statutorily protected.

3.2.19. The Chilterns Beechwoods (a composite of 9 sites), Hartslock Wood and Aston Rowant are designated Special Areas of Conservation and are of European significance. There are 3 National Nature Reserves, 64 Sites of Special Scientific Interest (SSSI) and 7 Local Nature Reserves. Several hundred other sites, known as Local Wildlife Sites have been identified for their importance within the local, county or sub-regional context.

3.2.20. Natural England report that in 2012 64.9% of the SSSIs in the AONB are in ‘favourable’ condition, with 33.8% as ‘unfavourable, recovering’, 1% are ‘unfavourable, no change’ and 0.3% ‘unfavourable, declining’.

3.2.21. The revised Ancient Woodland Inventory for the Chilterns (2012) has shown that there are 11,058 hectares of Ancient Woodland (13.19% of the AONB area). There are also 3,943 hectares of Plantations on Ancient Woodland Sites (PAWS – 36% of the ancient woodland) which should be restored to more natural conditions.

3.2.22. The Chilterns has a nationally important concentration of high quality chalk grassland, estimated to extend over 700ha in total, with 1 SAC, 3 NNRs, 28 SSSIs, 5 LNRs and over 100 Local Wildlife Sites based on chalk grassland.

3.2.23. A 2002 survey showed that the Chilterns AONB is of national importance for some farmland bird species, notably corn bunting, linnnet, skylark and yellowhammer.

Population

3.2.24. Up to date Census data is not currently available to the Conservation Board and reliance is therefore placed on the 2001 data (as for the current Management Plan). Should data emerge through the review programme relevant changes will be made, however, it is thought that few of the headlines will have changed substantially.

- 3.2.25. In 2001 the Chilterns had the highest rural, urban and total average income out of all SE protected landscapes (National Parks and AONBs). It had the smallest percentage of households below the national average income (39%). At the other end of the scale the Isle of Wight had the lowest average income (rural and urban combined) and 68% of households below national average income.
- 3.2.26. In 2000, the Chilterns had the lowest score in the Index of Multiple Deprivation out of all SE protected landscapes. This does not mean that deprivation is absent but that overall it is scarce.
- 3.2.27. In general the South East's protected landscapes had a higher proportion of detached houses (and bungalows) than the regional average and the Chilterns had a particularly high proportion compared to the others. Together with the Surrey Hills, house prices in the Chilterns were amongst the highest. They increased by an average of 24% between 2001 and 2003; below the average AONB and regional rates of increase.
- 3.2.28. There were relatively high proportions of managers and senior officials and professionals in the Chilterns. There were slightly below average proportions of people in skilled trades and fewer process, plant and machine operatives and also low proportions of manual workers. The banking, finance and insurance sector were an important employer for residents and the Chilterns was notable in its propensity towards larger businesses compared to other protected landscapes in the South East.
- 3.2.29. Rates of self-employment in the Chilterns were unremarkable for a protected landscape but still higher than the regional average. Employment in agriculture, hunting and forestry (a category in practice dominated by farming) made up a small percentage of total employment in AONBs. In the Chilterns, 0.45% of working residents were employed in this sector, the lowest proportion of any South East protected landscapes but still above the average for the region
- 3.2.30. Compared to the other SE protected landscapes, the Chilterns had: the highest vehicles/person figure (0.69) out of all the protected landscapes; the fewest households with no or 1 car, and the most households with 2 or 3 cars. 5% of households had 4+ cars, compared to the regional average outside AONBs of 2%. In terms of journeys to work, the Chilterns had the second highest percentage of car users of SE protected landscapes.

Material assets

- 3.2.31. Farmland makes up approximately 60% of the land area of the AONB. Of this nearly 60% is arable, the remainder being mainly permanent pasture and farm woodland. The principal crops grown are cereal crops, mainly wheat and barley and oilseed rape with a small amount of oats. Sheep outnumber cattle by more than 2 to 1; the number of cattle has declined, from about 19,000 in 2000 to around 16,000 in 2010. Almost 17,000 pigs are kept, a decrease in numbers from 2008. The number of sheep has decreased over the period from 2000 to 2010 to just under 35,000.
- 3.2.32. There about 1,100 agricultural holdings in the AONB. The total number of commercial holdings has been decreasing. Numbers of larger holdings (more than 100ha) has remained fairly constant while smaller, less profitable units are sold, amalgamated or switch to contract farming. The numbers of 'non-commercial' part-time or hobby farmers continues to increase while numbers of full-time agricultural workers decline.
- 3.2.33. Environmental Stewardship has been the agri-environment scheme which provides funding to farmers and other land managers who deliver effective environmental

management on their land. In 2012 there were 201 Entry Level Stewardship (ELS) agreements (includes 7 Organic ELS agreements) covering 22,337 ha, or 44.7% of the farmed area of the AONB and 72 Higher Level Stewardship (HLS) agreements (includes 8 OHLS) covering 8,102 ha (16.2 % of the farmed area of the AONB). Reform of the Common Agricultural Policy (CAP) is due to be finalised in 2015 with a New Environmental Land Management Scheme (NELMS) being proposed.

- 3.2.34. The beech woods of the Chilterns are one of the AONB's defining features. In total, 23.5% of the land area of the AONB is wooded; some 19,700 ha. Somewhat over half this area (about 56%) is considered ancient woodland, of which 64% is classified as Ancient Semi-natural Woodland and the remainder as Plantations on Ancient Woodland Sites (PAWS). 75% of Chiltern woodlands are in private ownership; charities and local authorities own 15%; The Forestry Commission 10%.
- 3.2.35. The Chilterns used to support a wide range of woodland industries including chair-making. In recent times the market for Chilterns timber has declined dramatically. Today, the woods are still harvested for timber but management for amenity, recreation and wildlife value has become equally important.
- 3.2.36. The abundance of the chalk deposits of the Chilterns coupled with the proximity to London gave rise in the past to a significant mineral extraction industry both within the AONB and adjacent to its boundaries. Today, only Kensworth Quarry, supplying chalk by pipeline for cement making in Warwickshire, and Pitstone are operational, whilst Landpark Wood has permitted chalk reserves but is inactive. A number of small brick making operations also continue to exist. Restoration of disused pits remains an issue. On some sites it has been achieved through landfill. Others have developed conservation or recreational value.
- 3.2.37. Waste arisings or recycling statistics are not available for the AONB as a whole. In England, 43.3% of household waste was recycled in 2011/12. This represents the highest average rate of recycling in England, although the rate of increase has levelled off. Rates for the local authorities of the Chilterns AONB were, with few exceptions, generally well above this with the highest rate being nearly 70%.
- 3.2.38. The scenic countryside of the Chilterns and its proximity to London means that it is enjoyed by millions of visitors every year. Most come on daytrips and their favourite activity is to go on walks and appreciate the stunning views from the Chilterns ridge. Others use the quiet lanes and bridleways to cycle and horse ride. There are over 2,000km of public rights of way in the Chilterns. This extensive network includes parts of two National Trails (the Ridgeway and the Thames Path) and a regional route (The Chiltern Way). Current statistics are not available, but a 2007 visitor survey showed that there were then about 55 million leisure visits to the Chilterns in the year, 41 million by local people, 10 million by day visitors and 4 million by people staying in or near the Chilterns.

Cultural heritage including architectural and archaeological heritage

- 3.2.39. The Chilterns has a very rich cultural heritage; the product of a long legacy of human influence. It includes buried archaeology, relict sites (surviving as earthworks or ruins) as well as historic buildings and landscapes still in contemporary use such as farms and field boundaries, industrial and military structures, ancient woodlands and commons and country houses with their associated parks and gardens. The Chilterns Historic Landscape Characterisation Project provides a valuable tool for understanding its importance and influence.

3.2.40. There is currently a lack of data on the condition of some elements of the historic environment (principally Listed Buildings of Grade II and non-designated heritage assets), but the publication by English Heritage of the Heritage at Risk Register, provides much valuable information in connection with Grade I and II* listed buildings, scheduled monuments and conservation areas at risk. The Board is seeking to add to this with a proposed project to survey Chilterns Traditional Farm Buildings.

3.2.41. The Countryside Quality Counts Assessment for the Chilterns National Character Area, which, as noted above, is almost twice the extent of the designated area of the AONB, reads as follows:

There have been Countryside Stewardship agreements covering about 90ha for historic landscapes since 1999, however, the extent is limited and this scheme has now ended. However, in 1918 about 8% of the NCA was historic parkland. In terms of the share of the resource the NCA was ranked 4. By 1995 it is estimated that 42% had been lost. About 25% of the remaining parkland is covered by an Historic Parkland Grant, and about 13% is included within an agri-environmental scheme. Only about 67% of historic farm buildings remain unconverted, but about 94% are intact structurally. These data suggest that important aspects of the historic resource remain neglected.

3.2.42. There are 19 Historic Parks and Gardens on the English Heritage register within the AONB. Historic Parks and Gardens are targeted under the Environmental Stewardship HLS option in the Chilterns JCA. In addition to the Historic Parks and Gardens there are: 2,149 listed building of Grades I, II* and II; 113 Scheduled Monuments and 94 Conservation Areas. There are also numerous other heritage assets spread throughout the AONB including routeways, farmsteads, landscape features, small towns and villages all of which make an important contribution to the character of the area. More information can be obtained by interrogating the annual State of the Chilterns Environment reports and the Chilterns Historic Landscape Characterisation Project.

Climatic factors

3.2.43. UK Climate Change Programme scenarios for future climatic conditions in the Chilterns indicate likely increases in average daily temperature of between 2-5°C by the end of this century, with a decline in summer rainfall of between 15-40% and an increase in winter rainfall of up to 30%, with increased frequency of stormy episodes. In the longer term these changes will have profound implications for the management of the AONB, but even in the nearer future their influence will be felt, raising issues relating to the landscape, biodiversity and woodland management, agriculture, water resources, the built environment, energy use and generation and visitor management.

Soil, geology and hydrogeology

3.2.44. A range of soil types are present in the Chilterns and have a major influence on land use and the landscape. At the south-western end of the AONB in South Oxfordshire, the chalk soils support an open, rolling landscape of large, unhedged fields and farms. Although classified as Grade 3 land, the shallow chalk soils are retentive of moisture and are relatively productive. On the slightly heavier and deeper soils of the upper greensand and lower chalk at the foot of the scarpface, the average farm size is smaller and the general farming practice centres around the production of cereals, beef and sheep. The rich alluvial soils along the Thames Valley still support concentrations of horticulture. The central plateau, with its complex of valleys, is generally less productive. Agricultural Land Classification (ALC) Maps indicate mostly Grades 3 and 4 on the clay with flints soils of the plateau tops and the steep scarp and valley sides. Higher-grade land occurs

only in the dry valley bottoms, where there are deep, well-drained loams. Where the chalk covers a small area near Tring, cereals, sheep and beef are the main enterprises. The geographically discrete northern part of the AONB has a rolling 'downland' character which is not deeply dissected and which supports a complex range of soil types.

- 3.2.45. Some 75% of the land in the AONB is of ALC Grade 3, with some 8.4% at Grade 2 and 12.5% graded as in non-agricultural use.
- 3.2.46. The bedrock underlying the Chilterns is chalk, principally comprising Upper, Middle and Lower Chalk beds, and this highly permeable rock allows relatively free movement of water (and therefore water-borne pollutants) into valuable groundwater resources.

Water

- 3.2.47. Fluvial flood risk is generally low in the Chilterns. The Thames Catchment Flood Management Plan identifies two types of flood plain in the AONB; undeveloped natural flood plain along the River Thames at the southern extremity, and the valleys of the chalk streams of the dip slope which are characterised as narrow flood plains and mixed land use. In these latter, it notes that relatively small clusters of people and property are at risk from flooding. However, groundwater and surface water flood risk is an issue for some river valley settlements both within (Hambleden) and on the fringe of the AONB (Chesham and High Wycombe).
- 3.2.48. Chalk is the most significant aquifer in south east England. The Chilterns chalk is a significant aquifer, of regional and national importance, both in terms of the water bodies it supports and for the amount of water that is abstracted from it for public supply. Water resources in the Chilterns are restricted to groundwater sources and are limited. Catchment Abstraction Management Strategies record water resource availability throughout the Chilterns as 'over-licensed', 'over-extracted' and 'no water available'. This over-extraction has resulted in low flows in the chalk streams of the dip slope, necessitating remedial action by the Environment Agency. In 2013 the area supplied by Affinity Water (approx 60% of the AONB) had the highest domestic, per capita consumption in the UK.
- 3.2.49. In addition to being limited across the Chilterns the groundwater resource is variable and vulnerable to pollution from both rural and urban sources. All of the Chilterns' waterbodies from which groundwater is abstracted are classified as Water Framework Directive (WFD) Drinking Water Protected Areas (DrWPAs). Currently the WFD assessment for the three groundwater units which make up the Chilterns and surrounding area are assessed as poor and are subject to a rising trend in pollutant levels.
- 3.2.50. Chalk streams are a globally rare habitat. Of around 200 in the world, 161 occur in England and nine have their source within the AONB. They also have considerable wildlife and amenity value. The Conservation Board works with partner agencies to restore and maintain this rare and valuable habitat through the Chilterns Chalk Streams Project.
- 3.2.51. The majority of water bodies (including all chalk streams) in the Chilterns are currently failing to attain Water Framework Directive quality objectives. Only the Grand Union Canal and Its Wendover Arm are currently assessed as attaining Good Ecological Potential. The primary reasons for failure are; low flows, poor invertebrate and fish populations, nitrate and phosphate levels.

Air

3.2.52. The Air Quality Strategy establishes the framework for air quality improvements.

Measures agreed at the national and international level are the foundations on which the strategy is based. Despite these measures, areas of poor air quality will remain, and these will best be dealt with using local measures implemented through the Local Air Quality Management regime. Local authorities are required to identify, review and assess those areas where the air quality objectives are being, or are likely to be, exceeded. There are two Air Quality Management Areas (AQMAs) designated by local authorities to address identified pollution issues in the AONB. These are within Wycombe District (the M40 throughout the district for Nitrogen Dioxide, NO₂) and Three Rivers District (the M25 at Chorleywood for Particulate Matter, PM10, and Nitrogen Dioxide, NO₂). Both local authorities have prepared Local Air Quality Action Plans.

4. Identifying Key Environmental Issues

- 4.1. Examination of the policy context within which the Management Plan is to be prepared and implemented, and of environmental conditions in the Chilterns, in the previous two chapters leads to the identification of the environmental problems and issues that the Plan needs to address and the constraints within which it must operate. This process has also been informed by the Conservation Board's experience of implementing the current Management Plan.
- 4.2. The SEA Directive requires that the Environmental Report should include:
“any existing environmental problems which are relevant to the plan or programme including, in particular, those relating to any areas of a particular environmental importance, such as areas designated pursuant to Directives 79/409/EEC(Birds) and 92/43/EEC(Habitats)”(Annex I (d))
- 4.3. Identifying the environmental issues in this way helps to improve the Management Plan objectives and options. It is also of central importance to the SEA process as a significant factor in the development of the SEA framework, in particular in defining indicators and targets. The ODPM guidance emphasises that any sustainability issues identified should, where possible, be supported by evidence in the form of baseline information.
- 4.4. Table 1 below summarises the key environmental issues identified to date, by SEA topic. This list represents the results of preliminary analysis only. The analysis of environmental issues has been iterative and continues. As the SEA develops with further stakeholder involvement the analysis of key issues is likely to evolve.

Table 1 – Environmental issues in the Chilterns

Key Issues / Problems	Relationship to SEA Objectives in Table 2
Landscape	
• Fragmentation of landscape - especially around towns – harder to buffer agricultural habitats.	1
• Effects of climate change – changing cropping patterns, species distribution, and increasing variability and extremes of weather will present challenges and opportunities for the natural beauty of the AONB.	1; 2
• Lack of management of landscape features, due to changes in land ownership, decline in availability of skills and availability of funding.	1; 2
• Local distinctiveness – the need to consider impacts of new development on wider landscape (especially major growth), increased use of local materials.	1; 4; 7; 8
Biodiversity, flora, fauna	
• Habitat fragmentation , isolated sites and need for more management at a landscape scale	2
• Decline in availability of advice for land managers e.g. private owners of local wildlife sites	2
• Declining livestock industry making small isolated sites increasingly difficult to manage as part of farm business. Shift from graziers paying to being paid on conservation sites.	2
• Management of access - high visitor numbers and lack of public awareness making site management difficult in some areas e.g. deer control.	2; 5; 6; 12
• Pests and diseases – impacts of non-native invasive species, as well as other pests and diseases on native species.	1; 2; 12
• Effects of climate change – implications for site management for example the need for increased grazing on grassland sites in response to longer growing season and increased rate of vegetation growth. Changes in species distribution e.g. less Beech on scarp.	2
Population	
• Generic issues – increased partnership working, increasing reliance on volunteers; public perceptions e.g. huge confusion re climate change – need for more education/awareness raising.	2; 5; 12
• Green Infrastructure/housing growth – will be increase in area of urban fringe, increased interface between people and farming community.	1; 2; 4; 5; 6; 12
• Ageing population will have implications for recreation and visitor management.	5; 6
• Traffic movements – need to consider wider implications of traffic, especially related to the growth agenda, High Speed 2, airport expansion and overflying aircraft.	5; 7

Human health	
<ul style="list-style-type: none"> • Increasing obesity of the population will have implications for recreation and visitor management. 	5; 6
Material assets	
<ul style="list-style-type: none"> • Changes in farming community – future impacts of new farming systems and agri-environment schemes unknown – some opportunities for new habitat creation and linkages. 	1; 2; 10
<ul style="list-style-type: none"> • Farming – overall decrease in number of holdings, increase in larger holdings. More contractors – traditional farms selling up to non-traditional landowners. Land bought as setting for house. 	1; 2; 4; 5; 8; 9; 10; 12
<ul style="list-style-type: none"> • Reduction in livestock numbers 	2; 8; 12
<ul style="list-style-type: none"> • Loss of agricultural infrastructure – livestock markets, labour/skills, abattoirs etc. 	1; 2; 3; 5
<ul style="list-style-type: none"> • High demand for grain leading to high prices - threats to farmland habitats created/restored through agri-environment schemes, especially buffer strips. Reduction in set aside. 	2; 7; 8
<ul style="list-style-type: none"> • Increasing non-food crops such as borage and opium. 	1; 2; 7; 8; 10
<ul style="list-style-type: none"> • Increasing focus on local food and more traditional breeds to graze conservation grasslands. 	1; 2; 6
<ul style="list-style-type: none"> • Woodland management – pest control still a major issue; Habitat Regulations and Health and Safety issues likely to have an increasing impact on woodland management; lack of public understanding of woodland management; decline in contractor /skills base; weather extremes likely to make management more difficult. 	1; 2; 8
<ul style="list-style-type: none"> • Trees – decay fungi working for longer could reduce life of veteran trees, leading to more problems with tree safety. 	1; 2; 3
<ul style="list-style-type: none"> • Woodland – increase in lotting; wood fuel could be an economic driver but at present marginal. 	1; 2; 7
<ul style="list-style-type: none"> • Pests and diseases – impacts of non-native invasive species, as well as other pests and diseases on landscape as well as native flora and fauna. 	1; 2; 12
<ul style="list-style-type: none"> • Tranquillity – impacts of increased noise and light pollution arising from greater levels of development and urban intrusion within, and in the setting of, the AONB. 	1; 2; 3; 4; 5; 7; 12
<ul style="list-style-type: none"> • Waste – need to consider waste minimisation rather than disposal, and increased re-use and recycling. 	11
Cultural heritage, including the historic environment, architectural and archaeological heritage	
<ul style="list-style-type: none"> • Commons – cultural/economic change – lack of economic relevance affecting their management. Commons not generally owned by people with agricultural interest, so more problems re-introducing grazing. 	2; 3; 5
<ul style="list-style-type: none"> • Historic Environment – lack of data on the condition of heritage assets, lack of knowledge including identification of sites, need for appropriate management, shortage of relevant skills. 	2; 3; 5

<ul style="list-style-type: none"> • Built environment – need for up to date design advice, to address general issues as well as impacts of permitted development and isolated buildings for example. 	1; 4
<ul style="list-style-type: none"> • Increased population – may lead to increased levels of development within the AONB and its setting 	1; 4; 7; 8; 9; 11; 12
Climatic factors	
<ul style="list-style-type: none"> • Increased variability in climate (e.g. temperature and rainfall), changes in growing season, increased incidences of extreme weather events will have significant implications for biodiversity, woodland, agricultural, landscape management and the built environment. 	1; 2; 3; 4; 5; 6; 7; 10
<ul style="list-style-type: none"> • The need for increasing energy production from renewable sources may present challenges in terms of landscape impact. 	1; 7; 8
<ul style="list-style-type: none"> • Sustainable construction – increased use of local building materials as carbon reduction/offset. 	1; 3; 4; 7; 8
<ul style="list-style-type: none"> • Land use conflicts – pressure to introduce new crops or management practices may conflict with conservation of landscape character. 	2; 7
Water	
<ul style="list-style-type: none"> • Increasingly stressed water resources as a result of a changing climate and due to more abstractions arising from increased population. 	2; 4; 9
<ul style="list-style-type: none"> • Chalk Streams – low flows, variability of flows, lack of designation, impacts caused by past changes, spread of invasive non-native species e.g. Japanese Knotweed, impact of flooding and need for sustainable drainage systems. 	2; 9
Air	
<ul style="list-style-type: none"> • Atmospheric deposition causes nutrient enrichment of habitats. 	2

5. The SEA Framework

5.1. Identifying the SEA Objectives

- 5.1.1. The next stage in the appraisal is the development of the strategic environmental appraisal framework. The SEA framework is intended to provide a way in which environmental effects can be described, analysed and compared – it is central to the SEA process. Though the SEA Directive does not specifically require the use of objectives or indicators in the SEA process, they are a recognised and useful way in which environmental effects can be described, analysed and compared at key stages of the Management Plan’s development.
- 5.1.2. The SEA framework consists of environmental objectives, the achievement of which should be measurable using indicators, and assessment criteria against which judgements can be made. Objectives and indicators can be revised as baseline information is collected and sustainability issues and problems are identified, and can be used in monitoring the implementation of the Management Plan. The identification of the SEA objectives is an iterative process, based on the review of relevant plans and programmes, the evolving environmental baseline and the developing analysis of key environmental issues.
- 5.1.3. SEA objectives are distinct from the objectives of the Plan (although there may be some overlap with them). They provide a way of checking whether the Management Plan objectives are the best possible ones for effective environmental management and can be seen as a methodological yardstick against which the environmental (and social and economic) effects of a plan can be tested. A framework of objectives, sub-objectives and indicators has been developed covering each of the defined SEA topics.
- 5.1.4. The process of identifying SEA objectives has involved reviewing the environmental protection and sustainability objectives set in relevant plans, programmes and policies described in Chapter 2. Particularly important are those contained in EU Directives, national legislation (for instance in defining the purposes of AONB designation) and regional sustainable development and environmental strategies.
- 5.1.5. The initial set of SEA Objectives proposed is set out below.

Table 2 – proposed SEA Objectives for the Chilterns

1.	To conserve and enhance landscape character and scenic quality.
2.	To conserve and enhance biodiversity.
3.	To conserve and enhance the historic and cultural environment.
4.	To conserve and enhance the built environment and promote sustainable construction methods.
5.	To improve quality of life for those living and working in the AONB.
6.	To encourage healthy lifestyles.
7.	To reduce greenhouse gas emissions and encourage sustainable forms of energy production.
8.	To secure sustainable use of natural resources.
9.	To secure sustainable water resource management including the conservation and improvement of water quality.
10.	To conserve and improve soil quality.
11.	To reduce waste and promote high rates of re-use and re-cycling.

12.	To increase awareness, understanding and enjoyment of the environment.
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5.2. Compatibility of SEA Objectives

5.2.1. In accordance with the ODPM guidance, the consistency of the SEA objectives one with another has been checked using a compatibility matrix. This has been useful in highlighting any tensions between objectives. Where possible these have been resolved by careful rewording of the objectives. Those that remain are now clearly identified for the decision-making process and consideration can be given as to the sort of mitigation measures that might be introduced to resolve or reduce any conflicts in the relevant Management Plan policies.

Table 3 – Compatibility of SEA Objectives

SEA Objectives	1.												
	2.	✓											
	3.	✓	✓										
	4.	✓	✓	✓									
	5.	✓	?	✓	✓								
	6.	✓	✓	0	0	✓							
	7.	?	?	?	✓	✓	0						
	8.	0	0	0	✓	✓	0	✓					
	9.	✓	✓	0	✓	✓	0	0	✓				
	10.	✓	✓	0	0	0	0	0	✓	0			
	11.	0	0	0	✓	✓	0	0	✓	0	0		
	12.	✓	?	✓	✓	✓	✓	✓	✓	✓	✓	✓	
		1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.
	SEA Objectives												

Key to compatibility	
Potentially incompatible	X
Uncertain	?
Compatible	✓
No relationship	0

5.2.2. As is to be expected, most of the SEA objectives are mutually supportive. In a number of instances there is no relationship between particular objectives, and in no case are two objectives potentially directly incompatible. However, though there are some, there are relatively few uncertainties.

5.3. Assessment criteria and indicators

5.3.1. In developing the Objectives further, detailed decision making criteria with indicators were also included, following the approach in the ODPM guidance. The decision-making criteria assist in addressing specific issues within each objective and aid the assessment of potential impacts of any policy option or choice.

5.4. The Proposed Assessment Framework

5.4.1. The proposed SEA framework is shown below in Table 4.

5.4.2. Impacts will be recorded by allocating a score for the adjudged significance of the positive or negative effect and by way of comment, which will include recommendations for improving the positive impact or mitigating the negative impact, as appropriate. Once assessed, columns will be added to Table 4 to indicate the relevant scores and comments and to highlight any suggested indicators.

Key to scores:

- ++ Strong/important positive effect
- + Positive effect
- ? Mixed and/or uncertain effect
- 0 No significant effect
- Negative effect
- Strong/important negative effect

Table 4 – SEA Framework

SEA Topic	Objective	Assessment Criteria
Landscape, Cultural heritage etc	1. To conserve and enhance landscape character and scenic quality	• Will it protect or enhance local landscape character and distinctiveness?
		• Will it add to the stock of locally distinctive landscape features?
		• Will it reduce the amount of derelict, degraded or unsightly land?
Biodiversity, fauna, flora	2. To conserve and enhance biodiversity	• Will it maintain and enhance protected and local wildlife sites, BAP habitats and species and networks in line with national and local targets?
		• Will it protect and enhance habitats and wildlife taking into account climate change?
		• Will it protect and enhance sites and features of geological value?
Cultural heritage etc.	3. To conserve and enhance the historic and cultural environment	• Will it recognise and respect historic landscape character?
		• Will it conserve or enhance designated, other known or potential historic sites, areas of significance, buildings and features?
		• Will it improve access to or understanding of the historic environment?
Cultural heritage etc.	4. To conserve and enhance the built environment and promote sustainable	• Will it lead to developments built to a high standard of design?
		• Will it conserve or enhance local settlement character and building styles, using local building materials?

Climatic factors	construction methods.	<ul style="list-style-type: none"> • Will it improve the satisfaction of people with their neighbourhoods as places to live and foster a sense of community?
Population, Human health	5. To improve quality of life for those living and working in the AONB	<ul style="list-style-type: none"> • Will it help to increase access to decent and affordable housing?
		<ul style="list-style-type: none"> • Will it encourage rural enterprise and access to fulfilling employment?
		<ul style="list-style-type: none"> • Will it improve access to key services?
		<ul style="list-style-type: none"> • Will it provide additional leisure facilities and accessible green spaces?
		<ul style="list-style-type: none"> • Will it improve access to existing facilities and the wider countryside, including opportunities for people of all abilities to come into contact with and appreciate wildlife and wild places?
Human health	6. To encourage healthy lifestyles	<ul style="list-style-type: none"> • Will it encourage people to take physical exercise?
		<ul style="list-style-type: none"> • Will it encourage local food production for local consumption?
Climatic factors, Air	7. To reduce greenhouse gas emissions and encourage sustainable forms of energy production	<ul style="list-style-type: none"> • Will it reduce emissions of greenhouse gases by reducing energy demand and consumption?
		<ul style="list-style-type: none"> • Will it increase the proportion of energy needs met from renewable sources?
		<ul style="list-style-type: none"> • Will it conserve and enhance landscape character, scenic quality and biodiversity?
Material assets	8. To secure sustainable use of natural resources	<ul style="list-style-type: none"> • Will it minimise the demand for raw materials and/or encourage the use of raw materials from sustainable sources?
		<ul style="list-style-type: none"> • Will it encourage efficiency in the use of energy?
Water, Biodiversity, fauna, flora	9. To secure sustainable water resource management including the conservation and improvement of water quality	<ul style="list-style-type: none"> • Will it limit water consumption to levels supportable by natural processes and supply systems, taking into account the impacts of climate change?
		<ul style="list-style-type: none"> • Will it maintain or improve the quality of the water environment (surface and groundwater)?
		<ul style="list-style-type: none"> • Will it maintain the extent and good condition of wetlands and rivers?
Soil	10. To conserve and improve soil quality	<ul style="list-style-type: none"> • Will it maintain and enhance soil quality?
Material assets	11. To reduce waste and promote high rates of re-use and re-cycling	<ul style="list-style-type: none"> • Will it reduce the quantity of waste residues for disposal?
		<ul style="list-style-type: none"> • Will it help to encourage the recycling of used materials?
Population	12. To increase awareness,	<ul style="list-style-type: none"> • Will it promote awareness- raising, training and education for all sections of local society?

	understanding and enjoyment of the environment	<ul style="list-style-type: none"><li data-bbox="699 157 1489 243">• Will it increase the number of people involved in volunteer activities?<li data-bbox="699 243 1489 296">• Will it encourage engagement in decision-making?<li data-bbox="699 296 1489 348">• Will it enhance people's access to nature?
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6. Remaining Stages of the SEA

6.1. Developing Options and assessing effects

- 6.1.1. This stage of the process will involve 6 tasks outlined in the Guidance:
- Testing the Management Plan objectives against the SEA framework
 - Developing Management Plan options
 - Predicting the effects of the Management Plan
 - Evaluating the effects of the Management Plan
 - Considering ways of mitigating adverse effects and maximising beneficial effects
 - Proposing measures to monitor the significant effects of implementing the Management Plan.

Testing the Management Plan objectives against the SEA framework

- 6.1.2. The objectives of the revised Management Plan will be tested against the SEA objectives to identify potential synergies and inconsistencies. This should give some early indication of where any tensions between management ambitions and the environment lie and help to redefine Plan objectives or policy directions where appropriate.

Developing Management Plan options

- 6.1.3. In conducting SEA, there is a requirement to appraise the likely significant environmental effects of implementing the Management Plan proposals *and any reasonable alternatives*. In developing revised policies and programmes to implement the objectives of the Management Plan it may well be appropriate to give consideration to alternative ways forward, or options, in respect of particular objectives. At the very least, there will be the “do nothing” option, i.e. what would happen if the revised Plan was not adopted. Comparing options against the SEA framework will aid their refinement and the eventual choice of the preferred solution.

Predicting the effects of the Management Plan

- 6.1.4. This task will comprise systematic prediction of changes to the environmental baseline arising from the revised Management Plan. These can be compared with the ‘do nothing’ or ‘business as usual’ scenario. As required by the SEA Directive, predicted effects will be characterised as precisely as possible in terms of their magnitude, the time period over which they occur, whether they are permanent or temporary, positive or negative, probable or improbable, widespread or local, and whether there are cumulative and/or synergistic effects. This will be an iterative process during the plan-making process in which emerging policy solutions are appraised, refined and re-appraised to ensure that the final plan is as environmentally sustainable as possible.

Evaluating the effects of the Management Plan

- 6.1.5. Evaluation involves forming a judgement on whether or not a predicted effect will be environmentally significant. The criteria of significance in Annex II of the Directive are relevant when considering a specific effect, e.g. its scale and permanence and the nature and sensitivity of the receiving environment.
- 6.1.6. In practice, this task will be combined with the previous, prediction task in the application of the SEA framework.

Considering ways of mitigating adverse effects and maximising beneficial effects

- 6.1.7. Annex I of the Directive requires the Environmental Report to include measures to prevent, reduce or offset any significant adverse effects on the environment of

implementing the plan or programme. These 'mitigation measures', may include proactive avoidance of adverse effects as well as actions taken after effects are noticed. They may also include measures to maximize beneficial effects

- 6.1.8. The ODPM guidance notes that mitigation can take a wide range of forms, including:
- Changes to the alternative concerned, or to the plan or programme as a whole;
 - Changes to a specific proposal within the plan or programme;
 - Inclusion of new provisions within the plan or programme;
 - Technical measures to be applied during the implementation stage, e.g. buffer zones, application of design principles;
 - Identifying issues to be addressed in project EIAs, and
 - Proposals for changing other plans and programmes.
- 6.1.9. It is expected that mitigation measures will often be identified in the process of prediction and evaluation and will be reported in the completed SEA framework. They will be fed back into the plan development process for consideration and possible adoption in the final Plan.

Proposing measures to monitor the significant effects of implementing the Management Plan

- 6.1.10. It will be important to monitor the significant environmental effects of implementing the Management Plan, to assess the effectiveness of any mitigation measures proposed and to identify any unforeseen adverse effects. A set of monitoring indicators is proposed in the SEA framework. This will be refined as the Conservation Board's more general monitoring programme is developed, as described in the Management Plan Review Project Plan. Section 6.4 below also contains information on the proposed monitoring process.

6.2. Preparing the Environmental Report

- 6.2.1. The Environmental Report is a key output of SEA, presenting information on the effects of the Revised Management Plan. Annex 1 of the Directive specifies the information to be included in the Report. This has already been set out in paragraph 2.2.1. above.

6.3. Consultation and Decision-making

- 6.3.1. The Environment Report will be a public document, published for consultation alongside the draft Revised Management Plan. A Non-Technical Summary will also be published. The Project Plan provides for a consultation period of 12 weeks, in the Autumn of 2013.
- 6.3.2. The Conservation Board will consider all representations made in respect of the draft Plan and the findings of the Environment Report when deciding if further changes to the draft Plan are desirable in the light of public consultation. Any such changes will be subject to SEA and the Environment Report will be updated accordingly.
- 6.3.3. The Conservation Board will then formally adopt the Revised Management Plan and publish it, together with the Environment Report and the Habitat Regulations Assessment, and send the documents to the Secretary of State as required by S90 of the CRoW Act.

6.4. Monitoring Implementation of the Management Plan

- 6.4.1. The Conservation Board will wish to monitor progress in implementing the actions set out in the Revised Management Plan. It will also seek to monitor the state of the AONB and the way it changes over time so as to evaluate the effectiveness of these actions in

conserving and enhancing the AONB. These two processes can be referred to as “performance monitoring” and “condition monitoring”.

- 6.4.2. The framework for performance monitoring will be provided by the Engagement Strategy which will form part of the Revised Management Plan itself, which will incorporate specific actions and criteria for success where appropriate. Such monitoring will inform any roll-forward of the Engagement Strategy. The Conservation Board will lead on this monitoring process, but for many actions will rely on contributions from the identified lead partner organizations.
- 6.4.3. Monitoring the evolving condition of the Chilterns AONB will be carried out, where possible and appropriate, on an annual basis with an associated report, and will principally be aimed at informing the quinquennial reviews of the Management Plan. It will be structured around a suite of indicators that will be developed, initially in establishing the evidence base for this review in Stage 2 above. It is recognized that data collection and analysis may in some cases occur over a number of years. Again, the Conservation Board will take the lead in coordinating this work, although partner organizations will often be best placed to collect the data required.
- 6.4.4. Natural England is proposing to develop a set of headline condition indicators for use in all AONBs. The Chilterns suite of indicators will incorporate this national set when it becomes available.