Yorkshire and Humber Regional Biodiversity Strategy

The YORKSHIRE & HUMBER BIODIVERSITY FORUM

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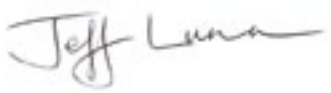
Foreword

Yorkshire and the Humber's wildlife has been under huge pressure with year-on-year losses of species diversity and abundance.

Today, that rate of decline has slowed with stronger legislation and more coordinated conservation action. Site based actions, the conservation of sites of special scientific interest and local wildlife sites in particular, alongside increasingly effective agri-environment schemes has helped to secure some of our finest wildlife from the mournful whistle of golden plover on high summer moors or flocks of wintering waders on the mud of the Humber. Yet, the decline continues and it is time for society to properly reverse this decline and rebuild our region's wildlife. For this, a landscape scale approach is required that goes beyond site based conservation. Such an approach requires effort across the whole of society from individuals, in gardens and at work, to the public and private sector. This regional biodiversity strategy sets out that ambition exhorting all to engage: to rebuild the wildlife of Yorkshire and the Humber for a better quality of life for all. This is a vision of real prosperity for all the people of this great region of ours.



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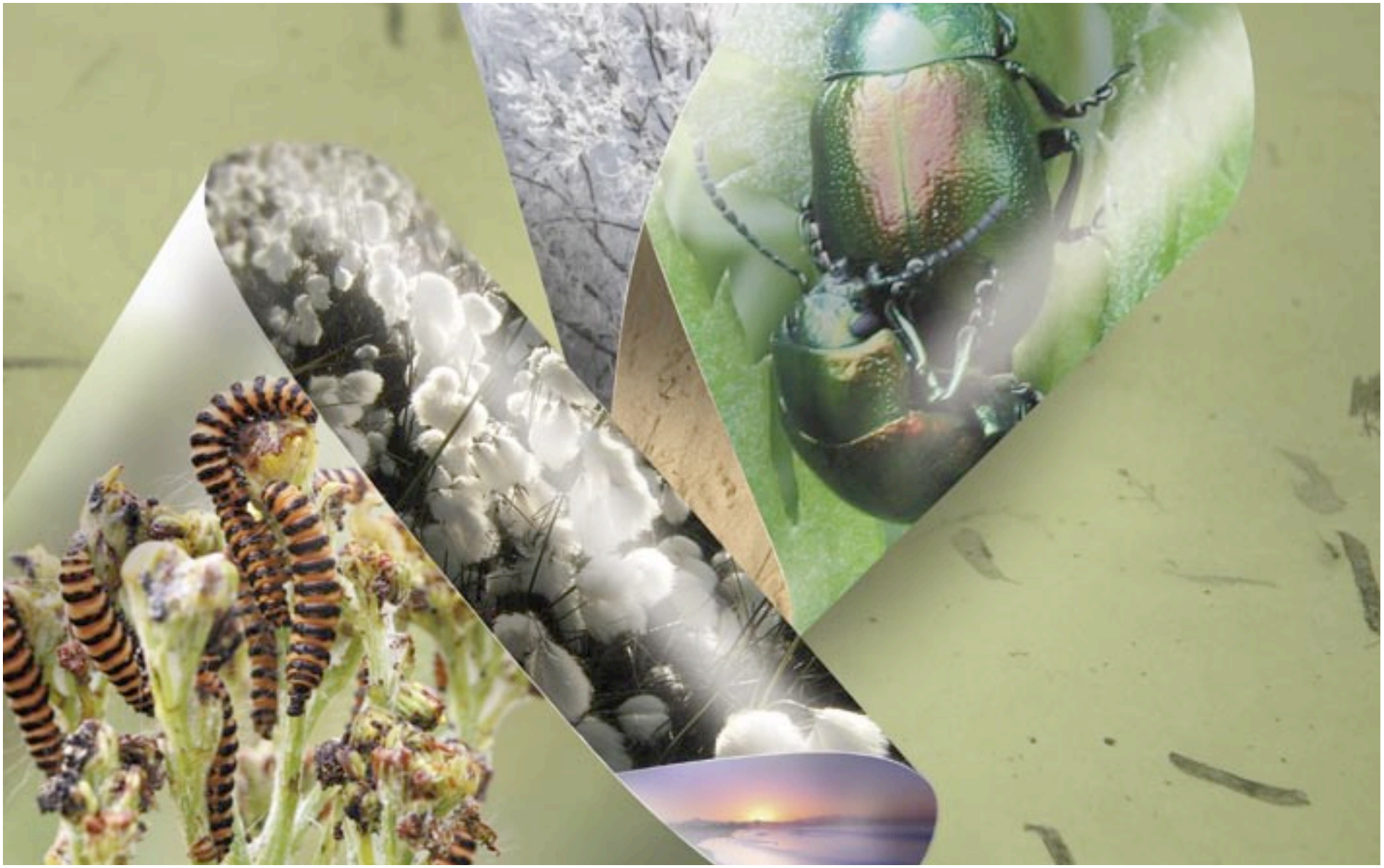


Executive Summary

The Yorkshire and Humber Regional Biodiversity Strategy has been developed by the Yorkshire and Humber Regional Biodiversity Forum (YHBF). It sets a framework for the integration of biodiversity into our regional and local policies, programmes and processes, and promotes a more joined up approach to biodiversity. It complements and implements the biodiversity elements of the Regional Spatial Strategy. The strategy also represents the region's contribution to the England Biodiversity Strategy and the UK Biodiversity Action Plan.

The Region's Biodiversity

- The North York Moors National Park contains the largest continuous tract of upland heather moorland in England
- The Humber is the second-largest coastal plain estuary in the UK
- The region contains over 23,600 hectares (ha) of Ancient Woodland

The Yorkshire and Humber region is exceptionally rich in biodiversity, and supports a wide range of species and habitats of high national and international importance. This is reflected in the large number and types of sites that are designated for their wildlife.

Designations For Wildlife

- 27 internationally important Natura 2000 sites
- 384 nationally important Sites of Special Scientific Interest - 11% of the region's total area
- Heritage Coasts and Maritime Areas

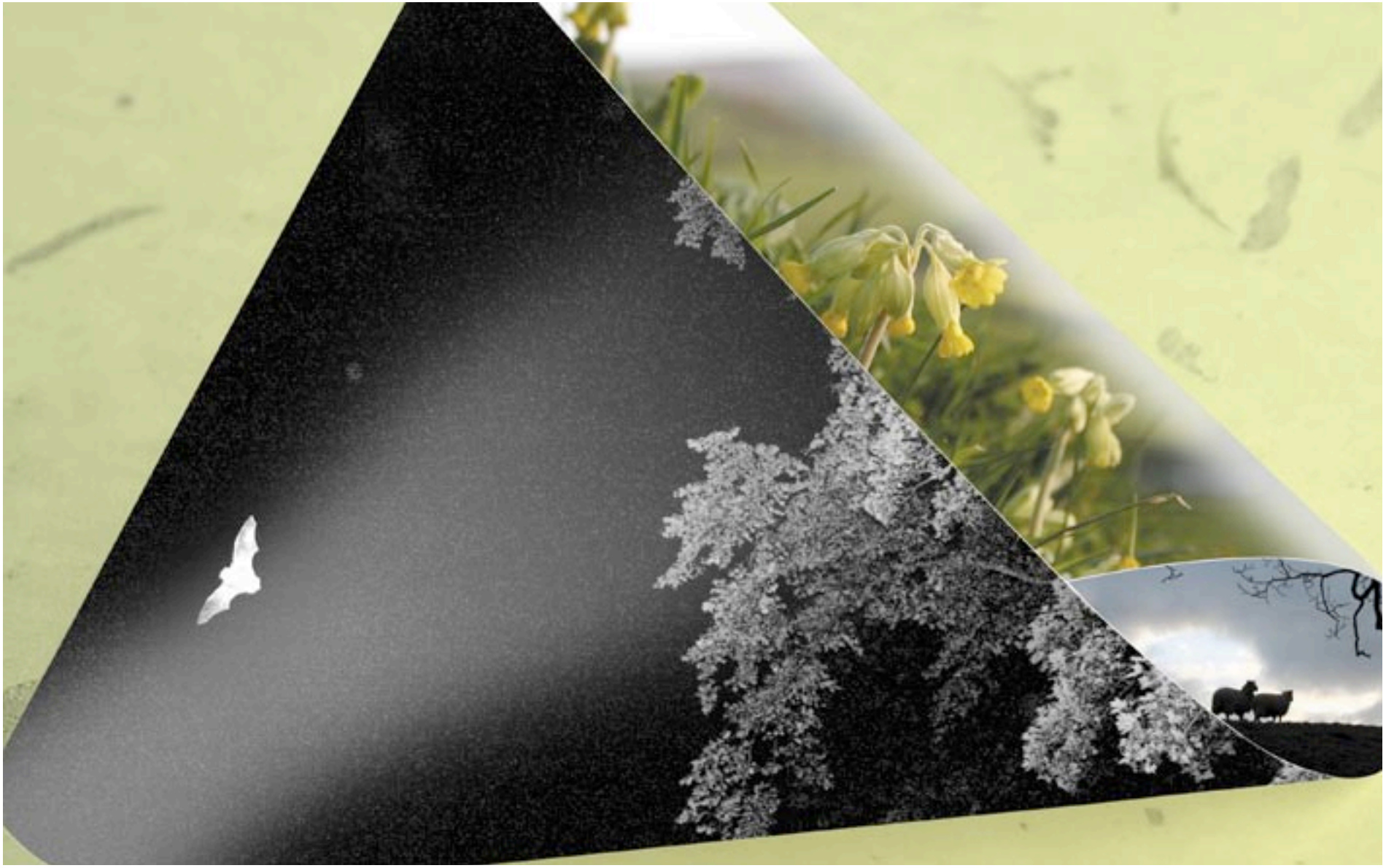
The losses and/or damage to our region's biodiversity have been well documented and, although there have been some major advances in the protection and management of wildlife over the past decades, biodiversity is still under threat. This strategy promotes a clear and proactive biodiversity message and highlights the considerable contributions that biodiversity makes to all parts of our society. These contributions, or 'ecosystem services', include essential resources such as the provision of food, clean water and flood alleviation, as well as benefits to the quality of people's lives. It is important that an ecosystem approach is embedded into regional policy and decision making about new developments if they are to be truly sustainable.

The Yorkshire and Humber Biodiversity Strategy adopts six key themes that set out the aspirations for the conservation of biodiversity in the region, and reflect the priorities identified in the national document 'Conserving Biodiversity in the UK 2007':

- Protecting the best sites for wildlife in the region;
- Focusing conservation action on the region's priority habitats and species;
- Improving functional habitat networks and enhancing the wider environment;
- Developing a robust evidence based for the region;
- Engaging people with the region's biodiversity;
- Helping the region's biodiversity adapt to climate change.

Within these six regional themes, the strategy has identified twenty-four strategic objectives which set out what action is required. A set of indicators and targets has been defined to assist with the monitoring of progress.

All sectors of the region (social, economic and environmental), have a role in the delivery of our local, national and international obligations for biodiversity. The final section of this strategy (section six) considers the interaction of biodiversity with the full range of sectors and identifies how they can play a key role in implementing this strategy both through their individual actions and via advocacy and influencing roles. It is proposed that these actions will be further discussed and developed within a subsequent implementation plan.



SECTION 1

Introduction

The biodiversity that surrounds us is fundamental to the survival of mankind. It provides us with food, clean air and water. It enriches our lives, is a source of wonder that stimulates curiosity, helps us relax, and provides us all with a sense of wellbeing. It is also plays an essential role in our nation's economic success, being an integral part of sustainable development.

Over the past century, development and a move to intensive farming, has resulted in the loss of a large proportion of our biodiversity at a cost to both our economy and our quality of life. Widespread recognition of this damage has resulted in greater legal protection for wildlife, improved controls on development, and changes to support mechanisms for farming. Over recent years these mechanisms have helped stem the tide of loss. With increasing public awareness and support for wildlife, biodiversity in England has started to recover and now, with increased funding being allocated for wildlife conservation, we are beginning to see some improvements. However we must continue to advance the biodiversity agenda, particularly in times of economic uncertainty and the challenge of climate change already becoming apparent. There is a continuing imperative to promote and deliver a clear and proactive biodiversity agenda. A strategic approach allied to concerted action is required to take on these future challenges. This strategy seeks to assist in delivering our vision of a region rich in biodiversity.

1.1 Our Biodiversity Vision for Yorkshire and Humber Region

The Yorkshire and Humber Biodiversity Forum and associated partner organisations have agreed the following vision for the region:

> Our vision is for a region where the wildlife and wild-spaces of our rural, urban and marine environments all contribute to a healthy functioning ecosystem, and where nature is conserved and treasured as an important part of a contented and economically successful community.

1.2 The role and aim of the Strategy

The Yorkshire & Humber Regional Biodiversity Strategy sets out a framework for the integration of biodiversity into regional and local policies, programmes and processes, and provides a means of promoting a coherent approach to biodiversity action in the region.

The strategy sits alongside other regional strategies and programmes and aims to inform these about the relevance of biodiversity in the achievement of their objectives. The strategy identifies the positive role biodiversity can play in contributing to the aspirations of other sectors and in helping to deliver economic and social development in the region. It identifies a suite of strategic objectives for biodiversity and identifies the key mechanisms and actions required of different partners and sectors.

The strategy highlights how the region can contribute to our local, national and international biodiversity obligations and how these will ultimately contribute to making the Yorkshire and Humber region a more attractive and prosperous place to live and work.

Specifically the strategy aims to:

- Establish biodiversity targets for priority habitats and species in the Yorkshire and Humber region;
- Provide a strategic framework for the work undertaken by regional and local biodiversity partnerships;
- Promote biodiversity as a key regional issue, thereby ensuring it is considered and incorporated into other regional strategic and implementation plans;
- Develop wider understanding of, and support for biodiversity, including the key role it has in improving the region's quality of life, health and economic development;
- Identify and communicate the actions required to maintain and enhance the region's biodiversity and highlight the responsibility of key regional partners and regional sectors in achieving these objectives.

1.3 Responsibilities for Delivery of the Strategy

This strategy has been produced by the Yorkshire and Humber Biodiversity Forum, on behalf of the wider regional community of partner organisations. Many of these organisations will play a key role in implementing this strategy, both through their individual actions and through wider advocacy and influencing programmes.

This strategy identifies key actions as well as the organisations who are expected to take a lead role in their delivery. However responsibility for implementation does not lie entirely with the nature conservation sector. It is important that all sectors accept responsibility for ensuring that action for biodiversity is integrated fully into their work.

In addition it must be recognised that, with appropriate support and guidance, local communities and individuals have a major a role to play through the implementation of smaller-scale projects which can complement larger-scale programmes and projects. The strategy will be complemented by the production of a regional implementation and/or delivery plan for the key actions identified within the document. This will be developed in 2009.

1.4 The Development of the Regional Biodiversity Strategy

The Yorkshire and Humber Biodiversity Forum (YHBF) is an partnership of organisations committed to working together to support biodiversity. It provides advice and information on wildlife issues and works closely with key regional organisations.

In 1999, the YHBF produced 'A Biodiversity Audit of Yorkshire & the Humber' which provided a comprehensive overview of the region's most important biodiversity features. This audit has been recently been reviewed by the Yorkshire and Humber Environmental Data Network (YHEDN) in light of the 2007 national revision of the UK Biodiversity Action Plan (BAP) habitat and species lists.

In 2005 a further YHBF-commissioned report on the biodiversity of the region formed the basis of the biodiversity policy in the Regional Spatial Strategy.

In September 2007, a workshop was held entitled 'One planet living: one living planet – helping people and nature thrive in Yorkshire and Humber'. This workshop provided an opportunity to involve people from a wide range of sectors and interests to help shape the development of this strategy.

Throughout the development of the Regional Biodiversity Strategy there has been an ongoing sustainability appraisal process. The final draft version was subject to a Sustainability Appraisal undertaken by the Yorkshire and Humber Environment Forum. The sustainability appraisal process was utilised to inform the final structure and content of this published document.

SECTION 2

Biodiversity

2.1 What is Biodiversity?

At the simplest level biodiversity can be defined as the variety of wildlife on earth, including plants, animals and all other forms of life. The world is losing biodiversity at an ever-increasing rate as a result of human activity. In the UK we have lost over 100 species during the last century, with many more species and habitats in danger of disappearing, especially at the local level.

Plants, animals and other forms of life interact with each other and the physical environment in which they live to form ecosystems. These are defined in the Convention on Biological Diversity as a "dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit". The Yorkshire and Humber region supports a wide range of ecosystems, from those relatively undisturbed in character, such as ancient woodlands, to ecosystems intensively managed and modified by humans, such as agricultural land and urban areas.

2.2 The Value of Biodiversity - Ecosystems Services

Even though we rarely stop to think of it, in addition to being important in its own right, biodiversity also provides a whole host of services and functions that bring value to our lives, including:

- Provision of food, water, timber and fibre (provisioning services)
- Helping to regulate climate change, floods, disease, waste and water quality (regulating services)
- Providing recreational, aesthetic and cultural benefits (cultural services)
- Supporting soil formation, pollination, photosynthesis and nutrient cycling (supporting services)

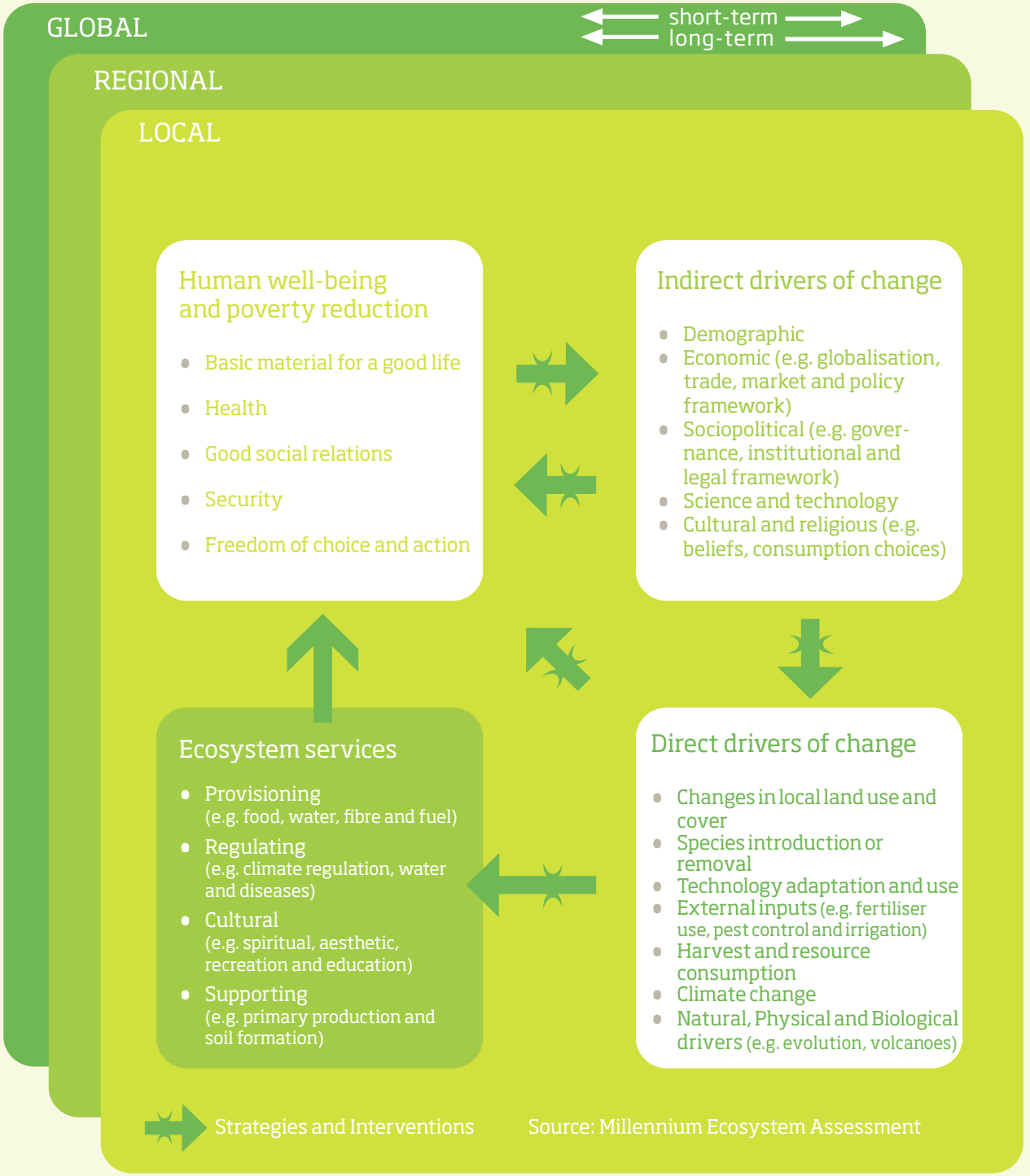
The Millennium Ecosystem Assessment (MEA, 2005) defines the benefits that people derive from biodiversity as 'ecosystem services'. The MEA highlights the link between biodiversity and human well-being, and recognises the need to reverse ecosystem decline by addressing the key drivers of change and by ensuring society values ecosystem services. The concept of valuing biodiversity through the ecosystem services it provides emphasises its importance to economic, social and environmental sectors of society. The finite nature of biodiversity means that the resource must be used and managed in a sustainable way, making biodiversity a vital indicator of the success of sustainable development.

It is important that the ecosystem approach is embedded into regional policy and decision making about new developments if they are to be truly sustainable. It is an approach which will become used more widely at all scales of Government, and will ultimately benefit the natural world as its real value is recognised and measures put in place to ensure biodiversity continues to provide the services that society needs in order to survive.

Figure 1
Ecosystem Services

Conceptual framework for the Millennium Ecosystem Assessment

Ecosystem services are the benefits people obtain from ecosystems. These include provisioning services such as food, water, timber and fibre; regulating services that affect climate, floods, disease, wastes, and water quality; cultural services that provide recreational, aesthetic, and spiritual benefits; and supporting services such as soil formation, photosynthesis, and nutrient cycling. The human species, while buffered against environmental changes by culture and technology, is fundamentally dependent on the flow of ecosystem services (MEA, 2005).



SECTION 3

The Biodiversity of Yorkshire and Humber

The Region's Biodiversity

Yorkshire and Humber is a large region that supports a wide range of species, habitats and geological features. This is reflected in the substantial numbers and types of sites that are designated for their wildlife value. This includes a significant proportion of England's most important wildlife sites, habitats and species, for example:

- Three National Parks – North York Moors, Yorkshire Dales, and the Peak District;
- 27 internationally important Natura 2000 sites, including Special Protection Areas for birds (SPAs) and Special Areas for Conservation (SACs);
- 3 RAMSAR Sites designated for their international wetland significance;
- 384 nationally important Sites of Special Scientific Interest (SSSIs) – covering 11% of its area;
- Numerous Local Nature Reserves, non-statutory 'Local Sites' and other sites managed by non-governmental organisations such as Wildlife Trusts, the RSPB and the Woodland Trust;
- Areas of Outstanding Natural Beauty– Nidderdale, Howardian Hills, Lincolnshire Wolds (partially) and Forest of Bowland (partially);
- Heritage Coasts and Maritime Areas – North Yorkshire and Cleveland Heritage Coast, Saltburn to Bridlington Maritime Area, Flamborough Head Heritage Coast, Spurn Heritage Coast and Bridlington to Skegness Maritime Area.

Figure 2
Environmental Designations

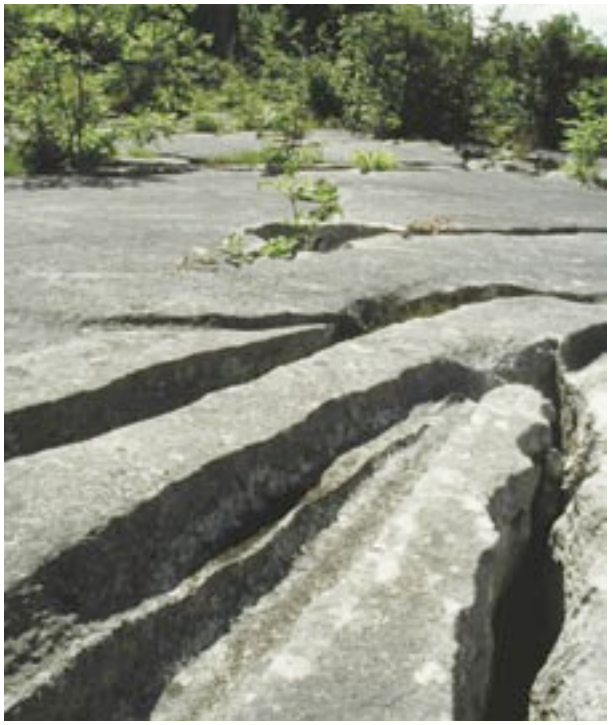
- Regional Boundary
- Heritage Coast **
- National Park **
- AONB **
- RAMSAR and proposed RAMSARSite *
- Special Area of Conservation (SAC) and proposed SAC
- Special Protection Area (SPA) * and potential SPA
- Community Forest **
- National Nature Reserves *
- Urban Areas
- Main Rivers
- Site of Special Scientific Interest

▶ RIGHT: The Yorkshire Dales supports over half of the UK's limestone pavement; a globally rare and threatened habitat. This dramatic and unique habitat is a valuable aspect of the region's biodiversity as well as educational resource and of great attraction to visitors. It is identified as a BAP priority habitat and a priority habitat type on Annex 1 of the EC Habitats Directive.

The Yorkshire and Humber Biodiversity Audit (YHBF, 1999) identified the most important habitats and species in the region as a guide to biodiversity when considering land use planning and action. The 1999 Audit revealed that the region supports a total of 35 national priority habitats and 105 national priority species, and that while many are found in designated sites, a significant proportion of the are found in non-designated areas. A process has now been put in place to allow annual updating of the regional species audit and the latest audit is available on-line (see Annex 1).

Some of the region's habitats are particularly important in a national context. These include:

- Upland moorland and heathland – the North York Moors National Park contains the largest continuous tract of upland heather moorland in England, and along with the Pennine Moors, the Region holds 28% of the upland heathland in England, and extensive areas of blanket bog;
- Limestone habitats – the Yorkshire Dales contains the most extensive series of limestone pavements in the UK, and important areas of upland calcareous grassland. The region supports over 50% and 20% respectively of the area of these habitats in England;
- Lowland hay meadows – the Lower Derwent Valley contains a greater area of high-quality examples of this habitat than any other UK site;
- Lowland raised bog – Thorne and Hatfield Moors are England's largest area of raised bog and are home to eight Red Data Book (RDB) invertebrate species;
- Chalk grassland – The East Yorkshire Wolds hold the most northerly chalk grasslands and rivers in the UK;



- Along the coast, Flamborough Head is an east coast representative of hard chalk cliffs, which occur more frequently on the south coast of England. There are larger numbers and a wider range of cave habitats at Flamborough than at any other chalk site in Britain. These cliffs also support England's largest mainland seabird colony;
- The Humber is the second-largest coastal plain estuary in the UK, and the largest coastal plain estuary on the East coast of Britain. During the breeding season it supports more than 10% of the UK's population of Bittern and in winter it regularly hosts more than 150,000 waterfowl;
- Over 23,600 ha of Ancient Woodlands, including some nationally significant concentrations that mean the Yorkshire and Humber region contains many of the largest connected woodland networks in England.

In addition to the various important priority habitats, the Yorkshire and Humber region is important for a number of rare (i.e. UK BAP priority/Vascular Plant Red List) species. Included in this list is the iconic Lady's Slipper Orchid, now reduced to one 'natural' population, found in a closely guarded and monitored location in Yorkshire. Through intensive management this species is slowly increasing its range.

Along the East coast, the Humber supports valuable saline lagoons home to highly specialised salt tolerant species, while internationally important numbers of over-wintering wildfowl and waders are attracted to the mudflats of the Humber Estuary and killer whales and white-beaked dolphin can even be spotted hunting off Flamborough Head.

While the priority species and habitats are important and reflect the features that most urgently need attention and action to protect them, the majority of the region lies outside such sites. Whilst urban environments and intensive agricultural landscapes support fewer species and habitats, the biodiversity associated with urban green spaces (our green infrastructure which includes private gardens, riverbanks and verges, allotments and public parks) are tremendously important. They represent the main contact with nature for the majority of people, but also provide valuable stepping stones for nature as part of wider ecological networks.

▼ BELOW: The red kite once widespread across the UK became extinct across most of the country in the 1800s. The Yorkshire Red Kite project was established by Yorkshire Water, English Nature and the RSPB in 1999 and has been successful in establishing a wild population of this magnificent bird in the region.

SECTION 4

Policy Context

The protection and enhancement of biodiversity in the region is driven by key policies and strategies through international and national conventions, Directives and legislation. These provide opportunities and inform policy and decision making at regional and local levels.

4.1 Legal Obligations

The UK has signed up to a range of international agreements that are relevant to biodiversity, such as the UN Convention on Biological Diversity and the Declaration on Sustainable Development, signed in Johannesburg in 2002.

These international agreements are reflected in EU Directives and UK legislation and also in regional policies that affect the area directly. Some of the key international and national legislative drivers of policy include:

- EU Wild Birds Directive, 1979 and EU Habitats Directive 1992 – both transposed into UK law by the Conservation (Natural Habitats etc.) Regulations 1994;
- EU Water Framework Directive, 2000;
- Environment Impact Assessment Directive, 1997;
- Wildlife and Countryside Act 1981 (as amended);
- Countryside and Rights of Way Act 2000; and
- Natural Environment and Rural Communities Act 2006.

Perhaps the most influential of these in relation to biodiversity are the EU Habitats Directive and the Wildlife and Countryside Act.

The EU Habitats Directive obliges Member States to take measures to maintain or restore natural habitats and wild species to a favourable conservation status and also to rigorously protect habitats and species of European importance through site designation and habitat enhancement (Natura 2000 sites). It also requires planning authorities to include policies in plans 'encouraging the management of features of the landscape which are of major importance for flora and fauna'.

The Wildlife and Countryside Act 1981 gives legal protection to the most important conservation sites in the country, designated as Sites of Special Scientific Interest (SSSIs), and to a number of the UK's threatened species.

4.2 UK Policy on Biodiversity

At the national level, the Government has issued a range of strategies and policies that are relevant to biodiversity, the most important being:

- Biodiversity – The UK Action Plan 1994;
- UK Sustainable Development Strategy 1999;
- Working with the Grain of Nature: A Biodiversity Strategy for England 2002;
- Rural Strategy 2004;
- Planning Policy Statements – especially PPS9 Biodiversity and Geological Conservation 2005;
- Conserving Biodiversity – the UK Approach 2007;
- Securing a Healthy Natural Environment: an action plan for embedding an ecosystems approach – Dec 2007.

Planning Policy Statement 1 (PPS1) on Delivering Sustainable Development states that the reversal of biodiversity loss and decline is a national planning priority and PPS9 on Biodiversity and Geological Conservation goes on to say that decisions should seek to 'maintain, enhance, restore and add to biodiversity by enhancing green spaces in towns and cities as well as in the countryside'.

The Government Public Service Agreement target 28 (PSA 28) 'Secure a healthy environment for today and the future' has biodiversity as one of its five key indicators and uses changes in populations of breeding birds in England as a proxy for the health of wider biodiversity.

The UK Biodiversity Action Plan (UK BAP) was published by the UK Government in 1994 in response to the 1992 convention on Biological Diversity, and many Local Biodiversity Action Plan (LBAPs) were produced as a local representation of the national set of UK action plans for habitats and species.

In 2002 the England Biodiversity Strategy (EBS) was produced and launched in response to devolution of environmental decision making to Scotland and Wales. The EBS has the aim of ensuring that biodiversity becomes embedded in all main sectors of public policy and set out a series of actions to make biodiversity a fundamental consideration in:

- Agriculture: encouraging the management of farming and agricultural land so as to conserve and enhance biodiversity as part of the Government's Sustainable Food and Farming Strategy;
- Water: aiming for a whole catchment approach to the wise, sustainable use of water and wetlands;

- Woodland: managing and extending woodland so as to promote enhanced biodiversity and quality of life;
- Marine and coastal management: so as to achieve the sustainable use and management of our coasts and seas using natural processes and the ecosystem-based approach;
- Urban areas: where biodiversity needs to become a part of the development of policy on sustainable communities and urban green space and the built environment.

A key aspect of the England Biodiversity Strategy was that it recognised the role of the individual regions in supporting biodiversity, and supported the establishment of regional partnerships, for example the YHBF.

In October 2007, the UK Government set out its strategic framework for the conservation of biodiversity in the document, 'Conserving Biodiversity – the UK Approach'. This document proposes utilising the integrating framework of an Ecosystem Approach to the delivery of biodiversity objectives by putting sustained effort into the following six priorities:

- protecting the best sites for wildlife;
- targeting action on priority species and habitats;
- embedding proper consideration of biodiversity and ecosystem services in all relevant sectors of policy and decision-making;
- engaging people, and encouraging behaviour change;
- developing and interpreting the evidence base; and
- ensuring that the UK plays a proactive role in influencing the development of Multilateral Environmental Agreements, and contributes fully to their domestic delivery.

4.3 Regional Planning and Biodiversity

Over recent years there has been a move by the UK Government towards a progressively more decentralised approach to the delivery of national policy, first with the establishment of the Regional Assemblies, and latterly through the process of the Sub-National Review.

The Integrated Regional Framework (2008) provides a vision and overall strategic framework for the region that underpins all other regional policy development. It outlines the ten top challenges currently facing the region, which include increasing the region's resilience to climate change. Within this integrated framework sit the following strategies:

- Regional Economic Strategy – the statutory economic framework for the sustainable development of the region with a clear focus on business success, wealth creation, jobs and skills;
- Regional Housing Strategy – provides the regional framework for the delivery of the Government's Sustainable Communities agenda;
- Regional Spatial Strategy (The Yorkshire and Humber Plan) – deals with the spatial dimensions of economic development and renaissance, social issues, and the environmental assets of the region. It also incorporates the Regional Transport Strategy for Yorkshire and Humber;
- There is also a series of thematic regional strategies such as the Regional Environment Enhancement Strategy, the Regional Forestry Strategy, the Regional Rural Framework, the Regional Cultural Strategy and the developing Regional Heritage Strategy which have been adopted. These seek to respond to specific aspects of the regional agenda and are relevant to biodiversity.

Regional Biodiversity Strategies (RBS) are identified in the Regional White Paper 2002 (Your Region, Your Choice: Revitalising the English Regions) as one of ten strategies that should be produced as part of the regional planning framework. Their intended scope is 'to provide a strategic framework for the work undertaken by regional and local biodiversity partnerships in conserving biodiversity and the sustainable use of biological resources'. The Yorkshire and Humber RBS is designed to achieve this obligation.

The Yorkshire and Humber RBS will also support the implementation of the biodiversity elements of the RSS, in particular the Biodiversity Policy ENV8 by identifying opportunities to embed biodiversity within all regional strategies, policies and projects. Policy ENV8 defines habitat enhancement areas in the region, and these are shown below. These enhancement areas were identified through an interpretation of spatial biodiversity data to categorise landscape areas according to their concentrations of semi-natural habitat. This Regional Biodiversity Strategy seeks to identify mechanisms by which habitat enhancement can be achieved whether semi-natural habitat is either highly concentrated or more widely dispersed and isolated.

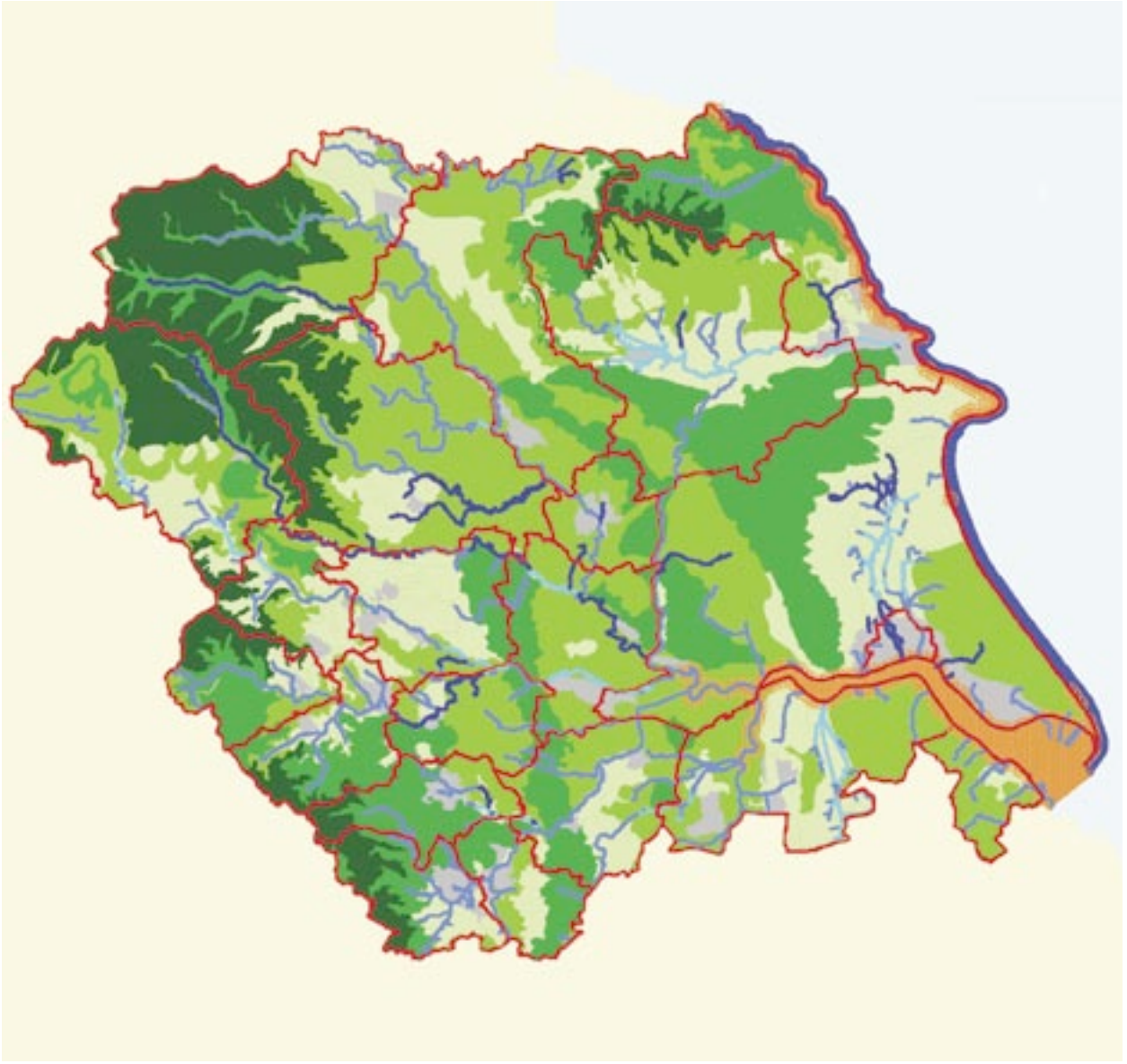
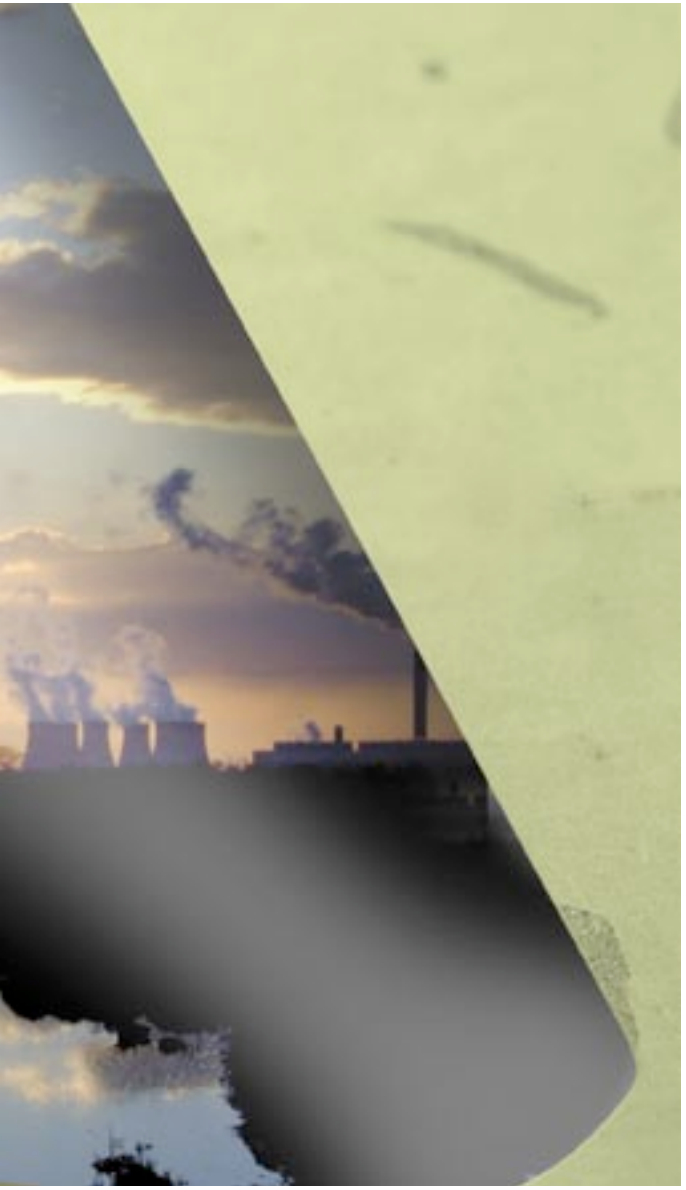


Figure 3
Habitat Enhancement Areas

- Riverine Enhancement Areas – Category 1
- Riverine Enhancement Areas – Category 2
- Riverine Enhancement Areas – Category 3
- Important Coastal/Estuary sites
- LPA Boundary
- Habitat Enhancement Areas – Type 1
- Habitat Enhancement Areas – Type 2
- Habitat Enhancement Areas – Type 3
- Habitat Enhancement Areas – Type 4
- No biodiversity information currently available



4.4 Local Context

Local authorities have an obligation under the CRoW Act, 2000 and PPS9 to 'maintain, enhance, and restore or add to biodiversity'. In addition the Natural Environment and Rural Communities (NERC) Act 2006 places a duty on every public authority 'in exercising its functions, to have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity'. The 2006 Act also makes clear that conserving biodiversity includes, in relation to a living organism or type of habitat, restoring or enhancing a population or habitat.

Local Area Agreements are three-year agreements made between central government and local authorities to deliver better outcomes for local people. They consist of a range of indicators including improved local biodiversity and adapting to climate change. Of key importance is the National Indicator 197 (NI197) which will monitor the proportion of locally recognised wildlife sites in favourable management. However indicators NI197, NI188 and NI189 will all provide a useful tools for local authorities to measure their success and help deliver the Regional Biodiversity Strategy at a local level.

Local Biodiversity Action Plans (LBAPs) are usually prepared by or for local biodiversity partnerships. These partnerships comprise representatives from a wide variety of organisations with an interest in the biodiversity of a particular area. LBAPs identify local priorities and contain objectives and targets for maintaining, restoring and creating habitats and conserving species, and prescribe actions to be undertaken through the partnership. LBAPs are an important delivery mechanism for this strategy.

Local Sites are areas of substantive nature conservation value and, although they do not have any statutory status, many are of equal wildlife interest to those included in the suite of statutory Sites of Special Scientific Interest. 'Local Sites' is the term used in DEFRA guidance but other terms are also used, including Local Wildlife Sites and Site of Importance for Nature Conservation (SINCS). There are over 36,000 Local Sites in England. They are defined areas, identified and selected locally for their nature conservation interest against locally agreed selection criteria.

SECTION 5

A Strategic Framework (strategic objectives)

So far, this strategy has sought to describe the intrinsic value of biodiversity as well as the wide-ranging nature of the benefits to be derived from the ecosystem services that are provided by biodiversity. In this chapter, the strategy proposes a framework for delivering those benefits which aims to:

- Be of spatial relevance at the regional scale – it is recognised that the framework needs to bridge the gap between national and local scales of action. While biodiversity action tends to be delivered at the national and local levels, there is an increasing realisation of the opportunities to address issues at the regional scale;
- Recognise the existing value of the region's biodiversity – as summarised in the previous section, the natural riches to be found in the region need to be safeguarded;
- Maximise the potential for creating new habitats and restoring areas for wildlife to enhance biodiversity for the future – the need to enhance biodiversity reflects the legal obligations set at the international and national level, and the policy context set out at all scales of government;
- Focus on the intrinsic value of biodiversity in its own right.

To achieve these aims, the framework adopts six key themes that set out the aspirations for the conservation of biodiversity in the region. These themes reflect the priorities identified in the document 'Conserving Biodiversity in the UK' published in 2007, which highlights the intrinsic value of biodiversity and provides a framework for recognising the threats and opportunities for biodiversity across all sectors in the region. Within each of the themes, a series of strategic objectives have been identified to set out what action is required, and indicators and targets have been suggested to allow progress to be monitored. The objectives and delivery mechanisms should be viewed as dynamic processes in their own right, subject to evolution in order to meet the requirements of a changing environment. They should also be seen as an inspirational springboard for action.

The twenty four strategic objectives identified in this section of the strategy apply to all sectors of the region – economic, development, environmental, agricultural etc., and actions and mechanisms required to achieve the key strategic objectives are highlighted sector by sector later in this document. These actions will be further developed and refined within a subsequent implementation/delivery plan to be produced by the YHBF.

Theme A

5.1 Protecting the best sites for wildlife in the region

Approximately 11% of the region's area is designated as internationally (SAC/SPA) or nationally important for nature conservation. In addition, a large proportion of the region's uplands fall within one of the three National Parks or four Areas of Outstanding Natural Beauty. The protection conferred on these sites reflects international and national legislation and is enshrined in national and local policies towards nature conservation.

Approximately 26% of the region's woods are categorised as Ancient Woodlands, with that figure increasing to around 50% for some districts in West and South Yorkshire.

The region also includes numerous Local Sites that are protected through planning policies set out in PPS9 and Local Development Frameworks.

Subject to the wishes of Parliament, a Marine Act covering offshore waters will provide the mechanism for protecting nationally important marine species and habitats.

The management and monitoring of SSSIs is undertaken by Natural England, according to nationally agreed common standards for habitat and/or species status/condition. These standards provide biodiversity targets for the nationally defined SSSIs and will form a key method for reporting on the region's performance in contributing to national commitments.

Designated sites provide the core of regional biodiversity networks but these networks also include a range of other wildlife areas across the region. Different parts of this network are afforded different degrees of legal protection, but all have a vital role to play in meeting national and regional biodiversity targets, maintaining local natural character and distinctiveness and helping wildlife to adapt to climate change. This broad range of sites can also support research and education and those that are open to the public offer excellent opportunities for contact with nature and the benefits to human health and wellbeing which this brings.

STRATEGIC OBJECTIVES	CORE DELIVERY MECHANISMS	INDICATORS	TARGETS
1 Prevent adverse effects to the region's important biodiversity sites and species.	Adherence to national and regional legislation and policy and early consultation with Natural England and other interested parties.	Amount of habitat loss or damage.	No net loss from current known baseline.
2 Increase the number and area of important sites protected under legislation or sympathetic ownership/management.	Designation of new SSSI, European and marine sites by Natural England. Designation of local sites by Local Authorities. Habitat creation by landowners and wildlife organisations. Protection of sites through sympathetic management.	Number of new SSSI, local wildlife sites and Local Nature Reserves (LNRs) notified. Number of Local Authorities with comprehensive agreed lists of Local Sites.	To be determined. 100% of local authorities to have identified lists of Local Sites within their local plans by 2011.
3 Ensure the development and implementation of a robust and effective policy framework for biodiversity at all levels of the Yorkshire and Humber region's governance.	Integration of biodiversity into regional strategies, Local Development Frameworks and other spatial planning documents.	Number of Statutory plans informed by, and incorporating biodiversity policies/targets.	100% of statutory plans with appropriate policies/targets.
4 Ensure potential effects of development on the region's biodiversity are fully considered and mitigation and enhancement afforded.	Implementation and development of good practice in planning development control e.g. liaison with Natural England and other interested parties at an early stage.	Amount of habitat loss or damage on internationally and nationally designated sites.	No net loss from current known baseline. Net gain achieved in all priority areas.
5 Achieve or maintain favourable 'biodiversity' condition for the region's most important wildlife sites.	Use of Environmental Stewardship and other incentives, adherence to good management practices and codes of good practice supported by training and advice.	Proportion of SSSI in favourable condition. Proportion of priority biodiversity habitats in favourable management.	95% of SSSI in favourable or unfavourable recovering condition by 2010. 95% of biodiversity action plan priority habitats and species in appropriate management by 2015.
6 Monitor important wildlife sites to inform progress on delivery of action plans for important habitats and species.	Ongoing monitoring programmes by Natural England, local authorities and wildlife organisations.	Number of SSSI monitored. Local Site monitoring.	All SSSI to undergo condition assessment monitoring within a six year cycle. Monitoring programmes established and signed up to by all local authorities and wildlife organisations/ Local Sites Partnerships.

Theme B

5.2 Focusing conservation action on the region's Priority Habitats and Species

Within the context of the UK Biodiversity Action Plan (UKBAP), the UK Biodiversity Partnership has identified a list of priority species and habitats. This was updated in November 2007 and now contains 1149 species and 65 habitats, (compared to 577 species and 49 habitats under the original UK BAP list). The new list reflects both continuing declines in some species and better data available as a result of the UK BAP, and is an important reference source.

Priority habitats and species will provide a focus for conservation action during the next decade. Much of this action will be undertaken at the local level through the development of LBAPs, and will be implemented by local partnerships of statutory and non-statutory organisations.

At the regional level, this strategy can provide a valuable framework for bridging the gap between the UK and LBAPs, and provide a supporting regional and sub-regional role to LBAP partnerships. Indicative regional habitat targets have been developed by national BAP leads and have been signed up to by the YHBF and are included at Annex 3. However these will be further updated as improved data becomes available.

Theme B: Protecting the best sites for wildlife in the region

STRATEGIC OBJECTIVES	DELIVERY MECHANISMS	INDICATORS	TARGETS
7 Deliver the agreed regional biodiversity targets through co-ordinated regional and local delivery plans.	YHBF and BAP partnerships to develop and sign up to a joint regional biodiversity implementation/ delivery plan.	Achievement of maintenance, restoration and expansion of priority habitat targets.	Achieve all regional targets for maintenance, restoration and expansion by 2015.
8 Target resources at projects that directly contribute to the conservation or recovery of the priority species and habitats in the region.	YHBF to provide guidance and support to project development and implementation.	Allocation of funding towards priority habitats and species.	100% of available resources utilised to achieve regional and UK BAP targets.
9 Promote continued updating of accurate and up-to-date biodiversity data on the region's priority habitats and species.	Increase support for sub-regional and local survey work to improve the evidence base, including Phase 1 habitat surveys.	Improved targeting and reporting.	Regional data gaps identified and costed survey programme of delivery in place .

Theme C

5.3 Improving functional habitat networks and enhancing the wider environment

While the suite of protected sites and the identification of priority species and habitats provides a useful basis for the conservation of biodiversity, the majority of the region lies beyond the boundaries of protected sites and has been subject to habitat loss and fragmentation, particularly in the latter half of the 20th Century. Intensification of agriculture and habitat loss to development has resulted in a patchy landscape mosaic with some areas supporting significant amounts of semi-natural habitat, while others retain very little. The traditional approach to protecting wildlife through a suite of protected sites is now seen as insufficient for the future management of our biodiversity. The connectivity between remaining habitat areas is viewed as being crucial for conserving the existing biodiversity and in assisting habitats and species to adapt to climate change. It is recognised that we need to begin to work at a landscape-scale, maintaining and increasing habitat linkages across our landscapes and improving the quality of the wider farmed and urban landscapes within which they sit. Important wildlife sites and the linkages between them create ecological networks across the region which will become increasingly important for wildlife as our climate changes.

The Biodiversity Policy ENV8 of the RSS presents a preliminary interpretation of the spatial distribution of biodiversity habitats in the region, identifying areas of the region as Enhancement Areas based on their environmental and landscape characteristics (see figure 3, p.17). This policy is viewed as the first step towards identifying core areas of biodiversity importance in the region and will be further developed to ensure delivery of robust and functional ecological networks that deliver clear benefits for biodiversity.

The scientific evidence base surrounding the development of ecological networks is rapidly advancing but the current work still has high levels of uncertainty and should be considered as provisional. However, it is an important concept/approach utilised across the UK and Europe and will be a useful tool in helping biodiversity to adapt to climate change.

Alongside this work at a landscape scale, work to improve connectivity at a local scale is also very important, enabling species to move more effectively over relatively short distances as well over longer distances.

In addition to supporting the role of ecological networks, this strategy provides a framework for delivering relatively large-scale habitat creation schemes, for example those associated with coastal managed realignment, restoration of mineral sites or through habitat creation in riverine flood plains.

Ecological connectivity will also be enhanced through the implementation of Green Infrastructure schemes which can provide multiple benefits for a wide range of sectors beyond biodiversity.

Theme C: Improving functional habitat networks and enhancing the wider environment

STRATEGIC OBJECTIVES	DELIVERY MECHANISMS	INDICATORS	TARGETS
10 Produce a credible set of mapped functional habitat networks for the region.	Regional Planning Body to map functional habitat networks across the region. YHBF to provide guidance on identification and function of habitat networks. Local Authorities to identify, map and conserve local functional habitat networks.	Habitat networks identified and incorporated at all levels of governance within the region and by YHBF partners.	YHBF endorsed regional habitat network map by 2010.
11 Promote management of wildlife sites which will maintain and enhance heterogeneity and diversity at all scales (so that a range of features and diversity of vegetation structure is encouraged).	Best practice management through BAP delivery, and spatial planning informed by advice and support from YHBF members.	Proportion of sites in favourable condition/ management.	All regional targets for habitats and species in appropriate management achieved by 2015.
12 Target resources to support the maintenance and development of habitat networks to improve the environmental capacity of the region.	Analysis of habitat connectivity, building on the habitat network map. Landscape scale approach to allocation of resources for habitat and species conservation and creation.	Protection and creation of viable habitat networks.	All high priority habitat networks identified and proactively conserved through appropriate delivery/funding mechanisms .
13 Ensure the recognition and protection of current and proposed habitat networks is enshrined in policy frameworks at all levels of the Yorkshire and Humber region's governance.	Integration of biodiversity into regional strategies, Local Development Frameworks and other spatial planning documents.	Habitat network approaches incorporated into regional statutory plans.	100% of statutory plans with habitat networks identified in appropriate policies.

Theme D

5.4 Developing a robust evidence base for the region

'Conserving Biodiversity – the UK approach' identifies a sound evidence base as being essential to support effective conservation of biodiversity in the UK. Research and associated monitoring is vital in order to:

- Assess the current status and trends in biodiversity;
- Understand the value of biodiversity and ecosystem services;
- Understand the reasons for unfavourable status and decline in biodiversity, assess future vulnerability and identify effective remedial measures and strategies;
- Target resources more effectively;
- Assess the outcomes and effectiveness of policy;
- Innovate in the way we collect, manage and use evidence to support policy and action.

Within the Yorkshire and Humber region, a key driver for developing a sound evidence base relates to the need to ensure that we are fully informed about the current status of biodiversity within the region. Progress has been made in the continuing development of a Yorkshire & Humber Ecological Data Network (YHEDN) with the aim of providing a consistent regional standard for data collection and monitoring through a network of effective Local Biological Record Centres.

Theme D: Developing a robust evidence base for the region

STRATEGIC OBJECTIVES	DELIVERY MECHANISMS	INDICATORS	TARGETS
14 Broaden and improve the environmental evidence base to adequately reflect the state of the region's environment.	Support for the collection of up-to-date basic habitat data from Phase 1 and similar surveys. Support for the targeted and active recording of biological data by biodiversity partnerships. Support for monitoring programmes to assemble and/or collate biodiversity data via Yorkshire and Humber Environmental Data Network (YHEDN).	Improved access to good quality and up to date biodiversity datasets through National Biodiversity Network (NBN), BARS and YHEDN.	Updated habitat inventory and priority species data sets publicly available through NBN. Annual audits of the region's species and habitats produced through YHEDN.
15 Improve evidence for and promote (in particular to audiences outwith the biodiversity community) the benefits biodiversity can provide to social and economic well-being.	Commission Yorkshire and Humber-wide research to demonstrate the value of biodiversity at a region-wide scale	Number of commissioned reports.	Evidence used to incorporate biodiversity in all future social and economic strategies and policies.
16 Improve the capture of, accessibility to, and use of up-to-date biological data to support the strategic objectives.	YHBF/NE engagement with national biodiversity leads to over regional biodiversity target setting. YHBF support to the development of the YHEDN.	Functioning partnership of Local Records Centres across the region.	Yorkshire and Humber Environmental Data network established. All existing Local Records Centres sustainably funded.
17 Improve links with the range of educational institutions as well as the broader biodiversity community.	Targeted engagement with universities. Greater engagement with broader biodiversity community through YHBF.	Representation of higher educational institutions in the YHBF. Organisations participating in the Yorkshire Biodiversity Forum and associated events.	One regional university represented on the YHBF Exec. Annual YHBF conference. Regularly updated website signposted to key organisations, businesses and individuals.

Theme E

5.5 Engaging people with the region's biodeiversity

Conserving and enhancing wildlife has widespread public support and enthusiastic, passionate volunteers achieve a great deal of biodiversity conservation. Engagement with nature/biodiversity is a priority both at the individual level and at the societal/community level. This latter issue, where the value of the ecosystem services associated with biodiversity is embedded into all sectors of society, is addressed in the remaining sections of this strategy.

At the more personal level, there is an important role for the strategy to play in helping to implement the related priority for action as set out in 'Conserving Biodiversity – the UK approach'. This action recognises that there is a need to engage more people in taking action to maintain and enhance biodiversity as part of their everyday lives, and to make their local environment more wildlife friendly. It also involves the need to develop communication strategies in each country of the UK and at regional and local levels that will present the case for and value of biodiversity conservation and encourage and aid behavioural change that will benefit biodiversity.

While many of the wider environmental programmes, such as greater energy and water efficiency, deliver benefits to biodiversity, the effects of these are largely indirect. The UK Biodiversity Partnership has identified the following behavioural changes that are of more direct relevance to the conservation of biodiversity:

- Create, or encourage others to create, wildlife friendly spaces – at home, in your local community and through work;
- Enjoy (and value) your local wildlife friendly space and share this enjoyment with others;
- Support the work of wildlife conservation organisations;
- Buy wildlife/environmentally-friendly/sustainably-sourced products;
- Record what you see and send results to your Local Records Centre;
- Exercise your civic duties to ensure those that represent your views reflect your environmental concerns.

Within the Yorkshire and Humber region, this strategy will play an important role in promoting this change in behaviour towards biodiversity, and will play a pivotal role in communicating biodiversity issues.

Theme E: Engaging people with the region's biodiversity

STRATEGIC OBJECTIVES	DELIVERY MECHANISMS	INDICATORS	TARGETS
18 Promote people's involvement in biodiversity activities and initiatives.	Volunteering programmes run by voluntary sector and other agencies. Designation of Local Nature Reserves (LNR) and other wildlife reserves and green space.	Number of people engaged in volunteering activities relating to the natural environment. Number of Local Nature Reserves established.	To be determined but linked to baseline figures. All local Authorities to have at least one LNR.
19 Increase public awareness of key biodiversity issues.	Develop regionally distinctive communications and link to the broader environmental agenda. Use of high quality and accessible interpretation and publicity material.	Hits on the YHBF website and the wider Environment Hub.	To be determined.
20 Facilitate engagement through actions to enhance quality of life and local distinctiveness.	Support biodiversity partnerships in delivering action and enhancing quality of life and local distinctiveness. Promote biodiversity within local communities.	Biodiversity represented in Sustainable Community Strategies.	100% of new/revised Sustainable Community Strategies to include targets for biodiversity.

Theme F

5.6 Helping the region's biodiversity adapt to climate change

It is now a well established fact that our climate is changing, and Climate Change adaptation is one of the ten Regional Challenges identified within the Integrated Regional Framework. Climate change is also prominent in the Regional Economic Strategy where it is identified as one of nine regional priorities. The predicted climatic changes will place further stress on the region's biodiversity, which is already under pressure from loss of habitat to development and intensive land management practices. Climate change will also affect key ecosystem services that our natural environment delivers such as the provision of water, energy and food. Significant investment in the region's environment is crucial if we are to ensure that people and wildlife are able survive and adapt to the increasing pressures that climate change will place on them. Tackling the problem at source by reducing greenhouse gas emissions is the highest priority but as the actions required to achieve this are covered in other regional strategies they are not detailed here. In the short to medium term the focus for this strategy is on improving the ability of our biodiversity to withstand existing pressures and be resilient in the face of predicted climatic changes.

In order to achieve this we need to ensure that habitat creation (both at a landscape and neighbourhood scale) and effective management of new and existing areas is carried out to make habitat networks more robust, improving the ability of wildlife to adapt.

A Regional Climate Change Adaptation Study is currently being undertaken by the Yorkshire and Humber Assembly and is due to be published in 2009. The most likely climatic changes for the region (identified using UK Climate Impacts Programme 2002) are:

- Average temperatures 1.0 - 2.3°C higher by 2050s, with extreme temperatures more common;
- Winters up to 20% wetter by 2050s with higher rainfall intensities;
- Increase in sea level between 15-75cm by 2080s;
- Decrease in summer rainfall by up to 32% by 2050s, but with higher rainfall intensities.

These predicted changes to our regional climate are likely to affect agricultural patterns, flood defence and water management, providing both threats but also opportunities for biodiversity. For example, managed realignment of coasts and rivers and the creation of washlands to store flood water can provide new habitats for biodiversity whilst providing flood defence benefits, and peatland, wetland and woodland habitats all have a role to play in carbon storage. By integrating biodiversity considerations into the planning of such schemes at an early stage the benefits for people and wildlife can be maximised.

In addition to the creation of new wildlife habitats there is also a need to improve the quality of the wider countryside for wildlife to ensure species are able to move freely within it, i.e. a move towards landscape scale nature conservation. Research has shown that climate change will generally have the effect of moving the natural ranges of habitats and species northwards and to higher altitudes (i.e. up slope). However, the ability to move will be affected by:

- the type of species in question – for example, insects are more able to move than some plants;
- physical factors – species inhabiting upland areas, for example, may need to leapfrog lowland areas;
- the extent to which habitats have become fragmented – for example the scattered areas of heathland in arable farmland within the Vale of York.

To be successful, the relationship with neighbouring regions, the North East, East Midlands and the North West, will become increasingly important in establishing robust ecological networks. The risk of a species becoming extinct or a habitat being lost will be reduced if a varied set of locations are conserved, encompassing not only the full geographic range of each species and habitat but also the full range of ecological, topographical and hydrological situations in which they occur.

In order to achieve the vision outlined above the following strategic approaches have been identified to complement national actions.

Theme F: Helping the region's biodiversity adapt to climate change

STRATEGIC OBJECTIVES	DELIVERY MECHANISMS	INDICATORS	TARGETS
21 Promote the value of landscape-scale conservation to help tackle the impacts of climate change e.g. to aid flood risk management and safeguard habitats which store carbon and benefit biodiversity.	Develop partnerships, including with landowners, to deliver landscape scale change. Encourage the development of ecological networks through spatially targeted action, building on the regional habitat network mapping work.	Development of a regional landscape-scale vision/ opportunities map.	Regional vision/opportunities map produced and endorsed by all key organisations by 2010.
22 Promote small scale but widespread conservation measures to make the wider countryside more wildlife friendly and improve connectivity, dispersal and colonisation opportunities.	Identification of suitable local actions to facilitate biodiversity adaptation in relation to climate change, such as new wildlife corridors. Such action may be suitable for inclusion in Local Area Agreements.	Number of local actions identified in LBAP, sub-regional and regional BAP and biodiversity delivery plans.	100% of biodiversity delivery plans to include appropriate actions.
23 Improve the evidence base regarding capacity of habitats and species to respond to climate change impacts.	Support the collation and review of information, and where appropriate commission additional research to answer questions about the capability and capacity of protected sites to function in the face of climate change. Identification of habitats and species which are particularly vulnerable to climate change and /or are valuable in helping the region respond to climate change.	Impact of climate change on vulnerable sites and species identified.	All sites and species vulnerable to climate change identified within the region and management plans developed to minimise effects.
24 Ensure energy crop production for biofuels does not conflict with biodiversity objectives by creating sensitivity maps and working with producers and end users.	Ensure that the region supports only sustainable biofuels.	Sustainable biofuel production.	No net loss or damage to biodiversity sites due to biofuel production.

◀ LEFT: Bog rosemary *Andromeda polfolia*, Thorne Moors National Nature reserve.

The Humberhead Levels and Moors partnership comprises a wide range of organisations including Natural England, Environment Agency, RSPB, and Yorkshire Wildlife Trust who are working to create an internationally renowned, unique wetland landscape, supporting thriving communities, economy and wildlife. The project currently being developed aims to demonstrate sustainable land and water management to help to adapt to the impacts of climate change and mitigating the effects of climate change through enhanced carbon storage. At the same time the project seeks to enhance the biodiversity of the area.

SECTION 6

Regional Sectors

The first sections of this strategy have identified the key aims and strategic objectives for the conservation of biodiversity in the Yorkshire and Humber region. The following pages consider the interaction of biodiversity with the full range of regional social and economic sectors. The key links between the various sectors are explored and the major issues and challenges defined. Key actions are identified by which the individual sectors can contribute towards the region's vision for biodiversity.

> A wildlife rich landscape resilient to climate change achieved through partnerships between the farming and biodiversity sectors.

Agriculture

WHAT ARE THE IMPORTANT LINKS BETWEEN AGRICULTURE AND BIODIVERSITY?

A healthy and sustainably-managed agricultural landscape can deliver high quality agricultural goods while still supporting biodiversity. A sustainably-managed agricultural landscape also provides a range of other ecosystem services, including the storage of carbon to mitigate against climate change, moderation and storage of the flow of water leading to reduction of flood peaks and natural filtration and treatment of pollutants.

A large proportion of our landscape is farmed and so its ability to aid the long-term survival of habitats and species is crucial. During the latter part of the twentieth century, the Common Agricultural Policy (CAP) focused solely on increasing food production. This led to the intensification of land management resulting in widespread degradation, fragmentation and loss of habitats and their associated species. More recently the CAP has placed a greater emphasis on rewarding farmers for the biodiversity they deliver, as well as for their traditional agricultural products.

The enhancement and promotion of the region's farmed landscape provides an opportunity for farm diversification which can boost rural communities, create jobs and open up the countryside to promote health and well-being.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

Over 70% of the region is in agricultural use, with around 16,000 holdings which range from extensive sheep farming on the upland moorland to intensive arable production on the high-quality agricultural soils of the lowland flood and coastal plains. It is estimated that 35% of main holdings in the region already have at least one source of on-farm income in addition to primary agriculture. Rising global populations and living standards, crop failures abroad and demand for alternative crops such as biofuels has led to increasing commodity prices and made agri-environment scheme payments less competitive; yet profitable farming enterprises and provision for wildlife are by no means mutually exclusive. It is crucial that land managers and conservationists work together to increase the ability of the farmed landscape to support both our common and widespread species, and our priority species and habitats in a way that is compatible with modern farming businesses. Integrating good environmental management across the farmed landscape will benefit both biodiversity and society in general, through the delivery of improved ecosystem services. There is a wide acceptance that the CAP should be further reformed to better reward the delivery of these services, and the Yorkshire and Humber region needs to engage in future debates to ensure that the region's unique issues are addressed.

WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• **Communicate more effectively with the farming community,** particularly with regards to the scale and loss of biodiversity from agricultural land use, and about the need to work in partnership to restore the region's biodiversity resource and the ecosystem services it supports.	Natural England, Defra, NFU, CLA, Environment Agency, Wildlife Trusts, LEAF, FWAG, RSPB
• Support farmers, through the provision of training and advice, to adopt **sustainable practices** to achieve recognised high standards and to participate in schemes and awards e.g. Linking Environment and Farming (LEAF), the Wildlife Trusts Biodiversity Benchmark and Natural England's Future of Farming Awards to maximise their contribution to sustaining high quality natural environments.	Natural England, Defra, RPA, NFU, CLA, Environment Agency, Wildlife Trusts, LEAF, FWAG, RSPB
• Identify and promote **demonstration sites and centres of excellence** throughout the region as examples of best practice for integrating farm management and biodiversity.	Natural England, NFU, RSPB, Wildlife Trusts, LEAF, FWAG
• Target resources, particularly environmental stewardship, to restoring and enhancing **priority habitats and species,** meeting the target to **halt biodiversity loss by 2010** and **halting the decline of farmland birds by 2020.**	Natural England, NFU, CLA, RPSB, BTO, Wildlife Trusts
• Work with the farming community and other land managers to implement habitat restoration to create **functional ecological networks** at the strategic regional level. Develop and deliver biodiversity at a landscape scale through effective partnerships between the farming and biodiversity sectors	Natural England, Environment Agency, RSPB, Wildlife Trusts, NFU, CLA, Local Authorities, Yorkshire Forward, Regional Planning Body
• Provide guidance for **sustainable biomass and biofuel production** in the region so that it avoids damage to priority habitats and species and actively delivers biodiversity benefits.	Yorkshire Forward, Natural England, Forestry Commission
• Support integrated rural development projects with biodiversity as a core component, for example **eco-tourism** initiatives, throughout the region that directly benefit local people and biodiversity.	Yorkshire Forward, Yorkshire Tourist Board
• **Develop partnerships between the farming community, education providers and statutory and voluntary conservation organisations** e.g. Farming and Countryside Education (FACE), to improve outdoor educational activities for all by facilitating field visits to farms, developing educational resources and using the expertise of environmental professionals to maximise educational opportunities.	Local education authorities, schools, colleges, voluntary conservation organisations, Natural England, other public bodies

> Biologically diverse, clean, healthy and productive oceans and seas, which also benefit human needs.

Coastal and Marine

WHAT ARE THE IMPORTANT LINKS BETWEEN COASTAL AND MARINE AREAS AND BIODIVERSITY?

Our coastal habitats, including cliffs, dunes, saltmarshes, mudflats and seas are rich in wildlife. Coastal habitats also provide a number of ecosystem services including a crucial role in flood defence which is currently challenged by climate change induced sea level rise resulting in increased coastal erosion. Coastlines, particularly estuaries, are often the focus of major development because of their important sea transport links. Coastal areas are also important for recreation and tourism and as a base for recreational and commercial sea fishing.

The marine environment has long been neglected with respect to the protection of biodiversity. In many areas the wildlife resource has suffered widespread degradation, fragmentation and loss of habitats due to a combination of pressures including fisheries, pollution, aggregate extraction and shipping. There are new pressures from climate change, invasive species and development of renewable energy facilities. The result is a coastal environment that has less biodiversity and a reduced resilience to increasing pressures than it should have. This situation has a direct impact on the ability of the region to derive economic and social benefits from our marine and coastal biodiversity. This is particularly evident in areas of coastal defence, wildlife related tourism and commercial and recreational sea fishing.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

Much of the Yorkshire coast and Humber Estuary is internationally or nationally important for its biodiversity, and the forthcoming Marine Act offers significant opportunities to enhance the biodiversity of the region's coastal and marine habitats. North of Bridlington the coast is characterised by headlands, cliffs and bays while, to the south, it is comprised of fast eroding, low clay cliffs and sand dunes as far as Spurn Head. The northern coast is important for its tourist appeal and biodiversity plays a key role in this, for example the amazing seabird spectacles at Flamborough Head and Bempton in the Spring. The Humber Estuary supports sand dunes, grazing marsh, saltmarsh and mudflats. Over the centuries it has lost the vast majority of its estuarine habitat and the remaining areas are under pressure from development and sea level rise. In addition to its status as an international biodiversity site the Humber Estuary is important for the economic prosperity of the region because of its major ports and transport links. The land adjacent to the estuary is subject to a high risk of flooding, but also supports significant population centres. Delivering economic aspirations and addressing the social issues while protecting and enhancing the estuary's biodiversity is one of the key challenges for the sustainable development of the region. In the Yorkshire and Humber marine environment all sectors will need to work in partnership to manage the cumulative pressures in a manner that provides opportunities for the protection, recovery and sustainable use of our seas.

WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• Include **provision for biodiversity** at an early stage in planning new developments associated with coastal or estuarine environments to ensure the best location and type of development are achieved.	Local planning authorities, Yorkshire Forward, businesses
• Develop a **strategic approach to coastal planning** that facilitates sustainable economic development while enhancing biodiversity.	Yorkshire Forward, local authorities
• Promote the value of all **ecosystem services** provided by coastal and marine habitats in relation to climate change, water quality management, flood risk, recreation, tourism and economic development. Highlight the cost benefits of functional coastal habitats in reducing flood risk and support further cost benefit analysis of ecosystem services in coastal situations.	Yorkshire Forward, Natural England, Environment Agency
• Continue to develop plans, e.g. Shoreline Management Plans and Integrated Coastal Zone Management Plans, that adopt a strategic approach and that **actively encourage and enable natural coastal processes**, including managed realignment.	Environment Agency, Natural England, local authorities
• Identify suitable **Marine Protection Areas** based on ecological and socio-economic data, ready for implementation through the forthcoming **Marine Act** including initiation of the North Sea Marine Conservation Zones Project.	Natural England, Yorkshire Forward, Regional Planning Body, local authorities
• Work with stakeholder to find the best approach to achieve 'good ecological status' as outlined the EU Marine Strategy Framework Directive (http://ec.europa.eu/environment/water/marine/index_en.htm)	Environment Agency, Natural England, Yorkshire Forward, Regional Planning Body, local authorities
• Develop a strong partnership approach to development of policy relating to **strategic planning in the marine environment** to deliver the forthcoming Marine Act.	Environment Agency, Natural England, Yorkshire Forward, Regional Planning Body, local authorities
• Building on the habitat connectivity study, **identify and deliver the creation of estuarine habitat** on the Humber which goes beyond the compensation of current and future losses to make the estuary more robust.	Natural England, conservation organisations
• **Maximise the ecological potential** of any proposed works as part of coastal open access proposals and use this to raise awareness of coastal and marine biodiversity.	Natural England, local authorities

> Capitalise on the benefits that biodiversity makes to the prosperity of the region by promoting the link between a high quality environment and economic success.

Economy

WHAT ARE THE IMPORTANT LINKS BETWEEN BUSINESS AND BIODIVERSITY?

All economic systems depend ultimately on healthy and functional ecosystems. The Stern Review sets out this relationship starkly... 'the overall costs and risks of climate change will be equivalent to losing 5% of global GDP each year, now and forever. If a wider range of risks and impacts is taken into account, the estimates of damage could rise to 20% or more.' Since writing this Stern has recognised that these figures are probably a significant under-estimate. So, economic success depends on the environment, and biodiversity is the bell-weather of environmental quality. Moreover, the conservation of biodiversity is a core principle in the achievement of sustainable development.

In addition, biodiversity-rich countryside and urban greenspace contribute to the achievement of a high quality of life in an area, making the region more attractive to inward investment. Natural habitats also provide valuable ecosystem services which have a direct bearing on regional economic performance. These include the storage of carbon to mitigate against climate change; moderation and storage of the flow of water leading to reduced flood risk; and natural filtration and treatment of pollutants. A biodiversity-rich environment provides opportunities for diversification into new enterprises including tourism and leisure.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

A 2002 Study by Yorkshire Forward and the Countryside Agency stated that 70,725 full time equivalent posts in Yorkshire and Humber Region depended directly on the quality of the environment, (for example public sector employees, environmentally beneficial agriculture, forestry, fisheries, tourism etc), or were directly involved in maintaining or improving the natural environment (recycling and waste management, pollution control, wastewater treatment, contaminated land remediation, environmental consulting, energy management, renewables, cleaner technology). At that time the 'environmental economy' was reckoned to generate 3% of regional GDP – £1.5bn out of £55.5bn.

The economy of the region is currently in transition, moving from a reliance on large-scale heavy industry, manufacturing, textiles and agriculture, to a more diverse knowledge-based economy fit for purpose in the new global market. Major economic investment is planned throughout the region, and the success of this investment will depend on it being underpinned by substantial improvements to key areas of the region's economic infrastructure, including green infrastructure.

Biodiversity contributes positively to the region's economy. It helps to attract millions of visitors from both the UK and around the world, and contributes to creating a high quality environment for living and working in.

It is vital that the region factors biodiversity related costs and benefits into investment decisions. To do this the region must develop a greater understanding of the value of biodiversity and the environment in general to the region's economy.

WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• Promote recognition that the region's rich biodiversity is a key factor in helping to **secure inward investment** into the region.	Yorkshire Forward
• Participate in and help develop mechanisms for dialogue between conservation organisations and business, such as Business in the Community, and help **identify region-wide biodiversity projects** where co-operation between conservation and business sectors would be beneficial.	Businesses, Natural England, Environment Agency, Forestry Commission, RSPB, Wildlife Trusts, Yorkshire Forward
• Integrate **provision for biodiversity** at an early stage in the planning of new developments (at any scale) to ensure the delivery of this strategy.	Local planning authorities, Yorkshire Forward, businesses
• Put in place processes/programmes to encourage businesses to adopt **sustainable practices** and achieve recognised standards (e.g. ISO14000 series Environmental Management Systems; Eco-Management Audit Scheme (EMAS); BREEAM industrial, offices or retail standards and the Wildlife Trusts Biodiversity Benchmark) in order to maximise the contribution of business to sustaining high quality natural environments. Plan for the **incorporation of existing, and the establishment of new, green infrastructure** areas in developments – this will include existing significant areas of private greenspace (including gardens), Public Open Space and biodiversity-rich land as part of the resource. This will ensure that the region's economy continues to benefit from the range of ecosystem services these areas provide.	Yorkshire Forward
• Provide **guidance on achieving sustainable development** to businesses on subjects such as Sustainable Urban Drainage Systems (SUDS), habitat enhancement and creation, green/living roofs and walls.	Local authorities, Yorkshire Forward, Regional Planning Body, Natural England
• **Support environmental businesses** which contribute to building the capacity for environmental enhancement in the region e.g. eco-tourism, landscape designers and architects, seed suppliers of native plants, installers of green roofs, air, water pollution control technology, organic farmers etc.	Local planning authorities, Environment Agency

“Every child in the region should have the opportunity to access outdoor learning.”

Education and Skills

WHAT ARE THE IMPORTANT LINKS BETWEEN EDUCATION AND SKILLS AND BIODIVERSITY?

Embedding learning about biodiversity in education and skills programmes across all age groups provides people with the knowledge to enable them to access and appreciate biodiversity-rich areas and achieve the associated benefits to health, well-being and quality of life. First hand experience of biodiversity in the outdoors provides an alternative learning experience to engage those children who do not normally thrive in the traditional classroom environment. As people learn about their local environment they are better equipped to recognise, value and take action for biodiversity leading to increased rates of volunteering and wider support to environmental organisations. Stimulating an interest in biodiversity will inspire the next generation to tackle the environmental challenges facing us all. Provision of skills training for the professional sector, along with increased adult learning will also help raise awareness and knowledge of the natural environment within the wider economic sector.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

The Yorkshire and Humber region has seen marked improvements in education and skills in recent years. However, there are still issues the region needs to tackle, such as relatively low GCSE results, and businesses still highlight skills gaps in the workforce that affect economic productivity. As is common with many parts of England, the region as a whole faces a major challenge both to increase access to natural greenspace and to increase interest in and appreciation of the natural environment.

WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• Meet the Natural England recommended standards for **Access to Natural Greenspace** (ANGSe) – that everyone should live no further than 300m from an accessible natural greenspace of at least 2ha.	Local authorities, Natural England
• Support the designation and use of **Local Nature Reserves**.	Natural England, local authorities
• Support the **Learning Outside the Classroom Manifesto** that every young person should experience the world beyond the classroom as an essential part of learning and personal development, whatever their age, ability or circumstances (www.teachernet.gov.uk/learningoutsidetheclassroom).	Local education authorities, schools, colleges, voluntary conservation organisations, Natural England, other public bodies
• **Develop partnerships between education providers and statutory and voluntary conservation organisations** to improve outdoor educational activities for all by facilitating field visits to nature reserves, developing educational resources, increasing volunteering opportunities in the local community and using the expertise of environmental professionals to maximise educational opportunities.	Local education authorities, schools, colleges, voluntary conservation organisations, Natural England, other public bodies
• Encourage the establishment of "**wildlife areas**" and the appropriate management of existing areas in all schools and colleges.	Local education authorities, schools, colleges, voluntary conservation organisations, Natural England, other public bodies
• New establishments to achieve **BREEAM schools** "very good" status as a minimum and schools to work towards achievement of at least **Eco-Schools** "silver award".	Local education authorities, schools, colleges

> Enhance the region's biodiversity by focusing attention on Ancient Woodlands and the habitat networks to which they contribute.

Forestry

WHAT ARE THE IMPORTANT LINKS BETWEEN FORESTRY AND BIODIVERSITY?

Woodlands are widely recognised as providing some of our richest wildlife habitats, particularly in relation to the region's Ancient Woodlands. In addition, their intrinsic value value for biodiversity, trees and woodlands also provide a cultural link between people and places as well as delivering a range of ecosystem services. Forestry provides timber, a carbon store and a source of renewable fuel. Woodland habitats are also helping to reduce flood risk through reducing rainfall run-off in catchments, slowing the passage of flood peaks as they pass downstream and reducing sediment erosion. Woodlands play an important cultural role in our society; providing a place for physical exercise, a restorative environment for mental well-being and educational opportunities associated with first-hand experience of biodiversity in the outdoors. Woodlands can also form part of a wider linked network of different habitat types at the landscape scale which helps the long-term survival of habitats and species. Key to maximising the delivery of this broad range of ecosystem services is sustainable management of the tree and woodland resource. This is enshrined within the UK Forestry Standard and its associated suite of management guidelines.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

Woodland covers approximately 5.8% of the region compared to the 8.4% in England overall. This relatively low area of woodland together with, in some places, a history of inappropriate planting and neglect has led to declines in some of the region's distinctive woodland wildlife. In 2005, timber production in the region stood at 270,000m^3 a year and there is growing interest in the use of forestry as a source of biomass for use as a renewable fuel. Although over a quarter of the region's woodland is classified as Ancient, over half of this has been replanted with non-native species. The Regional Spatial Strategy sets targets to increase the area of accessible woodland and increase the region's woodland resource by approximately 500ha per annum. The Regional Forestry Strategy sets targets to deliver the woodland element of the England Biodiversity Strategy and prioritises other biodiversity objectives such as management of Ancient and designated woodlands, and the creation and protection of functional woodland networks.

WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• Continue to support the **adoption of sustainable practices** in forestry and woodland management and promote the achievement of high standards through publicity and award schemes.	Forestry Commission, forestry sector
• Determine the **distribution and status of priority woodland habitats** and species within the region, and ensure that regional targets derived from the national woodland habitat and species action plans are met.	Forestry Commission, Natural England, local authorities
• Build on the work that is underway to map existing **functional ecological networks** to identify areas for potential woodland habitat restoration or creation to fill gaps in the network. Work with landowners, the forestry industry and others to implement these plans.	Forestry Commission, Natural England, Environment Agency, RSPB, Wildlife Trusts, local authorities, Yorkshire Forward, Regional Planning Body, private landowners
• Work with woodland owners, the forestry industry and others to undertake a condition assessment of all Ancient Woods within the region and draw up a **prioritised plan for their restoration**, focusing particularly on planted ancient woodland sites.	Forestry Commission
• Recognise the role of trees and woodlands in the **provision of green infrastructure and in the contribution they can make to meeting Access to Natural Greenspace** (ANGSe) standards through delivery of adopted targets for Accessible Woodland within the region.	Natural England, Forestry Commission, local authorities, private landowners
• Plan for the incorporation of native trees into an enhanced programme of **tree planting in the urban environment** to benefit from their positive effects on air quality and climate amelioration.	Local authorities, Forestry Commission, Natural England
• Provide **guidance for biomass production** in the region to ensure that it delivers biodiversity benefits alongside climate change mitigation.	Natural England, Forestry Commission

> Utilise the health and well being benefits of the natural environment.

Health

WHAT ARE THE IMPORTANT LINKS BETWEEN HEALTH AND BIODIVERSITY?

There is growing evidence that regular contact with the natural environment improves health and wellbeing, particularly for children, the elderly and those living in deprived areas. In particular it can help to prevent long- term conditions such as diabetes, heart disease, cancers and poor mental health. The research is supported by the recently released 'Healthy Weight, Healthy Lives: A Cross-Government Strategy for England' and the NICE public health guidance 8 'Promoting and creating built or natural environments that encourage and support physical activity'.

Children have less contact with the natural environment now than at any time in the past. Contact with nature can improve children's concentration and self-discipline, and playing in the natural environment improves children's social, mental and physical development. Children use the natural environment to recover from stress and are more active when outdoors and more motivated to exercise.

It can also provide secondary benefits to a local community by helping to support a good quality of life, thereby promoting the area as a good place to live and work, that will attract future investment. Green areas and urban trees in towns and cities also help to reduce air pollution and ameliorate the effects of high summer temperatures.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

Although the region is rich in biodiversity, many people do not have access to green space or the wildlife it supports. A large proportion of the region's population live in large urban conurbations where opportunities to have regular contact with the natural environment are limited.

Unhealthy weight gain and lack of physical activity among both adults and children are among the most significant public health challenges for the Yorkshire and Humber region. Within the region obesity is the second most important preventable cause of ill health and death after smoking. The region has the lowest physical activity participation rate of any English region and 52% of the population over 16 years of age do no moderately intensive physical activity. The Foresight report predicts that, based on current trends within England, the Yorkshire and Humber region will have the sharpest increase in obesity with 65% of women and 70% of men are likely to become obese by 2050 unless action is taken.

WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• **Maintain existing green infrastructure** and, through targeted outreach, connect the general public to it.	Local planning authorities, Yorkshire Forward, Natural England, Forestry Commission
• **Prioritise the establishment of new green infrastructure** in areas of high deprivation and poor health.	Local planning authorities, Natural England
• Meet the Natural England recommended standards for **Access to Natural Greenspace** (ANGSe) – e.g. that everyone should live no further than 300m from an accessible natural greenspace of at least 2ha.	Local planning authorities, Yorkshire Forward, Natural England
• **Implement the recommendations of NICE public health guidance 8** on physical activity and the environment.	Local authorities
• Investigate the potential for the contribution of existing and new green infrastructure e.g. waterways, to contribute to the development of **sustainable transport routes** which maximise the opportunities for walking and cycling.	Local authorities, Natural England, Sustrans
• Plan for the incorporation of **trees and green areas** into the urban environment to benefit from their positive effects on **air quality and climate**.	Local authorities, Forestry Commission, Natural England
• **Develop partnerships between the health sector and statutory and voluntary conservation organisations** to improve and deliver outdoor healthy activities for all, including: Walking the Way to Health; direct involvement in practical conservation activities e.g. Green Gym; Care Pathways to the Natural Environment for Sedentary Patients; Green Exercise Pilot.	Mental Health Trusts, Primary Care Trusts, GPs, Health Trainers, Government Office, local authorities, Local Strategic Partnerships
• Support research to **improve the evidence base regarding the health benefits of biodiversity** and share the information obtained with relevant organisations.	Natural England, NHS, Mental Health Trusts, Primary Care Trusts, universities, local authorities
• Encourage the establishment of "**wildlife areas**" and the appropriate management of existing areas in all hospitals.	Hospital Trusts, Natural England, local planning authorities, voluntary conservation organisations

> Create high quality natural environments in urban areas and ensure that new developments deliver substantial benefits both for people and the natural environment.

Housing

WHAT ARE THE IMPORTANT LINKS BETWEEN HOUSING AND BIODIVERSITY?

The development of towns and cities, and associated increase in population densities, can clearly be detrimental to biodiversity. Well sited and designed housing can, however, have positive benefits for biodiversity through the enhancement of existing habitats and the creation of new areas of biodiversity-rich greenspace. Housing with high quality design and suitable provision for biodiversity provides benefits for environmental quality, health, well-being and quality of life, thereby promoting the region as a good place to live and work and attracting future investment. In contrast, new housing developments that are poorly sited and designed can have negative impacts on biodiversity through direct damage or loss of habitats and species and secondary effects ranging from the impact of associated infrastructure including roads to the increasing demands placed on local resources such as water.

Inappropriate re-development of urban or brownfield sites already rich in biodiversity can also be damaging and it is important that these areas are recognised and protected. In many cases where there are long-established urban conurbations there is great potential to review and adapt existing residential areas to help biodiversity and/or ecosystem service provision, for example by enhancing the green belt for ecosystem services and developing community gardens.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

Significant increases in housing provision are proposed within the region, most of which will be in West and South Yorkshire, but with smaller increases are also proposed for Scarborough, Selby, York, Hull, North East Lincolnshire and North Lincolnshire. Various other areas have been identified as targets for urban renaissance. In addition, changes are also proposed in the policy on Green Belt around York and in West Yorkshire.

WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• **Influence the allocation** of areas for new housing developments to avoid direct impact on areas of high biodiversity value or where land is of potential value in the creation/expansion of ecological networks.	Natural England, Environment Agency, Regional Planning Body, Wildlife Trusts, local authorities
• Plan for the **incorporation of existing and the establishment of new green infrastructure** areas in housing developments – this will include existing significant areas of private greenspace (gardens), Public Open Space and biodiversity-rich land as part of the resource.	Natural England, local planning authorities, housing developers, Yorkshire Forward
• Meet the Natural England recommended standards for **Access to Natural Greenspace** (ANGSe) – e.g. that everyone should live no further than 300m from an accessible natural greenspace of at least 2ha.	Natural England, local planning authorities, housing developers, Yorkshire Forward
• Ensure that development and management of **Public Open Space maximises benefits to local communities** including: positive experiences of nature; increasing health, well-being and quality of life; improvement of property values and development of sense of place.	Local authorities, public authorities, voluntary conservation organisations
• **Secure long-term management and stewardship of greenspace** – plan for the long term in the planning and design stage, construction and on-going management/management plans. Avoid high on-going maintenance costs by incorporating ecologically self-sustaining landscapes. Secure long-term resources e.g. planning agreements, endowments, Land Trusts, service charging, Community Infrastructure Levy.	Local authorities and housing developers, voluntary conservation organisations
• Support opportunities for the **involvement of local communities** in the design and management of their local environments through, for example social enterprises or Land Trusts for Public Open Spaces around new developments. **Safeguard and enhance habitat networks** recognising their value to local people e.g. street trees and views of natural landscapes and waterways can increase property values by between 6 –18 % (Biodiversity by Design TCPA 2004).	Local authorities, Wildlife Trusts, voluntary conservation organisations
• **Support development of standards regarding building design** e.g. BREEAM Code for Sustainable Homes accreditation scheme.	Yorkshire Forward
• Incorporate **Sustainable Urban Drainage Systems (SUDS)** into housing development and develop protocols for their management.	Local planning authorities, housing developers, Environment Agency
• **Adapt building design to incorporate features for wildlife** – e.g. green/living roofs (as a condition for planning permission on all major flat roof development as in the London Plan and as a requirement for new medium and large scale buildings in Sheffield's draft LDF), bird and bat boxes.	Green roof centres, local authorities

> Maximise the benefits of current and future mineral extraction areas to contribute towards landscape-scale habitat creation.

Minerals

WHAT ARE THE IMPORTANT LINKS BETWEEN MINERALS AND BIODIVERSITY?

Minerals are valuable natural assets that underpin manufacturing industry, construction and agriculture. Due to the important links to the underlying geology, the location of sites for extraction can often coincide with areas of importance for biodiversity. The extraction of minerals can have adverse effects on the landscape, the natural and historic environment, and the quality of life of people living nearby. However, minerals extraction is a temporary land use and the reclamation and restoration of sites can present particular opportunities for biodiversity and people.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

Mineral extraction is an important component of the region's economy. The region has extensive reserves of minerals including sand and gravel in alluvial and glacial deposits, off-shore aggregates and hard rock including sandstone, limestone and chalk. There is also a legacy of subsidence from deep coal mines while deep mining of potash in the North East of the region can result in some off-shore settlement. Although mineral extraction has impacted on areas of high biodiversity and environmental importance in the past, tighter regulation has reduced this impact. In some parts of the region, restoration of mineral sites now represents a major opportunity for biodiversity as is already being demonstrated in, for example, the Swale and Ure washland areas.

WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• Develop regional guidance for **strategic planning of mineral extraction after use** to maximise biodiversity restoration potential, focusing effort on areas with high concentrations of minerals extraction.	Yorkshire Forward, mineral planning authorities, minerals industry, Natural England, RSPB, voluntary conservation organisations
• Maximise opportunities presented by mineral abstraction to contribute towards **strategic, large-scale habitat creation** ensuring linkages between minerals extraction and wider initiatives through Local Development Frameworks and local partnerships.	Mineral planning authorities, minerals industry, Natural England, voluntary conservation organisations
• Agree **regional targets for habitat expansion through mineral site restoration** building on the Nature After Minerals project.	YHBF, supported by Natural England, RSPB
• Secure **long-term management of restored sites** through available mechanisms such as planning conditions and agreements, Landfill Tax Credit Scheme, Aggregates Levy Sustainability Fund (ALSF) and Environmental Stewardship.	Mineral planning authorities, minerals industry, Landfill Tax Credit Scheme operators, Natural England (including ALSF and environmental stewardship)
• **Encourage best practice for biodiversity in mineral abstraction and after use** including the development of supplementary planning documents within Minerals Frameworks, the development of resources such as the Nature After Minerals Programme and use of accreditation schemes such as the e.g. ISO14000 series Environmental Management Systems, Eco-Management Audit Scheme (EMAS) and the Wildlife Trusts Biodiversity Benchmark as well as the production of Biodiversity Action Plans.	Mineral planning authorities, minerals industry, Wildlife Trusts, RSPB, Natural England
• Develop regional policy on the **protection of marine and coastal biodiversity and ecosystem services** from the adverse direct and indirect effects of off-shore mineral working by the development of improved spatial planning within the marine environment.	Yorkshire Forward, Defra, Natural England

“Promote and conserve the region’s high quality natural areas as tourist destinations.”

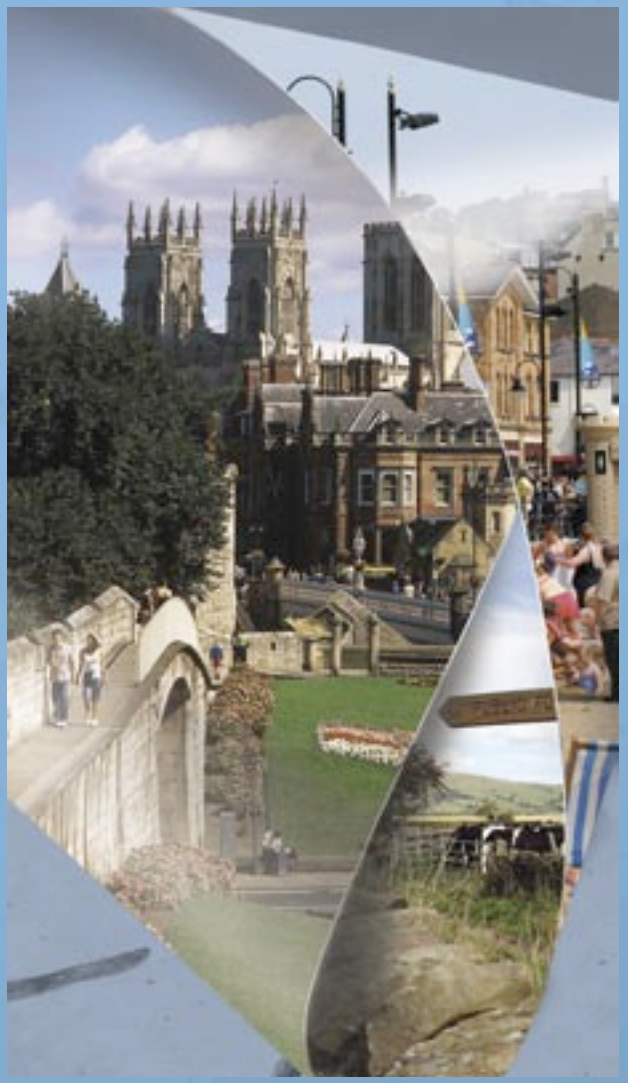
Tourism

WHAT ARE THE IMPORTANT LINKS BETWEEN TOURISM AND BIODIVERSITY?

Biodiversity-rich areas are attractive places for tourists to visit. The enhancement and promotion of the region’s best wildlife areas provides an opportunity to boost rural communities, create jobs and open up the countryside to promote health and well being. Sustainable tourism and ‘eco-tourism’ provide benefits both to tourists and the local economy while safeguarding sensitive habitats and species and raising public awareness of environmental issues. However not all current tourism is compatible with biodiversity and large-scale tourism does have the potential to damage the natural environment both directly, for example damage to wildlife habitats, and indirectly, for example through car emissions.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

Yorkshire and Humber region has extensive and varied natural resources which are attractive to visiting tourists. The tourism sector in the region depends heavily on the region’s areas of high environmental quality such as three National Parks, four AONBs, an extensive coastline and many smaller nature reserves and other areas rich in wildlife. It is estimated that the tourism sector is worth over £6bn to the region, nearly 6% of the regional economy, and it employs almost 190,000 people in more than 20,000 businesses. The draft Regional Visitor Economy Strategy envisages that over the next 5 years Yorkshire will grow the value of the visitor economy by 5% per annum.



WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• Commission a **comprehensive review of nature, and wider environmental based tourism** within the region to understand better how this increasingly important sector can be developed and supported, in accordance with the Convention on Biological Diversity Guidelines on Biodiversity and Tourism Development.	Yorkshire Forward, Yorkshire Tourist Board, Tourism Partnerships, Natural England, voluntary conservation organisations
• Ensure the **natural environment's contribution to the rural and tourism economies** is embedded within the Y&H Strategic Framework for the Visitor Economy.	Yorkshire Forward, Natural England
• Develop collaborative approaches with Yorkshire Tourist Board to highlight and promote **sustainable recreation on the region's nature reserves** and maximise public awareness of the natural environment. Encourage the use of environmental quality in regional promotional activities.	Local authorities, land owners, local tourism operators, Yorkshire Tourist Board, Tourism Partnerships
• Encourage tourism operators to adopt **sustainable practices** and achieve recognised standards e.g. ISO14000 series Environmental Management Systems, Eco-Management Audit Scheme (EMAS) and the Wildlife Trusts Biodiversity Benchmark to maximise their contribution to sustaining high quality natural environments.	Yorkshire Tourist Board, Tourism Partnerships, tourism operators, wildlife trusts
• Gather **evidence on the impact of tourism** on locally and nationally important biodiversity areas with a view to defining carrying capacities for sensitive sites.	Tourism operators, Yorkshire Tourist Board, Natural England, universities
• Support **eco-tourism** initiatives throughout the region that directly benefit local people and biodiversity.	Yorkshire Tourist Board, Yorkshire Forward
• Promote and support the development and improvement of public transport initiatives to leisure and tourist destinations.	Yorkshire Forward
• Investigate the potential for the contribution of existing and new green infrastructure e.g. waterways, to contribute to the development of **sustainable transport routes.**	Local authorities, Yorkshire Forward, Natural England
• Support and develop tourism opportunities in **coastal and maritime environments** to maximise opportunities for local economies to benefit from new areas of coastal access and to improve access to and interpretation of the marine environment.	Local authorities, land owners, local tourism operators, Yorkshire Tourist Board, Tourism Partnerships

> Ensure that protected areas become exemplars of sustainable transport networks.

Transport

WHAT ARE THE IMPORTANT LINKS BETWEEN TRANSPORT AND BIODIVERSITY?

Transport affects business success, the quality of life and the environment. Transport networks, comprising roads, railways, canals and other waterways, footpaths and bridleways, can with appropriate management, provide habitats for wildlife along watercourses, banks and verges that are an important part of wider ecological networks. The development and promotion of green corridors for car-free walking and cycling routes brings biodiversity into the urban landscape, while also providing access routes for people to local biodiversity and further out into the countryside, thus contributing to environmental quality, health, well-being and quality of life. Less well-planned development and management of transport infrastructure can have negative impacts on biodiversity through direct damage or loss of habitats and species and indirectly through disturbance, pollution (some types of which contribute to climate change), the fragmentation of habitat networks and corridors and the isolation of species populations.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

Yorkshire and Humber Region has higher than national average increases in traffic on roads and personal car use; more people are travelling further with fewer journeys made by public transport, cycling or walking. There are plans to promote airport expansion in the region, plus expansion of ports and waterways and surface access to them, and well as investment in new and upgraded transport infrastructure. All of these developments have the potential to impact either directly or indirectly on the region's environment and associated biodiversity, and contribute towards greenhouse gas emissions. A key regional challenge is to develop sustainable transport systems aimed at reducing reliance on private car transport while improving the investment in and accessibility of public transport.

WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• **Maximise contribution of new and existing transport routes' 'soft estate' (verges etc) to biodiversity**, environmental quality and health by careful design and appropriate planting (e.g. street trees reducing particulate pollution affecting people's health) and management.	Highways Agency, local authorities, Network Rail, British Waterways, Environment Agency
• Ensure **regional and local transport planning and plans for the management of major routes** incorporate a positive commitment to biodiversity and that there is integration of Route Management Strategies and Environmental Management Plans on major routes.	Local authorities, Yorkshire Forward, Natural England, Highways Agency, Railtrack
• Recognise the importance of existing linear transport-related features including canals, road corridors & railways and incorporate them into **green infrastructure plans**.	Local authorities, Yorkshire Forward, Natural England
• Investigate the potential for the contribution of existing and new green infrastructure e.g. waterways, to contribute to the development of **sustainable transport routes**.	Local authorities, Yorkshire Forward, Natural England
• Ensure that through early and thorough consultation and careful planning design, any **development of major infrastructure projects e.g. airports and ports, is sustainable** and has a positive effect on the biodiversity resource of the region.	Yorkshire Forward, port authorities, airport authorities, Natural England, Environment Agency, local planning authorities, Government Office, Network Rail, Highways Agency

> Create new and restore existing wetland/floodplain habitats to increase biodiversity and reduce flood risk.

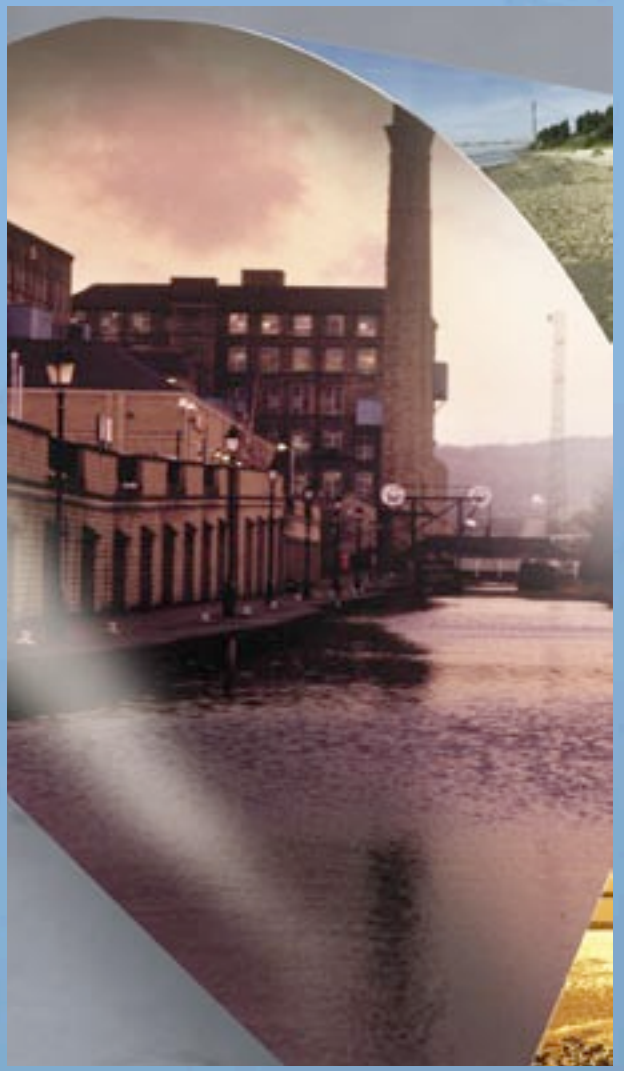
Water

WHAT ARE THE IMPORTANT LINKS BETWEEN WATER AND BIODIVERSITY?

Water is a critically important natural resource, vital to human life and the health of the environment. Sustainable water management should deliver adequate water resources, high water quality, effective flood risk management and opportunities to restore the natural environment and enhance biodiversity. Healthy water and wetland habitats, including blanket bog, rivers, wet woodland, floodplain meadows, fens and lakes, are areas rich in biodiversity and also provide ecosystem services. Services include the storage of carbon to mitigate against climate change, moderation and storage of the flow of water leading to reduction of flood peaks, and natural filtration and treatment of pollutants. However, impacts on water and wetland habitats such as the development of land in floodplains, poor water management planning in new developments, intensive agricultural land use, construction of flood barriers along rivers, drainage of upland areas, over-abstraction of water resources and point and diffuse pollution, has led to loss, damage and fragmentation of wetland areas. Damaged areas of water and wetland habitat have less biodiversity, which impoverishes our society and means they are less able to provide the essential and cost effective ecosystem services listed above. It is widely acknowledged that combating water management and water quality issues through end of pipe solutions is expensive and in many cases more energy intensive than tackling the causes of the problems at source through a long term whole-catchment approach to management.

KEY ISSUES FOR YORKSHIRE AND HUMBER REGION

In 2006 the Yorkshire and Humber Biodiversity Forum set out a Wetland Vision which includes a target of the creation of 1000ha of wetland habitat by 2015. This strategy aims to help deliver this target. Water and wetlands are particularly important in Yorkshire and Humber from the upland peatlands, to the river valleys and the extensive coastal floodplain. Smaller features such as ponds, lakes and fens are also important for biodiversity and form part of a wider ecological network with other habitat types. A sixth of the region lies within flood risk areas including the floodplain of the Humber and much of this land includes major existing and proposed development areas, significant industry, high-grade agricultural land and transport infrastructure. The first River Basin Management Plan (RBMP), a requirement of the Water Framework Directive (WFD), was published in December 2008. An assessment of the Humber basin found that 90% of rivers, 82% of groundwaters and 99.6% of transitional waters were at risk of failing to reach good status due to diffuse pollution. The RBMP will help deliver improved biodiversity across the region's rivers, lakes, coast and groundwaters by addressing issues which compromise the ecological quality of these water bodies.



WHAT DO WE NEED TO DO?	WHO NEEDS TO TAKE THE LEAD
• Promote the value of all **ecosystem services** provided by water and wetland habitats in relation to climate change, water resource management, flood risk, recreation, tourism and economic development. Highlight the cost benefits of functional wetland habitats in reducing flood risk and support further cost benefit analysis of ecosystem services.	Yorkshire Forward, Defra, Natural England, Environment Agency
• Support Local Planning Authorities in **protecting floodplains from unsuitable development,** and promote a strategic approach to assessing the cumulative effects of inappropriate development on the function of floodplains both in terms of flood alleviation and biodiversity value.	Environment Agency, Natural England, Regional Planning Body
• Maximise the contribution of **Catchment Flood Management Plans** to the restoration of floodplain wetlands (including the managed realignment of flood defences) to deliver better water management and enhance biodiversity. Integrate catchment flood management plans with wider spatial planning and the work of Internal Drainage Boards (IDB).	Environment Agency, Natural England, Yorkshire and Humber Assembly, local authorities, Yorkshire Forward, IDBs
• Use priorities for **large scale habitat restoration** identified by the Yorkshire & Humber Wetland Vision, the England Wetland Vision Project and the Yorkshire and Humber Wetland Feasibility Study to develop the funding of detailed, site-specific feasibility studies to take forward individual wetland restoration projects both in the uplands and lowland flood and coastal plains.	Natural England, Environment Agency, YHBF partners
• Incorporate **Sustainable Drainage Systems (SuDS)** into all new development and develop protocols for their management. Support the understanding and development of **sustainable agricultural drainage systems.**	Local planning authorities, developers, Environment Agency, IDBs
• Use available mechanisms such as the water company periodic review of prices and the England Catchment Sensitive Farming Delivery Initiative (ECSFDI) to reduce **diffuse pollution** in key catchments.	Natural England, Environment Agency
• Develop an effective programme of measures as part of **Water Framework Directive** delivery to bring additional benefits to the region's biodiversity, beyond current planned activity, and ensure that a suitable funding package is in place to deliver it.	Environment Agency
• Ensure opportunities are taken to **benefit biodiversity during planning for the water sector** in the region including schemes submitted under the PR09 process and water resource planning (including Catchment Abstraction Management Strategies, Drought Plans etc).	Environment Agency, Yorkshire Water
• Support the development of IDB biodiversity action plans and ensure these are properly integrated with LBAPs.	Environment Agency, Natural England

Annex 1

Biodiversity Audit of the Yorkshire and Humber Region – Lists of priority species and habitats in Yorkshire and the Humber

The 'Biodiversity Audit of Yorkshire and the Humber' produced in 1999 by the Yorkshire and Humber Biodiversity Forum was the first comprehensive review of wildlife and habitats in the region (http://www.yhbf.org). The audit utilised a range of datasets and experts to set a baseline on nationally important species and habitats. The audit details the UK priority habitats and species present in the Yorkshire and Humber region and provides information on their status in relation to the national resource, the threats that may affect their future, and any available information on trends in population sizes or changes in habitat areas. A subsequent report 'Yorkshire and the Humber Biodiversity Audit: Species and Habitats of Regional Importance' was produced in 2003, which provided lists of habitats and species considered to be of regional importance. Both these reports identified the need for regular reviews of the two audits.

Regional Species Data Audit (2008)

As part of the Yorkshire and Humber Environmental Data Network project (http://www.yhedn.org.uk) a system has been put in place for updating the regional species audit data annually from both Local Record Centre and NBN Gateway (http://data.nbn.org.uk) species datasets. This will form part of a wider system feeding back to LBAP partnerships and naturalist societies encouraging these groups to provide records and to target their survey work or land-management activities. The outputs of the analysis show the coverage of UK BAP species for which there are positive records and where LBAP species lists are available these can also be included.

At the time of writing this analysis has been carried out for the North Yorkshire Districts and the unitary authorities of York, East Riding of Yorkshire, Kingston upon Hull, North Lincolnshire and North East Lincolnshire. Since the YHEDN network has not yet been formally established, we are currently working to establish appropriate agreements with West Yorkshire and South Yorkshire record centres so that we can include their data in the audit process.

The process is carried out online and draws from data supplied by North and East Yorkshire Ecological Data Centre (NEYEDC), Lincolnshire Biodiversity Partnership (LBP), Humber Environmental Data Centre (HEDC) and data made available to the public by contributors to the NBN Gateway. This includes the Biological Records Centre, the Environment Agency and many of the National Recording Schemes and Societies.

The process is repeated annually before the start of the survey season and will be provided to LBAP partnerships and naturalist societies. This means that we can target work during the survey season to generate data in order to inform the next iteration of the process.

This audit process could be further refined by determining the coverage in terms of available habitat (for habitat tied species) in order to give a percentage of the maximum potential distribution. The main obstruction to this is the licensing of the habitat analysis data which is currently prohibitively expensive.

Further Information

The audit data and further single species analysis is available online (to registered users) through the NEYEDC website (http://www.neyedc.org.uk). If you would like access to this data please contact the YHEDN project officer Dan Jones (dan.jones@humber-edc.org.uk).

Live single species data shows the local distribution mapped according to the currency of the available records. In combination with feeding back to the naturalist societies and LBAP partnerships, this can be used to demonstrate where a species is locally in decline or colonising a new area. The single species analysis also shows the national distribution in order to assess the local significance of the species and a phenology analysis of the data from the last year.

Annex 2

Regional Spatial Strategy habitat and floodplain enhancement areas (see figure 3, page 17, 'habitat enhancement areas')

Type	Biodiversity Characteristics	Policy Development	Policy Implementation
Type 1	Within type1 areas UK BAP priority habitats dominate the landscape. The region's core biodiversity resource, often of international significance, is in this zone.	Policy should recognise, and seek to maintain and restore the biodiversity resource.	Decisions should ensure the maintenance, and wherever possible restore the integrity of the biodiversity resource.
Type 2	Within type 2 areas UK BAP priority habitats are less extensive than above, but to some extent they still form a functioning network across the landscape.	Policy should recognise biodiversity networks and seek to strengthen their integrity by expanding patches of high quality habitat, and enhancing links between them. Opportunities for strategic habitat restoration should be sought.	Decisions should seek to expand and enhance networks and should seek opportunities to strengthen them, by contributing to the strategic restoration of habitats.
Type 3	Within type 3 areas UK BAP priority habitats are restricted to isolated sites, separated by large areas of intensively managed farmed and/or urban areas.	Policy should recognise and protect isolated biodiversity features and encourage their expansion.	Decisions should protect isolated biodiversity features and should seek opportunities to expand and buffer them, thereby providing protection from external impacts.
Type 4	Within type 4 areas UK BAP priority habitats are largely absent.	Policy should encourage recreation and restoration of multi-functional semi-natural habitats.	Decisions should accommodate and allow for restoration of multi-functional semi-natural habitats.
Coastal Estuary	The region's coastline and estuaries are of international importance for species and habitats.	Policy should recognise and enable natural processes to be sustained and the resulting changes to the coastline managed.	Decisions should ensure the maintenance of natural processes is sustained to maintain the integrity of the biodiversity resource.

Annex 3

Indicative Regional Biodiversity targets for Yorkshire & the Humber

Table summarising regional disaggregation of national HAP targets proposed in the England Biodiversity Group paper 'Biodiversity Targets by Government region' (Gavin Measures, 2007)

Priority Habitat	England target	Target type	England target / value date	Expected YH Contribution
Native Woodland	Restore 36,000 ha of non-native plantations on ancient woodland sites (PAWS) to native woodland in England by 2015.	Restoration	36,000 ha by **2015**	3,780 ha
Native Woodland	Expand the current native woodland resouce in England by 53,000 ha by 2015.	Expansion	53,000 ha by **2015**	7,154 ha
Wood-pasture and parkland	Restore areas of derelict wood-pasture and parkland to favourable condition at 400 sites by 2015.	Restoration	400 sites by **2015**	40 sites
Wood-pasture and parkland	Expand the area of wood-pasture and parkland, in appropriate areas, to help reverse fragmentation and reduce the generation gap between veteran trees at 120 sites by 2015.	Expansion	120 sites by **2015**	12 sites
Lowland meadows	Restore 481 ha of lowland meadow from semi-improved or neglected grassland by 2015.	Restoration	481 ha by **2015**	40 ha
Lowland meadows	Re-establish 256 ha of grassland of wildlife value from arable or improved grassland by 2015.	Expansion	256 ha by **2015**	35 ha
Upland hay meadows	Restore 48 ha of upland hay meadow from semi-improved or neglected grassland by 2015.	Restoration	48 ha by **2015**	-
Upland hay meadows	Re-establish 72 ha of grassland of wildlife value from arable or improved grassland by 2015.	Expansion	72 ha by **2015**	22 ha
Lowland dry acid grassland	Restore 285 ha of lowland dry acid grassland from semi-improved or neglected grassland by 2015.	Restoration	285 ha by **2015**	23 ha
Lowland dry acid grassland	Re-establish 276 ha of grassland of wildlife value from arable or improved grassland by 2015.	Expansion	276 ha by **2015**	15 ha

Priority Habitat	England target	Target type	England target / value date	Expected YH Contribution
Lowland calcerous grassland	Restore 726 ha of lowland calcareous grassland from semi-improved or neglected grassland by 2015.	Restoration	726 ha by 2015	50 ha
Lowland calcerous grassland	Re-establish 8,426 ha of grassland of wildlife value from arable or improved grassland by 2015.	Expansion	8,426 ha by 2015	450 ha
Purple moor-grass and rush pasture	Restore 128 ha of purple moor-grass and rush pasture from semi-improved or neglected grassland by 2015.	Restoration	128 ha by 2015	15 ha
Purple moor-grass and rush pasture	Re-establish 151 ha of grassland of wildlife value from arable or improved grassland by 2015.	Expansion	151 ha by 2015	15 ha
Lowland heathland	Increase the extent of lowland heathland by 6,100 ha by 2015.	Expansion	6,100 ha by 2015	180 ha
Eutrophic standing waters	Maintain the condition of all eutrophic standing waters of known conservation importance currently judged in good condition (Tier 1).	Achieve condition	131 sites by 2015	6 sites
Eutrophic standing waters	Improve the condition of 200 eutrophic standing waters of conservation importance that have been damaged by human activity (Tier 2) by 2015.	Achieve condition	200 sites by 2015	7 sites
Eutrophic standing waters	Prevent further deterioration in condition of the remaining eutrophic standing waters (Tier 2/3).	Achieve condition	3,586 sites by 2015	351 sites
Mesotrophic lakes	Maintain the condition of all mesotrophic lakes of known conservation importance currently judged in good condition (Tier 1).	Achieve condition	21 sites by 2015	-
Mesotrophic lakes	Improve the condition of 56 mesotrophic lakes of conservation importance that have been damaged by human activity (Tier 2) by 2015.	Achieve condition	56 sites by 2015	5 sites

Priority Habitat	England target	Target type	England target / value date	Expected YH Contribution
Mesotrophic lakes	Prevent further deterioration in condition of the remaining mesotrophic lakes (Tier 2/3).	Achieve condition	567 sites by 2015	79 sites
Lowland raised bog	Restore lowland raised bog immediately or via succession from fen on chosen areas of archaic peat to ensure a sustainable hydrological regime for adjacent extant habitat.	Restoration	1,000 ha by 2015	100 ha
Fens	Initiate by 2015, the restoration of 1,500 ha of former fen habitat across England.	Restoration	1,500 ha by 2015	105 ha
Reedbeds	Continue creating reedbed from land of low nature conservation interest with the objective of expanding the reedbed resource in England by 1,900 ha by 2015.	Expansion	1,900 ha by 2015	130 ha
Coastal and floodplain grazing marsh	Restore and improve 7,500 ha of relict C&FPGM habitat by 2015 (e.g. dry C&FPGM with inappropriate hydrological regime, agriculturally improved sites).	Restoration	7,500 ha by 2015	800 ha
Coastal and floodplain grazing marsh	Re-establish 1,250 ha of C&FPGM of wildlife value from appropriate land sources (e.g. arable land) by 2015.	Expansion	1,250 ha by 2015	200 ha
Coastal sand dunes	Restore sand dune habitat lost or severely degraded as a result of to afforestation, agriculture and infrastructure. A target figure of 200 ha (minimum) to be reinstated to dune habitat by 2015.	Restoration	200 ha by 2015	_
Coastal vegetated shingle	At two key locations initiate restoration of shingle communities on arable land over shingle deposits by 2015.	Restoration	2 sites by 2015	_
Maritime cliff and slope	Increase the extent of maritime cliff unaffected by coastal engineering/ coastal protection by a further 25km by 2020.	Restoration	10km by 2015 25km by 2020	2 km
Maritime cliff and slope	Increase the area of cliff-top semi-natural habitats by at least 200 ha (minimum) by 2015.	Expansion	200 ha by 2015 300 ha by 2020	25 ha

Priority Habitat	England target	Target type	England target / value date	Expected YH Contribution
Saline lagoons	Create, by the year 2015, 100 ha of saline lagoon to offset estimated historical losses.	Expansion	100 ha by 2015	10 ha
Limestone pavement	Ensure there is no further deterioration in the quality of the geodiversity/biodiversity interest of limestone pavement by 2015.	Achieve condition	2,600 ha by 2015	1,359 ha
Limestone pavement	In key locations, where limestone pavement is degraded initiate projects to restore the biodiversity value of the habitat by 2015.	Restoration	4 sites by 2015	2 sites
Upland calcareous grassland	A total of 8,500 ha of upland calcareous grassland within SSSIs, to be in favourable or unfavourable recovering condition by 2015.	Achieve condition	8,507 ha by 2015	5,602 ha
Upland calcareous grassland	Achieve a measurable increase in the extent of upland calcareous grassland resource outside SSSIs in good or recovering condition by 2015.	Achieve condition	Target values still to be set by HAP Group	Yes
Upland heathland	A total of 179.9 kha of upland heathland within SSSIs, to be in favourable or unfavourable recovering condition by 2015.	Achieve condition	179,900 ha by 2015	78,531 ha
Upland heathland	Achieve a measurable increase in the extent of upland heathland resource outside SSSIs in good or recovering condition by 2015.	Achieve condition	Target values still to be set by HAP Group	Yes
Blanket bog	A total of 176.1 kha of blanket bog within SSSIs, to be in favourable or unfavourable recovering condition by 2015.	Achieve condition	176,100 ha by 2015	46,956 ha
Blanket bog	Achieve a measurable increase in the extent of blanket bog resource outside SSSIs in good or recovering condition by 2015.	Achieve condition	Target values still to be set by HAP Group	Yes

Target Types:
Achieving condition – maintain and/or improve the condition of existing BAP habitat
Restoration – improve the condition of relict or degraded habitat
Expansion – increase the extent of BAP habitat

Annex 4

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Annex 5

Glossary

AONB	Area of Outstanding Natural Beauty
ANGSt	Access to Natural Greenspace Standards
BAP	Biodiversity Action Plan
BARS	Biodiversity Action Reporting System
BTO	British Trust for Ornithology
CLA	Country Land and Business Association
CRoW	Countryside and Rights of Way Act
Defra	Department for Environment, Food and Rural Affairs
EA	Ecosystems Approach
EA	Environment Agency
EBS	England Biodiversity Strategy
EU	European Union
FC	Forestry Commission
FWAG	Farming and Wildlife Advisory Group
HAP	Habitat Action Plan
LBAPs	Local Biodiversity Action Plans
LDF	Local Development Framework
LEAF	Linking Environment and Farming
LRCs	Local Records Centres
LSPs	Local Strategic Partnerships
MEA	Millennium Ecosystem Assessment
NE	Natural England
NERC	Natural Environment and Rural Communities Act
NFU	National Farmers Union
NI188	National Indicator Adapting to Climate Change
NI189	National Indicator Flood and Coastal Erosion
NI197	National Indicator on Local Wildlife Sites
PPS	Planning Policy Statement
PR09	Periodic review of water company price limts
PSA	Public Service Agreement
RDB	Red Data Book
RSPB	Royal Society for the Protection of Birds
RSS	Regional Spatial Strategy
SAC	Special Area for Conservation
SAP	Species Action Plan
SINCS	Site of importance for nature conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SUDS	Sustainable Urban Drainage Systems
UKBAP	UK Biodiversity Action Plan
YHBF	Yorkshire and Humber Biodiversity Forum
YHEDN	Yorkshire and Humber Environmental Data Network

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