



# **The challenge of wild nature conserving itself**

**Steve Carver & Mark Fisher  
Wildland Research Institute  
Changing Perceptions of Nature - a  
Wilder Future? University of Cumbria  
18 January 2017**



# The sliding scale of wildness

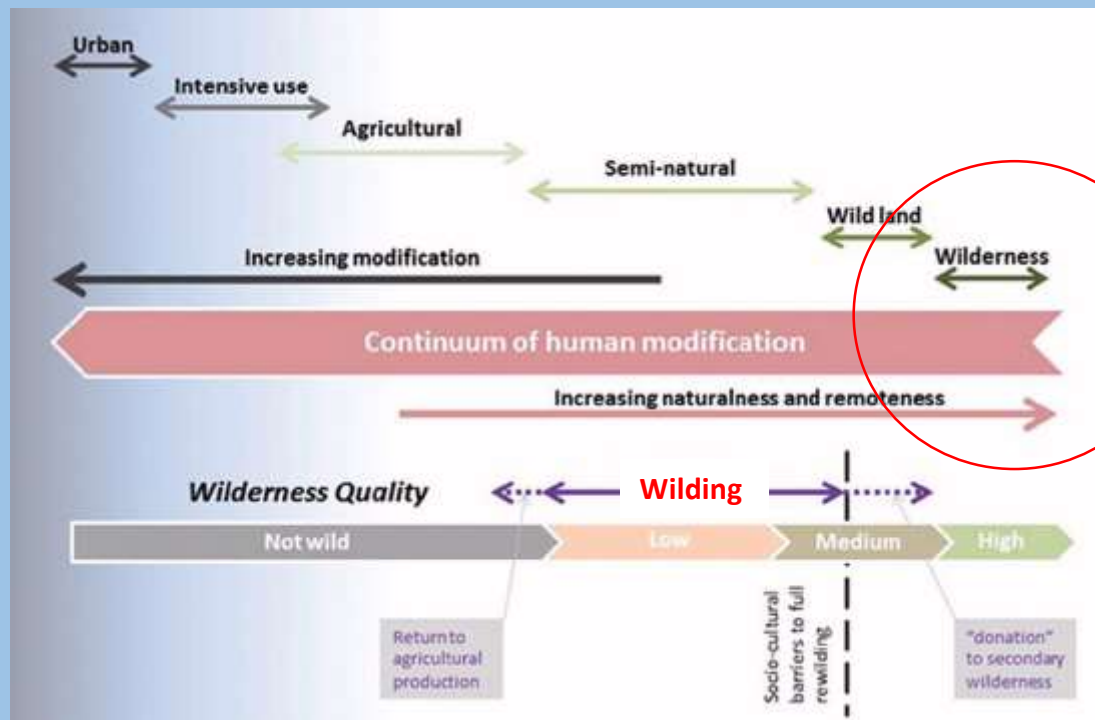
ECOS 37(3/4) 2016

## The challenge of wild nature conserving itself

The last edition of ECOS had a lot to say about rewilding in its many guises, a spectrum of less wild and more wild. This article looks at how nature conservation is currently seen, and rewilding in particular, as a way towards outlining the wildest end of this continuum. Without this most wild part of the overall picture, humans will never face or even relish the challenges of wild nature while learning as a species to live with it, within it.

MARK FISHER & ALISON PARFITT

think of a continuum from the not-wild of agricultural surroundings to the most wild, it is the most wild that is missing, as it is the missing bit in us - banished from our psyche. In Britain we don't have anywhere, at any meaningful scale, where we are able to have the full and wholesome relationship that we need to have with wild nature, where we can be most wild.



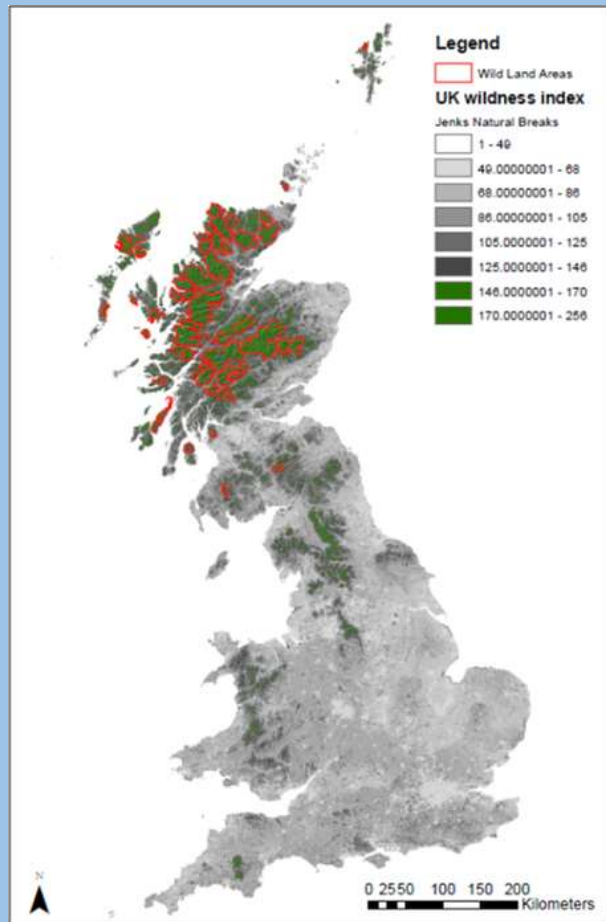
**THE MOST WILD  
IS MISSING  
IN BRITAIN**

We are not advocating wilding for everywhere, to the most wild, but we do see it as true nature conservation - it is wild nature conserving itself.

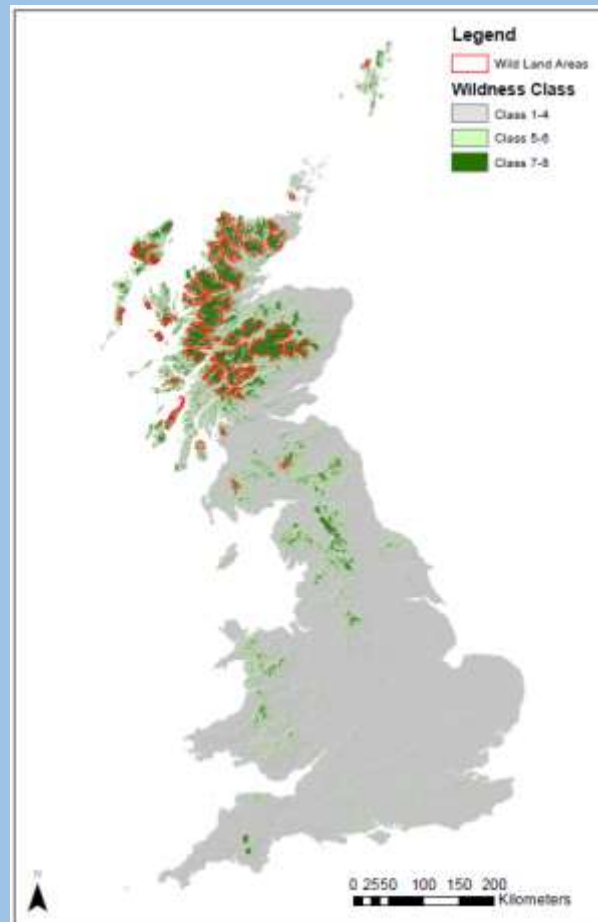


# Relative scale of wildness mapped for Britain

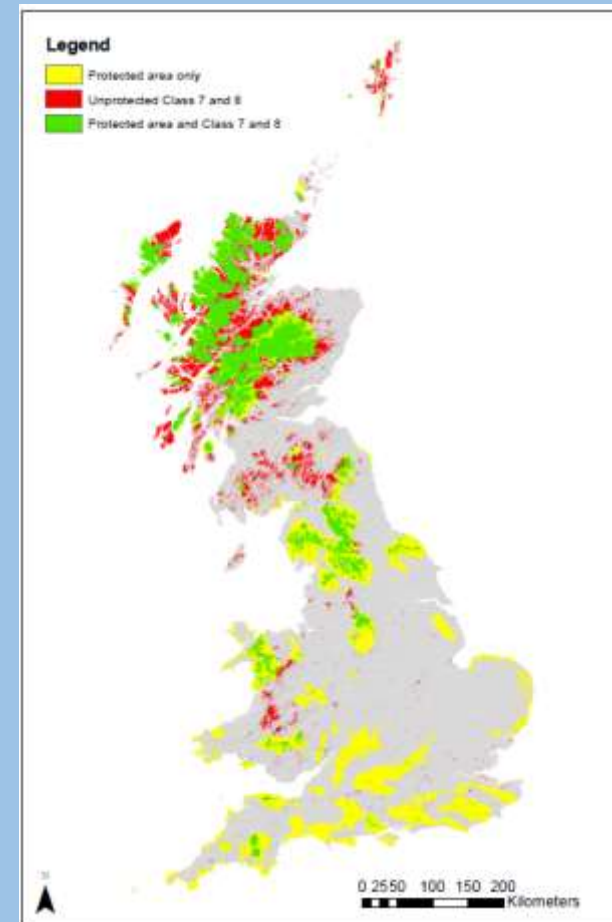
Comparison - UK level wild land



Wildness Class 1-8

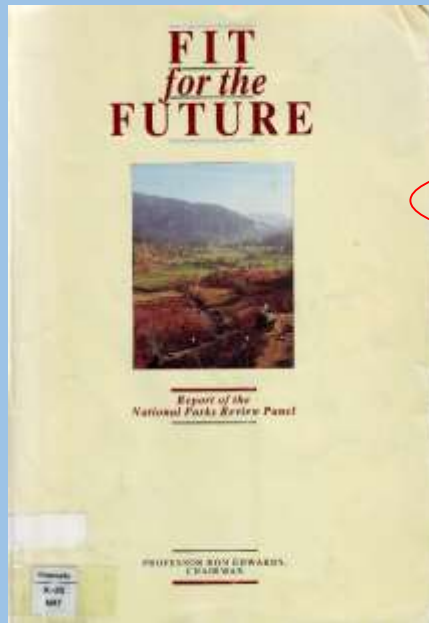


Class 7 and 8 - protected and unprotected



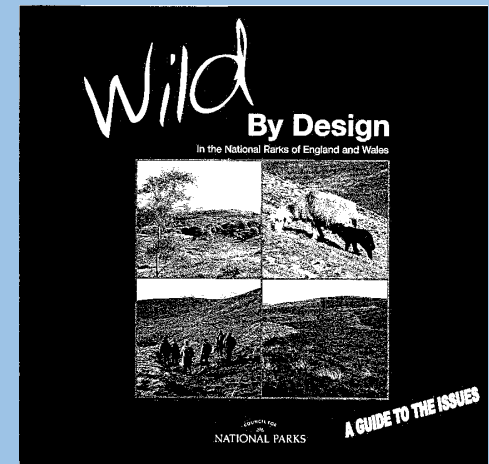


# REVISITING Edwards Report 1991 & Wild by Design 1997



**6.3** A number of experimental schemes on a limited scale should be set up in the national parks, where farming is withdrawn entirely and the natural succession of vegetation is allowed to take its course.

**Government** endorses **Recommendation 6.3** of the Edwards Report, 1991, to set up experimental schemes in National Parks where **farming is withdrawn**, allowing growth and development of **natural vegetation**



**Promoting areas where ecological processes can be paramount**

The real challenge is to have the courage and commitment to leave minimal intervention areas on a much larger scale (landscapes of thousands of hectares) and over much longer time periods (hundreds of years).

**Council for National Parks** sets a **long term challenge** in **Wild by Design**, 1997

## FIT FOR THE FUTURE

A statement by the Government on policies for the National Parks

Department of the Environment

January 1992

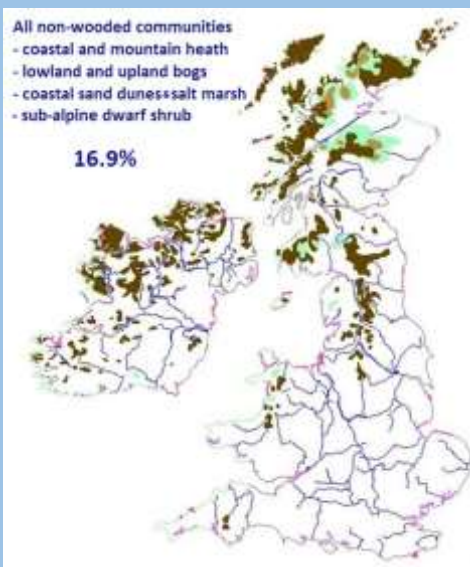
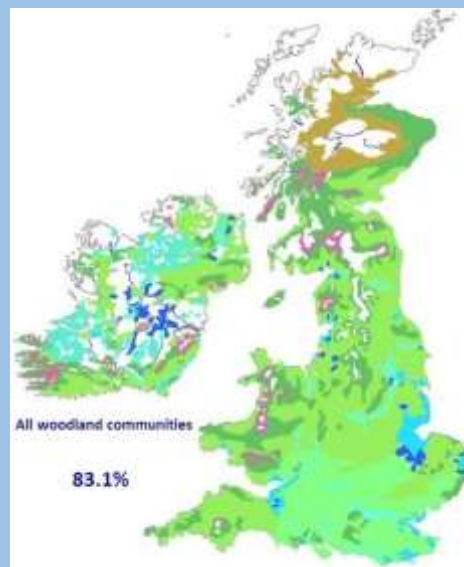
**5.6** Whilst the Government believes the future of the National Parks is closely tied to the future of farming, some of the wilder or more remote areas of the Parks may offer opportunities for experimenting with the voluntary withdrawal of farming operations and allowing the growth and development of natural vegetation. The National Park authorities are well placed to consider the scope for and location of such areas and, in conjunction with the countryside agencies, could set up some experimental schemes the results of which might be of value to a wider audience.



# Natural vegetation mapping of the UK



Digital mapping system (Bohn, U. *et al* 2004) matches plant communities with **current climatic** and **soil conditions** of Europe



Five different **oak communities**, comprising two-thirds of all woodland, could cover much of the UK

All woodland communities = 83.1%

All non-woodland communities = 16.9%



# Timescale of self-replicating natural systems

Timescale in reaching **spontaneous, self-replicating population** of reinstated species depends on **developmental age** at which **reproduction** occurs. For trees, **spontaneous perpetuation** and **wildwood structure** may take 100y or more

## WOLF

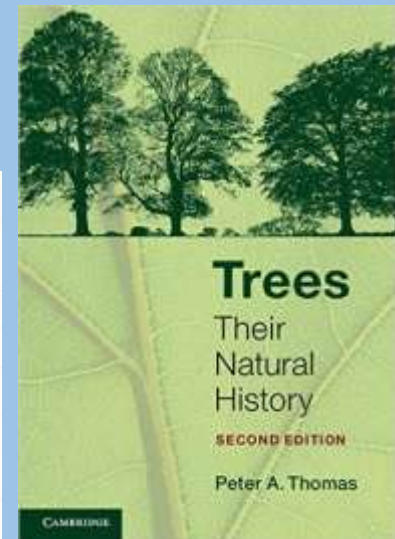
- reaches sexual maturity within **two years**
- gestation period is ~ 63 days
- average litter size is 5 or 6
- live for up to **17 years**

## OAK TREE

- produces acorns at **40-60 years** old
- optimum seed bearing 80-120+ years
- periodic acorn production from none to over 50,000 per year
- expected life span **350 - 700 years**



The Lifespan of Trees in Britain	
Ash	200 -220
Aspen	100
Beech	180-200
Common Alder	200
Common Lime	400
Common Oak	350
Scots Pine	300
Silver Birch in Southern England	80
Silver Birch in Northern England	150
Silver Birch in Highlands of Scotland	220



**Box 6.2** Approximate age of first fruiting and optimum seed-bearing age

Common name	Scientific name	Age of first seed production (years)	Optimum seed-bearing age (years)
<b>Hardwoods</b>			
Alder	<i>Alnus</i> spp.	12	—
Ash	<i>Fraxinus excelsior</i>	20–40	40–100
Beech	<i>Fagus</i> spp.	40–60	80–200
Birch	<i>Betula</i> spp.	7–40	20–70
Oak, English	<i>Quercus robur</i>	40–60 <sup>a</sup>	80–120+

## ~~Social behaviour and reproduction~~

~~A wolf is sexually active when it is two years old. Oestrus lasts 5-7 days once a year, generally in January-March. Parturition occurs after 60-62 days and litter size varies from 1 to 11 pups. Generally only one litter is produced in each pack~~



# Are there any large areas that function ecologically as woodland?

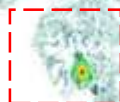
Spatial distribution of areas of higher woodland cover in Britain (deciduous woodland)

Woodland cover



UK cover 12%  
EU average 37%

Core area of 20% cover in 208km<sup>2</sup> around Newby Bridge



Landscape Research, Vol. 25, No. 3, 291-303, 2000



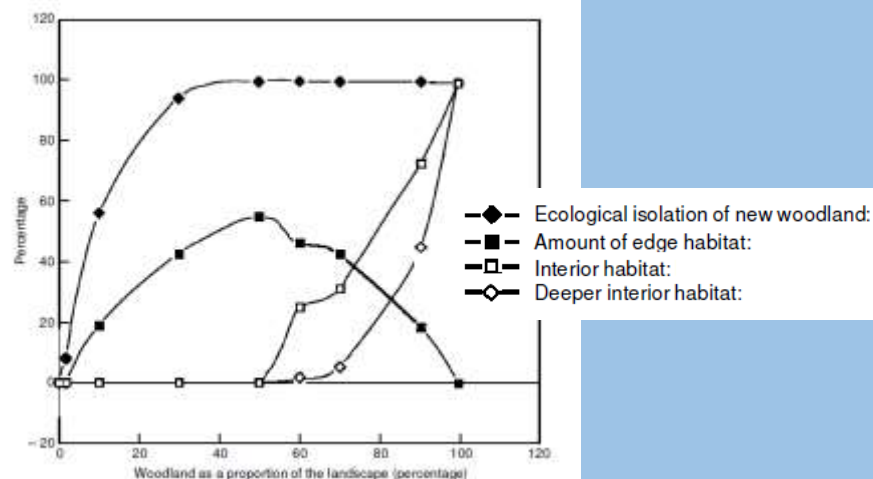
## Rebuilding Networks of Forest Habitats in Lowland England

G. F. PETERKEN

**ABSTRACT** Forest habitats in England have remained fragmented for centuries, and this has isolated populations of woodland species. Now, however, there may be opportunities to increase woodlands and restore the connections between habitats and populations. An ecological basis is provided for reconstructing a forest habitat network.

**KEY WORDS:** England, forest, habitat network, landscape

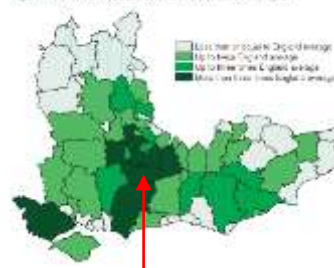
Rebuilding Networks of Forest Habitats 295



At 30% cover and above, woodland becomes **ecologically functional**:

- higher likelihood of corner or edge **contact** with other woodland
- overcomes **fragmentation** and **isolation**

Figure 11: Deciduous woodland cover in the Waverley Borough Council area



Waverley Borough Council area is 30% wooded



# Return of natural vegetation

## What drives ecological restoration.....

- **public** or **beneficial ownership** (or control)
- removal of non-native **grazing animals**
- recruitment of **woody species** and the reinstatement of the **structural complexity of vegetation**
- reinstatement of **natural processes** such as nutrient cycling, decomposition, trophic cascades etc

## .....and what holds it back?

- grazing by **domestic livestock**
- dependency on **agri-environment schemes** (HLS, Countryside Stewardship): characterised by managerialism and short-termism – lack **PERMANCY**
- **inflexibility** within current designation system (SSSI): based on **broad habitats** and **Common Standards Monitoring**
- **lack of strict protection category** (non-intervention) in protected area designation

## What about reinstatement of animal kingdom?



# SMALLSCALE - Vegetation renewal and hydrological improvements - examples of livestock exclusion in the uplands of Cumbria

**Livestock exclusions** monitored by applications to the **Planning Inspectorate** to fence areas in **upland commons**

## Improving native diversity and hydrology, mitigating downstream erosion and flooding

Caldbeck Common (Burbleshwaite, Charlton Gill, Roughton Gill), Cumbria - January 2008  
Saddleback Common, Cumbria - July 2008  
Hartley Fell, Cumbria - March 2010  
Bampton Common, Cumbria - February 2011  
Brackenthwaite Fell, Cumbria March 2011  
Langstrath & Coombe Fells, Cumbria June 2012

## Protect woodland regeneration or planting

Milburn & Blencarn Commons, Cumbria - June 2005  
Baugh Fell Common, Sedbergh, Cumbria - June 2006  
Wherside Great Allotment, Cumbria - November 2007  
Mungrisdale Common, Cumbria - July 2008  
Bowscale Common, Cumbria - July 2008  
Blencarn Fell Common and Kirkland Fell Common, Cumbria - September 2011  
Skirwith Fell, Cumbria - September 2011  
Glenridding Common, Cumbria - November 2011

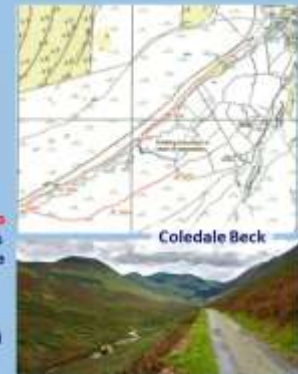
## Overgrazing

Whelpside, Cumbria - August 2011  
Armboth Fell, Cumbria - August 2011  
Blencarn Fell Common and Kirkland Fell Common, Cumbria - September 2011

### Brackenthwaite Fell, Cumbria



- National Trust owned common **heavily grazed by sheep**
- Coledale Beck severely eroded - several major landslips
- large amounts of **sediment** washed into Bassenthwaite Lake resulting in **high levels of phosphates**
- **sediment risk map** identified highest sediment supply risk rating for Coledale
- restoration of **mire vegetation** on the upper slopes and **woodland regeneration** on the lower slopes would help to **reduce water run-off**
- woodland restoration would increase diversity and **provide habitat for breeding birds**, merlin and ring ouzel
- **sheep excluded by fencing off 29ha**
- **4,000 trees - aspen, willow and alder - planted in drifts along two miles of the Beck**



### Langstrath and Coombe Fells, Cumbria



- Common owned by **National Trust**
- seven grazing rights holders registered over the common
- HLS requires creation of areas of **sparse woodland** to enhance biodiversity
- fencing is to **exclude sheep** from 74ha so that new woodland is protected



16. The purpose of the fencing is to protect mature native planted trees and naturally occurring trees from grazing. The primary reason for the fencing is to protect the trees and prevent the loss of the trees. The fencing is to be used to prevent the loss of the trees and prevent the loss of the trees. The fencing is to be used to prevent the loss of the trees and prevent the loss of the trees.

- **prevention of quick run off, reducing flooding further downstream**
- **creation of habitat for birds**



Blue Rock with South Wall and Black Wall in background

### Glenridding Common, Cumbria



- two graziers with registered rights on common owned by Lake District National Park
- one of the largest areas of **juniper** in the Lake District, dominated by bushes suffering **dieback from old age**
- juniper could be lost from the common as very few young vigorous bushes - **regeneration often grazed off by sheep**



- Area 1** - 14ha fenced off to **exclude sheep** so that juniper seedlings survive. Juniper also be planted with varying density
- Area 2** - fenced off and planted with juniper and native woodland, extending a **habitat corridor** and improving connectivity of woodlands



Area 1 - juniper bushes suffering age-related dieback across the stand



# LARGESCALE -Hardknott Forest and Duddon Valley woodland



- Hardknott Forest** 600 ha **Forestry Commission** conifer plantation in the upper Duddon valley
- planted in the 1930s and 1940s - now reaching **end of rotation** (maturity)
  - aim is to **increase natural and recreational value** through **gradual restoration** into **native oak and birch woodland** with open crags and boggy areas
  - opportunity to create **largest semi-natural woodland** in Lake District through **natural regeneration**
  - being linked in to existing a series of **ancient oak woodlands** that snake down the valley all the way to coast!

*Landscape Research, Vol. 25, No. 3, 291–303, 2000*

## Rebuilding Networks of Forest Habitats in Lowland England

G. F. PETERKEN





# Natural regeneration at Hardknott Forest



Cutting Sitka spruce amongst birch regeneration



Cutting Sitka spruce regeneration



Planting juniper

Work parties in **dormant season** clear regenerating **Sitka spruce**, plant juniper, remove redundant fences (Uni. of Leeds; Park Lane College, Leeds; Leeds City College; Scottish Agricultural College; Scottish Rural University College)



- area clear felled 1998



**Clearfelling** upland conifer plantation sites where **local native seed sources exist** has the potential to be **effective method** of establishing **native woodland** through **natural regeneration**



# Grassguards Native Woodland – a linking woodland



**Upland Oakwood** planted by Forestry Commission in 2005 to link Hardknott Forest and **Duddon Valley ancient woodland**

- oak, rowan, birch, holly and juniper planted in **five groups** across landscape
- scattered holly, juniper and rowan in upper crags
- area enclosed by **fencing** to keep out deer and sheep from the fell during **woodland establishment**





## Making real space for nature: a continuum approach to UK conservation

*Traditional conservation concerns over wildlife loss, cherished habitats and landscape heritage are holding back more adventurous thinking on rewilding, species reintroductions and landscape-scale natural processes. A bolder vision for the UK countryside, with a range of ambitions for wildlife and landscape conservation could allow nature to flourish to its full potential.*

STEVE CARVER

## Rewilding... conservation and conflict

*Those with an eye to the ecological potential of the UK will probably like rewilding. Those rooted in targets and condition statements or those with purist views of cultural landscapes may find rewilding awkward. This article discusses the themes and barriers to rewilding thrown up by current conservation practice and in doing so, hopefully identifies some solutions and compromises across different conservation mindsets.<sup>1</sup>*

STEVE CARVER

<http://www.wildlandresearch.org/our-work/downloads/publications/>

## The challenge of wild nature conserving itself

*The last edition of ECOS had a lot to say about rewilding in its many guises, a spectrum of less wild and more wild. This article looks at how nature conservation is currently seen, and rewilding in particular, as a way towards outlining the wildest end of this continuum. Without this most wild part of the overall picture, humans will never face or even relish the challenges of wild nature while learning as a species to live with it, within it.*

MARK FISHER & ALISON PARFITT