



# State of the natural environment in Yorkshire and the Humber:

your role in its future

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Natural England has been charged with the responsibility to ensure that England's unique natural environment including its land, flora and fauna, freshwater and marine environments, geology and soils are protected and improved. We also have the responsibility to help people enjoy, understand and access the natural environment.

# Foreword

This report shows how the natural environment can make a real difference to all our lives, and addresses issues where the region's environment needs the support of more than its traditional champions. Some of these issues will be familiar to you – climate change and landscape conservation for instance – but others such as Green Infrastructure, marine conservation, less so. All are pivotal to the region's success in the future.

The report demonstrates the relevance and importance of the natural environment to wider social and economic agendas. Our natural environment provides vital services to us all, such as the carbon storage and flood control functions of our peatlands and the natural health service benefits of urban green space. By investing in, and expanding, the environmental capacity of the region we can increase the social and environmental capacity for economic growth in genuinely sustainable ways.

On the wider stage, new challenges are presented by the review of the region's governance structures; the development of an Integrated Regional Strategy; and the ever increasing urgency of reconciling the demands of housing, energy, food production and water supply whilst improving social wellbeing. We must make the most of these opportunities to marry up our social and

economic needs with those of the natural environment so we can come that much closer to delivering truly integrated and sustainable development, and it is this agenda which this report seeks to address.

This year marks the 60th anniversary of the National Parks and Access to the Countryside Act, the landmark legislation for the conservation and enhancement of our landscapes and wildlife. With your help, we aim to take this forward, ensuring that our natural environment is safeguarded for the next 60 years, resilient in the face of change.



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Peter Nottage  
Regional Director

# Introduction

Conserving and enhancing the region's natural environment is the primary concern of Natural England. Both nationally and regionally, our work in delivering this purpose is organised around four outcomes:

- **A healthy natural environment** – our natural environment will be conserved and enhanced.
- **Enjoyment of the natural environment** – more people enjoying, understanding and acting to improve the natural environment more often.
- **Sustainable use of the natural environment** – the use and management of the natural environment is more sustainable.
- **A secure environmental future** – decisions which collectively secure the future of the natural environment.

Natural England, through the Environmental Stewardship Scheme, currently invests over £42 million in the region's economy. Currently 89% of the region's Site of Special Scientific Interest land is under management which protects or will secure their special interest. Our target is to reach 95% by 2010.

These agreements help halt biodiversity decline and promote recovery; protect geological and historic features; enhance public access; and help secure wider environmental assets such as water quality and soil resources.

The first part of this report addresses five key themes for the natural environment in Yorkshire and the Humber: Green Infrastructure; climate change adaptation; health and the environment; Landscape conservation; and marine conservation.

The second part of the report provides contextual evidence on the state of the region's natural environment, drawn from data sets within Natural England's recently produced *State of the Natural Environment 2008* report.

([www.naturalengland.org.uk/publications](http://www.naturalengland.org.uk/publications)).

The character of and threats to this region's natural environment are widely appreciated and are discussed in many regional documents, an excellent recent addition being the Regional Biodiversity Strategy. Our report sets out what Natural England believes can and should be done and by whom, and it provides evidence and illustration to support these actions.



# Climate change adaptation for the natural environment

It is generally accepted that our climate is changing as a result of increased greenhouse gas emissions from human activity. We are all beginning to wake up to the necessity of both reducing emissions (mitigation), and taking action to avoid the worst consequences of unavoidable climate change (adaptation). We must similarly take action for the region's natural environment, impacted as it is by so many socio-economic pressures. It is essential we increase the robustness of our natural environment and give it the space it needs to adapt to the pressures of significant climate change.

## The reason why

Taking action to help the region's natural environment adapt to climate change is essential because:

- Historical and current greenhouse gas emissions mean the next 50 years of climate change are already 'locked-in', so adaptation is vital<sup>1</sup>.
- Our landscapes and their component habitats are important regulators of damaging climate change and weather-related events such as species invasion, riparian and surface water flooding, extreme heat, drought, high winds and storm surges. They also help protect key resources such as soils and water. However climate change will seriously affect our ability to maintain our best wildlife habitats in good condition.
- The region has large stores of carbon locked-up in its peat soils. These are at risk of releasing this carbon if soils dry out<sup>2</sup>.
- A great deal of our agricultural production still depends on wildlife (eg insect pollinators), as do virtually all of our marine fisheries.
- Our habitats and wildlife are likely to come under increased pressure, as demands for food production, biofuel production and energy generation (alongside more traditional infrastructure demands) increase.
- Many of our highest quality habitats are deeply fragmented and isolated – this makes it difficult for wildlife to move in response to climate change. Additionally we may well need to provide space for species and habitats which are losing ground further south.
- The tidal surge on the east coast of England in November 2007 caused widespread inundation of freshwater habitat by salt water, and not all such areas will return to their former freshwater state. Major disruption to the footpath network on the east coast also occurred, some of it resulting in long-term loss of access.

<sup>1</sup>Houghton J.T. Meira Filho L.G. Griggs D.J. Nougier M. (Eds) 1997 Implications of Proposed carbon dioxide Emissions Limitations, IPCC Technical Paper IV.  
<sup>2</sup>Worrall F. Carbon Storage in peatlands – how do we realise the potential. University of Durham.

## What Natural England will do in the region

Natural England's work both nationally and regionally is heavily influenced by the climate change adaptation agenda. In addition to contributing to national work on a framework for assessing climate change resilience of Sites of Special Scientific Interest and the development of evidence on the contribution land and marine managers can make to climate change mitigation and adaptation, we will:

- Develop an Adaptation Strategy for the natural environment for one of our region's National Character Areas.
- Work with regional partners to implement the region's Climate Change Action Plan and lobby for action to take forward the findings of the region's Climate Change Adaptation Study.
- Bring significant areas of land into positive environmental management through the Environmental Stewardship Scheme, and within this get 95% of SSSI in favourable or recovering condition by 2010.
- Support the development of the region's Ecological Data Network.
- Develop our marine conservation, Green Infrastructure, and environment & health agendas.
- Work with the regional planning body on the development of the Regional Spatial Strategy Biodiversity Implementation Plan.
- Natural England will work to become an exemplar in emission reduction and low carbon operation.
- Promote the principle of managed realignment as frequently the most appropriate response to coastal squeeze.
- Engage with the development of any regional carbon trading scheme.

Humber Bridge

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## Our challenge to you

### **If you are a politician:**

- Develop your understanding of the threats from climate change, and the role that the environment can play in ameliorating those threats.
- Engage with the need to find long-term, sustainable solutions.

### **If you work for a local authority:**

- Work to the principle of sustainable adaptation, namely that: action taken in one place or sector neither limits the capacity of other areas or natural and man-made systems to successfully adapt, nor itself contributes to the causes of climate change.
- Take decisions, and make policy, which anticipate climate change and provide for the adaptation of the natural environment.
- Help us to develop an understanding of environmental capacity. Use this to inform decisions on future development at policy and case level.
- Get more out of your Green Belt – develop its role in climate change adaptation.
- Provide multi-functional Green Infrastructure as an integral part of all new development – this can both considerably enhance the quality of development and provide climate change adaptation capacity for both people and biodiversity.

### **If you work in the private sector:**

- Consider participating in the Business in the Community 'May Day Network'.
- Seek to provide multi-functional Green Infrastructure as an integral part of all new development – this can both considerably enhance the quality of development and provide climate change adaptation capacity for both people and biodiversity.

### **If you are involved in regional strategic planning and decision making:**

- Work to the principle of sustainable adaptation, namely that: action taken in one place or sector does not limit the capacity of other areas or natural and man-made systems to successfully adapt.
- Take decisions, and make policy, which anticipate climate change and provide for the adaptation of the natural environment.
- Engage with efforts to develop a proper valuation of natural assets, including the ecosystem services they provide.
- Use the region's Climate Change Adaptation Study as the starting point for an integrated framework and adaptation programme for cross-sector action on climate change, with adaptation of and for the natural environment an underpinning element.
- Get more out of the region's Green Belt – develop its role in climate change adaptation.

### **If you work in a government agency:**

- Ensure that your policies, programmes and projects are supportive of and compatible with climate change adaptation.
- Develop inter-agency partnerships to deliver wider benefits.

### **If you have a role in the management of land:**

- Help us to develop an integrated and robust network of habitats functioning across the landscape to conserve wildlife and protect people.
- Adopt the following principles in seeking to provide adaptive capacity for the natural environment:
  - Conserve existing biodiversity;
  - Reduce sources of harm not linked to climate;
  - Develop ecologically resilient and varied landscapes;
  - Establish ecological networks through habitat protection, restoration and creation;
  - Make sound decisions based on analysis; and
  - Integrate adaptation and mitigation measures into conservation management, planning and practice.

### **Climate change adaptation and the natural environment: facts and figures**

- **Warming has been unprecedented in at least the last 50 years, and the 17 warmest years have all occurred in the last 20 years** ([www.metoffice.gov.uk](http://www.metoffice.gov.uk))
- **“Of the 32 species in this report, 29 are projected to see significant shifts in suitable climate space.”** (Walmsley, C.A. Smithers, R.J., Berry, P.M., Harley, M, Stevenson, M.J. Catchpole, R. (Eds.). 2007. MONARCH – Modelling Natural Resource Responses to Climate Change – a synthesis for biodiversity conservation. UKCIP, Oxford.)
- **“For the three species (out of the four studied) affected by climate, range boundaries retracted 70–100 km northwards (mountain argus, Scotch argus) and 130–150 m uphill (mountain ringlet) in the sample of sites analysed.”** (Franco A.M.A. Hill J.K. Kitschke C. Collingham Y.C. Roy D.B. Fox R. Huntley B. Thomas C.D. 2006 Impacts of climate warming and habitat loss on extinctions at species' low-latitude range boundaries. *Global Change Biology*, 12. 1545-1553)
- **The best available information suggests that saltmarshes in the UK are being lost to erosion at a rate of 100 hectares per year.** (UK Biodiversity Action Plan).
- **400: The number of crop species globally that are pollinated by bees.** (Southwick, 1992; Buchmann and Nabhan, 1996 in IPCC Third Assessment Report: Climate Change 2001).
- **90%: The possible global crop loss in the absence of bees.** (Ref: As above)



# Green Infrastructure

Green Infrastructure: the essential green assets that, often unrecognised, contribute so much to our personal, socio-economic and environmental wellbeing – from street trees to urban woods; gardens to allotments; informal green space to public parks; and cycle paths to road verges.

## The reason why

The development and delivery of planned Green Infrastructure networks across the region is vital because:

- Green Infrastructure will be a key asset in adaptation to climate change, providing protection from flooding and climatic extremes<sup>1</sup>.
- Green Infrastructure provides opportunity for healthy, outdoor recreation and thereby improves physical and mental wellbeing<sup>2</sup>.
- Green Infrastructure can make significant contributions to protecting and enhancing local biodiversity<sup>3</sup>.
- Green Infrastructure networks will be a vital part of the re-establishment of more robust ecological networks<sup>4</sup>.
- Green Infrastructure development can raise the image, value and investment potential of regeneration and enterprise areas and enable more sustainable and healthy lifestyles<sup>5</sup>.

## What Natural England will do in the region

Green Infrastructure is a national and regional advocacy priority for Natural England. We will:

- Work with our partners to ensure that there is adequate Green Infrastructure throughout the region.
- Work to achieve local authority support for Green Infrastructure via Local Strategic Partnerships, Local Area Agreements and Local Development Frameworks (LDF).
- Influence local authorities and developers to incorporate Green Infrastructure into eco-towns and growth points.
- Develop a major project in the Aire Valley.
- Deliver advice to local authorities on the application of Regional Spatial Strategy (RSS) Green Infrastructure policy.
- Provide Access to Natural Greenspace Standards (ANGSt) mapping to all local authorities across the region.

<sup>1</sup>Evans, E., Ashley, R., Hall, J., Penning-Rowsell, E., Saul, A., Sayers, P., Thorne, C. and Watkinson, A. (2004) Foresight. Future Flooding. Scientific Summary: Volume I Future risks and their drivers. Office of Science and Technology, London

<sup>2</sup>Fjortoft, I & Sageie, J 2000. The natural environment as a playground for children. Landscape and Urban Planning Vol 48, 83-97.

<sup>3</sup>Smith, R. Gaston, K. Warren, P. Thompson K. 2004 Biodiversity in Urban Gardens in Sheffield, Newsletter No.3.

<sup>4</sup>Yorkshire and Humber Biodiversity Forum. 2009. Yorkshire and Humber Biodiversity Strategy.

<sup>5</sup>Roberts, P. 2006. Environmental Quality and Sustainable Communities. Creating a Setting for Investment 2006 Conference 'Making Places Profitable'.

## Our challenge to you

### **If you are a politician:**

- Recognise the benefits, particularly economic, of Green Infrastructure.
- Support links between the national curriculum and the provision of local outdoor space as a place to learn.
- Encourage greater emphasis on, and use of, local green space with Primary Care Trusts as a preventative health care measure.
- Support Green Infrastructure provision to help deal with the impacts of climate change (eg flooding).

### **If you work for a local authority:**

- Recognise the benefits of Green Infrastructure for your area.
- Make sure your LDF fully integrates the RSS Green Infrastructure policy.
- Use your Green Infrastructure plan to integrate green space strategies, local transport plans and the use and management of your own landholdings.
- Identify delivery and funding mechanisms for the improvement, creation and future management of Green Infrastructure.
- Encourage the incorporation of Accessible Natural Greenspace Standards (ANGSt) in plans and strategies.
- Identify suitable sites for new Local Nature Reserves.
- Maintain adequate Green Infrastructure data to inform decision making.

### **If you are involved in regional strategic planning and decision making:**

- Ensure the RSS Green Infrastructure policy is implemented and monitored.
- Ensure Green Infrastructure is a key component of the Single Regional Strategy.
- Ensure new housing requirements are met with Green Infrastructure embedded.
- Help local authority partners understand what is required of them.
- Ensure Green Infrastructure is part of wider integrated infrastructure plans.

### **If you work in a government agency:**

- Review internal policy documents to include Green Infrastructure policy.
- Use area-based working to align policy and management with local needs.
- Develop inter-agency partnerships to deliver wider benefits.

### **If you work for a NGO:**

- Get involved in localised Green Infrastructure delivery and policy making.
- Promote education and training for Green Infrastructure use and management.

### **If you are a developer:**

- Incorporate Green Infrastructure into regeneration and development proposals.
- Work to Accessible Natural Greenspace Standards (ANGSt) targets.
- Integrate sustainable transport links into the development proposals.

### **Green Infrastructure: facts and figures**

- **\$1.37-\$3.09. The annual benefit from every dollar invested in tree management across five cities in the USA.** (McPherson, G. Simpson, J.R. Peper, P.J. Maco, S.E. Xiao, Q. 2005. Municipal Forest Benefits and Costs in five US Cities. Journal of Forestry)
- **£1-10 Billion. The cost of urban flooding by 2080 if no mitigation action taken – the causes: more buildings covering permeable ground, increases in paving, climate change, ageing drainage infrastructure.** (Evans, E., Ashley, R., Hall, J., Penning-Rowsell, E., Saul, A., Sayers, P., Thorne, C. and Watkinson, A. (2004) Foresight. Future Flooding. Scientific Summary: Volume I Future risks and their drivers. Office of Science and Technology, London)
- **91%. The proportion of people who believe parks and green spaces contribute to their quality of life.** (CABE Space Report. 2006. Urban Parks: Do you know what you're getting for your money?)
- **5-7%. The uplift in house prices for properties overlooking parks.** (CABE Space Report. 2005. Does Money Grow on Trees?)
- **80%. The decline in allotment area in Britain in the last 50 years.** (Chand, P. *et al* Biodiversity and Allotments. Glasgow Caledonian University)
- **350; 80; 63. The numbers of native vascular plants; lichens and bryophytes found in 61 Sheffield gardens.** (Smith, R. Gaston, K. Warren, P. Thompson K. 2004 Biodiversity in Urban Gardens in Sheffield, Newsletter No.3.)
- **23%. The proportion of Sheffield that is garden.** (Source, as above)







# Environment and health

The region has had some of the poorest health in England during the last two decades<sup>1</sup>. In addition to an ageing population, trends suggest a future with more ill-health. Unhealthy weight gain and lack of physical activity among both adults and children is one of the most significant public health challenges for the region. The region has the lowest physical activity participation rate of any English region. The Foresight report predicts that based on current trends the Yorkshire and Humber region will have the sharpest increase in obesity, with 65% of women and 70% of men being obese by 2050 unless action is taken. The region will not be able to afford either the treatment costs or loss of productivity associated with this level of obesity.

Poor mental health affects millions of people, reducing wellbeing and productivity and increasing health inequalities.

In 2004 the Regional Strategic Framework for Health (*Our Region Our Health*), recommended action on cycling, walking and physical activity more generally, as well as improvements to public and green space. Since that time and despite the publication of guidance from NICE (*Promoting and creating built or natural environments that encourage and support physical activity*) and the launch of *Healthy Weight, Healthy Lives: A Cross-Government Strategy for England* there has been insufficient action to change the obesity-inducing environment in which we live or encourage people to be more physically active.

## The reason why

The development of an 'Environment and Health' agenda in the region is essential because:

- Children have less contact with nature and fewer chances for informal play than in the past.
- Playing in a natural environment improves children's social, mental and physical development<sup>1a</sup>.
- Children use the natural environment to recover from stress and this helps to reduce mental health disorders<sup>2</sup>.
- When playing outdoors children maintain high levels of physical activity<sup>3</sup>.
- For adults, contact with the natural environment has been shown rapidly to reduce stress<sup>4</sup>, increase resilience to further stress and improve concentration levels.
- Many people feel uplifted by contact with the natural environment and the social value of sharing nature with family or friends can boost people's sense of wellbeing<sup>5</sup>.
- Local access to green space increases levels of sustainable travel<sup>6</sup>.
- Regular physical activity can reduce the risk of back pain and depression, two of the leading causes of sickness absence from work<sup>7</sup>.
- Healthy ageing is enhanced by close and frequent contact with the natural environment leading to greater independence and dignity.
- The number of people over 85 years will double between 1995 and 2035<sup>8</sup>.

- People become less physically active as they age<sup>9</sup> yet staying active can reduce a person's biological age and enhance their life expectancy<sup>10</sup>.
- The life span of older people increases when they live near parks and tree-lined streets<sup>11</sup>.
- The natural environment allows more activity, encourages people to meet and talk and creates a constantly changing and stimulating environment.
- Sharing public spaces helps communities develop a sense of identity and belonging<sup>12</sup>.
- Green space within communities reduces aggression and crime, even when allowing for other social factors<sup>13</sup>.
- Climate change will lead to more heat waves resulting in a greater number of deaths. High night time temperatures are a major factor in heat wave deaths. Green space stores less heat than concrete and provides a valuable cooling effect during heat waves<sup>14</sup>.

## What Natural England will do in the region

Natural England wants to see action which responds to the above, with more people enjoying, understanding, benefiting from and, as a result, acting to improve the natural environment. We will step up our work to promote the natural environment as a preventative health solution to the public health sector and the public, with an increased focus on the benefits. To these ends, we will:

- Use the Healthy Weight, Healthy Lives cross-Government Strategy to promote the role of the environment in health and attract some of the funding attached to this strategy to the region.
- Promote our green exercise pilot in North Lincolnshire and share the results with partners. (This three year pilot project, started in October 2007, tests a range of physical activities with primary school children and inactive adults with the aim of encouraging the participants to be more active.)
- Develop a pilot project which supports health professionals in recommending, in appropriate cases, exercise in the natural environment as a form of treatment.
- Support the expansion of *Walking the Way to Health* schemes.
- Influence local authorities and others to improve the quality, quantity and usage levels of green space near where people live.

<sup>9</sup>RSS, May 2008.

<sup>10</sup>Fjortoft, I & Sægeie, J 2000. The natural environment as a playground for children. *Landscape and Urban Planning* Vol 48, 83-97.

<sup>11</sup>Wells NM, Evans GW; Nearby Nature; A buffer of life stress among Rural Children. *Environment and Behaviour*, vol.35, No 3 311-330 2003.

<sup>12</sup>Baranowski T, Thompson WO, DuRant RH, et al. (1993) Observations on physical activity in physical locations: age, gender, ethnicity, and month effects. *Res Q Exerc Sport*; 64:127-33.

<sup>13</sup>Pretty J *et al*, The mental health and physical health outcomes of green exercise. *International Journal of Environmental Health Research* 15 (5), 391-337.

<sup>14</sup>Pretty J (2007) *The Earth Only Endures*.

<sup>15</sup>Craig CL, Brownson RC, Cragg SE, Dunn AL, Exploring the effect of the environment on physical activity: A study examining walking to work. *Am J Prev Med* 2002;23:36-43.

<sup>16</sup>British Heart Foundation, workplace health activity toolkit 2003.

<sup>17</sup>Royal Commission on Long Term Care, 1999.

<sup>18</sup>Skelton, D A *et al*, *Physical Activity in Later Life*, 1999.

<sup>19</sup>Shephard RJ, *Ageing, Physical Activity and Health*, Illinois, 1997.

<sup>20</sup>Tankano, T Nakamura, K & Watanabe, M 2002. Urban residential environments and senior citizens' longevity in megacities: the importance of walkable green spaces. *Journal of Epidemiology and Community Health*, Vol 56, 913-918.

<sup>21</sup>Kuo, F E (and others). 1998. Fertile Ground for Community: Inner-City Neighbourhood Common Spaces. *American Journal of Community Psychology*, Vol 26,6.

<sup>22</sup>Kuo FE and Sullivan WC (2001) Environment and crime in the inner city. Does vegetation reduce crime. *Environment and Behaviour* 33 343-367.

<sup>23</sup>Q Weng, D Lu, J Schubring Estimation of land surface temperature-vegetation abundance relationship for urban heat island. *Remote Sensing of Environment*, 2004.

## Our challenge to you

### **If you are a politician:**

- Use contact with the natural environment to deliver your social, economic and environmental priorities.

### **If you work for a local authority:**

- Build provision for walking and cycling into new developments, and transport and Green Infrastructure plans.
- Integrate use of the natural environment into policies and programmes for sport and leisure.
- Use and manage local authority-owned green space to provide opportunities for physical activity.
- Participate in the *Walking the Way to Health Initiative*.
- Sign up to ANGSt objectives – accessible natural space within 300 metres (or five minutes' walk) of every home in England for exercise, relaxation and wellbeing.

### **If you work for a Primary Care Trust:**

- Promote use of the natural environment as part of the health care given to patients.
- Invest in programmes that connect people to the natural environment.

### **If you are involved in regional strategic planning and decision making:**

- Build health gains into the plans for new developments, transport and Green Infrastructure plans.

### **If you are a planner or developer:**

- Build health gains into the layouts of new developments, transport and Green Infrastructure plans.

### **If you are a funder:**

- Invest in programmes that connect people to the natural environment and deliver health improvements to communities most in need.

### **If you are from the education sector:**

- Use the natural environment to benefit children's social, physical and mental development.

### **If you are an environmental organisation:**

- Work together to promote common messages to the health sector and deliver effective programmes that encourage use of the natural environment.

### **If you manage a school, hospital, carehome, workplace, shop or housing estates:**

- Take action to boost the appeal and usability of the natural environment you own or manage.

### **If you are a sport and leisure organisation:**

- Integrate use of the natural environment into your policies and programmes.

## Environment and health: facts and figures

- **60.0 and 62.8. Disability free life expectancy for men and women in Yorkshire & Humber.** (Yorkshire Futures. 2007. Progress in the Region 2007)
- **67.1%. Anticipated increase in the over 65's population between 2005 and 2030.** (Yorkshire Futures. 2007. Progress in the Region 2007)
- **For every 10% increase in green space there can be a reduction in health complaints in communities equivalent to a reduction of five years of age.** (De Vries S. Vrheii R.A. Groenewegen P.P. 2001 Nature and Health. The relationship between health and green space in people's living environment. Euro Leisure congress, Netherlands).
- **14,000. The number of morbidly obese children in Yorkshire and the Humber.** (Professor Paul Gately. 2009. Chair of the Change4Life Summit and Director of Carnegie Weight Management)
- **60 minutes/day. The amount of physical activity needed to prevent the build up of body fat in children.** ([www.nhs.uk/change4life](http://www.nhs.uk/change4life))
- **536. The number of health walk schemes operating around the country as part of the *Walking the Way to Health Initiative*.** ([www.whi.org.uk](http://www.whi.org.uk))



# Landscape conservation

The Yorkshire and Humber region has a wealth of distinctive landscapes, or 'National Character Areas'. These are a product of ten millennia of human activity superimposed on a geography shaped by geological, climatic and biological processes. Landscapes are a key resource, giving us a sense of identity, as well as being fundamental to the delivery of any creative, integrated, forward-looking programme for the natural environment. Landscapes provide the physical settings of everyday life and are an important expression of the relationship between people and place. People's enjoyment of the natural environment is strongly influenced by the landscape setting. Landscapes are everywhere, not just in special or designated places.

## The reason why

Traditionally landscape conservation has been a priority activity in our designated landscapes such as National Parks and AONBs. However Natural England believes that all landscapes matter, and that a fuller and wider appreciation of the importance of landscape conservation would benefit the whole region because:

- Diverse landscapes which are managed sustainably will deliver a range of ecosystem goods and services, as well as remain valued distinctive expressions of local identity.
- An understanding of landscape character, aesthetics, systems and dynamics and cultural heritage is an essential part of resource management and planning.
- Landscapes are dynamic and constantly evolving, and we need to plan and manage this change to ensure that all landscapes in the future can respond to society's changing needs and values.
- A comprehensive understanding of landscape will influence, as well as provide an integrating framework for, the management of change at a range of spatial scales and governance levels.

## What Natural England will do in the region

Natural England is committed to the implementation of the European Landscape Convention. To that end we will:

- Seek to ensure that as landscapes change, they evolve in distinctive, diverse and special ways.
- Develop the Regional Landscape Partnership to share experiences and best practice.
- With the Regional Landscape Partnership, seek to implement the findings of the feasibility study into setting up a Regional Landscape Framework.
- Hold further seminars for local authority planners to disseminate best practice in embedding landscape into forward planning, policies and decision making.
- Our advice to local authorities on landscape character assessment will be based on both qualitative (including people's values and aesthetics) and quantitative (for example landform, settlement patterns) ways of knowing about landscapes.

- Continue to support the role that protected landscapes play in the conservation, enhancement and delivery of the sustainable use and management of England's natural environment.
- Use all available means to ensure our landscapes are managed sustainably and are highly valued, distinctive expressions of local identity.
- Through expanding and improving our evidence base, make the link more explicit between landscape character and quality, and the range of ecosystem goods and services they deliver.
- As part of our evidence programme we will support the national project to update and extend the descriptions and analyses of the National Character Areas. We will develop ways of understanding people's perceptions of the whole range of landscapes as part of our commitment to engaging a wider proportion of the population in landscape issues.
- Continue to improve our understanding of, and monitor changes in, both landscape character and perceptions.
- Participate in a national initiative to evaluate a range of scenarios for England's future landscapes.

Ingleborough

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## Our challenge to you

### **If you are a politician:**

- Familiarise yourself with the objectives of the European Landscape Convention.
- Recognise the positive contribution made by England's landscapes to local, regional and national prosperity and quality of life.

### **If you work for a local authority/National Park/AONB:**

- Create your own action plan for the implementation of the European Landscape Convention.
- Ensure that all our landscapes are resilient to major drivers such as climate change, and continue to ensure the best care for protected landscapes.
- Explore the potential for improving the way all landscapes contribute to a healthy natural environment.
- In AONBs, ensure that the Strategic Environmental Assessment for the Management Plan is robust and that the Plan includes policies that will protect and enhance the landscape.
- Improve the ways in which evidence about your achievements in landscape conservation is gathered and disseminated.
- Develop your understanding of landscape character, aesthetics, systems and dynamics and cultural heritage as an essential in resource management and planning.
- Develop your own landscape character assessments and strategies to guide policy development and decision making, and develop strategies and guidelines based on landscape character to be adopted as Supplementary Planning Guidance.
- Ensure that all landscapes are playing their full role in the conservation, enhancement and delivery of sustainable use and management of our natural environment, exemplifying and demonstrating best practice.
- Work with us to produce practical guidance showing how people can work with landscapes in our towns, cities and growth areas as well as the countryside and the coast, making a difference for England's natural environment.
- Engage in the process of assessing the suitability of the land between the Lake District and Yorkshire Dales National Parks for National Park status.

### **If you work in the private sector:**

- Develop your understanding of landscape character, aesthetics, systems and dynamics and cultural heritage as an essential in resource management and planning.
- Ensure that all new projects make a positive contribution to local landscape character, including by retaining as many features as possible, getting the scale and location of the development in sympathy with the local landscape, and using local materials and styles.

### **If you are involved in regional strategic planning and decision making:**

- Draw up your own action plan for the implementation of the European Landscape Convention.



- Integrate landscape thinking into the multi-functional, sustainable planning and management of the natural environment.
- Develop your understanding of landscape character, aesthetics, systems and dynamics and cultural heritage as an essential in resource management and planning.
- Work with us to produce practical guidance showing how people can work with landscapes in our towns, cities and growth areas as well as the countryside and the coast, making a difference for England's natural environment.
- Encourage local planning authorities to develop their own landscape character assessments and strategies to guide their policy development and decision making, and to make strategies and guidance available as Supplementary Planning Guidance.

#### **If you work in a government agency:**

- Draw up your own action plan for the implementation of the European Landscape Convention.
- Integrate landscape thinking into the multi-functional, sustainable planning and management of the natural environment.
- Explore the potential for improving the way protected landscapes contribute to a healthy natural environment.
- Develop your understanding of landscape character, aesthetics, systems and dynamics and cultural heritage as an essential in resource management and planning.

#### **If you work for a NGO:**

- Draw up your own action plan for the implementation of the European Landscape Convention.

#### **Landscape conservation: facts and figures**

- **35. The number of European states (including the UK) that have signed up to the European Landscape Convention.**
- **26. The number of Character Areas either wholly or partly within the Yorkshire and the Humber region.**
- **The region hosts 3 National Parks, 5 Areas of Outstanding Natural Beauty, 3 Heritage Coasts and 35,000 designated historical assets.** (Government Office for Yorkshire and the Humber. 2008. The Yorkshire and Humber Plan)
- **27%. The proportion of the region's landscapes which showed loss or neglect over the period 1999 to 2003.** (Land Use Consultants for Natural England. 2008. Yorkshire and Humber Regional Landscape Framework – draft Feasibility Study)
- **16 out of 28. The number of Landscape Character Assessments in the region which pre-date current best practice guidance.** (Land Use Consultants for Natural England. 2008. Yorkshire and Humber Regional Landscape Framework – draft Feasibility Study)



# Marine conservation

The UK's marine environment is more diverse than all our terrestrial habitats combined. It is a resource of vast biological diversity and huge and sustainable economic potential. We have largely ignored our responsibilities of sustainable stewardship for the seas and they now face increasing pressure from human exploitation and the emerging threat of climate change.

Consequently our seas are damaged and degraded, and their capacity to provide important services to the Yorkshire and Humber region such as food, employment and recreation are much reduced. Examples from home and abroad show us that the marine environment has a huge potential for regeneration and that this can provide significant benefits for society as a whole.

## The reason why

It is vital that we mobilise efforts to conserve our marine environment at a regional level because:

- The marine environment can recover from current unsustainable practices; this will yield environmental, social and economic benefits.
- The region contributes to the pressures from which our marine environment suffer such as commercial fishing, pollution and marine development. Climate change exacerbates this.
- Nationally, there were 75 million day visits in 2005 to the undeveloped coastline and 51% of those visitors didn't visit frequently but would like to visit more often. Despite this popularity, there is no general right for people to use the coast .
- Maximising the economic benefit to coastal communities from tourism is intimately linked to improving the quality of our marine environment.
- England's seas provide food for some of the most important breeding seabird populations and wintering/migrating bird congregations on Earth.
- The majority of the potential locations for tidal and wave energy projects are designated or proposed Special Protection Areas (SPAs) or Special Areas of Conservation (SACs).
- Our internationally important coastal sites, such as the Humber Estuary are under increasing threat from economic and development pressures.
- The Marine Bill's passage through Parliament will almost certainly result in additional obligations to protect and conserve our marine environment. By taking action now the region can be ahead of the political game and derive the benefits that such positioning will confer.

## What Natural England will do in the region

Natural England is committed to achieving the recovery of species populations and marine habitats, so that our seas are better able to cope with the threats that climate change poses and once again have the capacity to support our coastal communities and our region's economy. Natural England will work with stakeholders and partner organisations to make this happen. To this end we will:

- Help deliver Defra's vision for 'clean, healthy, safe, productive and biologically diverse oceans and seas'.
- Promote existing management of Marine Protected Areas including Flamborough Head SPA/SAC, Humber Estuary SPA/SAC and the Flamborough Head No Take Zone to achieve sustainable use of sites.
- Promote and gain wide support for the aims of the North Sea Marine Conservation Zones project which aims to establish an ecologically coherent network of Marine Protected Areas in the English North Sea by 2012.
- Help to deliver Government's goal of much greater coastal access in the region.



## Our challenge to you

### **If you are a politician:**

- Recognise that the North Sea's very poor condition adversely affects coastal and regional economies.
- Understand that realising the North Sea's potential depends on careful stewardship of its natural resources, and the natural processes which support them.
- Support the Marine Bill in its passage through Parliament and recognise that Marine Protected Areas are a very important mechanism for ensuring sustainable management of our seas – by establishing them we will provide a positive legacy for current and future generations.
- To ensure the establishment of Marine Protected Areas is transparent and fair we need you to help us to engage your constituencies in the North Sea Marine Conservation Zones Project.

### **If you work for a local authority:**

- Use your decision-making powers to protect natural processes and environmental quality in the marine and coastal environment.
- Develop and pursue marine-friendly policies in spatial plans.
- Consider how you will develop capacity to address Marine Spatial Planning – a likely outcome of the Marine Bill.
- Wherever relevant be aware of 'Marine Stewardship Council' labelling on marine produce and pursue Blue Flag status for all your beaches.
- Work with us to develop improved access to our region's coast.

### **If you are a developer (eg Ports and Harbour Authority, renewable energy sector, shipping operator or aggregates industry) or have a commercial interest in the marine or coastal environment:**

- Be sensitive to the fragility of marine ecosystems and the possibility of impacts on natural coastal and marine processes.
- Look for opportunities to enhance the marine environment through your investments.
- Recognise that, from estuary and coast to open seas, Marine Protected Areas are vital to the sustainable management of our marine environment.
- Recognise that Marine Protected Areas are a key mechanism for supporting and regenerating coastal communities and economies.
- Become an active partner in the North Sea Marine Conservation Zones Project.
- Support the Marine Bill in its passage through Parliament.
- Promote, and participate in, the Marine Stewardship Council's fishery accreditation and sea-food eco-labelling schemes.
- Think about how your industry can contribute to long-term food security.

### **If you are involved in regional strategic planning and decision making:**

- Seek to make strategic plans alive to the opportunities and threats arising from the marine environment.
- Consider how you will develop capacity to address Marine Spatial Planning – a likely outcome of the Marine Bill.
- Use your decision-making powers to protect natural processes and environmental quality in the marine environment.
- Develop and pursue marine friendly policies in spatial plans.

### **If you work for a NGO:**

- Support the Marine Bill in its passage through Parliament.
- Become an active partner in the North Sea Marine Conservation Zones Project.

### **Marine conservation: facts and figures**

- **The European Commission now considers that 88% of UK fish stocks are over-fished.** (Marine Conservation Society, 2008, Silent Seas)
- **In 2006 only 6 out of a total of 20 fin-fish stocks around the UK were being managed sustainably.** (Defra 2008, England Biodiversity Strategy Indicators: UK fish stocks fished within safe limits)
- **It has been estimated that for every kilogram of North Sea sole caught by beam trawler, up to 14 kg of other seabed animals are killed.** (de Groot S.J. and Lindeboom H.J. (eds) 1994, Environmental Impact of Bottom Gears on benthic fauna in relation to natural resources management and protection of the North Sea, Netherlands Institute for Sea Research, NIOZ Rapport 1994-11)
- **On average biomass increases by 446% inside marine reserves.** (Partnership for Interdisciplinary Studies of Coastal Oceans, 2008, The Science of Marine Reserves)
- **Over 30% of estuaries and 15% of coastal waters are at risk from nutrients, pesticides, organic pollutants and heavy metals.** (Environment Agency, 2007, Working for a better marine environment. Our marine strategy progress report)
- **96% of autopsied North Sea fulmars had plastic in their stomachs.** (Van Franeker J.A. *et al*, 2005, Save the North Sea Fulmar Study 2002-2004, Alterra Report 1162)



# State of the natural environment data

## Introduction

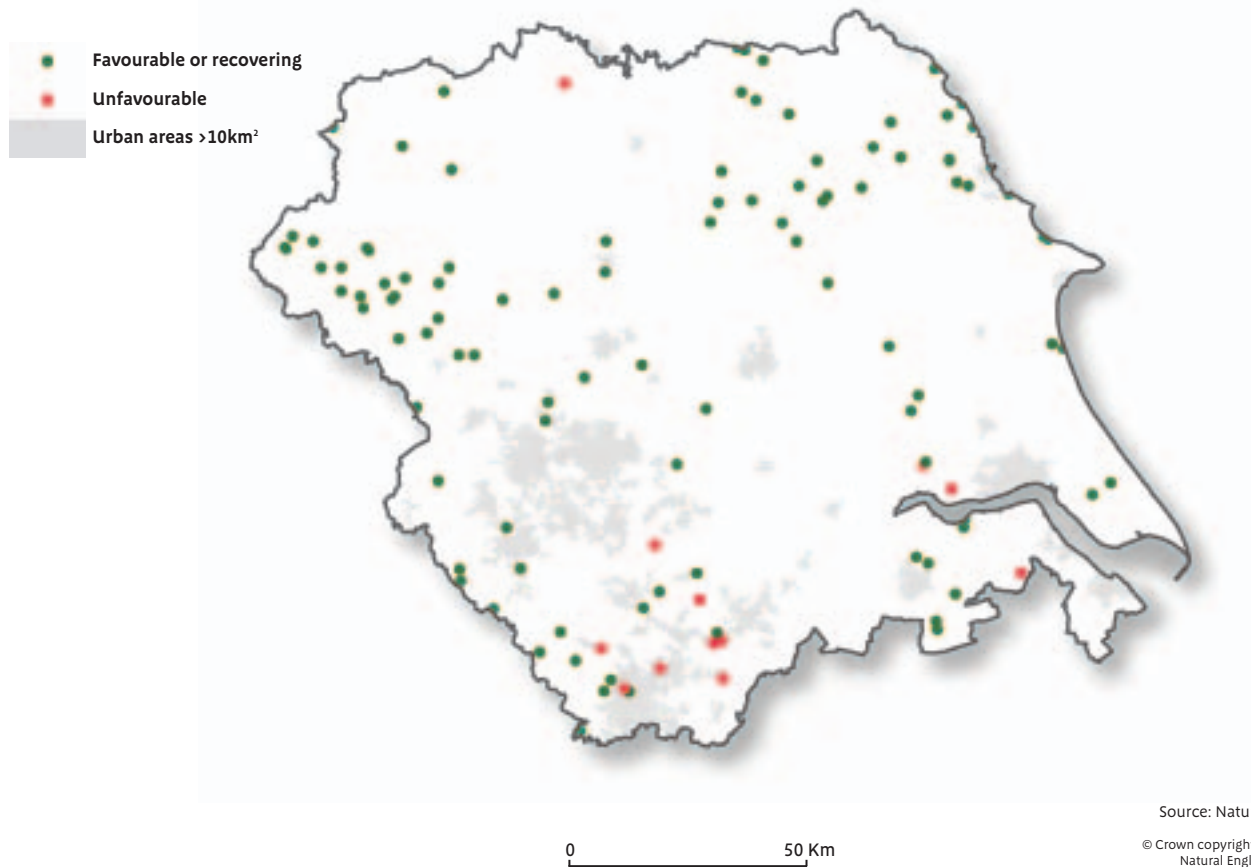
The following pages provide background environmental information on the Yorkshire and the Humber region, presented as a series of maps. For the most part these are drawn from Natural England's national *State of the Natural Environment* report, published in 2008.

The maps relate to geology and soils, landscape character and designations, SSSI condition, access and accessibility, the coverage of agri-environment schemes; transport and pollution.

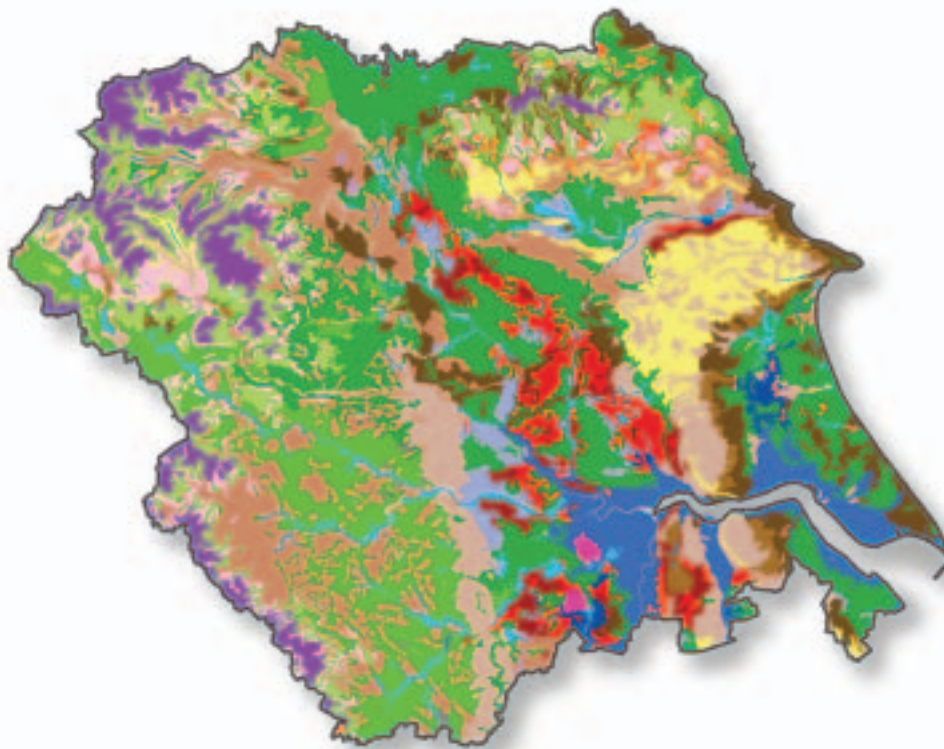
Figure 1 Bedrock



Figure 2 Geo-features SSSI condition



**Figure 3 Soils**



0 50 Km

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Visit [www.landis.org.uk](http://www.landis.org.uk) for more information.

**Figure 4 National Character Areas**

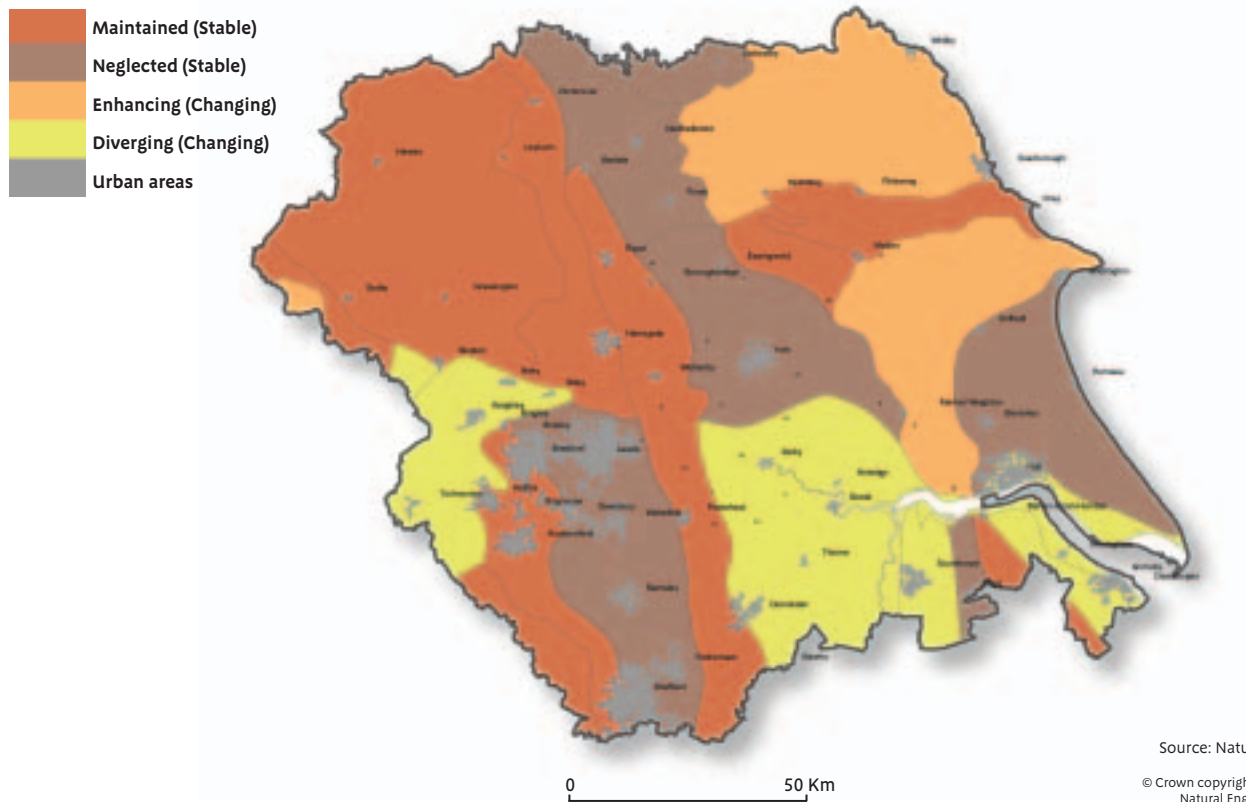


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**Figure 5 Countryside Quality Counts headline results**



**Figure 6 Designed and defined landscapes**

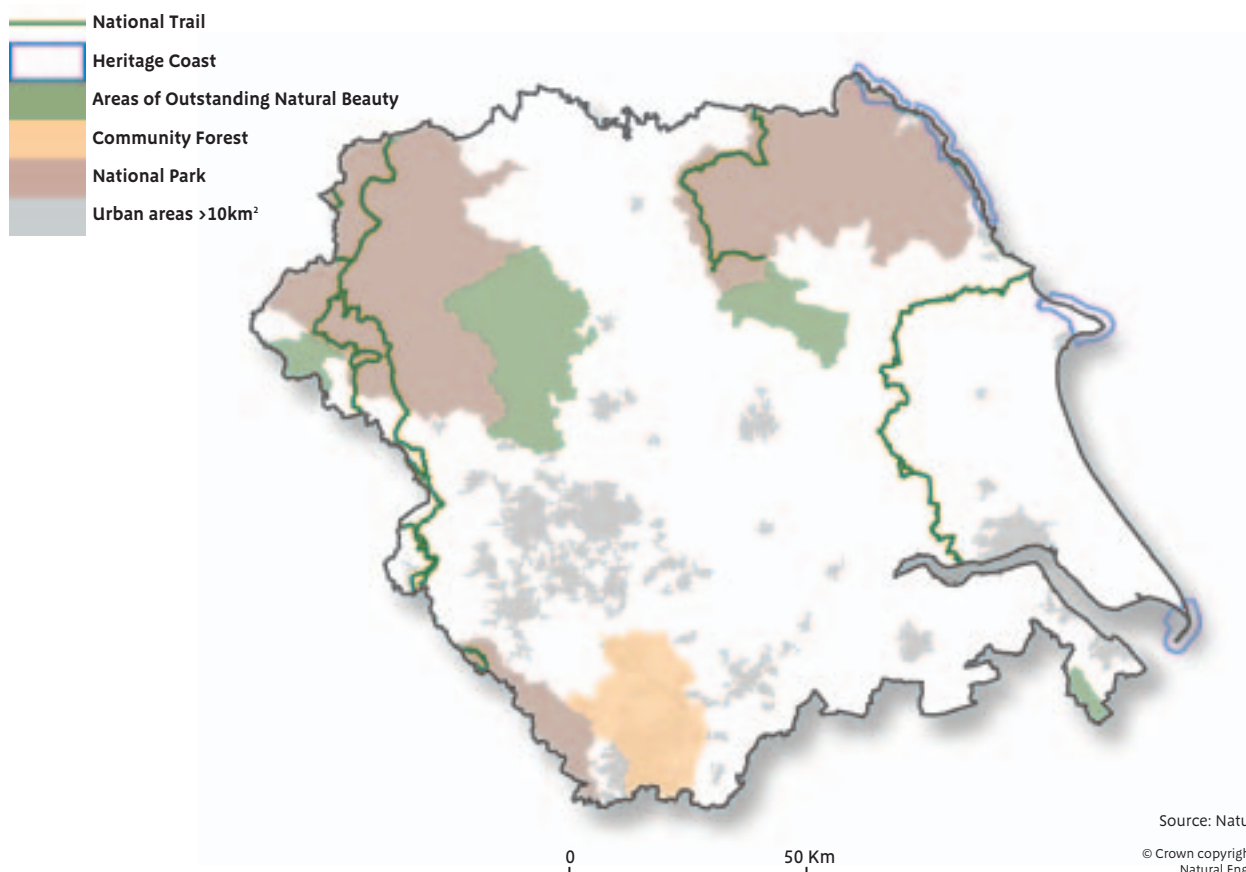
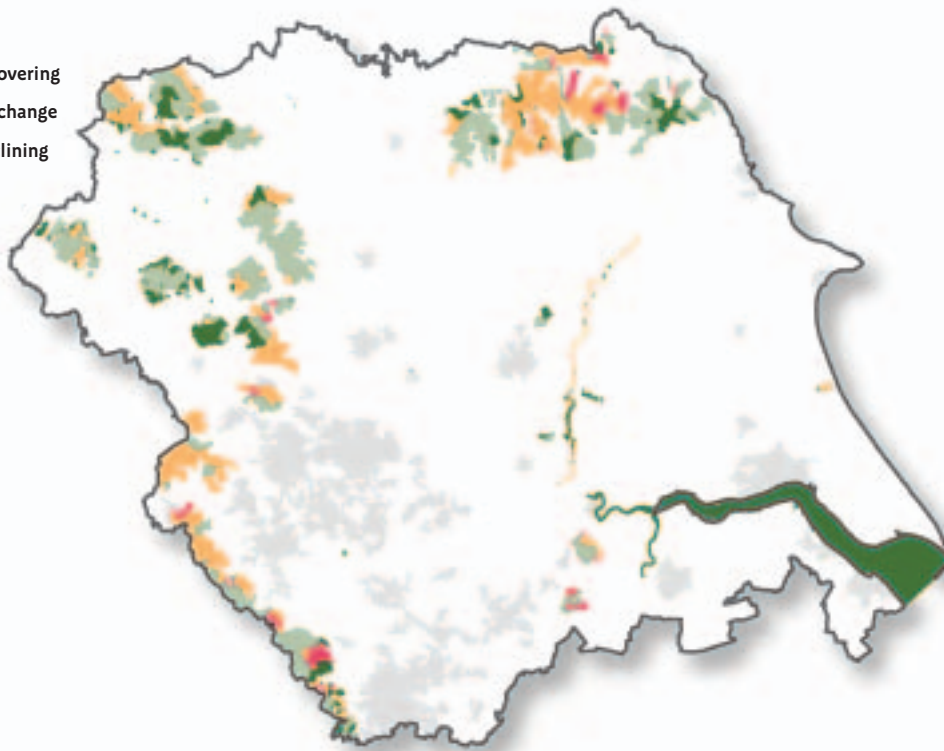


Figure 7 SSSI condition

SSSI condition

- Favourable
- Unfavourable recovering
- Unfavourable no change
- Unfavourable declining
- Urban areas > km<sup>2</sup>



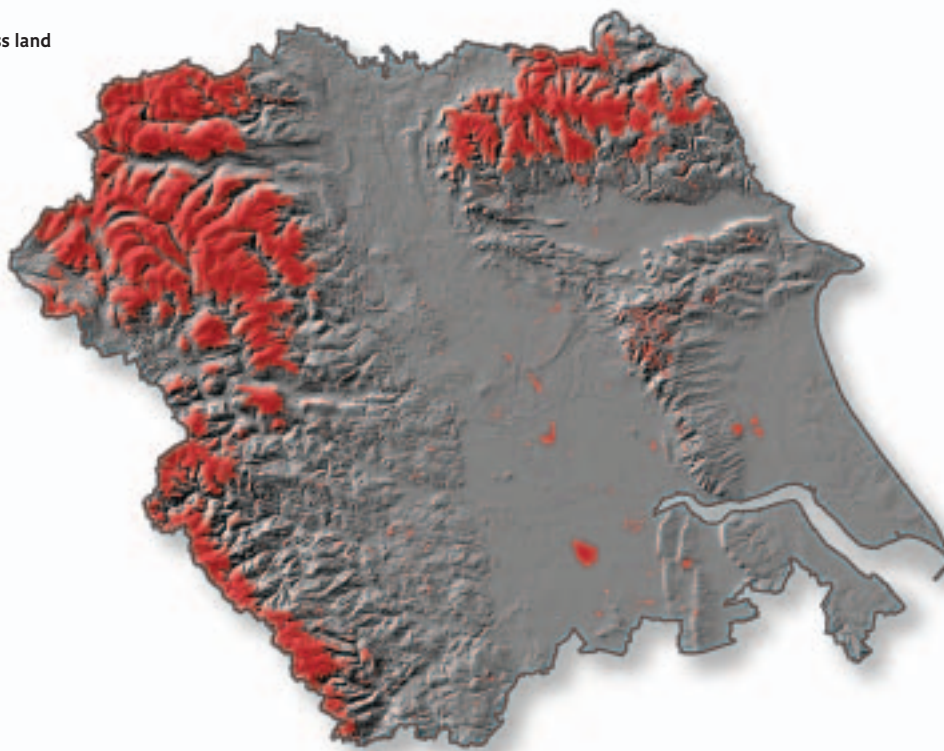
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Source: Natural England, 2008

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Figure 8 CRoW access and topographical relief

- CRoW open access land

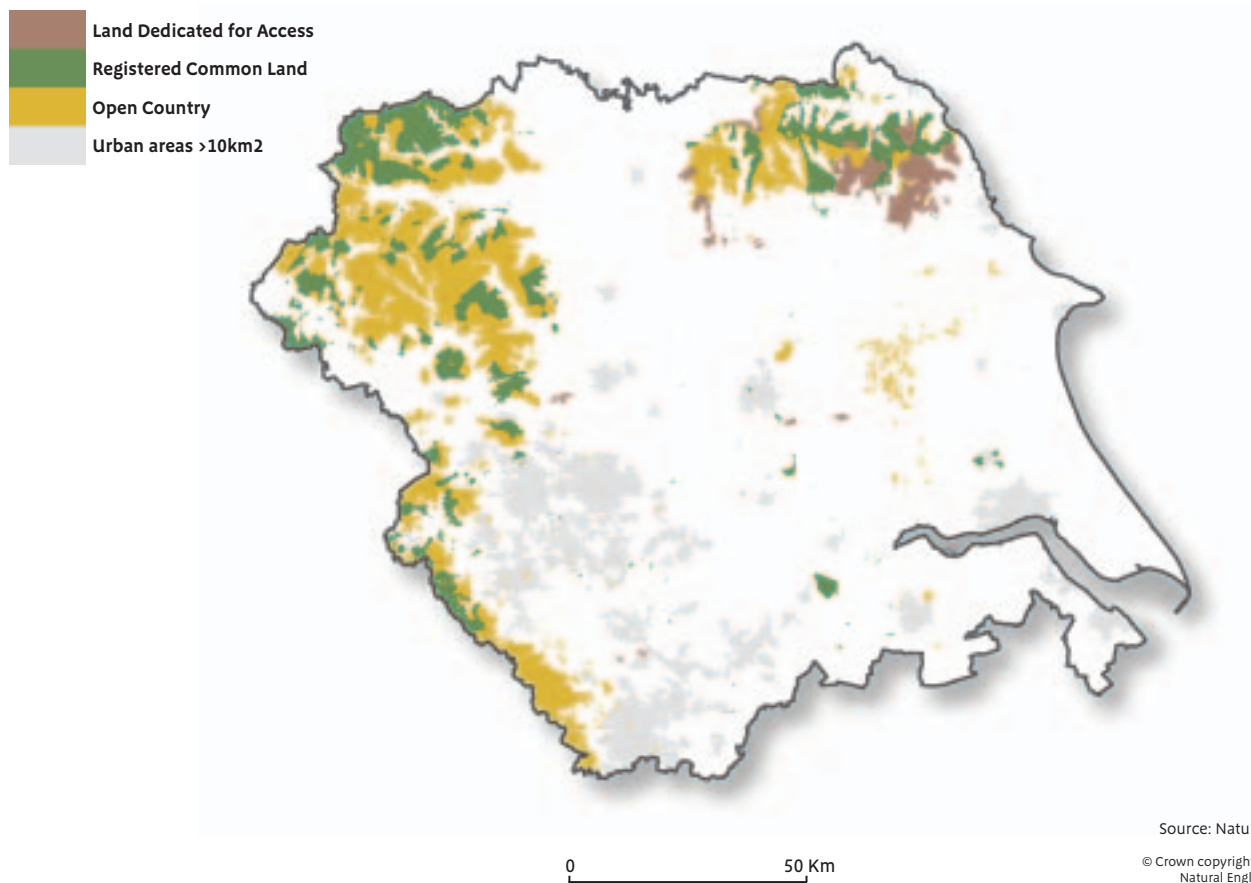


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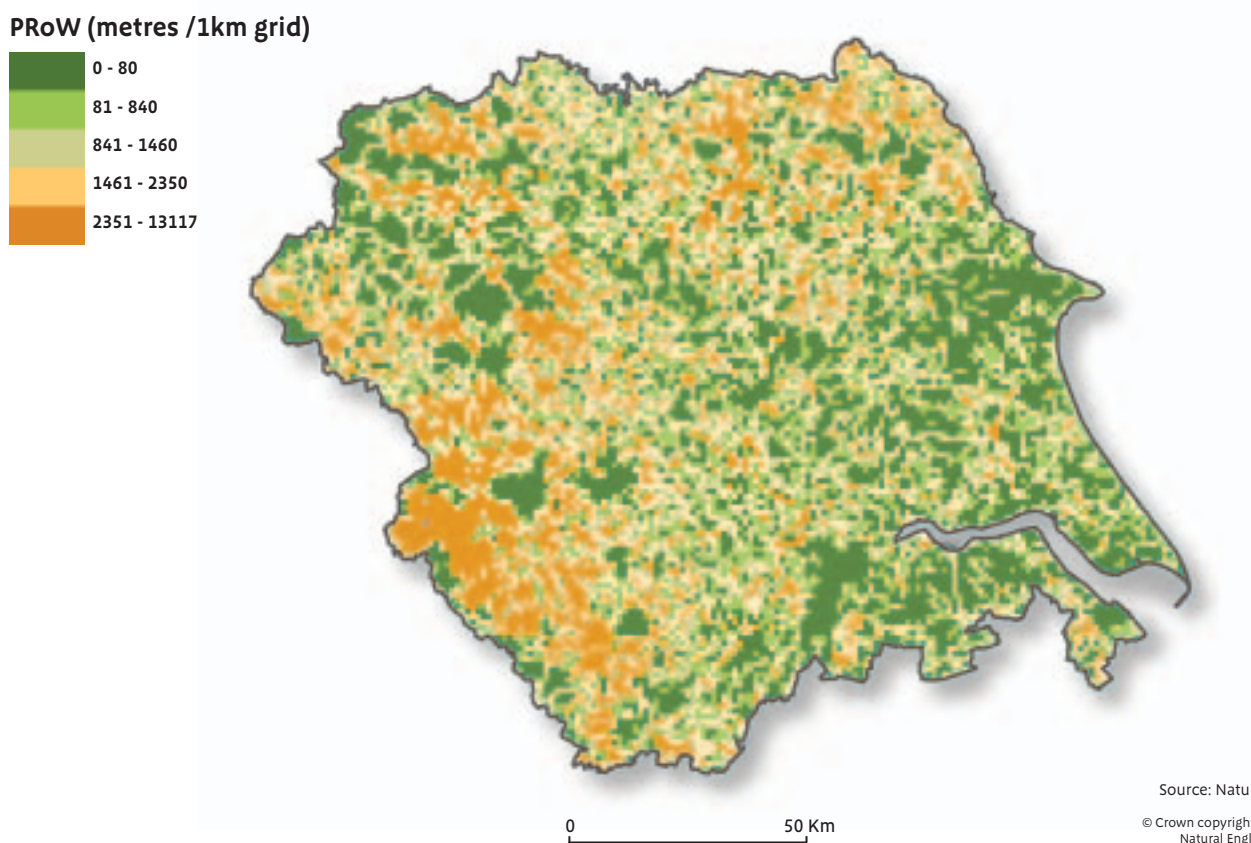
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**Figure 9 Open access land**



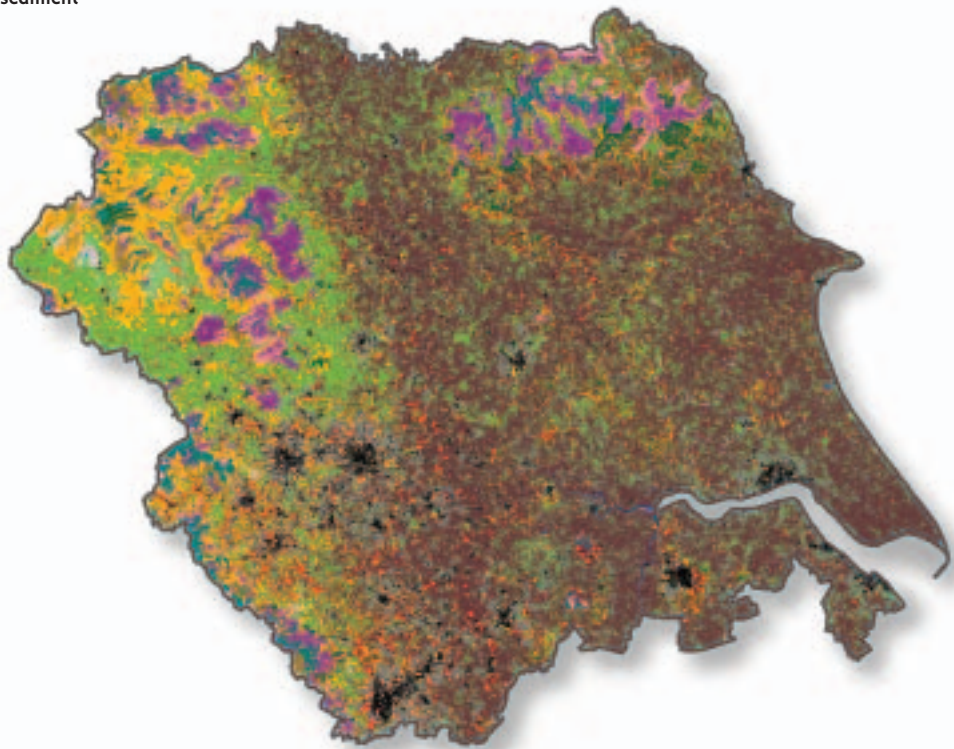
**Figure 10 Public Rights of Way**





**Figure 11 Land cover**

- Broadleaved/mixed woodland
- Coniferous woodland
- Arable and horticultural land
- Improved grassland
- Neutral grass (grazed/rough)
- Calcareous grass (grazed/rough)
- Acid grass (grazed/rough)
- Bracken
- Dense dwarf shrub heath
- Open dwarf shrub heath
- Fen, marsh and swamp
- Bogs (deep peat)
- Water (inland)
- Inland rock and bare ground
- Suburban/rural development
- Urban and industrial areas
- Littoral rock and bare sediment
- Supra-littoral rock and sediment
- Saltmarsh



Land Cover Map 2000 was created by the Centre for Ecology & Hydrology and funded by a Consortium led by the Natural Environment Research Council, Government Departments and Agencies.

Source: Natural England, 2008

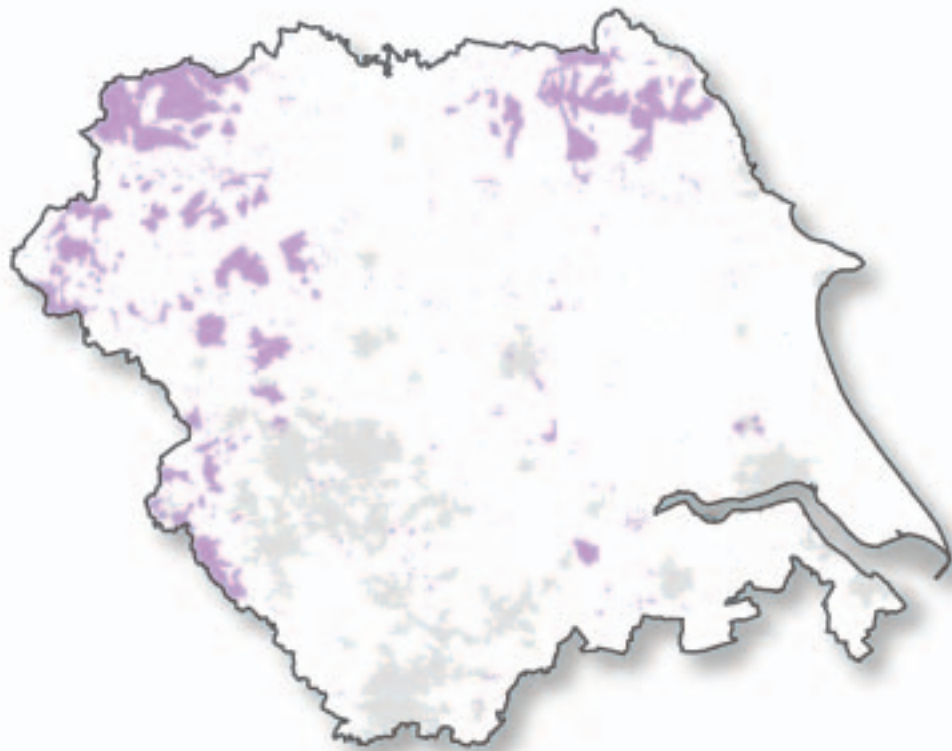
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0  50 Km



**Figure 12 Common land**

- Registered common land
- Urban areas >10km<sup>2</sup>



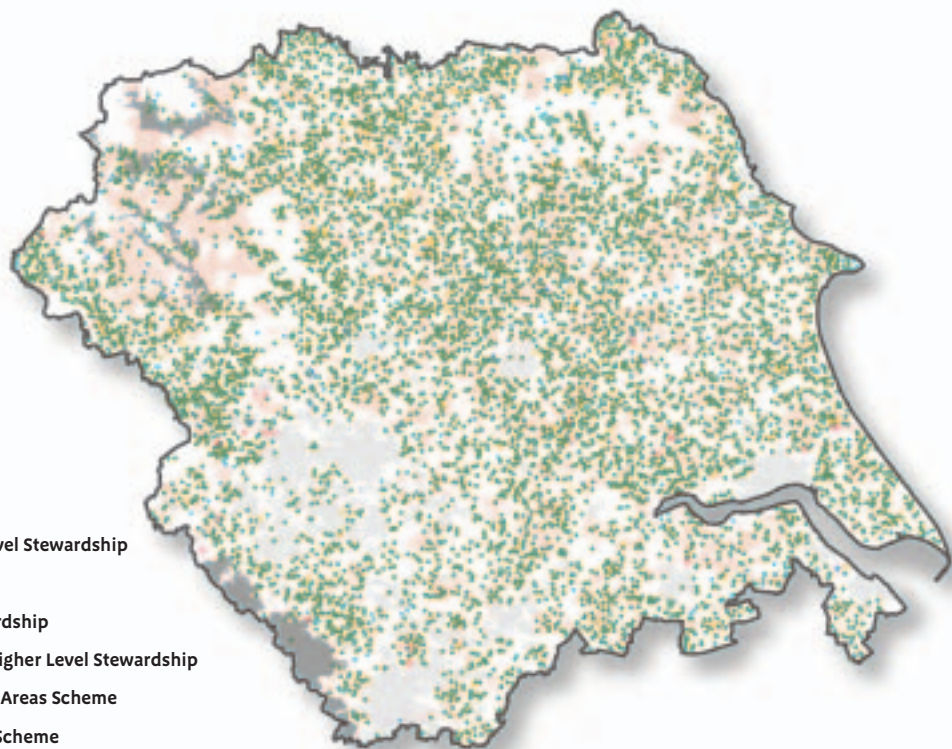
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**Figure 13 Agri-environment schemes**

- Entry Level Stewardship
- Entry Level plus Higher Level Stewardship
- Higher Level Stewardship
- Organic Entry Level Stewardship
- Organic Entry Level plus Higher Level Stewardship
- Environmentally Sensitive Areas Scheme
- Countryside Stewardship Scheme
- Urban areas >10km<sup>2</sup>

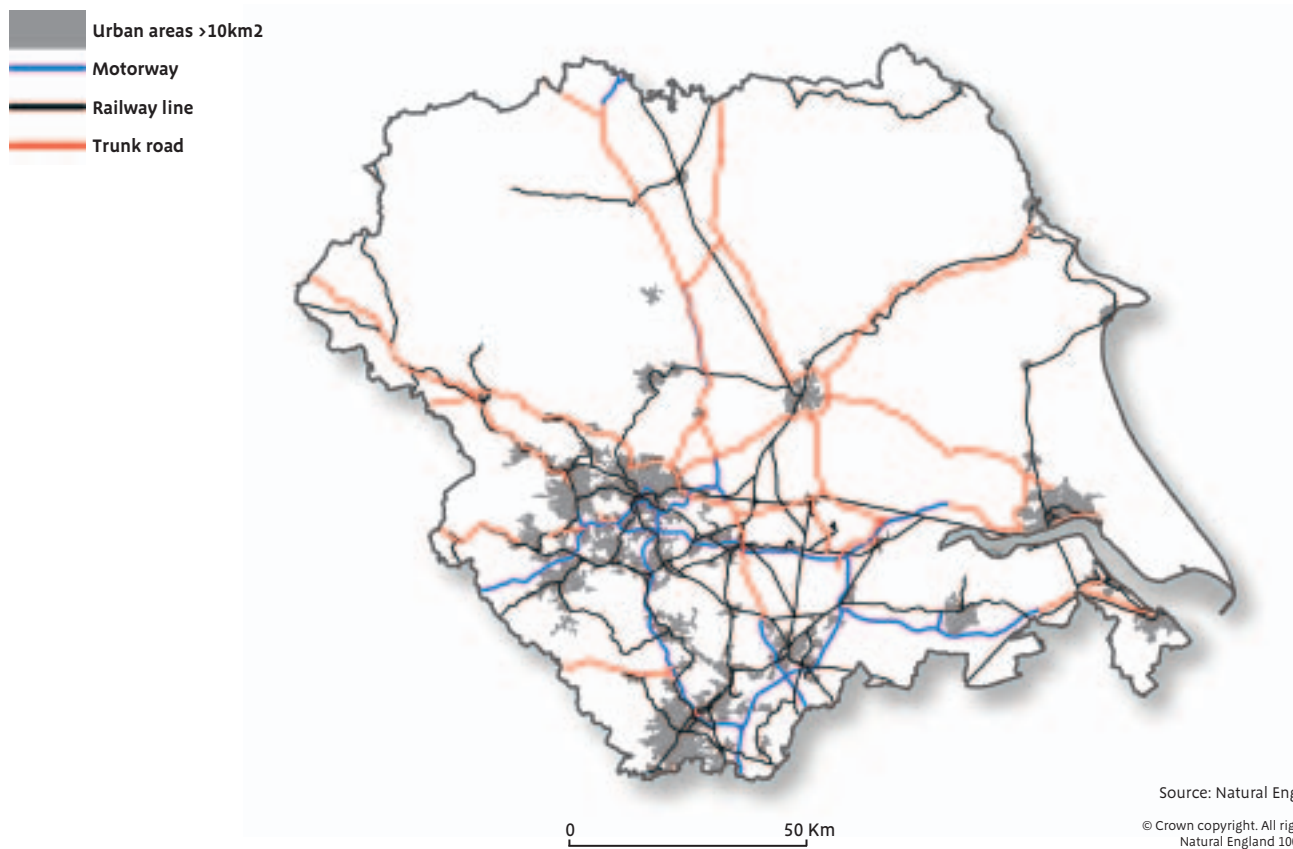


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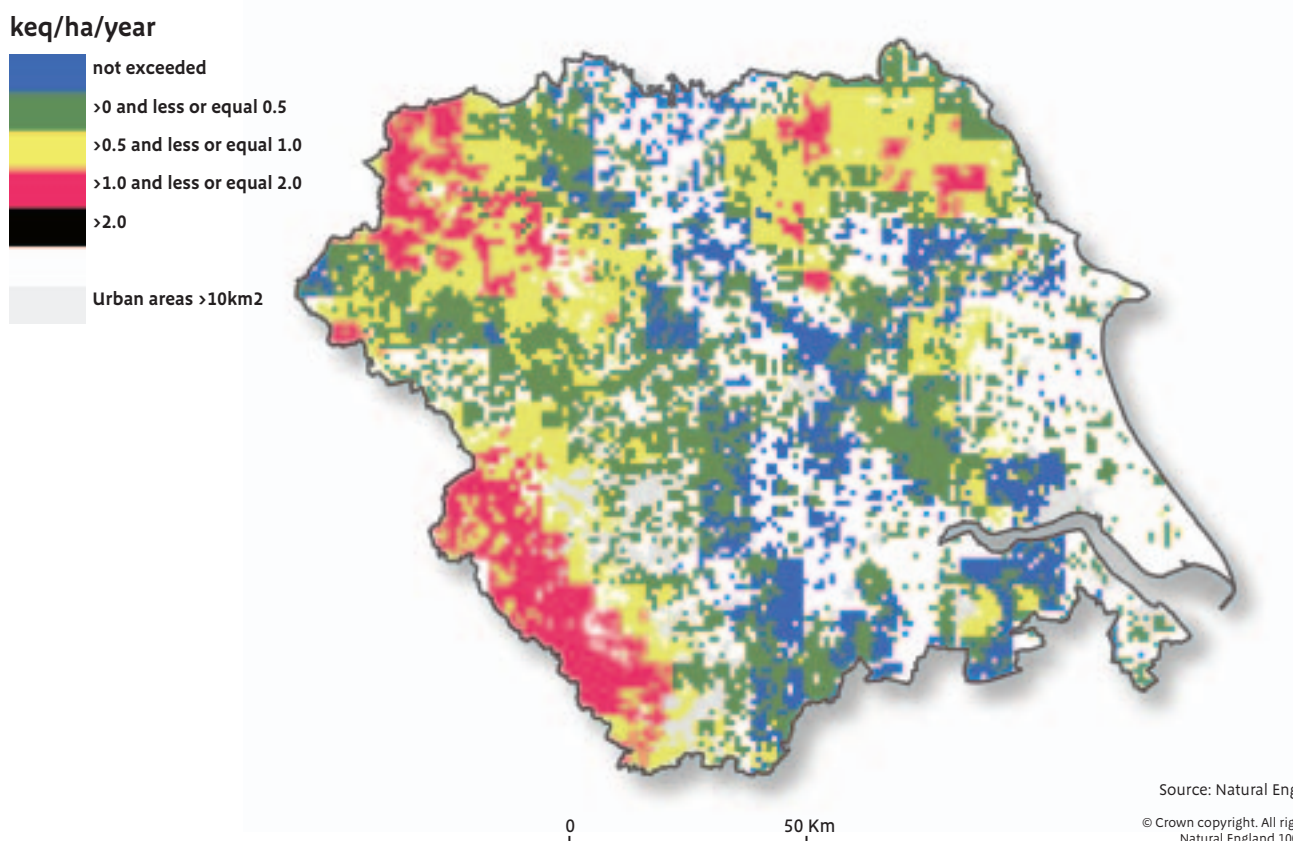
Source: Natural England, 2008

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**Figure 14 Transport and urban areas**



**Figure 15 Nutrient nitrogen exceedence**



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Yorkshire Wolds

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