



A Joint Agency

Strategy for Wild Deer in Scotland

Draft for Public Consultation 2007

A Joint Agency

Strategy for Wild Deer in Scotland

Draft for Public Consultation 2007



Foreword by the Minister for Environment

Wild deer are a great asset to Scotland, a key part of our environment and our rural economy. They are also part of our identity – iconic species valued by those living in Scotland as well as those visiting. People come across wild deer in many places, not just in rural areas where deer management provides significant employment, but increasingly in urban green spaces.

The Scottish Government is clear in its objective to create a greener Scotland by improving the sustainable use of our natural resources and conserving our rich biodiversity. We are also clear in our objectives to create a wealthier, healthier and safer Scotland.

In doing so we must rise to the challenges of managing a wild population that interacts with people in many different ways, both positive and negative. The challenges are many and include protecting our highly valued biodiversity, contributing to successful businesses and to thriving communities. The key is to meet these challenges as a whole, to find ways that benefit both the environment and people in Scotland.

I am pleased that we are taking this fresh opportunity to work across different parts of government to address the challenges inherent in managing wild deer. This is a vital part of a more sustainable approach to our rural environment and economy. I encourage everyone with an interest in wild deer in Scotland to engage in this consultation and contribute to the strategy for the future management of some of our most iconic species.



Michael Russell, MSP
Minister for Environment

contents

	page
1. Introduction	1
1.1 A Strategy for wild deer	1
1.2 Consultation on the draft strategy	2
1.3 Assessing the likely effects of the strategy	3
2. Context	4
2.1 Wild deer in Scotland	4
2.2 Policy context	5
2.3 Delivering a range of objectives in a changing context	7
2.4 Building on recent progress	8
3. Vision	10
4. Key issues to address	12
5. Ways of working - guiding principles	13
6. Achieving the vision - objectives	14
6.1 Objectives contributing to a high quality environment	14
6.2 Objectives contributing to sustainable economic development	15
6.3 Objectives contributing to social wellbeing	16

	page
7. Key actions	17
7.1 Actions contributing to a high quality environment	17
7.2 Actions contributing to sustainable economic development	20
7.3 Actions contributing to social well-being	22
7.4 Cross-cutting actions contributing to all objectives	24
8. Implementation	28
8.1 Key government tools for implementation	28
9. Monitoring and review	29
9.1 Monitoring	29
9.2 Review	29
Glossary	
Annexes	30
Annex 1: Background	32
Annex 2: The changing context	35
Annex 3: Policy context	36
Annex 4: Process to develop the strategy	42
Annex 5: Non-technical summary of strategic environmental assessment	44
Annex 6: SEA Environmental report (available electronically only)	53
Annex 7: Assessment of potential socio-economic effects (available electronically only)	53

1 : introduction

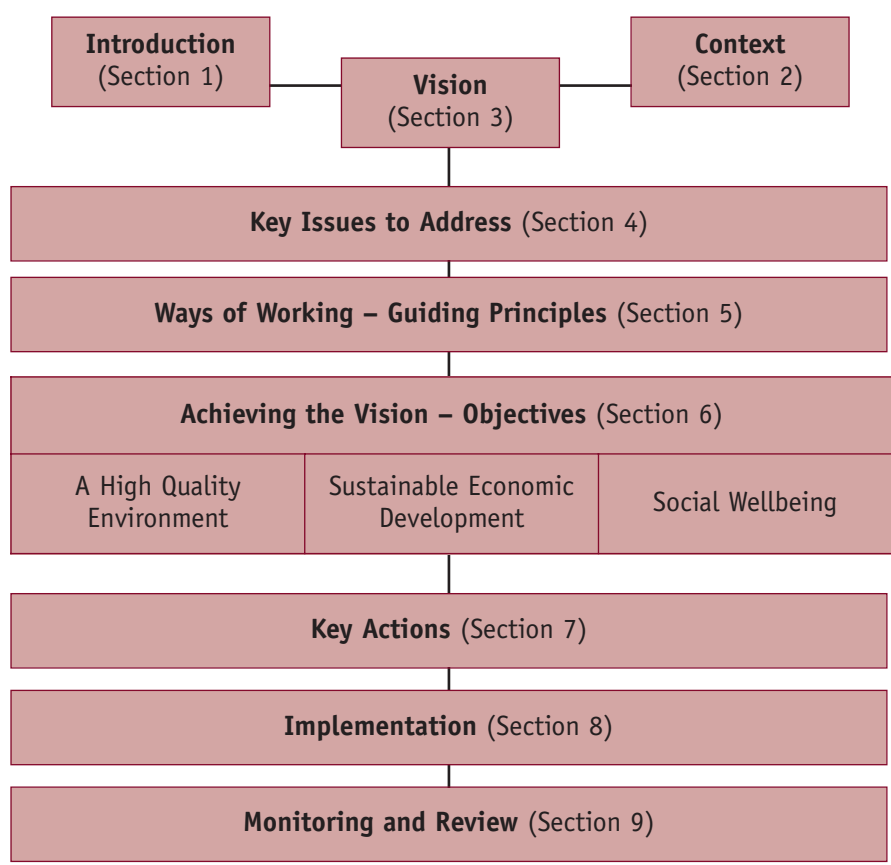
1.1 A Strategy for wild deer

Wild deer are an important element of Scotland's biodiversity and ecology, an economic asset and valued as iconic species. Present in woodlands, open countryside and increasingly in the margins of urban areas across much of Scotland, the different species of wild deer affect people and interact with land-uses in many different ways creating both costs and benefits. The management of these species, involving many different interests, requires careful planning at all levels – from strategic to operational on the ground.

At the strategic level the Deer Commission for Scotland (DCS) published the first long-term vision for wild deer in 2000, setting out a vision for the next 15-20 years. In 2001, DCS published a long-term strategy, setting out how it would work towards achieving the vision.

This new strategy, including a revised vision, will replace the 2000 and 2001 publications. Much has changed since the first vision and strategy. In particular, the public policy context has evolved significantly as devolved government in Scotland has become established and deer management in practice has also evolved.

Summary of Strategy Structure



Recognising the need to approach deer management as an integral part of wider land-use, this strategy will be the Scottish Government's strategy for wild deer, setting out a common direction and framework for not just the Deer Commission for Scotland, but for all relevant parts of government in relation to wild deer. It addresses all species of wild deer in Scotland and is relevant to all models of land ownership and deer management.

The strategy seeks to set out the high level vision, objectives and actions that are needed so that the management of wild deer benefits the environment, economy and people of Scotland. Through this consultation draft, DCS and its partners are seeking views and contributions from all those with an interest in wild deer on both the long-term direction and the practical actions needed. These views will inform completion of the strategy and more detailed proposals for its implementation that will follow.

1.2 Consultation on the draft strategy

This consultation draft provides a basis for anyone with an interest in wild deer to engage with the strategy and inform its development. The process of development is summarised here. More details on the methodology are given in Annex 4.

Development of the strategy is being overseen by a steering group comprising:

- The Deer Commission for Scotland;
- Forestry Commission Scotland;
- Scottish Natural Heritage;
- The Scottish Government (Rural Directorate).

In developing the draft to this stage, a range of stakeholders have been involved through an advisory group established to provide expertise and knowledge to inform development of the strategy. Composition of the advisory group is shown in Annex 4.

The key stages of developing the strategy so far include:

- Review of current situation, previous DCS Vision and Long Term Strategy;
- Scoping of vision and issues to be addressed in the strategy;
- Publication of Scoping Report for consultation (22/06/07);
- Development of vision, outcome and objectives to give a long term framework for managing wild deer;
- Identification of key actions needed to make progress towards the long term objectives;
- Identification of monitoring needs;
- Assessment of potential effects of the strategy on the environment, economy and society;
- Public consultation on the draft strategy.

This document draws these stages together and presents a draft strategy for public consultation. Following the consultation period, the following steps will complete the strategy:

- Analysis and report of consultation responses;
- Review of consultation responses and consideration of how the draft should be developed for completion;
- Completion of strategy.

1.3 Assessing the likely effects of the strategy

An assessment of the likely significant effects of the strategy is being carried out as part of its development. For environmental effects this takes the form of a Strategic Environmental Assessment (SEA). This is a statutory requirement which assesses the likely significant effects of the strategy on the environment. For socio-economic effects a similar, non-statutory, assessment of the likely effects is being carried out. The results of these assessments on the draft strategy are published for consultation alongside this draft in a separate document (Annexes 6 and 7).

2 : context

2.1 Wild deer in Scotland

There are four species of wild deer established in Scotland: roe, red, sika and fallow. A fifth species, muntjac, has been reported but has not been confirmed as being resident in Scotland. Roe and red deer are native species; they colonised Scotland naturally after the end of the last glaciation around 10,000 years ago and wild populations have survived in Scotland since then. Sika and fallow deer have both become established following introduction. This strategy addresses management of all four species, although the implementation of objectives and actions will vary between each species.

Red deer are the largest native mammal in the UK and are found predominantly in the open hill range characteristic of much of upland Scotland, also using woodlands and plantations, particularly for shelter. Although red deer may be the most recognisable species to many, roe deer are in fact the most widely distributed species across Scotland. Roe deer are mainly woodland dwelling and are found throughout mainland Scotland, including around urban centres.

Sika and fallow deer have become established as a result of deliberate releases and escapes from deer parks. Fallow deer were introduced from the Mediterranean to England, possibly during the 11th or 12th centuries. They occur in Scotland mostly around areas in which they were originally kept in captivity. Sika deer were introduced from Japan into UK deer parks in the 19th century and began to escape from captivity in the 1920s. They are more widespread than fallow, with populations spreading in the south, west and north of Scotland.

With no natural predators in Scotland (since the extinction of the wolf), wild deer populations tend to increase and are therefore managed by man, principally because of their

interaction with other land-use and management objectives as a result of grazing, browsing and trampling. Their distribution and numbers have the potential to cause concern where these impact adversely on natural habitats, public safety and the economic value of woodlands and agriculture.

The total population of wild deer in Scotland is not known, but counts are made at a more local scale in order that numbers can be managed according to the impact that they have. In practice this means that deer numbers need to be reduced in some areas in order to reduce the impacts of grazing, trampling or browsing, to allow management objectives to be achieved. At a national scale it is clear that roe, red and sika populations have risen significantly in recent decades. Indications suggest that this trend is continuing; the numbers and distribution of roe deer are expanding, red deer populations are increasing in some areas and sika deer continue to expand their range. Fallow deer numbers appear to remain steady in isolated populations. Annex 1 gives more information on current population trends and the complex relationship between deer numbers and impacts.

The legal framework for wild deer management derives from Scots law, under which deer are regarded as a common resource in that they belong to no-one until they are killed or captured. The right to shoot deer generally goes with the ownership or occupation of land. This is a different model from many other European countries and reflects the wider structure of rights over land and natural resources in Scotland. Deer management is carried out by a range of land managers on estates, farms and crofts and through recreational sport stalking.

These deer management activities, including sport stalking, currently support several

thousand jobs in Scotland. Taking into account related goods and services, this activity makes a significant contribution to the rural economy, often in areas where employment and economic opportunity is relatively limited.

A survey carried out by the Association of Deer Management Groups in 2004 suggests that deer management in Scotland supports the equivalent of 2,520 full-time jobs each year. The value of this to the Scottish economy, taking into account related goods and services, is estimated as £105 million annually.

2.2 Policy context

The Scottish Government has identified five strategic objectives in order to 'focus government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth'. The five strategic objectives, shown below, provide an overarching context, to which the strategy seeks to contribute. Annex 3 shows in more detail the contribution of the strategy across these strategic objectives.

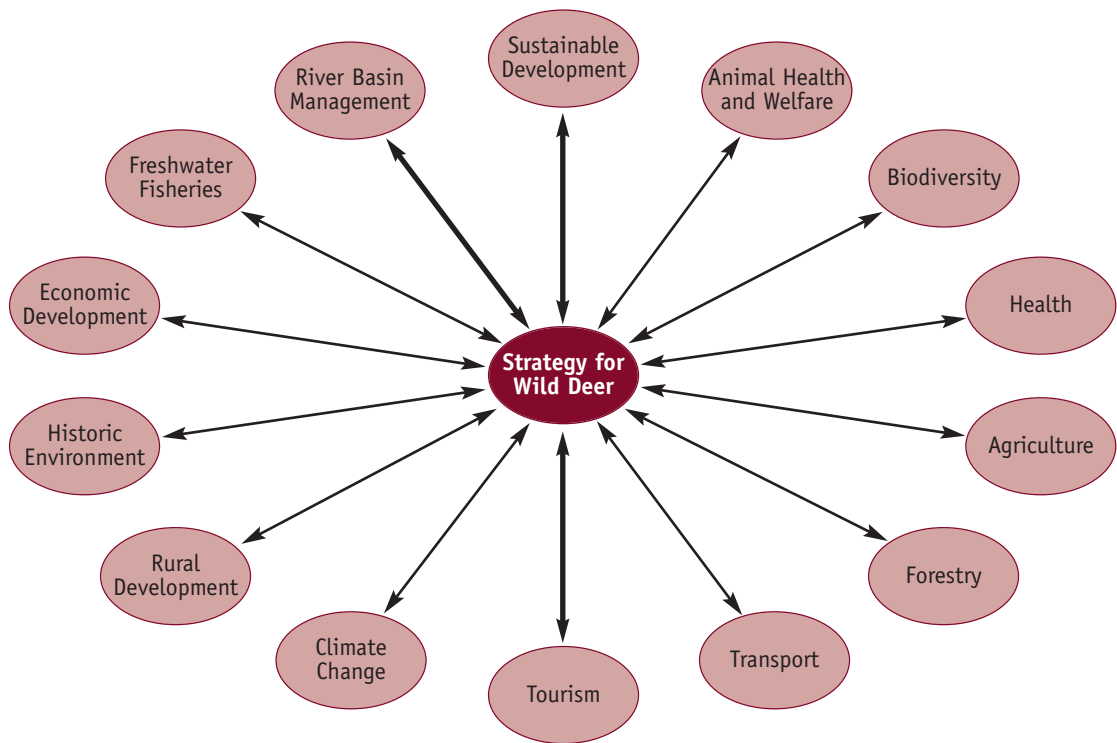
Scottish Government Strategic Objectives

1. **Wealthier and fairer** – enable people and businesses to increase their wealth and more people to share fairly in that wealth;
2. **Healthier** – help people to sustain and improve their health, especially in disadvantaged communities, ensuring better, local and faster access to health care;
3. **Safer and Stronger** – help local communities to flourish, becoming stronger, safer places to live, offering improved opportunities and a better quality of life;
4. **Smarter** – expand opportunities for Scots to succeed from nurture through to life long learning ensuring higher and more widely shared achievements;
5. **Greener** – improve Scotland's natural and built environment and the sustainable use and enjoyment of it.

Sustainable development is a theme which cuts through all of the government's objectives and provides an over-arching policy context. Scotland's sustainable development strategy sets out five principles:

- Living within our environmental limits
- Ensuring a strong, healthy and just society
- Achieving a sustainable economy
- Promoting good governance
- Using sound science responsibly

In the context of sustainable development, managing wild deer can influence and contribute to a wide range of public policy objectives (together often referred to as 'the public interest') including economic development, natural heritage, environmental quality, tourism, transport, public health and well-being amongst others. The key policy linkages are shown in the figure below. Further consideration of the policy context, including the key aims and objectives of recent national policies is included in Annex 3.



Across most of Scotland wild deer are managed as an integral part of the wider natural resource and land use pattern. Integration with other land-use policy is therefore vital. In recent years the Scottish Government has published strategies on agriculture and forestry (2006) and the Scottish Rural Development Programme (2007) provides the overall context and implementation mechanisms.

Increasingly, the Scottish Government is seeking to integrate its approach to delivering rural and environmental services in a way that is more effective and efficient. This strategy for wild deer aims to be a further step towards a more integrated approach to land management policy in Scotland.

2.3 Delivering a range of objectives in a changing context

Wild deer are managed to meet a wide range of objectives. These include a range of what are often termed 'public objectives' (collectively the 'public interest') articulated through the public policy identified in Section 2.2 and a range of what are often termed 'private objectives', referring to the legitimate aims of individual land managers, organisations or businesses which are of value to themselves.

In practice of course, most enterprises pursue both 'private' and 'public' objectives together in their management objectives. Both within and between the 'public' and 'private' labels there are likely to be some objectives that are potentially conflicting and some which are complementary. The emphasis throughout this strategy is on identifying the full range of relevant objectives, seeking to reconcile the conflicts and identifying the synergy.

The interaction of wild deer with other land-use or management objectives is one of the key drivers of their management. For example, wild deer can have a significant impact on woodland establishment, agricultural production, habitat condition and road safety. In order to help deliver objectives such as woodland establishment or biodiversity conservation, the numbers of wild deer are therefore managed either at an individual or population level in relation to the impacts they have. Annex 1 outlines these interactions further.

Management objectives are part of a complex decision-making process and will respond to changes in the wider environmental, economic and social context. The key factors likely to affect the objectives of deer management in the future include:

Economic circumstances – as deer management is often only one aspect of multi-faceted rural businesses, broader economic trends will affect land management decisions, both those directly relating to deer and those relating to other land-uses with which deer interact. Levels of personal wealth, patterns of land ownership, market trends and the fiscal regime will all have an effect on investment in land management and in determining management objectives.

Legislative/policy change – future legislative change or government change may lead to changes in legislation, either specifically to wild deer legislation or broader legislation that affects the way natural resources are managed, for example further land or agricultural reform, nature conservation or new approaches to developing a low carbon economy. Government is likely to continually seek to adjust the balance between objectives in pursuing the public interest and changes in government may bring more substantial adjustments. Changes may also be introduced as a result of further legislation in an EU context.

Climate change – changes in the climate and resulting landscape change may well affect the behaviour and health of deer populations over time, and therefore their management. Responses to climate change are also likely to lead to more focus on ecosystem and landscape scale management of natural resources and affect the broader rural economy of which deer management is part, as carbon efficiency becomes a driver.

Tourism markets – deer management in many places is closely linked with sport tourism, and increasingly broad tourism opportunities associated with the deer resource are being identified, with red deer in particular increasingly recognised as an iconic species. This aspect of deer management is dependent on both Scottish and foreign markets which are in turn influenced by broader world tourism trends and competition and vulnerable to the changes that affect the tourism economy over time.

Other land-use change – deer management is closely linked with other land-uses including forestry and upland farming. As the objectives and management approaches of other land-uses change, so there is likely to be an effect on wild deer and their management. For example, the potential removal of sheep from some upland areas may lead to changes in the grazing patterns and numbers of wild deer in some places, to which deer management will need to respond. A multi-use approach to forestry, potential expansion for carbon storage and the use of land for biomass production will also influence deer management.

Public perceptions – the public perceptions of the value of deer and natural habitats, the need to manage a wild population, animal welfare expectations and attitudes to shooting and land management are all likely to have a significant effect on how the resource is managed, both directly and through the influence of public perception on public policy.

2.4 Building on recent progress

In the years since the first long-term vision and strategy were identified (2000/01) there have been significant developments in pursuing sustainable deer management. A major focus of government in this period has been achieving well-managed designated nature conservation sites. The Scottish Government set a target of 80% of their special features being in favourable condition by March 2008 and the UK Government set a target of 95% by March 2010. The requirement is for features to be in favourable condition, or recovering through active management to achieve favourable condition.

Recognising the need to integrate the management of different land-uses affecting designated sites, the Deer Commission for Scotland, Scottish Natural Heritage, Forestry Commission Scotland and the Scottish Government established a process of joint working through which the relevant tools across government could be used to help land managers take the necessary action to deliver these targets. There has been a high and growing level of collaborative working between government agencies and land managers. While considerable progress towards the targets is being made, there is significant work still to be done.

With 96% of the total number of 5432 designated features assessed, current analysis shows 73% already meet the target. Of these, 43% (2341 features) have been assessed as being potentially subject to impacts by deer or other grazing animals. 82% (1927 features) of these are in favourable or recovering condition and not considered to be at risk of adverse impacts from these sources (this represents 35% of all features).

The focus is therefore on the 338 features that remain at risk, representing some 30% of the total number that need active management in place to be in recovery by 2010. Around half of these, 172 features on 91 sites totalling 412,311 ha or about 5% of Scotland, are already being addressed and, when management is in place, will contribute 15% of the work required to achieve the 2010 target. The challenge that exists is to secure action on the other half that remain, involving some 166 features on another 147 sites.

Taking a broader focus, the development of best practice guidance by organisations involved in deer management together with government agencies has been a significant development in recent years. A set of approximately 90 guides covering key areas of deer management practice ranging from shot placement to habitat monitoring has been developed in conjunction with a series of demonstration events for practitioners.

These developments have made significant progress in key areas of deer management. This strategy seeks to build on this work and progress these areas further, together with other actions, to secure a sustainable approach to deer management in the long term.

3 : vision

In 20 years time:

1. There will be widespread understanding and achievement of 'sustainable deer management' – the conservation, control and use of all species of deer so as to contribute to:

A high quality environment, by

- valuing populations of wild deer as part of Scotland's natural heritage;
- minimising any adverse impacts of wild deer on nature and natural systems.

Sustainable economic development, by

- careful use of wild deer as a resource, contributing to successful rural businesses and communities;
- developing the skills, knowledge and employment opportunities of those involved in deer management;
- minimising any adverse impacts of wild deer on other land uses.

Social wellbeing, by

- safeguarding public health and reducing safety risks associated with wild deer;
- facilitating the observation and understanding of wild deer by the public;
- promoting the enjoyment of wild venison as a high quality food product.

2. Effective mechanisms will be in place to:

- **assess the actual management interventions required to achieve the best combination of these outcomes in any area at a given time; and**
- **ensure that these interventions are carried out effectively, in good time and in accordance with best practice.**

Red deer

Britain's largest native land mammal, red deer are distributed across much of northern Scotland, Argyll, the Trossachs and Galloway. The red deer is perhaps the species most commonly thought of by the public, who recently voted them Scotland's most iconic species.

The red deer range appears to have remained relatively static recently. Changes may occur in response to changes in climate and the distribution of other livestock in upland areas that may change in response to agricultural policy.

Management challenges include the grazing, trampling and browsing impacts of red deer, together with other animals, which can have a significant influence on the condition of habitats and shaping of the landscape in their open range. They also pose a road safety risk in some areas.

Sika deer

Asian in origin, sika were introduced as an ornamental species during the late 19th and early 20th centuries and have now become established on mainland Scotland, occupying more than 40% of the red deer range. They are genetically closely related to red deer and hybrids are common.

Given the adaptability of sika, they have steadily expanded their range and are likely to continue to do so. This is likely to result in continued hybridisation with red deer.

Management challenges include their impacts on woodland where they can cause damage to trees of all age classes and 'bark strip' large areas of woodland.

Roe deer

Roe deer are the most widely distributed species of deer in Scotland, occurring in every 10 kilometre square with the exception of some islands.

Roe deer are spreading into new areas, often encouraged by the spread of suitable habitat such as woodland networks.

Increasingly, roe deer are found in and around urban areas, presenting new management challenges in relation to road safety, impacts on green spaces and the welfare of the deer themselves.

Other management challenges include the effects of roe deer in woodlands and on agricultural land, where they can cause damage to trees and crops. The majority of reported road accidents concerning deer involve roe deer.

Fallow deer

Introduced from the Mediterranean, possibly during the 11th or 12th centuries, fallow have the most limited range of all four wild deer species in Scotland.

They occur in isolated populations in several areas, which have not expanded significantly in recent times.

Management challenges include localised road safety issues and impacts on agriculture and woodland through grazing and browsing.

4 : key issues to address

If the vision set out in Section 3 is to be achieved, a number of key issues need to be addressed. These are summarised in the table below. Addressing these key issues is the starting point for the set of objectives identified in Section 6.

Outcome	Issues to address
A high quality environment	<ul style="list-style-type: none"> • Although over 80% of relevant features on designated sites are in favourable condition there are 338 on 238 sites identified where a reduction in grazing pressure (which may include deer as well as other herbivores) is needed to help deliver government targets. Action has commenced on around half of these but remains to be taken on the remainder; • Climate change is likely to affect the distribution and level of deer populations. Climate change adaptation and mitigation is also likely to require deer management to contribute to wider land-use objectives; • Consistently identifying and including biodiversity objectives beyond designated sites in deer management planning and integrating these objectives with socio-economic objectives.
Sustainable economic development	<ul style="list-style-type: none"> • Adding value to the wild deer resource through activities and products; • Capturing the value of wild deer as an iconic asset to Scotland's tourism economy; • Minimising the economic losses to other land-use objectives and costs attributable to wild deer; • Ensuring ongoing skills, professional development and capacity to manage wild deer.
Social wellbeing	<ul style="list-style-type: none"> • Safeguarding health and minimising safety risks, for those working in deer management and the wider public; • Managing the impacts of wild deer in and around communities; • Broadening participation and enjoyment associated with wild deer.
Cross-cutting issues	<ul style="list-style-type: none"> • Reconciling diversity in land ownership and management motivations and objectives; • Determining what sustainable deer management means in practice at a local level; • Ensuring high levels of deer welfare; • Increasing levels of knowledge and understanding among all involved in deer management and the wider public; • Using robust science and data to underpin management decisions.

5 : ways of working – guiding principles

There is a wide range of objectives for which deer are managed, some of which will conflict in some places and at some times. These guiding principles set out ways of working which allow potential differences to be

addressed. They set out a level of good practice which should guide all those involved in deer management planning and implementation.

Wild deer should be managed throughout their range in a way that –

1. integrates a range of deer management and other land-use objectives.

This means:

- Identifying and articulating the range of relevant objectives;
- Engaging other land-use interests in resolving the potential differences;
- Encouraging mutual understanding, trust and collaboration between interest groups.

2. uses collaboration best suited to achieving the management objectives.

This means:

- Identifying who else is needed to assist in achieving the management objectives;
- Sharing effort and resources to achieve the objectives in the most effective way.

3. uses a geographical scale and timescale best suited to achieving the management objectives.

This means:

- Identifying the geographical scale at which objectives are most likely to be achieved, which may be different from individual landholding or even deer management group units;
- Identifying the timescale over which objectives are most likely to be achieved and using the flexibility of time to integrate different objectives.

4. engages and communicates with all relevant interests.

This means:

- Identifying and engaging the range of stakeholders relevant to local circumstances;
- Actively considering the objectives of stakeholders;
- Providing opportunities for those stakeholders to inform management planning and be informed about deer management.

5. uses sound science and the best available evidence.

This means:

- Applying research and monitoring to inform ongoing management;
- Sharing and disseminating information among all relevant interests to develop a transparent and collective resource of information and understanding.

6 : achieving the vision – objectives

This section sets out a series of objectives that together are needed to achieve the vision. The objectives are grouped under the following three broad outcomes derived from the vision, although in practice there are significant interactions across and between the outcomes and objectives.

Management of all species of wild deer will contribute to:

- A high quality environment
- Sustainable economic development
- Social wellbeing

6.1 Objectives contributing to a high quality environment

The following objectives seek to ensure that Scotland continues to have populations of wild deer valued as a component of its biodiversity and ecosystems, and that the impacts of wild deer on other aspects of the environment, particularly other species and habitats, natural processes and landscape character, are managed to minimise negative effects and result in positive benefits.

a) Safeguard the welfare of all species of wild deer.

Deer welfare will be considered in all management interventions. It is important to engage the public in developing understanding of wild deer, their management and the associated responsibilities in relation to welfare.

b) Minimise further spread of non-native deer species in Scotland.

Sika deer are already established and present a management challenge in some areas where they result in a significant loss to management objectives, particularly forestry. While sika deer will continue to spread in Scotland, their spread will be minimised through active management.

In order to conserve some red deer populations as free from sika deer genes as possible, the risk of hybridisation will be reduced and effective red deer refugia will be maintained on selected island areas.

Continued action is required to prevent the establishment of muntjac in Scotland. Based on experience in England, the potential impacts of muntjac deer on biodiversity and other land-uses in Scotland are strongly negative. The spread of fallow deer will be monitored, particularly in the context of changing climatic conditions.

c) Secure the favourable condition of features in designated sites.

Identify where wild deer management can contribute to securing the favourable condition of Scotland's designated sites and take action to establish and maintain appropriate levels of grazing. The management of wild deer, along with other grazing animals, has a key role to play in meeting government targets to secure 80% of features in favourable (or recovering) condition by March 2008 and 95% by March 2010.

d) Conserve and enhance biodiversity in the wider countryside.

Biodiversity objectives will be considered as an integral part of the deer management planning process across the wider countryside. The appropriate levels of grazing by deer and other animals will be considered as part of dynamic ecosystem management. Where wild deer contribute to the loss of biodiversity action will be taken to reduce their impacts as part of an integrated approach to ecosystem management.

e) Maintain the integrity of natural processes.

Wild deer will be managed as a part of functioning ecosystems, with their impacts on water bodies and catchments, soil structure and habitats taken into consideration in the management planning process.

f) Help tackle and adapt to the effects of climate change.

The contribution of carbon-rich soils and vegetation cover, including woodland, to the storage and sequestration of carbon is significant. The grazing, trampling and browsing effects of wild deer (alongside livestock) will be managed to maintain an appropriate vegetation cover. Management will also seek to enhance habitat connectivity and prevent fragmentation, to help ecosystems adapt to climate change.

g) Conserve and enhance the cultural and historic environment.

Deer management will contribute to the conservation of the cultural and historic environment, including landscape character, through managing grazing and trampling impacts.

6.2 Objectives contributing to sustainable economic development

The following objectives seek to ensure that deer management contributes to successful rural businesses and the socio-economic development of communities.

a) Increase the economic opportunities associated with wild deer.

There is a range of opportunities to add value to deer-related products and activities, and to broaden the economic benefits associated with the deer resource. These include developing the markets for stalking, photography and wildlife watching and appropriate branding of venison products. More broadly the value of

wild deer to Scotland's tourism industry will be better articulated and used.

b) Minimise economic costs attributable to wild deer.

Although a potential asset in their own right, wild deer can cause significant economic loss to other land use activities, particularly agriculture and forestry. Wild deer will be actively managed as part of an integrated approach to land use in order to minimise the negative impacts on other economic activities.

c) Develop the market and supply chain for venison.

The value of good quality venison will be promoted, and marketing initiatives will be supported by development of the supply chain, seeking to secure a consistent and high quality supply.

d) Contribute to the social and economic development of communities.

The employment opportunities associated with the deer resource will be developed, both through direct management activity and through associated activities such as tourism.

Deer management provides jobs in remote rural areas and those involved often make a significant contribution to the skills, knowledge and capacity of communities. Engagement in the deer management planning process will be encouraged.

e) Ensure the skills and knowledge required to manage deer as an integral part of natural resources.

Ongoing training and professional development is vital. Links between education and training providers and land managers will be further developed and a culture of continuing professional development will be promoted by all those involved in deer management.

6.3 Objectives contributing to social wellbeing

The following objectives seek to contribute to social wellbeing by safeguarding health and safety associated with deer management, facilitating public enjoyment of wild deer and the outdoors and managing their impacts in communities.

a) Increase participation in management and enjoyment of the wild deer resource.

Opportunities will be developed to broaden participation and enjoyment of wild deer, through encouraging new entrants into deer management and stalking, and enabling people to find out more about wild deer, enjoy seeing them and ultimately understand more about deer and their management.

b) Contribute to a safe and healthy environment for people.

Increasing road safety risks associated with localised deer populations and increases in traffic volumes and speed in both rural and urban environments require co-ordinated action between local communities, transport and deer management interests.

In common with all land-based activities there are a range of health and safety risks associated with deer management which will be actively addressed through high standards of training, awareness and physical provision. Human disease risks, including those associated with ticks, require careful monitoring, and co-ordinated management including aspects of public awareness and information.

c) Manage the impacts of wild deer in and around communities.

Wild deer are present in and around many rural communities and increasingly in and around urban areas. The road safety risks and impacts of deer on green spaces including graveyards and gardens will be actively managed through co-operation between community and land management interests.

d) Promote opportunities for outdoor recreation.

The opportunities for outdoor recreation will be encouraged. Responsible outdoor access will be encouraged through provision of accurate and up to date information on stalking activity and provision of information such as where wild deer are likely to be seen.

e) Promote venison as a healthy food.

The health value of good quality venison will be promoted, supported by work on the supply and economic value.

7 : key actions

This section sets out a series of key actions identified to make progress towards the objectives set out in Section 6. These actions are not exhaustive and should not preclude other action that will help contribute to the objectives. They should, however, be a focus for collective effort and resources in making progress towards the long-term vision for wild deer. These actions should also be considered to build on the significant work already carried out by all those involved in deer management.

Under each headline action, greater detail of what needs to be done and why is given, together with proposed indicators for monitoring progress. The objectives to which each action will contribute are cross-referenced and four cross-cutting actions are set out. The actions listed here are not ranked in any order of priority.

7.1 Actions contributing to a high quality environment

7.1.1 Achieve the favourable condition of Scotland's important nature conservation sites

Why?

Scotland and the UK are committed to achieve challenging targets for designated sites in order to contribute to European requirements for biodiversity conservation. These targets require 80% of features to be in favourable condition by 2008 and 95% by 2010. This does not mean instant recovery is expected, but there must be a clear plan of action in place that is likely to lead to favourable condition.

What needs to be done?	<ul style="list-style-type: none"> Actively manage grazing, browsing and trampling impacts of deer and other animals on Sites of Special Scientific Interest and Natura Sites to achieve favourable condition; Integrate management action with other land-uses including agriculture in order to achieve favourable condition; Seek the most effective management solutions using the appropriate management area and timescale in order to achieve long-term benefits for designated sites.
Which objectives will this contribute to?	<p>6.1c) Secure favourable condition of features in designated sites;</p> <p>6.1d) Conserve and enhance biodiversity in the wider countryside;</p> <p>6.1e) Maintain the integrity of natural processes;</p> <p>6.1f) Help tackle and adapt to the effects of climate change.</p>
Possible indicators	<ul style="list-style-type: none"> Percentage of relevant SSSIs (within the scope of the Natural Heritage audit of sites for grazing/trampling impacts) in favourable or unfavourable recovering condition.

7.1.2 Conserve and enhance biodiversity in the wider countryside

Why?

Action on designated sites will help protect Scotland's most important areas for nature conservation, but long-term sustainability requires good biodiversity management across the wider countryside. To do this, biodiversity planning needs to be an integral part of deer management and other land-use plans.

<p>What needs to be done?</p>	<ul style="list-style-type: none"> • Develop effective ways to address deer management within an ecosystem scale approach to landscape and biodiversity; • Integrate biodiversity and ecosystem objectives and data into deer management planning; • Contribute to the conservation of species on the UK and Scottish biodiversity action plan lists; • Seek Orders under the Destructive Imported Animals Act to restrict the movement of sika deer to refugia islands and to restrict the movement of muntjac deer into Scotland.
<p>Which objectives will this contribute to?</p>	<p>6.1c) Secure favourable condition of features in designated sites; 6.1d) Conserve and enhance biodiversity in the wider countryside; 6.1e) Maintain the integrity of natural processes; 6.1f) Help tackle and adapt to the effects of climate change; 6.1g) Conserve and enhance the cultural and historic environment.</p>
<p>Possible indicators</p>	<ul style="list-style-type: none"> • Number of deer management plans addressing biodiversity objectives; • Status of UK and Scottish biodiversity list species and habitats.

7.1.3 Contribute to climate change mitigation and adaptation

Why?

Land-use, particularly in the forests and uplands of Scotland, has the potential to play a significant and relatively low cost role in storing carbon and minimising its release into the atmosphere. Wild deer management in many places is a key tool to achieving objectives for woodland establishment and expansion; and for maintaining vegetation cover on carbon rich soils including peat.

Deer management also has a significant role to play in helping biodiversity to adapt to the effects of climate change, through ensuring ecosystems are in a robust condition to respond to change. In particular, the creation of habitat networks is a key means to manage adaptation.

What needs to be done?	<ul style="list-style-type: none"> • Protect woodlands, bogs and carbon-rich soils in order to maintain and enhance carbon storage; • Facilitate establishment and maintenance of habitat networks in order to help biodiversity adapt to climate change; • Research the impacts of climate change on wild deer and their habitats.
Which objectives will this contribute to?	<p>6.1c) Secure favourable condition of features in designated sites; 6.1d) Conserve and enhance biodiversity in the wider countryside; 6.1e) Maintain the integrity of natural processes; 6.1f) Help tackle and adapt to the effects of climate change.</p>
Possible indicators	<ul style="list-style-type: none"> • Status of carbon storage; • Levels of damage to woodland establishment and carbon-rich soils attributable to wild deer.

7.2 Actions contributing to sustainable economic development

7.2.1 Enhance the economic benefits derived from wild deer

Why?

The sustainable use of the wild deer resource is a key part of the long-term conservation and management of wild deer in Scotland. In rural areas wild deer are a significant resource that can support jobs and businesses. As part of an integrated approach to rural development, actions to enhance the benefits of the resource to land management, local communities and the wider economy are needed.

<p>What needs to be done?</p>	<ul style="list-style-type: none"> • Retain existing markets and develop new markets associated with wild deer, both in stalking and other activities and products; • Identify the most effective means to brand and market venison as a quality, sustainable product; • Increase the number and value derived from people participating in deer-related activities including stalking and wildlife watching and remove perceived barriers to participation; • Seek to capture fairly the economic value of wild deer among those involved in deer management.
<p>Which objectives will this contribute to?</p>	<p>6.2a) Increase economic opportunities associated with wild deer; 6.2b) Minimise economic losses attributable to wild deer; 6.2c) Develop the market and supply chain for venison; 6.2d) Contribute to social and economic development of communities; 6.2e) Ensure the skills and knowledge required to manage deer as an integral part of natural resources.</p>
<p>Possible indicators</p>	<ul style="list-style-type: none"> • Economic value of deer-related activity and products; • Number of jobs associated with deer management.

7.2.2 Minimise costs to land-use objectives and rural development

Why?

Wild deer can cause significant costs and damage to land-uses, particularly forestry and agriculture, leading to costs to the rural economy. The costs of managing deer, particularly in woodland settings, can also be high. Wild deer therefore need to be actively managed in such a way as to minimise the costs and negative impacts on economic activities and help contribute to successful rural businesses.

What needs to be done?	<ul style="list-style-type: none"> • Actively manage wild deer to minimise losses to woodland establishment and growth, agriculture and other land uses; • Maintain and develop capacity to manage deer in woodlands cost effectively.
Which objectives will this contribute to?	<p>6.2b) Minimise economic losses attributable to wild deer; 6.2d) Contribute to social and economic development of communities.</p> <p>It will also contribute to the following objective for a high quality environment (6.1) and social wellbeing (6.3):</p> <p>6.1b) Minimise further spread of non-native deer species; 6.3c) Manage the impacts of wild deer in and around communities.</p>
Possible indicators	<ul style="list-style-type: none"> • Economic value of deer-related activity and products; • Number of jobs associated with deer management.

7.3 Actions contributing to social wellbeing

7.3.1 Increase opportunities and quality of experience for observing and enjoying wild deer

Why?

Promoting opportunities for the public to see and enjoy wild deer is a key means to broaden the benefits of the wild deer to the people of Scotland and visitors. Increasing opportunities for public enjoyment will help to facilitate greater knowledge and understanding about wild deer and their management, as well as contributing to opportunities to realise greater economic value from wild deer. More broadly, people will enjoy seeing and knowing more about species regarded as iconic.

<p>What needs to be done?</p>	<ul style="list-style-type: none"> • Promote locations and opportunities where people are likely to observe wild deer; • Provide information to local communities and tourism businesses on wild deer and their management.
<p>Which objectives will this contribute to?</p>	<p>6.3a) Increase participation in management and enjoyment of the wild deer resource;</p> <p>6.3d) Promote opportunities for outdoor recreation.</p> <p>It will also contribute to the following objective for sustainable economic development:</p> <p>6.2a) Increase the economic opportunities associated with wild deer.</p>
<p>Possible indicators</p>	<ul style="list-style-type: none"> • Number of people participating in deer watching/associated activities; • Provision of information on wild deer to tourism businesses.

7.3.2 Safeguard health and safety

Why?

Demonstrating high standards of competence is key to maintaining public confidence in deer management, and to reducing risks to health and safety associated with wild deer and their management. Proactive management is needed to reduce the risk of road traffic accidents involving deer, in rural areas but also increasingly in urban areas, and to addressing risks to human health.

What needs to be done?	<ul style="list-style-type: none"> • Demonstrate high standards of competence in food safety, operator safety and public safety; • Reduce the risks of road traffic accidents involving wild deer; • Co-ordinate action to minimise deer-related human disease risks.
Which objectives will this contribute to?	<p>6.3b) Contribute to a safe and healthy environment for people;</p> <p>6.3c) Manage the impacts of wild deer in and around communities.</p> <p>It will also contribute to the following objective for a high quality environment (6.1):</p> <p>6.1a) Safeguard the welfare of all species of wild deer.</p>
Possible indicators	<ul style="list-style-type: none"> • Number of reported road traffic accidents involving wild deer; • Number of reported health and safety incidents relating to deer management; • Number of cases of food safety issues associated with venison; • Number of cases of reportable diseases attributed to working with deer.

7.4 Cross-cutting actions contributing to all objectives

7.4.1 Develop effective frameworks for sustainable deer management

Why?

As the guiding principles identify, deer management must be carried out in the context of wider land-uses and objectives. The challenges facing natural resource management cut across all sectors. New ways are needed to address the interactions of land-use objectives, driven by cross-cutting issues such as climate change, water catchment management and sustainable development.

<p>What needs to be done?</p>	<ul style="list-style-type: none"> • Promote widespread understanding of sustainable deer management in practice; • Understand at a local level the costs and benefits delivered by deer management; • All relevant interests engage in the deer management planning and implementation process to consider social, economic and environmental objectives for management; • Facilitate greater community engagement in deer issues; • Learn from other international models for managing wild deer in considering future approaches; • Build on the collaboration of deer management groups to integrate deer management with other land-uses and interests; • Where deer management groups do not exist ensure that effective management forums exist in all relevant areas.
<p>Which objectives will this contribute to?</p>	<ul style="list-style-type: none"> • Underpins all objectives.
<p>Possible indicators</p>	<ul style="list-style-type: none"> • Coverage of deer management groups; • Range of stakeholders involved in deer management planning; • Survey of the perceived effectiveness of deer management structures.

7.4.2 Safeguard the welfare of wild deer

Why?

As a valued part of Scotland’s biodiversity the welfare of wild deer is a key part of management. However, they remain a wild resource rather than a farmed animal and the welfare responsibilities need to be articulated accordingly. In retaining ongoing confidence in the high standards of deer management in Scotland, it is necessary to be able to demonstrate high standards of deer welfare in management.

<p>What needs to be done?</p>	<ul style="list-style-type: none"> • Agree a common understanding of deer welfare; • Articulate the welfare responsibility associated with managing wild deer; • Demonstrate high standards of competence in safeguarding welfare; • Consider deer welfare in all management planning and activities affecting wild deer; • Monitor disease risks and the effects of climate change on deer welfare.
<p>Which objectives will this contribute to?</p>	<ul style="list-style-type: none"> • Underpins all objectives.
<p>Possible indicators</p>	<ul style="list-style-type: none"> • Condition of wild deer populations; • Reported welfare incidents.

7.4.3 Use sound science to underpin management decisions

Why?

The use of sound science is key to making effective management decisions. A range of robust methods for monitoring the impacts of deer is available and should be an integral part of management planning and implementation. Management should also respond and adapt in the light of new evidence and data.

<p>What needs to be done?</p>	<ul style="list-style-type: none"> • Establish a series of long term monitoring sites to inform management practice; • Collate data from deer managers and processors more effectively and share data among relevant interests to be used in management; • Empower land managers to use sound science to underpin the deer management planning process; • Improve knowledge of optimal grazing regimes for site management; • Refine methods of measuring impacts of wild deer on habitats.
<p>Which objectives will this contribute to?</p>	<ul style="list-style-type: none"> • Underpins all objectives.
<p>Possible indicators</p>	<ul style="list-style-type: none"> • Levels of long-term monitoring; • Use of science in deer management plans.

7.4.4 Raise awareness and understanding of wild deer and their management

Why?

Awareness and understanding, both among those with an interest in wild deer and the wider public, is key to effective management. Understanding public perceptions and seeking to better inform public debate about deer and land management issues will help to develop and retain confidence in the management of natural resources. It is particularly important to raise awareness of wild deer and their management in areas where deer have not in the past been present, especially urban areas where people will be unfamiliar with the issues that arise.

<p>What needs to be done?</p>	<ul style="list-style-type: none"> • Develop a greater understanding of public perceptions of wild deer; • Increase public understanding of the need to manage wild deer and how they are managed; • Increase awareness of roe deer and the associated management needs in and around urban areas; • Increase awareness of the interactions of all species of wild deer with access and recreation in urban, woodland and open land settings.
<p>Which objectives will this contribute to?</p>	<ul style="list-style-type: none"> • Underpins all objectives.
<p>Possible indicators</p>	<ul style="list-style-type: none"> • Surveys of public perceptions.

8 : implementation

This strategy sets out the vision, objectives and headline actions for wild deer at a national level. Its implementation will therefore require more detailed resource planning at an organisational and individual level. As the Scottish Government's strategy, implementation will be led through the corporate and operational plans of public bodies, especially the Deer Commission for Scotland, Forestry Commission Scotland and Scottish Natural Heritage. Following completion of the strategy, the implementation process will identify the relevant leads, resources and mechanisms needed for delivery.

However, management of wild deer across Scotland is carried out by a wide range of organisations, businesses and individuals across the private, voluntary, public and community sectors, all of whom are vital in realising the long-term vision. Implementation of the strategy will rely on further development of the collaboration already established among and between land management interests and government.

In some areas of Scotland, principally in the red deer range, Deer Management Groups are established providing a valuable basis for communication and collaboration. Further evolution of this collaborative model is likely to be a key means to address the broad range of challenges and objectives identified in this strategy.

8.1 Key government tools for implementation

The Scottish Government has a range of tools available to use in implementing the strategy, particularly in its engagement with those directly involved in managing wild deer. These tools include:

Advice and guidance – Government provides regular advice and guidance to land managers and others in relation to how management objectives can best be achieved and how management can contribute to the government's strategic objectives. Development of best practice guidance is a good example of guidance developed through working with stakeholders that provides a tool to help deliver many of the actions.

Financial support – Government may offer financial support to help land managers deliver its strategic objectives. Given limited resources, such support will be prioritised to the best proposals that will help deliver improved business viability, environmental benefits and thriving rural communities. In the period 2007-13 most funding support to land managers will be delivered through the Scottish Rural Development Programme.

Communication and engagement – Effective communication and engagement with relevant interests can make a significant contribution to delivering the strategy. Not only government, but all those involved have an ongoing role to ensure continued improvements in common knowledge and understanding.

Regulation – Government has powers of regulation to act as a backstop in safeguarding the public interest. In relation to wild deer directly, the Deer (Scotland) Act 1996 gives the Deer Commission for Scotland statutory powers to assist in achieving sustainable deer management. More broadly, there is a range of regulations and statutory powers, particularly to safeguard environmental quality and public safety.

9 : monitoring and review

9.1 Monitoring

There are two strands to monitoring the strategy:

- a) monitoring the delivery – the extent to which the objectives and actions of the strategy are achieved;
- b) monitoring the impacts – the effects that implementing the strategy has on the environment, the economy and society.

Monitoring the delivery will focus on the objectives and actions set out over a five year review period. It will report on what has been achieved against the objectives and actions set out using indicators to be agreed, based on those proposed in section 7.

Monitoring the impacts of the strategy will focus on a set of indicators reflecting the state of the environment, economy and society on which the strategy could impact. Where possible the indicators selected will link to existing national monitoring frameworks and datasets to avoid duplication and ensure maximum value.

The strategic environmental and socio-economic assessment carried out as part of the strategy's development has highlighted some potential indicators against which the impacts could be monitored. While in some cases, changes to the state of the environment, economy or society are actively sought, there may also be unforeseen effects, and changes resulting from external influences which may require adjustments to deer management policy as a result. Implementation of the strategy must therefore remain responsive to these potential changes.

9.2 Review

The strategy will be reviewed on a rolling five-year timetable, with the first review being due in 2013. It is anticipated that the vision and objectives should provide a relatively stable long-term context that will need to be refreshed every five years in response to changes in context. By contrast, the key actions are likely to be reviewed more fully at each five-year review. In some cases, the issue may have been addressed and no longer be a priority, or other priorities may have emerged during the review period that need to be addressed in the next five-year period.

glossary

Biodiversity: the variety of all living organisms.

Browsing: feeding on the woody parts of plants.

Carbon Sequestration: provision of long-term storage of carbon, e.g. in trees, vegetation and soils.

Cultural Heritage: the tangible and intangible attributes and qualities of an area or place that have historic and/or social value.

Cultural Landscape: landscapes and places that have been shaped by humans, including transport routes (e.g. drove roads) agricultural systems (e.g. runrigs) and patterns of settlement (e.g. crofting townships).

Designated Nature Conservation Sites: sites which have been designated by government to protect their 'special features'. These special features represent the most important parts of natural heritage.

Ecosystems: the non-living and living aspects of an environment functioning together.

Favourable Condition: objectives are set for each 'special feature'. These objectives describe broad targets, e.g. population size (for species) or area covered by a particular plant species (for habitats) which need to be met for the feature to be defined as in 'favourable condition'.

Habitat Networks: habitats which are linked together to create a wider, more sustainable and interconnected pattern of habitats.

Range: the limits of the geographical distribution of a species or group of deer, e.g. the open hill range of red deer.

Refugia: used in the context of 'red deer refugia', this refers to specific Scottish islands on which the aim is to maintain and protect the genetic integrity of the resident populations through preventing the colonisation of other non resident deer. Red deer refugia were established under the Wildlife and Countryside Act 1981 (variation of Schedule 9) Order 1999. This Act makes it an offence to release Sika deer or their hybrids or deer of the Cervus genus on to specified Scottish islands.

Sites of Special Scientific Interest (SSSIs): a national suite of nature conservation sites protected as examples of the UK's flora, fauna, geological or physiographical features.

Social Wellbeing: people's quality of life. This could include access to social facilities and services, community cohesion, physical and mental wellbeing.

Sport Stalking: Individuals who stalk (the act of shooting selected deer) on a recreational basis, rather than as part of their employment.

Special Features: specific flora or fauna which because of their national or international importance have led to a site being designated for their protection.

Stakeholders: individuals or their representative organisations that have responsibilities towards and an interest in the success of an activity or organisation.

Strategic Environmental Assessment: a statutory process to ensure that the significant potential environmental effects of plans, policies and programmes are identified, assessed, consulted on, mitigated and monitored.

Sustainable Development: ‘development that enables all people throughout the world to satisfy their basic needs and enjoy a better quality of life without compromising the quality of life of future generations’ (*definition from the Brundtland Report*).

annex 1 : background

1.1 Deer numbers, distribution and impacts

The present distribution of each of the four wild deer species in Scotland is shown in the indicative maps in this Annex. The total population of wild deer species in Scotland is not accurately recorded. This is in part because the nature of wild deer means that they are very difficult to count at a national scale, and in part because numbers alone are a poor measure of impact. Management is based on more local assessments of deer populations and their impacts on objectives.

The impacts which deer have (on environmental, social and economic objectives - both public and private) are the key determinant of management. It is the assessment of these impacts (positive or negative) in any area, rather than numbers *per se*, which informs decisions about management. In practice management aims to adjust the density of deer through culling, in order to secure an appropriate balance of desirable deer numbers and impacts.

The browsing, grazing and trampling pressures which deer exert on an area are related to density. But the effect of any particular density of deer on the condition of the habitat and other land-use objectives, particularly forestry and agriculture, can vary enormously depending on the type and sensitivity of the habitat, the season, the stage in the growth cycle of farm or forest crops, etc. These pressures exist in a larger context with sheep, cattle and other grazing animals also having an impact. Depending on the habitat type or land-use objective, the density of deer can be either too high or too low to meet the objectives. The density of deer is therefore best managed alongside the density of other grazing stock in response to their effect on the habitat condition or other production objectives.

Hill red deer were routinely counted by the Red Deer Commission and then DCS between 1961 and 2000. Analysis of this data requires care, because only a sample of areas was counted each year and individual counts are subject to error. Statistical analysis which includes correction for area and year effects suggests an increase from 197,600 (+/- 35,000) in 1967 to 350,900 (+/- 33,300) in 2000 (Clutton-Brock & Albon 1989; Clutton-Brock *et al.* 2004).

Woodland-dwelling deer species (roe deer, sika deer, fallow deer and red deer) are extremely hard to count and numbers are not known with any precision. However, between 1973 and 2002 roe deer, sika deer and fallow deer increased their range in Scotland (Ward 2005), partly in association with the expansion of forestry and woodland planting. In addition, culls of all species (including red deer) have increased over time, so it can be inferred that these populations have also increased, although it is not known by how much.

1.2 Wild deer and biodiversity

Wild deer contribute to and have an impact on Scotland's landscapes and biodiversity through grazing, browsing and trampling. They are an intrinsic part of Scotland's biodiversity, with red and roe deer being recognised as 'species for sustainable use' in SNH's Species Action Framework (2007). In addition to the role of deer in meeting the government targets for designated sites, deer also have a broader role to play in the wider biodiversity objectives as set out in the Scottish Biodiversity Strategy translated into action through the UK Biodiversity Action Plans.

1.3 Wild deer and woodlands

Deer are a part of woodland ecosystems, where their key role is a grazing animal. Wild deer can have a significant adverse effect on the establishment and growth of trees by grazing, browsing and trampling. The diversity of habitats in ancient and semi-natural woodlands has resulted, in part, from a history of grazing management, partly by deer. Grazing is a natural part of habitat maintenance, opening up areas for new plants to colonise, but if grazing levels are too high damage occurs. Likewise if grazing levels are too low then colonisation of the poorer species can dominate which results in a lack of diversity in the ground flora with reduced or no natural regeneration. Obtaining the appropriate balance through effective management is key. Deer need to be managed in some areas to enable the restoration of woodland habitats which sustain both them and other valued elements of biodiversity.

The Scottish Forestry Strategy seeks an expansion of woodland area to cover around 25% of Scotland's land area by the second half of the 21st century. Deer management will have a key part to play in achieving this vision.

1.4 Wild deer: socio-economic benefits

Wild deer are an important asset for Scotland's economy as they support several thousand jobs and local economies by contributing to tourism, sporting activities and the production of venison.

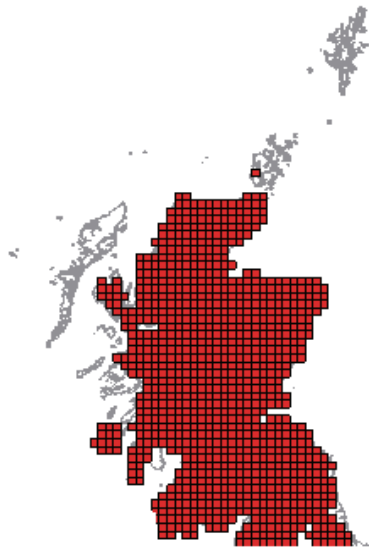
Deer can contribute to tourism through wildlife watching and more generally through the status of red and roe deer in particular as an iconic species drawing people to Scotland. The use of sport stalking as a tool for managing deer creates local jobs in often remote communities and also has a positive knock-on

effect in the community with guests and their families using local catering, accommodation, etc. Increasingly there is an interest in and demand for venison.

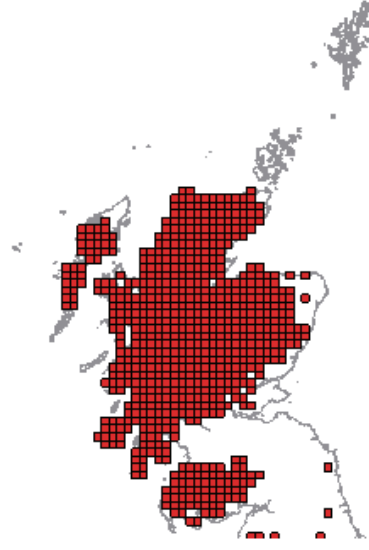
1.5 Wild deer: socio-economic costs

Wild deer impact on a range of land-use objectives. They can have negative impacts on forestry and agriculture both of which can lead to economic losses. Managing the wild deer to mitigate this damage is costly.

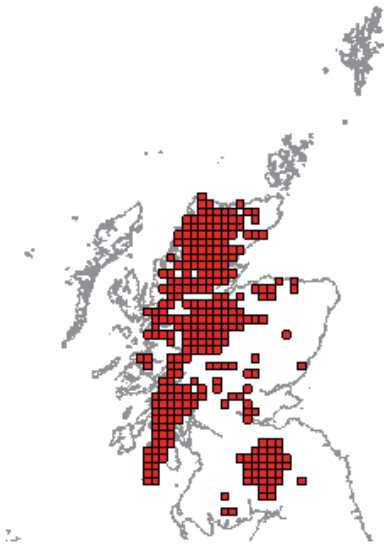
Costs to agriculture can be high due to damage to crops. Likewise costs to forestry can be high. Damage to forestry and woodlands is partly mitigated against by erecting deer fences (in areas where considered appropriate). As an indication of costs it has been calculated that the cost of replacing the deer fences on the national forest estate would be £21 million, not including ongoing maintenance costs.



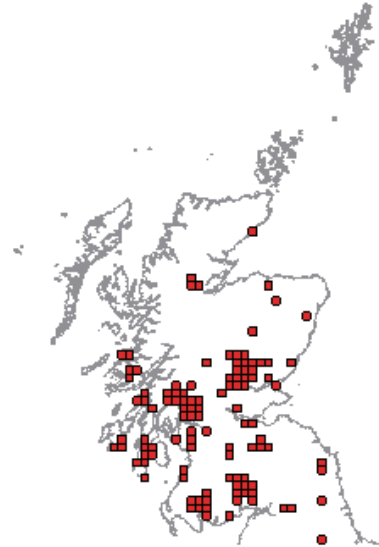
Roe Deer Distribution



Red Deer Distribution



Sika Deer Distribution



Fallow Deer Distribution

Source: National Biodiversity Network Gateway

Data providers:

Mammal Records from Britain from the Atlas of Mammals; Highland Biological Recording Group

annex 2 : the changing context

2.1 Changes since the first vision and long-term strategy leading to revision

A number of significant changes have occurred since the Deer Commission for Scotland set out its first long-term strategy in 2001. These include:

- Targets for the condition of Scotland's designated natural heritage sites;
- New biodiversity policies and duty;
- Increasing collaboration in management and management planning among land managers and with government bodies;
- Greater integration and joint working among government bodies;
- Development of the priority site process, now part of the joint working process addressing deer impacts on designated sites;
- Introduction and development of best practice guidance by the deer management sector;
- Consideration of changes to deer close seasons;
- Development of the fitness and competence register;
- Growth in the role of non-governmental organisations and other representative groups;
- Increasing diversity of land ownership and management objectives;
- Growing public interest in healthy food.

2.2 Changes likely to affect the objectives of deer management in the future

Changes in the future will affect the way this strategy is implemented and inform reviews of its direction, just as the context has evolved since 2000. Section 2.3 summarises some of the key factors of change that can be anticipated.

Given that the rate of change can be swift and its implications far reaching, this strategy has been developed with the process of change in mind. The structure cascades through the document, starting with the vision, leading to the objectives to achieve this vision and then the key actions to achieve these objectives.

It is anticipated that at the five-year review, the vision is likely to remain relatively constant, the objectives will need to be adjusted and the key actions are likely to change more fully, in response to changing pressures and priorities. However, the strategy should remain flexible and any review should respond to the wider policy context at the time.

annex 3 : policy context

Scottish Government objectives

The Scottish Government has identified five strategic objectives in order to 'focus government and public services on creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth'. The five strategic objectives, shown opposite, provide an overarching context, to which the strategy seeks to contribute.

The table below shows the government objectives to which each objective of this strategy will contribute.

Changes in policy context since 2000

Devolved government in Scotland now has responsibility for rural and environmental matters. New strategies and policies including biodiversity, sustainable development, transport, economic development, tourism, rural development, forestry and agriculture have been put in place since 2000. In 2007 a change in government in Scotland also introduced a new set of strategic objectives.

There have been significant changes in legislation during this time, notably the Protection of Wild Mammals (Scotland) Act 2002; the Land Reform (Scotland) Act 2003 including the right of responsible access; the Nature Conservation (Scotland) Act 2004 which introduced a significant new approach to managing designated sites and a general biodiversity duty on all public bodies; and the Environmental Assessment (Scotland) Act 2005 which requires assessment of the potential effects of all plans, programmes and strategies on the environment.

In the European context, the Water Framework Directive encourages a more co-ordinated approach to managing water catchments.

Reform of the Common Agricultural Policy and subsequent development of the Scottish Rural Development Programme is also leading to significant changes to the pattern of land management support, the full implications of which are yet to be played out. In the immediate future, Rural Development Contracts will be a key mechanism for integrating and prioritising support for delivering the government's objectives.

Climate change issues increasingly influence rural and land-use policy, aimed at both mitigation and adaptation. The Scottish Government is currently consulting on a Climate Change Bill.

Public awareness and interest in deer management and wider environmental issues has grown, accompanied by media interest. At the same time community planning and a consultative approach to governance is increasing the engagement of the wider public and communities with land-use policy and planning.

Summary of relevant national policy

The table below gives a summary of the key aims/objectives of the most recent national policies in relation to the policy areas identified in section 2.2. The change of government in Scotland in 2007 means that many of these policies are in the process of being reviewed and updated, but they remain the most recent statement of policy and are therefore relevant context.

STRATEGY FOR WILD DEER OBJECTIVES	SCOTTISH GOVERNMENT STRATEGIC OBJECTIVES				
	Wealthier and Fairer	Healthier	Safer and Stronger	Smarter	Greener
Objectives Contributing to a High Quality Environment					
a) Safeguard the welfare of all species of wild deer					✓
b) Minimise further spread of non-native deer species in Scotland					✓
c) Secure favourable condition of features in designated sites					✓
d) Conserve and enhance biodiversity in the wider countryside					✓
e) Maintain the integrity of natural processes					✓
f) Help tackle and adapt to the effects of climate change					✓
g) Conserve and enhance the cultural and historic environment					✓
Objectives Contributing to Sustainable Economic Development					
a) Increase the economic opportunities associated with wild deer	✓				
b) Minimise economic losses attributable to wild deer	✓				
c) Develop the market and supply chain for venison	✓				
d) Contribute to the social and economic development of communities	✓		✓		
e) Ensure the skills and knowledge required to manage deer as an integral part of natural resources				✓	✓
Objectives Contributing to Social Wellbeing					
a) Increase participation in management and enjoyment of the wild deer resource	✓		✓		
b) Contribute to a safe and healthy environment for people			✓		
c) Manage the impacts of wild deer in and around communities			✓		✓
d) Promote opportunities for outdoor recreation		✓			
e) Promote venison as a healthy food		✓			

Summary of key aims/objectives from national strategies	
Strategy	Key aims/objectives
Choosing our Future: Scotland's sustainable development strategy	<ul style="list-style-type: none"> • Living within our environmental limits • Ensuring a strong, healthy and just society • Achieving a sustainable economy • Promoting good governance • Using sound science responsibly
Changing our Ways: Scotland's climate change programme	<ul style="list-style-type: none"> • developing a transparent approach and an open and inclusive process; • integrating climate change routinely into policy development across all sectors and at all levels; • achieving Scotland's contribution in the most sustainable way – considering the wider environmental, social and economic implications of different courses of action; • influencing and contributing to UK, European and global efforts to respond and adapt to climate change where Scotland's participation can add most to the process; • combining both demand management (reduced energy consumption and increased efficiency of use) and supply side measures (low carbon options including fuel mix and renewables); • maximising opportunities for both mitigation and adaptation (e.g. green jobs, technology development, renewables, biomass, sustainable flood management) – and making the most of Scotland's strengths; • leading the public sector, visibly and by example – doing and communicating best practice to others; • overcoming the inertia – everyone making the connection between daily life choices and climate change, and having options to act accordingly; • increasing the momentum – capacity building, monitoring, reporting, feedback.
Scottish Rural Development Plan	<ul style="list-style-type: none"> • Underpinning performance and quality in the agriculture, food processing and forestry sectors • Enhancing rural landscapes and the natural heritage • Water management • Climate change • Promoting a more diverse rural economy and thriving rural communities

Summary of key aims/objectives from national strategies – continued	
Strategy	Key aims/objectives
Rural Scotland – Better Still, Naturally (2007)	<ul style="list-style-type: none"> • Broaden and strengthen the rural economy, including the skills base • Protect, maintain and develop our natural and cultural assets • Improve accessibility and quality of services people and businesses depend on • Address the challenges and opportunities of population change • Promote social and economic inclusion • Help to build resilient, sustainable rural communities • Improve stakeholder engagement • Improve focus, delivery and measurement of progress towards the main outcomes
Scottish Biodiversity Strategy	<ul style="list-style-type: none"> • Overall aim - To conserve biodiversity for the health, enjoyment and wellbeing of the people of Scotland now and in the future • Species & Habitats: To halt the loss of biodiversity and continue to reverse previous losses through targeted action for species and habitats • People: To increase awareness, understanding and enjoyment of biodiversity, and engage many more people in conservation and enhancement • Landscapes & Ecosystems: To restore and enhance biodiversity in all our urban, rural and marine environments through better planning, design and practice • Integration & Co-ordination: To develop an effective management framework that ensures biodiversity is taken into account in all decision making • Knowledge: To ensure that the best new and existing knowledge on biodiversity is available to all policy makers and practitioners
National Transport Strategy (2006)	<ul style="list-style-type: none"> • Objective: Improve safety of journeys by reducing accidents and enhancing the personal safety of pedestrians, drivers, passengers and staff.
Scottish Forestry Strategy	<ul style="list-style-type: none"> • Outcome 1: Improved health and wellbeing of people and their communities • Outcome 2: Competitive and innovative businesses contributing to the growth of the Scottish economy • Outcome 3: High quality, robust and adaptable environment

Summary of key aims/objectives from national strategies – continued	
Strategy	Key aims/objectives
Forward Strategy for Scottish Agriculture: Next Steps	<ul style="list-style-type: none"> • Vision: “A prosperous and sustainable farming industry, one of Scotland's success stories, which benefits all the people of Scotland. It should be: • focused on producing food and other products for the market; • a major driver in sustaining rural development, helping rural communities prosper; • a leading player in the protection and enhancement of the environment; • a major contributor to key objectives on animal health and welfare and human health and well-being; • keen to embrace change and market opportunities. • Rural Scotland is not a single entity and the type of farming varies from place to place. The role of agriculture and the range of economic, social and environmental benefits expected from it will differ from one part of Scotland to another.”
Scottish Tourism: The Next Decade	<ul style="list-style-type: none"> • Ambition: 50% sustainable growth in tourism revenues by 2015
Framework for Economic Development in Scotland	<ul style="list-style-type: none"> • Objectives: • <i>economic growth</i> – with growth accelerated and sustained through greater competitiveness in the global economy; • <i>regional development</i> – with economic growth a pre-requisite for all regions to enjoy the same economic opportunities, and with regional development itself contributing to national economic prosperity; • <i>closing the opportunity gap</i> – with economic growth a pre-requisite for all in society to enjoy enhanced economic opportunities, and with social development in turn contributing to national economic prosperity; • <i>sustainable development</i> – in economic, social and environmental terms.
Smart Successful Scotland	<ul style="list-style-type: none"> • Priorities: • Growing businesses – Scotland: a fast learning, high earning nation • Global connections – Scotland: a globally connected nation • Learning and Skills – Scotland: Every Scot ready for tomorrow's jobs

Summary of key aims/objectives from national strategies – continued	
Strategy	Key aims/objectives
Passed to the Future	<ul style="list-style-type: none"> • Sustainable management of the historic environment
A 5 Year Species Action Framework: making a difference for Scotland's species	<ul style="list-style-type: none"> • Priority species for targeted action as a contribution to biodiversity goals • Native deer (red and roe) listed as a species for sustainable use
Improving Health in Scotland: The challenge (2003)	<p>Ensure that primary food producers are contributing their full part to the achievement of the Scottish Dietary Targets by:</p> <ul style="list-style-type: none"> • working with all sectors of Scottish agriculture and fisheries to promote and develop the sustained availability of core Scottish produce as part of a healthy diet; • developing and promoting the potential of the local food sector; • prioritising current grant schemes in favour of projects which support the Scottish Dietary Targets as well as adding value to Scottish produce; • supporting through research the development of produce which contributes to the further implementation of the SDAP.
A Strategic Framework for Scottish Freshwater Fisheries	<p>Scotland will have sustainably managed freshwater fish and fisheries resources, that provide significant economic and social benefits for its people.</p>

annex 4 : process to develop the strategy

Development of the strategy is being led by the Deer Commission for Scotland. In order to develop a joint approach across all parts of government, a steering group has been established comprising the Deer Commission for Scotland, Forestry Commission Scotland, Scottish Natural Heritage and the Rural Directorate of the Scottish Government.

Advisory group

An advisory group has been established to contribute knowledge and expertise to inform development of the strategy. Composition of the group is detailed below, although the group remains flexible in order that relevant expertise can be drawn upon as the strategy develops.

The advisory group has met twice in the process to develop this consultation draft. The first meeting on 3rd April 2007 considered the overall direction of the strategy and the scope of issues that should be considered in its development. These discussions informed the scoping report that was published on 22nd June 2007.

The second meeting was held on 17th July 2007 and considered the key factors likely to affect deer management and early drafts of the vision, outcomes and objectives. It also considered where implementation should focus on key actions in order to achieve the objectives. Summaries of the group's discussions are available at www.dcs.gov.uk.

Methodology

The consultation draft has been developed through the following key stages:

- Considering the scope and direction of the strategy;
- Identifying long-term outcomes to guide development of the strategy;
- Identifying key factors likely to affect deer management objectives;
- Identifying key issues that the strategy should consider;
- Developing a long-term vision;
- Developing a set of objectives to provide a framework for management;
- Developing a set of key actions;

Stakeholder Advisory Group	
Association of Deer Management Groups	Scottish Crofting Foundation
British Association for Shooting and Conservation	Scottish Environment Link
British Deer Society	Scottish Gamekeepers Association
Country Sports Tourism Group	Scottish Rural Property and Business Association
National Farmers' Union of Scotland	Scottish Society for the Prevention of Cruelty to Animals
Cairngorms National Park Authority	Loch Lomond and the Trossachs National Park Authority
Convention of Scottish Local Authorities	Scottish Game Dealers and Producers Association

- Identifying a framework for monitoring and potential indicators;
- Assessing the likely effects of the strategy as it is being developed.

In all of these stages, development of the draft has drawn on engagement with the following through a series of workshops and seminars:

- Joint agency steering group (DCS, SNH, FCS, Rural Directorate);
- Joint agency discussions (DCS, SNH, FCS, Rural Directorate);
- Stakeholder Advisory Group.

Strategic environmental assessment

The Environmental Assessment (Scotland) Act 2005 introduces an obligation on all public bodies to consider the potential significant effects on the environment when developing plans and policies. This assessment is known as Strategic Environmental Assessment (SEA).

The SEA process is an integral part of strategy development and its purpose is to ensure that potential significant effects on the environment are considered and communicated in developing the strategy, and that mitigation against negative effects is incorporated where appropriate.

The SEA legislation and accompanying guidance sets out the required assessment process and a series of topic headings under which the potential effects of the strategy on the environment should be considered. The process includes an obligation to consult on the assessment of potential environmental effects and there are opportunities for informal and formal consultation with all interested stakeholders. Formal consultation with relevant stakeholders is required at key stages of the SEA process and includes the following three statutory consultation authorities:

- Scottish Natural Heritage;
- Scottish Environment Protection Agency;
- Historic Scotland (on behalf of Scottish Ministers).

The SEA is being carried out with the assistance of specialist consultants (Envirocentre and Collingwood Environmental Planning). Further detail on the SEA methodology is given in the Environmental Report.

Socio-economic assessment

There is no statutory requirement to assess the potential socio-economic effects of a new strategy in the same way that SEA requires assessment of potential environmental effects. However, given the importance of socio-economic objectives in sustainable deer management and the wider policy context of rural development, DCS is carrying out an assessment, at a strategic level, of potential significant socio-economic effects. This process is limited by the availability of data, but also highlights the need to obtain more socio-economic data in future.

annex 5 : non-technical summary of strategic environmental assessment

Non-Technical Summary of the Environmental Report

From the Strategic Environmental Assessment of the Strategy for Wild Deer in Scotland

1.1 Introduction

The Strategic Environmental Assessment (SEA) of the draft Strategy for Wild Deer in Scotland (the Strategy) has been carried out by EnviroCentre, in partnership with Collingwood Environmental Planning, and on behalf of the Deer Commission for Scotland (DCS). An SEA is required for the Strategy under the European Community SEA Directive (2001/42/EC) and the Environmental Assessment (Scotland) Act 2005. The SEA has been carried out alongside the development of the Strategy and seeks to ensure that the Strategy contributes positively to the high level of environmental protection now expected by the Scottish Government. The SEA seeks to ensure that potential significant effects on the environment of implementing the Strategy, and of reasonable alternatives, are identified, described, evaluated and taken into account before the Strategy is adopted.

To support the public consultation on the draft Strategy and the potential effects on the environment of its implementation, an Environmental Report, which documents the SEA process and outcomes, is required under the SEA legislation. This Non-Technical Summary of the Environmental Report is also required to facilitate wider consultation.

1.2 Consultation on the draft Strategy

The three-month consultation period on the draft Strategy is from:

Monday 5th November 2007 to Friday 1st February, 2008

Responses to the consultation on the draft Strategy and its potential effects on the environmental should be sent to:

consultation@dcs.gov.uk OR

**Strategy for Wild Deer Consultation
Deer Commission for Scotland
Great Glen House, Leachkin Road,
Inverness IV3 8NW**

The SEA Non-Technical Summary is found in the Annex to the Strategy, and is also contained within the SEA Environmental Report available either from the DCS website or on a CD-ROM distributed with copies of the Strategy. Printed copies of the documents are available on request.

Download the full SEA document from
www.dcs.gov.uk

1.3 Background to strategy

There have been considerable changes in deer management since 2001 when the DCS published its first Long-Term Vision and Strategy for Wild Deer in Scotland. Consequently, a review of the original DCS Vision and Long-Term Strategy was needed. Scottish Ministers asked DCS to lead the development of a new Strategy for Wild Deer in Scotland as a joint-agency strategy. This aims to encourage a more sustainable and integrated approach to deer management in the broader context of land management. The main agencies involved in supporting DCS in development of the Strategy were Scottish Natural Heritage and the Forestry Commission for Scotland.

Through this approach, the new Strategy for Wild Deer in Scotland will not simply guide the work of DCS as an organisation, but will be a cross-agency national Strategy for wild deer, sitting alongside other land-use strategies such as the Scottish Forestry Strategy and the Forward Strategy for Scottish Agriculture. The draft Strategy sets out a long-term Vision, some Guiding Principles and a series of Objectives and Actions for future deer management. See Figure 1 for an overview of the structure of Strategy.

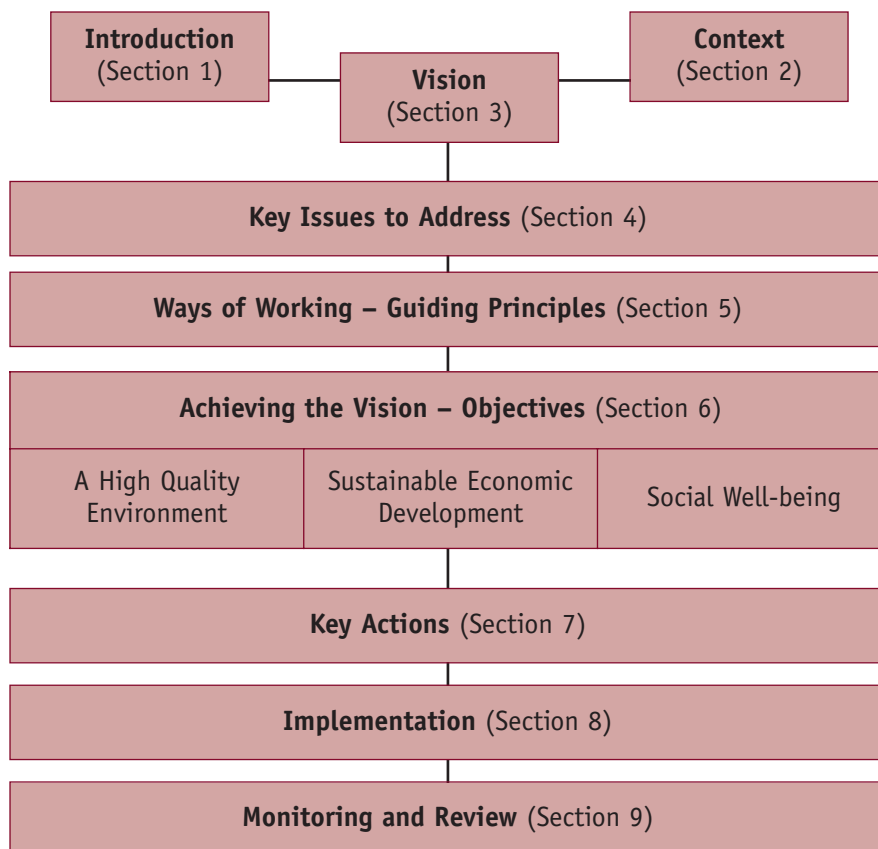


Figure 1: Summary of Strategy Structure
Source: Draft Strategy for Wild Deer (DCS, 2007)

1.4 Integration of the SEA with the Strategy development process and engagement with stakeholders

The SEA has been undertaken in parallel to the development of the draft Strategy with considerable interaction between the SEA team and the Strategy team. See Figure 2 below for an overview of how the SEA process was integrated with the Strategy development process. In addition, the SEA process has involved a combination of formal and informal engagement with relevant stakeholders throughout the development of the Strategy. The SEA team engaged with the Strategy development process, over an extended period from March 2006 to October 2007 as the strategy development process unfolded. A range of different mechanisms were employed, including meetings with staff, phone conversations, e-mail communications, engaging with the consultations on the draft Strategy and Strategy Scoping Report, reviewing comments, formal consultation on the Scoping Report and workshops with the Strategy Steering and Advisory Groups.

1.5 SEA overview

The SEA aims to inform the draft Strategy development process. It is important to note that the draft Strategy itself is a high level strategy and as such the approach taken to the SEA has been of a high level assessment. This SEA is not intended to address issues that should be considered during the assessment of lower-level plans or complementary strategies which may support implementation of the Strategy.

1.5.1 Scoping the level of detail for the assessment

The approach to the SEA of the draft Strategy initially involved determining the level of detail of the SEA to ensure it was appropriate to the draft Strategy (called 'Scoping'). A Scoping Report, for the draft Strategy itself and the potential effects of implementing the Strategy on the environment, was produced and consulted upon in June and July 2007.

The responses to the Scoping Report were taken into account to inform and adapt the approach to development of the Strategy and the undertaking of the assessment of the Strategy's potential effects on the environment, society and the economy. In the case of the potential environmental effects of the Strategy, the responses informed the approach to the associated SEA. The responses to the Scoping Report consultation provided comments on an initial review of relevant plans, programmes, strategies and associated environmental protection objectives to which the Strategy and the SEA would need to refer. A list of environmental protection objectives (termed 'SEA objectives') were identified under the following nine environmental topics, which would be appropriate for the Strategy to work towards. The SEA topics are included in Table 1, which summarises the outcomes of the assessment of effects of the proposed Strategy Actions, and the SEA Objectives are included in Table 2, which summarises the assessment of the overall effects of the Strategy compared to continuing with the current approach to deer management.

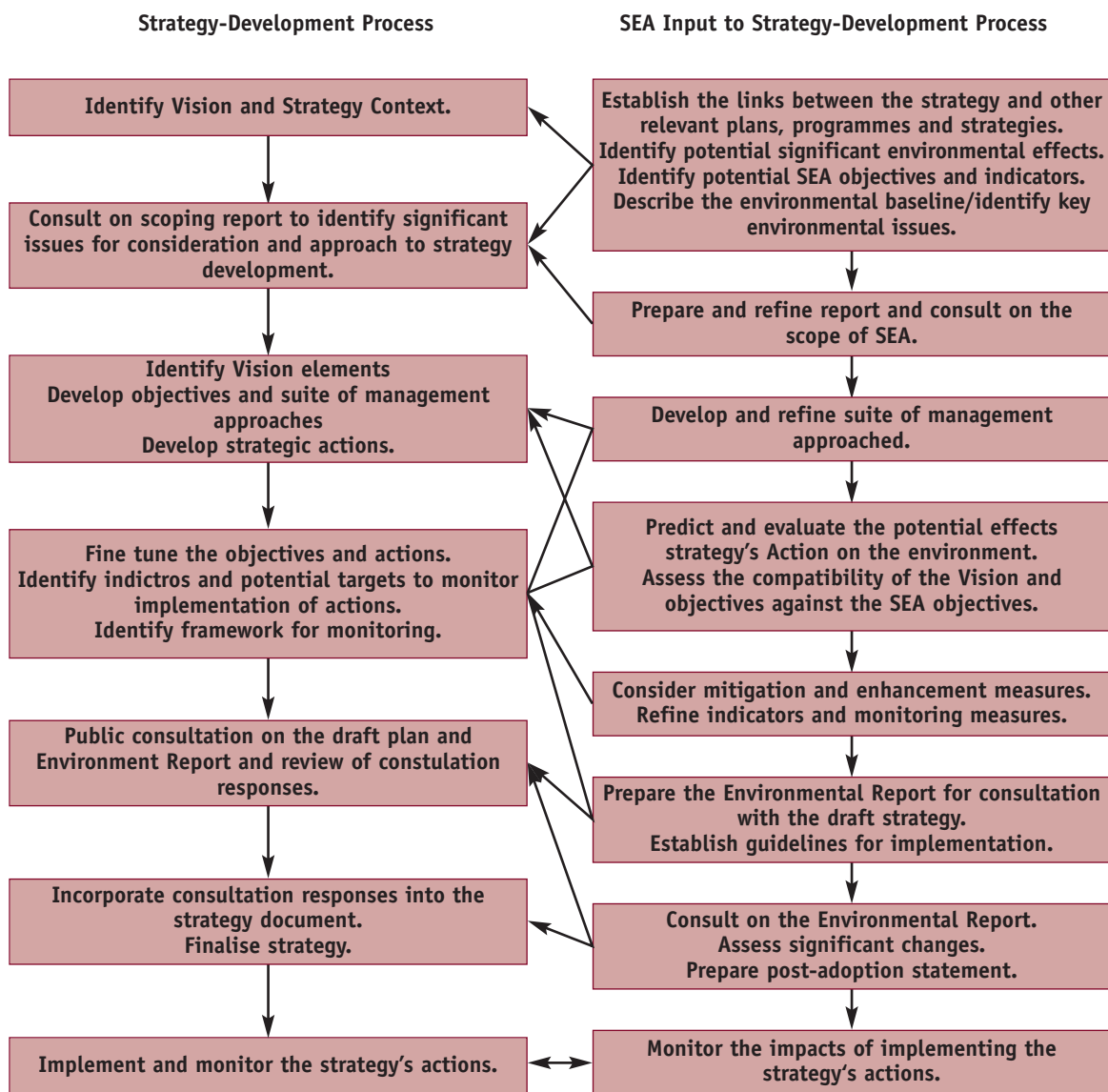


Figure 2: Integration of the SEA into the Strategy development process

Source: Adapted from Therivel (2004) and Fife Council SEA Toolkit (2006)

To set the context within which the draft Strategy will need to operate, the SEA Objectives were used to support identification of key environmental issues and used as a framework for establishing the environmental baseline against which the effects of implementation of the draft Strategy would be assessed. Through this process, some initial monitoring indicators were identified for measuring progress of the Strategy towards achieving the SEA Objectives.

1.5.2 Assessing extent to which Strategy Objectives support environmental objectives

SEA Objectives identified under each of the above topics were used as a basis for testing the extent to which the **Strategy Vision and Objectives** were supportive of, compatible with, or incompatible with, the overarching SEA objectives. This broad compatibility test highlighted areas of particular attention for implementing and monitoring the effects of the strategy. The compatibility test also helped focus the SEA on further assessing the most significant potential effects of implementing the Strategy.

Strategy Vision: Compatibility Test Outcome:

Overall, as the Strategy's vision elements are overarching and high-level in nature, compatibility with the SEA objectives is largely uncertain. Many of the vision elements have the potential to conflict with or support the SEA objectives. The outcome depends largely on how the Strategy's actions are implemented in lower-level plans.

Strategy Objectives: Compatibility Test Outcomes:

High Quality Environment Objectives: Most of the Strategy's environmental objectives are supportive of the SEA objectives. There are a few areas of conflict, largely as a result of potential knock-on (or secondary) effects on the historic environment and landscape.

Sustainable Economic Development Objectives:

The compatibility of the Strategy's sustainable economic development objectives with the SEA objectives is characterised by many areas of conflict combined with some areas of uncertainty. This is largely because increasing the economic opportunities associated with wild deer could potentially result in a range of negative environmental effects generally associated with economic development depending on how this is carried out. There is only one instance where the Strategy's sustainable economic development objectives are supportive of the SEA objectives, and this is in the context of enhancing and protecting human health.

Social Well-being Objectives:

The compatibility of the Strategy's social well-being objectives with the SEA objectives is characterised by many areas of uncertainty combined with some areas of conflict. Only a few of the social well-being objectives are supportive of the SEA objectives. As might be expected, the social well-being objectives are particularly supportive of protecting and enhancing human health.

1.5.3 Identification of alternative approaches to deer management

Through its implementation, the Strategy will need to respond to, and anticipate, a number of external factors for change. These include potential changes in:

- Land Use,
- Agricultural Reform,
- Economic Circumstances,
- Tourism Pattern,
- Climate,
- Public Perception,
- Legislation, Policy and Administration, and
- Other unforeseen events.

Through exploration and discussion of the potential implications of the above changes for the Strategy, a range of approaches to deer management were identified in relation to each of the above factors for change. These helped to understand better the potential effects different actions might have on the environment. The strategy as a whole was also assessed against the 'No Strategy' (or 'Business-as-usual') scenario, i.e. how would the environmental effects resulting from implementing the strategy differ from if no new strategy was put in place (see below).

1.5.4 Assessing potential environmental effects of Strategy Actions

To assess, in further detail, the **potential effects** of implementation of the **Strategy Actions** on the environment, the Strategy Actions were assessed against the SEA objectives. The outcomes of this assessment supported the identification of the most significant potential effects of implementing the Strategy. Where there were potential **beneficial effects** identified, further

enhancement of these effects was suggested. Where potential **detrimental effects** were identified, ways of monitoring and **reducing** these effects were recommended.

Table 1 summarises the results of the assessment. Table 2 summarises the results of assessment of the potential effects of the Strategy compared to the scenario of not having a new Strategy, i.e. the '**New Strategy**' versus '**No New Strategy**' (or 'Business-as-usual') scenarios. The key explains the scoring approach used in Tables 1 and 2 below.

The following sections draw on the outcomes of these assessments and summarise the key recommendations for reducing potential detrimental effects and monitoring potential effects with the implementation of the Strategy. The scores are meant to be indicative, not absolute.

Key to scoring of potential effects	
++	Major positive effects
+	Minor positive effects
0	Neutral effects
-	Minor negative effects
--	Major negative effects
++/-, +/--- etc.	Mixed effects
?	Uncertain effects

SEA Topics	Effects of Environment Actions	Effects of Economic Actions	Effects of Social Actions	Effects of Cross-cutting Actions	Overall Effects of All Actions
Biodiversity	++	-/+	-/+/?/0	?/0	+/-
Population and Human Health	0	-/+/?0	++	?/0	+/?
Water Quality	+	?	?/+	?/0	0/+
Flood Risk	+	?/0/+	0/?	?/0	0
Soil Resources	++	?	?/0/+	?/0	+/?
Air Quality	0	0/?	0??	?/0	0
Reducing Contributions to Climate Change	?	-/+/?	-/+/?/0	?/0/+/-	?/-
Adaptation to Climate Change	+	-/+/?	-/+/?	?/0/+	+/?
Sustainable Resource Management	+	-/+/?	?	?/0/+	?/+
Cultural Heritage	-/+	-/+/?	-/+/?/0	?/+	+/-
Scottish Landscape	++	-/+/?	-/+/?/0	?/+	+/-

Table 1: Summary – Prediction and Evaluation of the Potential Effects of the Strategy.

Strategy Actions – Assessment of Effects Outcomes:

High Quality Environment Actions: Most of the Strategy's environmental actions are likely to have minor to major positive effects on most of the SEA objectives. However, there may be some minor and indirect negative effects on the historic environment due to increased visitor numbers to cultural heritage sites and the associated trampling and general 'wear and tear'.

Sustainable Economic Development Actions: Most of the Strategy's sustainable economic development actions may have minor negative or uncertain effects on all the SEA objectives. This is largely because increasing the economic opportunities associated with wild deer may have a range of negative environmental effects generally associated with economic development depending on how they are implemented.

Social Well-being Actions: The Strategy's social well-being actions are likely to have mixed, neutral or uncertain effects on the SEA objectives. On the one hand, actions may have major positive effects on protecting and enhancing human health. On the other hand, actions may have minor negative effects, because enhancing social development may result in range of negative environmental effects generally associated with infrastructure development.

Cross-cutting Actions: Many of the Strategy's cross-cutting actions are equally likely to have uncertain, neutral or positive effects on the SEA objectives. A minority may have minor negative effects on reducing contributions to climate change, protecting the historic environment and the Scottish landscape.

SEA Objectives	No New Strategy	New Strategy
To maintain and enhance biodiversity, flora, fauna and habitats	?	+/-
To protect and enhance human health	?	+/?
To meet environmental standards required by the Water Framework Directive (WFD)	0/+	0/+
To avoid, reduce and management flood risk	0/+	0
To conserve soil resource and quality	?/+	+/?
To improve air quality	0	0
To contribute to adaptation to climate change	?	+/?
To reduce contributions to climate change	+/-	?/-
To promote sustainable management of natural and man-made resources	+/?	?/+
To protect, conserve, and where appropriate, enhance the historic environment and cultural heritage	+/-	+/-
To protect, conserve and enhance the Scottish landscape	?/-	+/-

Table 2: Summary – Assessment of ‘No Strategy’ versus ‘New Strategy’ scenarios

Note: The first score is the primary overall effect of the scenario and the second score is the secondary overall effect.

1.5.5 Proposed measures for reducing detrimental effects

Key negative effects

The key potential negative effects are mainly due to the Strategy’s objectives and actions to promote economic and social development, such as deer-related businesses and opportunities to view wild deer, which could result in a range of minor negative environmental effects generally associated with infrastructure development depending on how they are implemented. Also, the Strategy’s focus on promoting deer-related outdoor activities may lead to an increase in visitors to the countryside (and associated trampling, compaction and other human presence effects), which may have a minor negative effect on cultural heritage sites, soil quality, and the Scottish landscape. The additive nature of the above types of effects

repeated across different sites over Scotland may also become a significant cumulative effect at the regional or national scale.

Summary of mitigation and enhancement measures

Proposed mitigation measures for the above potential negative effects include:

- Detailing, in lower-level plans, how people participating in activities can reduce their negative effects on cultural heritage sites, soil quality and the Scottish landscape.
- Advising how deer-related businesses, such as the venison production and stalking, may ensure that the potential environmental effects of any economic/infrastructure development associated with them can be minimised.

1.5.6 Proposed framework for monitoring potential effects of implementing the Strategy

A proposed monitoring framework has been developed to be incorporated into the overall framework for monitoring the effects of implementation of the Strategy. The monitoring framework consists of a number of proposed indicators which could be used at a number of different levels and scales:

- Indicators relevant to establishing the wider operational context and the environmental baseline:
 - e.g. indicators include: land use change; and status of species and designated sites.
- Indicators relevant at the local/ site level; and
 - e.g. indicators include: loss of soil carbon content; species, habitats or designated sites adversely affected by deer or deer management activities; and the costs associated with deer management.
- Indicators requiring further research and/ or data analysis.
 - e.g. indicators include: locations and condition of landscape designations, cost to forestry and agricultural sectors of effects of deer.

1.6 Relationship with other assessments and relevant plans, programmes and strategies

As the Strategy will be referred to, and implemented by, a number of lower level operational plans at appropriate organisational or local scales, the SEA of the Strategy seeks to provide a framework for informing subsequent SEAs or development of more detailed monitoring frameworks. The main key issues for implementation highlighted in the Environmental Report, along with

recommendations for monitoring significant potential detrimental effects identified through this SEA, should be broadly applicable to more detailed, site specific, considerations in supporting operational level plans. Lower-level plans, programmes and projects taking on board the objectives of the Wild Deer Strategy should consider the extent to which they need to undertake Appropriate Assessment of potential effects on European designated sites (required under Article 6 of the Habitat's Directive) or Environmental Impact Assessment (EIA) (in relation to individual projects), especially where they may involve development or new infrastructure.

1.7 Next steps

Following consultation on the Environmental Report (including this Non-technical summary) and the draft Strategy, all responses will be collated and analysed by the Scottish Government. The results of the analysis will be taken into account in the finalisation of the Strategy. In line with SEA legislative requirements, in the event that any significant changes are made to the Strategy, an assessment of its potential effect on the environment of the changes will be undertaken and summarised in an addendum to the Environmental Report. A post-adoption statement on how the Environmental Report itself and the responses to the SEA and draft Strategy have been taken into account will also be published along with a list of the Consultees.

The Environmental Report (along with any addendum required), and the Post-Adoption Statement, will be published alongside the final Strategy for Wild Deer in Scotland.

annex 6 : SEA environmental report
**annex 7 : assessment of potential
socio-economic effects**

Annex 6 and Annex 7 available only as
electronic documents.

Further copies of this document are available from:

Deer Commission for Scotland
Great Glen House
Leachkin Road
Inverness
IV3 8NW

Tel: 01463 725000
Fax: 01463 725048

Deer Commission for Scotland
Alpha Centre, Unit 11
Stirling University Innovation Park
Stirling
FK9 4NF

Tel: 01786 446282
Fax: 01786 446292

This document is also online at www.dcs.gov.uk

Email enquiries: enquiries@deercom.com