Making Space for Nature – a review of England's protected area network

Birkbeck Institute of Environment, in conjunction with the Linnean Society and Ecology and Conservation Studies Society 25th February 2011

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Outline of presentation

- Terms of reference and introducing the panel
- What are ecological networks?
- What is the evidence that our current wildlife sites comprise a coherent and resilient network?
- Ecological conclusions
- Overview of recommendations
- Take home messages

Panel Members

Chair: Prof. Sir John Lawton
Prof. Val Brown
Prof. Bill Sutherland
Prof. Alastair Fitter
Prof. Georgina Mace
Sir Graham Wynne (RSPB)
Stephanie Hilborne (TWT)
Jane Forshaw (Local Authority)
Richard Leafe (Lake District NP)
Mark Southgate (Planning inspectorate and AONBs)
Clive Elphick (former director United Utilities)
Ross Haddow (Stody Estates)
John Varley (Clinton Estates)
Tom Tew (NE)
Peter Brotherton and Mina Patel (NE Secretariat)

Terms of reference

- Examine evidence on the extent to which England's collection of wildlife sites represents a coherent and resilient ecological network capable of adapting to the challenge of climate change and other pressures (looked at 2^{O}C temp. rise)

- Examine the evidence base to assess whether a more inter-connected network would be more effective today and in the future and, if so, how this could be delivered

- Taking account of the ecological, economic and social costs and benefits, make costed and prioritised recommendations

Commissioned by Defra

Terrestrial, freshwater and coasts (i.e. not marine)

Looking forward to 2050

Presented to Secretary of State in Defra in September 2010

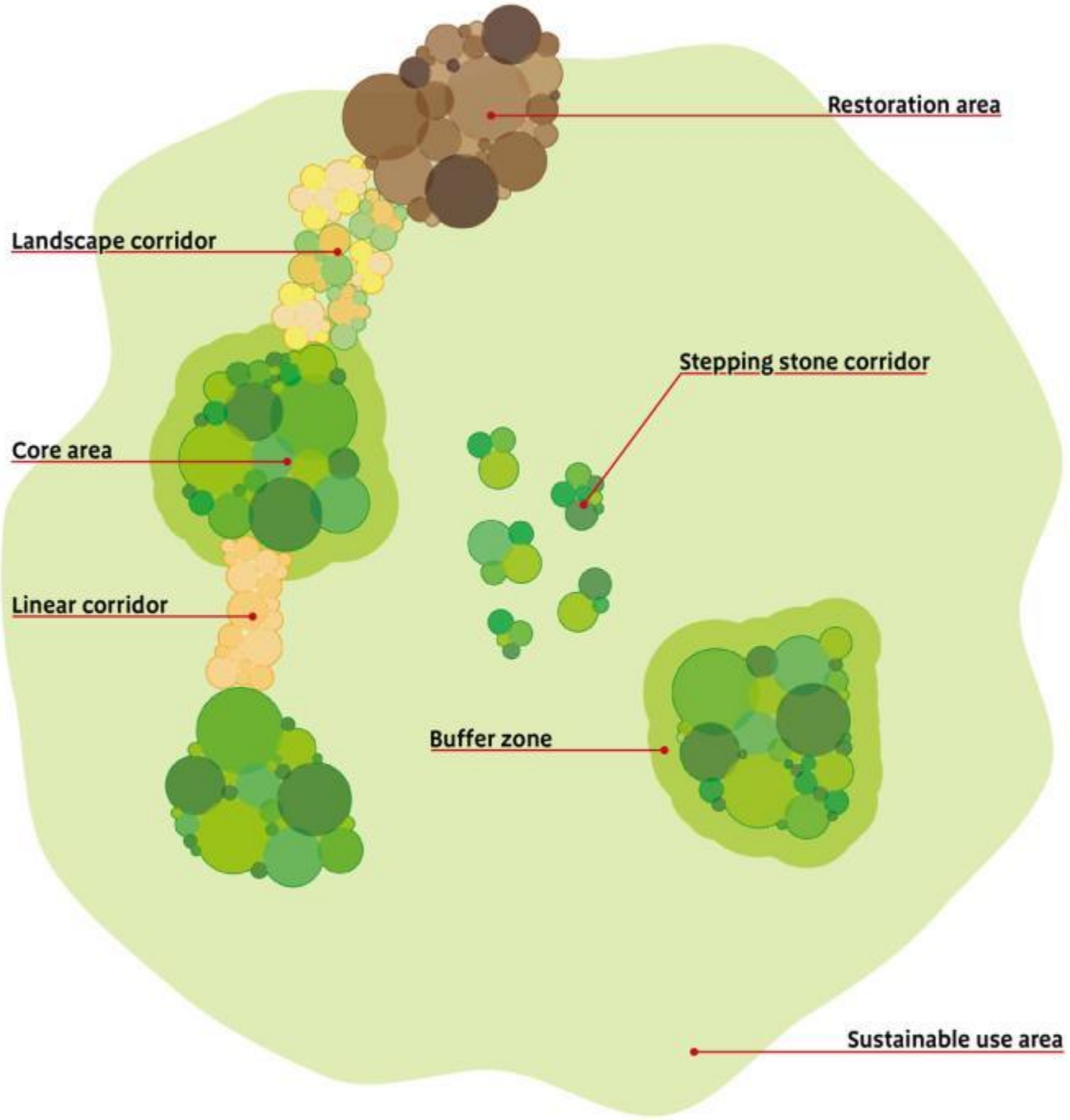
Two previous lectures in the series looked at the causes of biodiversity loss at a global scale, and at the challenges of protecting the most important areas in the world.

This lecture narrows the geographic scope considerably, but the underlying problems and principles are the same.

The lecture after this will look at the use of Agri-environment schemes to deliver conservation across Europe, but particularly in the UK, which nicely follows on from some of the things I will talk about.

Ecological Networks

- Widely recognised as an appropriate conservation response to a fragmented natural environment
- Endorsed (required?) by many international agreements, notably the Pan-European Biological and Landscape Diversity Strategy (PEBLDS) which requires the establishment of a Pan-European Ecological Network (PEEN)
- More than 250 initiatives underway globally, including progress in Scotland, Wales and parts of England
- Varied approaches (in particular the use of focal species), but common elements


Restoration area
Landscape corridor
Stepping stone corridor
Core area
Linear corridor
Buffer zone
Sustainable use area

Key concepts – coherent and resilient

- A **coherent** ecological network is one that has all the elements necessary to achieve its overall objectives; the components are chosen to be complementary and mutually reinforcing so that the value of the whole network is greater than the sum of its parts.
- A **resilient** ecological network is one that is capable of absorbing, resisting or recovering from disturbances and damage caused by natural perturbations and human activities (including climate change) while continuing to meet its overall objectives of supporting biodiversity and providing ecosystem services.

Three objectives

- Restore species and habitats appropriate to England's physical and geographical context to levels that are sustainable in a changing climate, and enhanced in comparison with those in 2000.

- Restore and secure the long-term sustainability of the ecological and physical processes that underpin the way ecosystems work, thereby enhancing the capacity of our natural environment to provide ecosystem services .... as well as providing habitats for wildlife.

- Provide accessible natural environments rich in wildlife for people to enjoy

Basically to make a step-change for nature conservation in England

Three tiers of wildlife sites

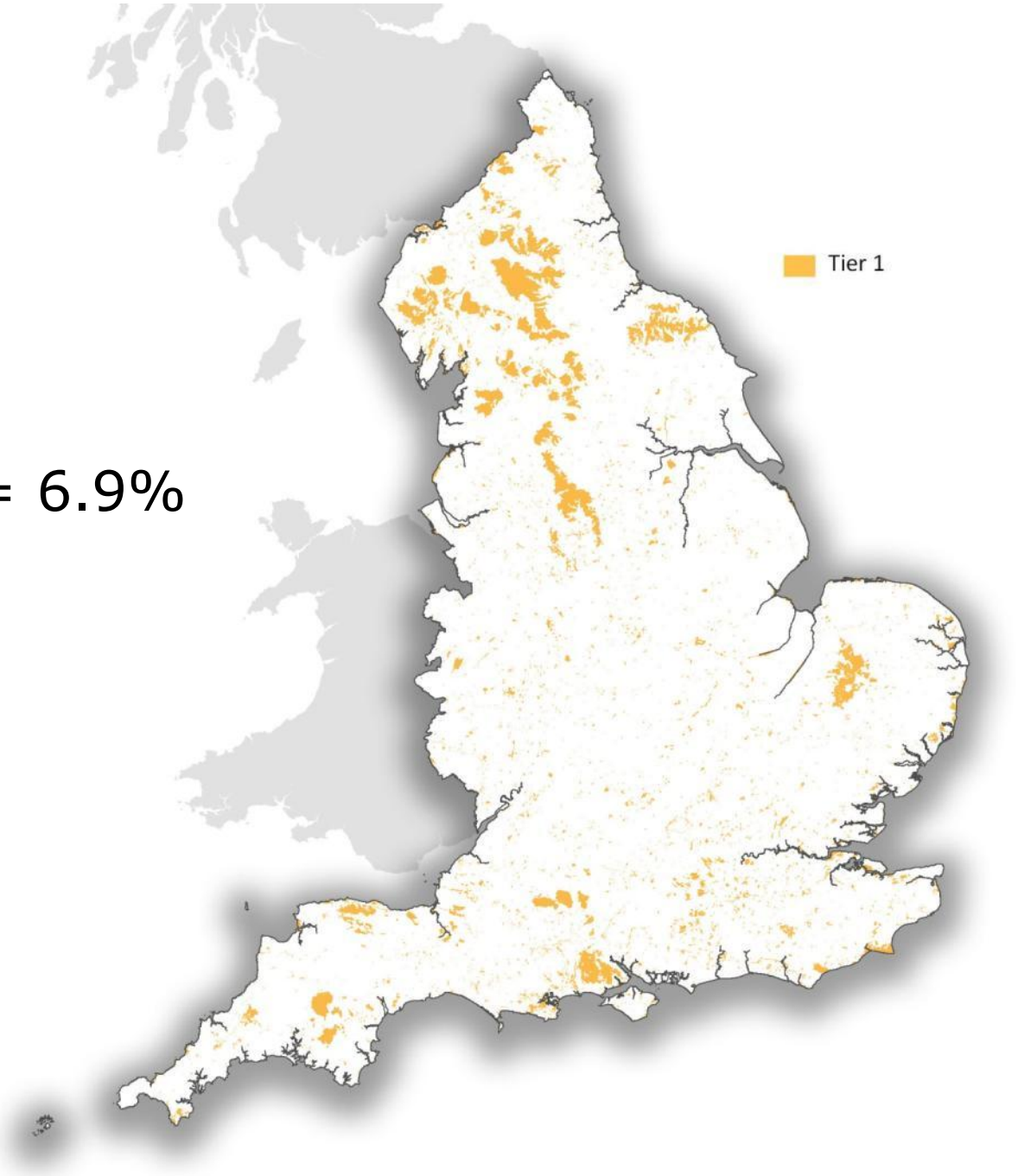
- Tier 1– sites whose primary purpose is nature conservation and which have a high level of protection either due to their statutory status or ownership.
  SSSIs, SACs, SPAs, Ramsar, NNRs, Local Nature Reserves, and voluntary conservation-sector owned reserves (RSPB, Wildlife Trusts)

- Tier 2 sites - areas designated for their high biodiversity value but which do not receive full statutory protection.
  Local Wildlife Sites and Ancient Woodland Inventory

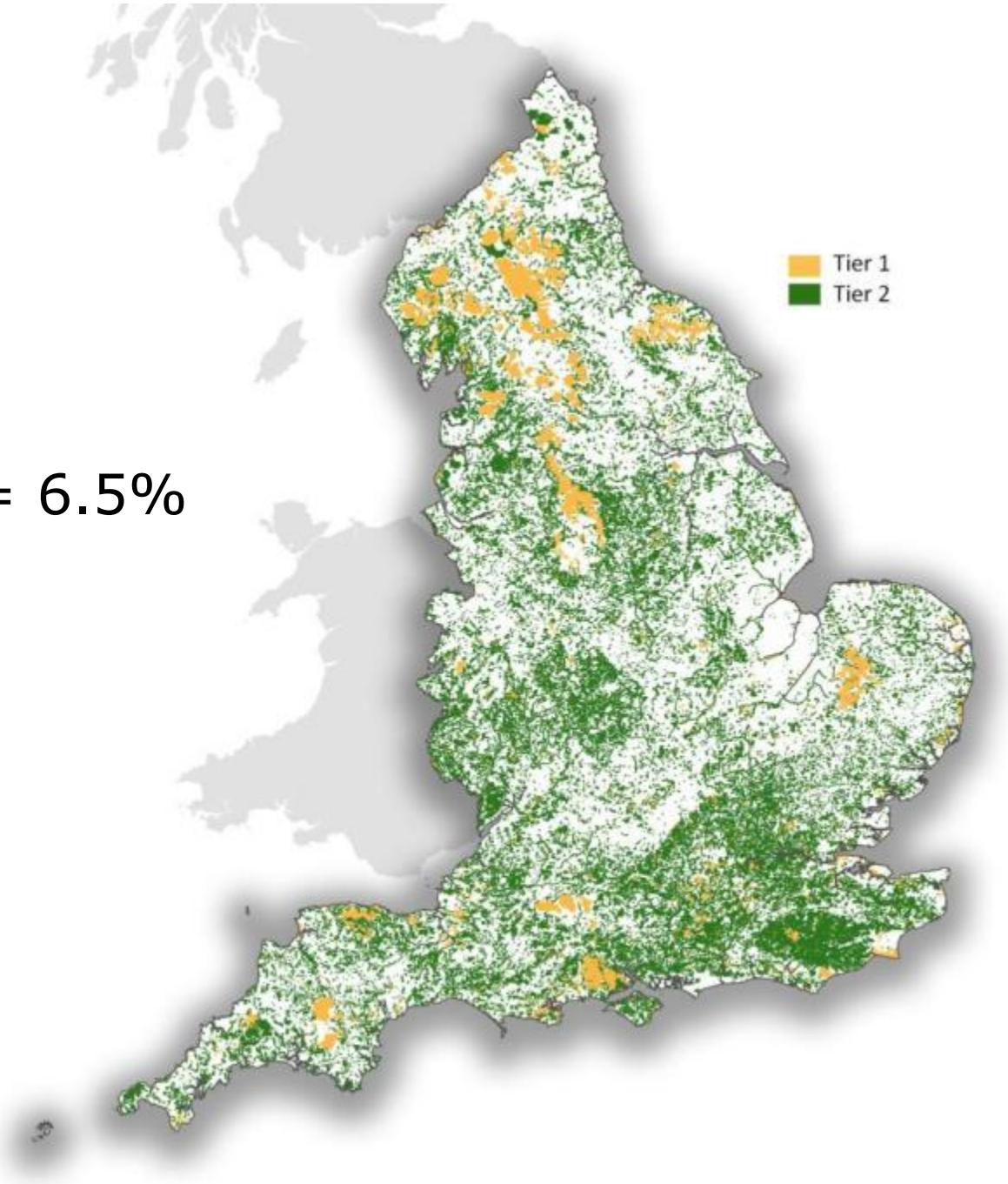
- Tier 3 sites - primarily designated for other reasons but wildlife conservation included in statutory purpose
  AONBs and National Parks

N.B. The review recognises (indeed emphasises) that there are other important areas for wildlife, that are outside ‘sites’.

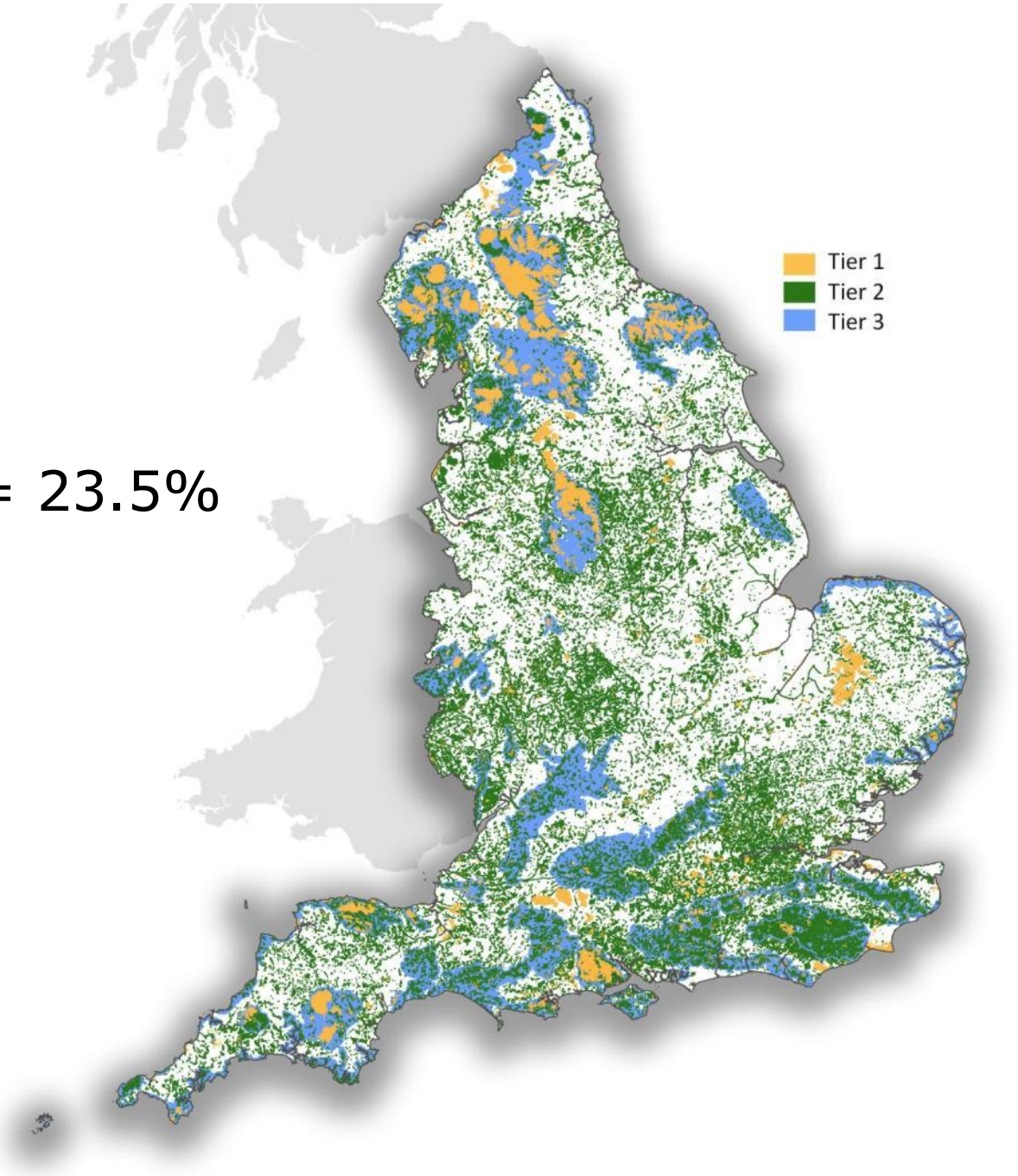
Tier 1 = 6.9%



Tier 2 = 6.5%



Tier 3 = 23.5%



Cannot just add up percentages to get total area protected (6.9%+6.5%+23.5% = 36.9% of England's land area) because there is considerable overlap in designations:

23.5% of National Parks also SSSI
11.8% of AONBs also SSSI

UN Convention on Biological Diversity new Strategic Plan (agreed by 193 countries) has target of *at least* 17% of land area of each country protected by 2020

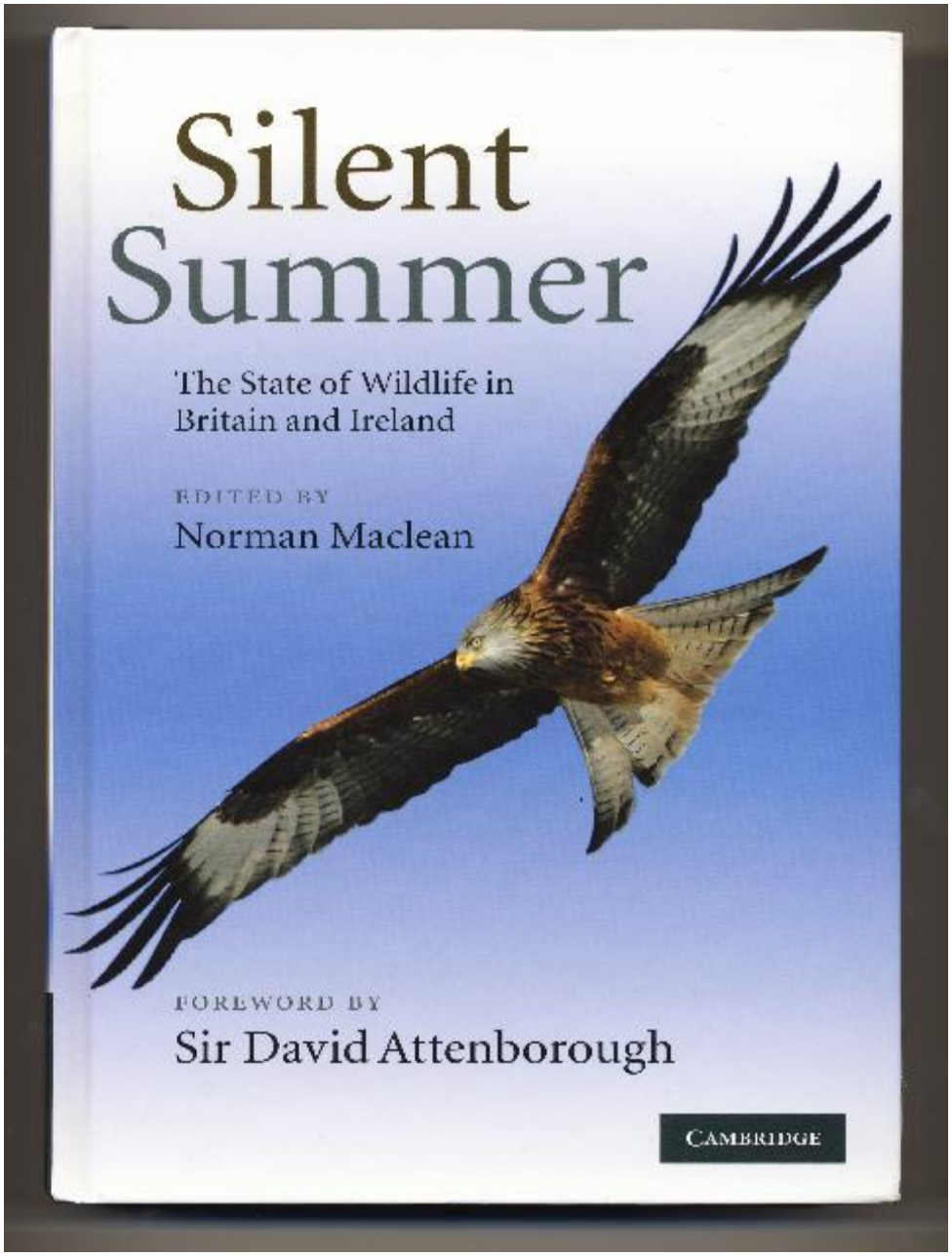
Tier 1 and Tier 2 (sites primarily protected for nature conservation, not landscape) total only 13.4%

WHATEVER THE AREA, IT ISN'T ENOUGH

Despite some real successes, England continues to lose wildlife at an alarming rate.

Report documents much of the evidence

e.g. in this book published in 2010



So why don't England's wildlife sites comprise a coherent and resilient network?

- Many of England's wildlife sites are too small (77% of SSSIs and 98% of LWS are smaller than 100 ha)
- Losses of certain habitats have been so great that the area remaining is no longer enough to halt additional biodiversity losses without concerted efforts
- With the exception of Natura 2000 sites and SSSIs, most of England's semi-natural habitats important for wildlife are generally insufficiently protected and under-managed
- Many of the natural connections in our countryside have been degraded or lost, leading to isolation of sites
- Too few people have easy access to wildlife.

What do we need to do? - ecological solutions

“MORE, BIGGER, BETTER AND JOINED”

- Improve the quality of current sites by better habitat management (and enhance heterogeneity)
- Increase the size of current wildlife sites
- Create new sites
- Enhance connections between, or join up, sites, either through physical corridors, or through ‘stepping stones’
- Reduce the pressures on wildlife by improving the wider environment, including through buffering wildlife sites

Better management of existing sites > Bigger sites > More sites > Enhance connectivity > New corridors

Reduce the pressures sites outside this hierarchy

Where you are matters

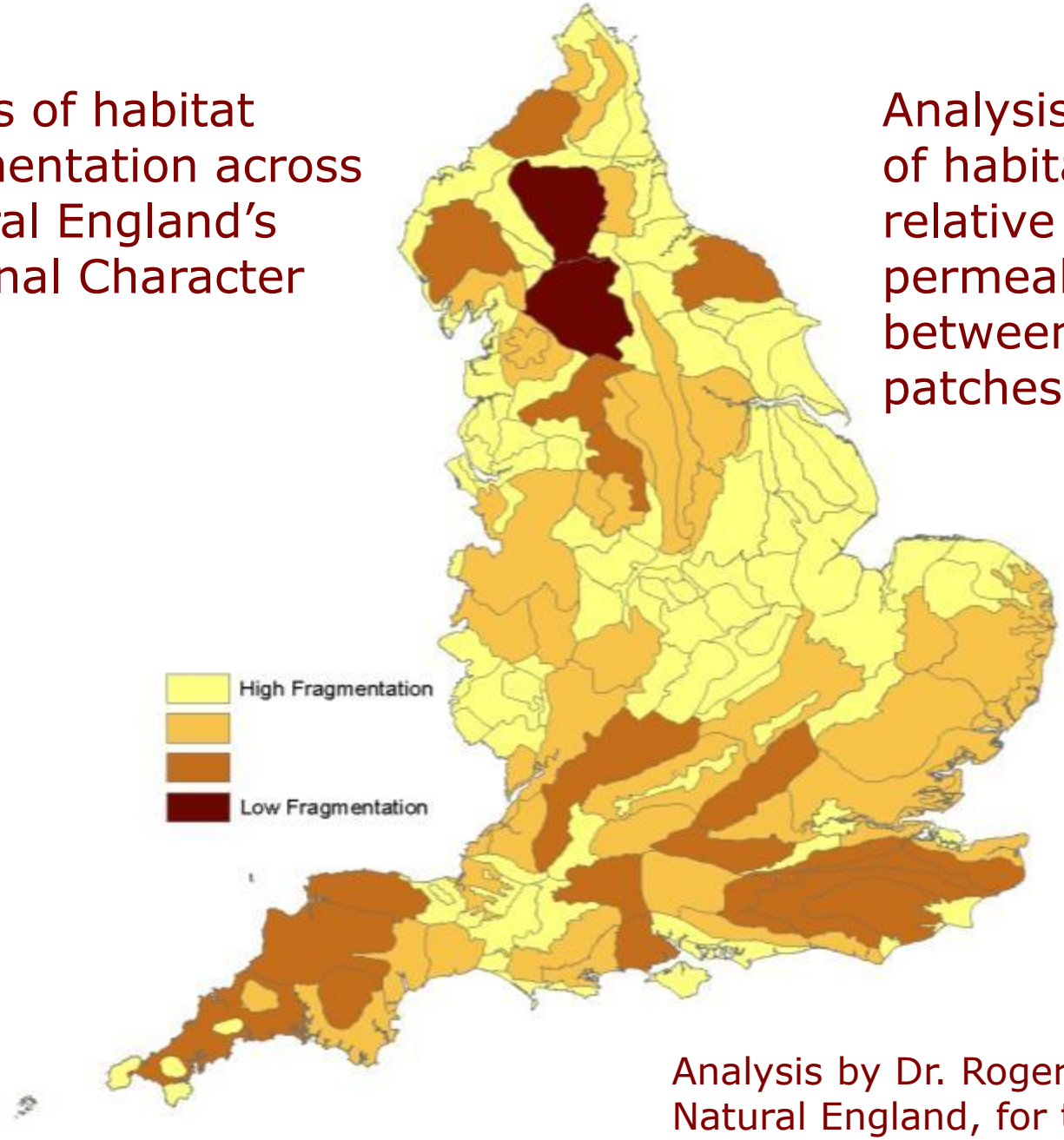
Increase habitat diversity and quality

Create new habitat / increase size of sites

Everywhere, but on a large scale in **ECOLOGICAL RESTORATION ZONES**

Levels of habitat fragmentation across Natural England's National Character Areas

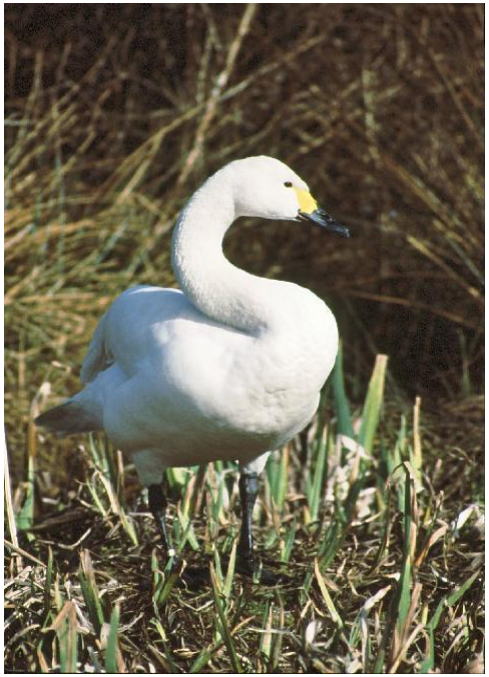
Analysis takes account of habitat extent, relative isolation and permeability of land between habitat patches



Analysis by Dr. Roger Catchpole, Natural England, for the review

How to turn this vision into reality?
The report sets out a ‘direction of travel’ – a forty year vision
We don’t have to do it all tomorrow
But we do have to start now

There is a lot of nitty-gritty detail in the report about the mechanisms to make this all happen



24 specific recommendations, including:

- Plan ecological networks:
  - local authorities should lead ecological network planning, working with third sector and government agencies;
  - clarify that local authorities' biodiversity duty includes planning ecological networks;
  - recognise large areas as *Ecological Restoration Zones;*
  - identify and protect wider ecosystem services (making space for water, coasts, carbon and people).
- Protect network components:
  - designate and manage SSSIs (and other sites) in ways that enhance their resilience to climate change;
  - public bodies owning land should do more to realise its potential;
  - better protect remaining high-value areas:

N.B. Protection does not have to be through legal designation

24 specific recommendations (continued)

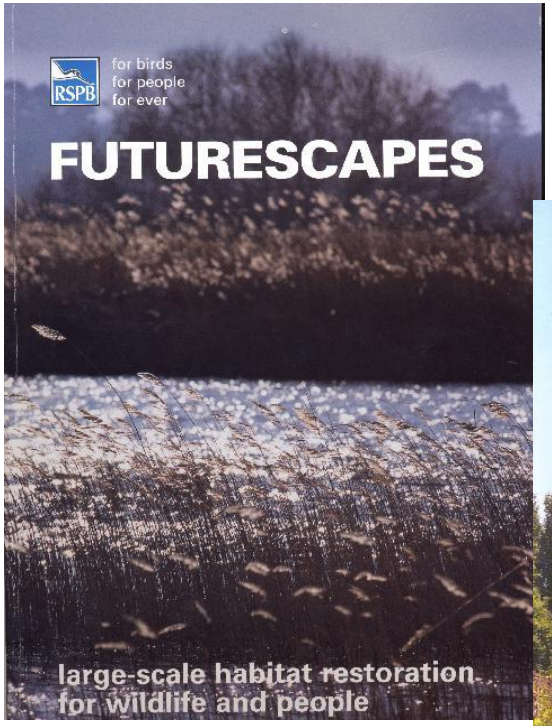
- Manage network components:
  - maintain progress with SSSI management;
  - better manage Local Wildlife Sites;
  - National Parks and AONBs should become exemplars of coherent and resilient networks;
  - retain HLS, consider new 'ELS-Plus' to buffer sites and establish ecological corridors;
  - promote new markets to support payment for ecosystem services;
- Establish new network components:
  - existing and new habitat creation requires greater focus (especially in ERZs).
  - consider new sources of funding e.g. biodiversity offsets and tax incentives
- Improve the wider countryside:
  - ELS needs to be improved to ensure uptake of key options

Conservation biologists and land-managers know how to deliver. It isn't hypothetical or untested. Given resources there have been some stunning conservation successes:

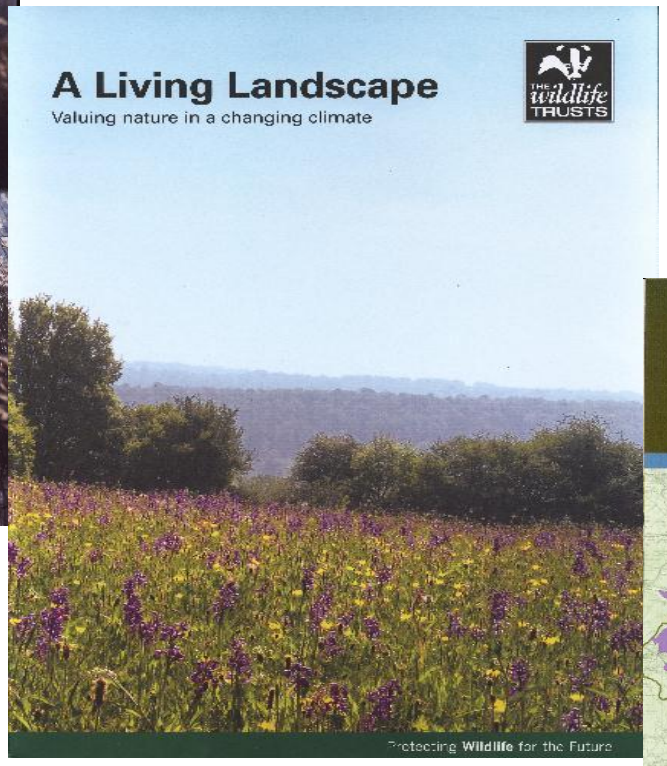
- In the last 10 years there has been a step change in the condition of England's SSSIs, from 50% to 93% now in favourable condition or 'recovering'
- There have been some highly successful species re-introduction programmes e.g Large blue butterflies, Red kites, and Pool frogs
- Some of the most exciting wildlife habitats in England are recreated habitats:
  wetlands like RSPB's Ham Wall and Yorkshire Wildlife Trust's Potteric Carr
  extensive recreation of Suffolk heathland

We know how to do this stuff, and we can win battles
To win the war we need to do much more

And we know where to do it.

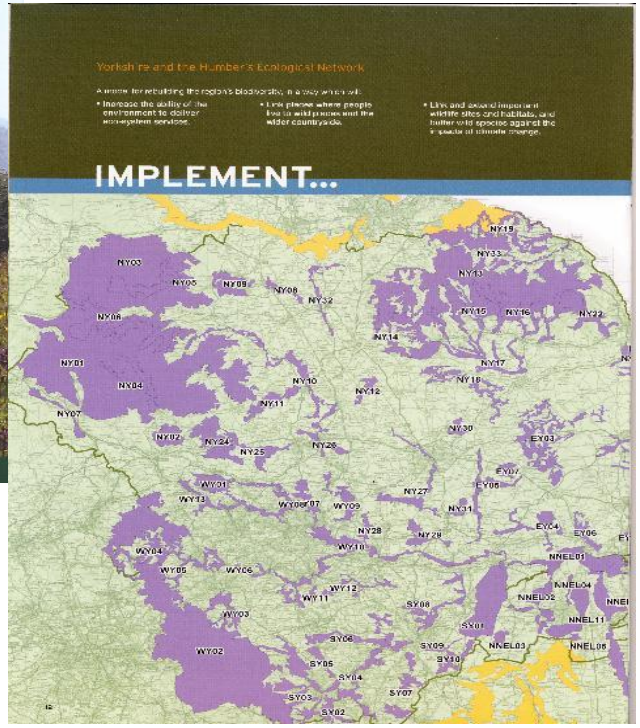


RSPB



The Wildlife Trusts

Yorkshire Wildlife Trust's *Living Landscape* 'opportunity' map



Costs

- Estimated total annual cost of all 24 recommendations is £600 million (BAP target cost study) to £1.1 billion (LUPG agri-environment study)
- Specific estimates for certain recommendations, e.g. for competition to establish Ecological Restoration Zones
- Society has to bear many of the costs anyway, in flood control, supplying clean water, coastal management, recreational ‘corridors’ etc. We need ‘joined up’ solutions that benefit people and wildlife by seeking multiple benefits in the way we manage land
- We need to embed the real economic benefits of the environment in all decision-making. Society ought to be paying land-managers for ecosystem services
- There may be other imaginative solutions e.g. Biodiversity Offsetting

Take-home messages

- It's not all bad. We have made considerable progress with site management and species recovery and this needs to continue
- Our wildlife sites do not comprise a coherent, resilient ecological network but establishing such a network would have huge benefits for wildlife and people
- Ecological networks, including restoration areas, need to be properly planned. This should involve (and be led by) local stakeholders but be informed by a national framework in partnerships
- Large-scale 'Ecological Restoration Zones' should be established in some areas
- We need a step change on what we do, to deliver more space for nature, in a bigger, better managed and joined up network for England's wildlife and wild places

Next steps

- Caroline Spelman has welcomed the report
- Government response will be through Natural Environment White Paper (NEWP) due this year
- Considerable interest outside Whitehall
  - Scottish Parliament
  - Numerous Wildlife Trusts
  - RSPB
  - Heritage Lottery Fund
  - Campaign for National Parks

Read the report for yourself at:

http://www.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf