



A greener vision for HS2

Ideas for large-scale nature restoration along the proposed route



The severing

As envisioned, the line

HS2 is England's biggest infrastructure project in modern times. If it goes ahead we believe it should be England's biggest nature restoration project too. But the current proposals are flawed, and we cannot support them.

Our focus is on the environmental impact of HS2 but independent analyses of Phase 1 (London – Birmingham) indicate that the direct economic benefits of HS2 remain weak. It cuts through communities and mainly benefits people only near the few stations on the route. It also puts massive constraints on large-scale plans to restore and reconnect habitats in areas where the line will run.

HS2 has produced an environmental statement for Phase 1 but it doesn't identify or account for all the environmental damage the project will cause.

effect...

will cut England in half

Much more must be done to avoid damaging special places for wildlife, before mitigation measures and compensation are considered. The Environmental Audit Select Committee's report on HS2 is also critical of its environmental impact and the current lack of vision for mitigation.

As it stands, thousands of hectares important to wildlife and communities will be lost forever, and ecosystems fragmented.

But, if it does go ahead, and with a much reduced environmental impact, HS2 could be a means to put nature (and people's access to it) back into areas of lowland England where it has been lost – to raise our environmental baseline following decades of decline.



As planned, HS2 is a 330-mile barrier across the country

Whether for people or wildlife, the divide is

the same

Marjorie Fox, volunteer warden at Broadwater Lake reserve, Herts

"The Colne Valley is a rare tranquil spot, precious to residents, bird lovers, cyclists and walkers. It is irreplaceable."

Sonia Liff, resident, Leicestershire

"I regularly walk in areas where HS2 is proposed to be sited. If it is built it will cut off many existing routes for walkers as well as wildlife."

Professor Mel Jones, local landscape historian, Sheffield

"Smithy Wood is irreplaceable because it is ancient and part of our local heritage."

Bechstein's bat

One of the UK's rarest mammals, but the proposed HS2 line cuts through the middle of Bernwood Forest in Buckinghamshire, where it is found.

Small blue butterfly

Northamptonshire's only population of this nationally scarce species is at Helmdon Disused Railway SSSI. Its habitat will be destroyed by HS2.

Red deer

Red deer and other deer species are present in Staffordshire but no assessment of populations or possible crossing routes have been made. The effect of severance has not been fully assessed.

Where we live

Our local green space



...and how to transform it

By restoring nature along the route – on a landscape scale

If HS2 goes ahead, then as a flagship infrastructure project it must demonstrate an exemplary regard for the environment.

This is not just to prevent further declines in species and habitats. Working with nature also makes social and economic sense. Benefits include happier, healthier people, reduced flood risk, returning wildlife and more resilient towns and countryside.

Our vision is a 1km ribbon of wildlife-rich landscape either side of the line – planned, established and run by a partnership of residents, landowners and local and expert groups. Recreated and naturally regenerated habitats would buffer, link and provide 'stepping stones' between wildlife sites. In time there would be new meadows, woodlands and wetland expanses to

explore, alongside existing farmland, communities and housing. Green bridges, pathways and cycle tracks ('Low Speed 2') would reconnect communities cut through by the proposed line. This would spread the benefits of HS2 to many along the route, rather than just those near its few stations. Funding for ongoing maintenance would be part of the HS2 legacy.



New wetland at the Great Fen in Cambridgeshire, next to the East Coast main line. This large-scale partnership project is restoring over 3000ha for people and wildlife

Why restore nature?

Seventy years of post-war development have given us a modern landscape dominated by built structures and intensive farming. Semi-natural areas come a poor third.

For 15 years organisations such as The Wildlife Trusts, the National Trust and RSPB have been working at a landscape level, to put back wildlife that has been lost.

The Wildlife Trusts have 130+ Living Landscape projects across the UK's cities, towns and countryside. Each targets an area for ecological restoration – perhaps a river catchment, cluster of ancient woodlands or urban greenspace. Working with local people and landowners, often over a time frame of decades, our Living Landscapes restore what is unique and distinct about the area's nature, to benefit wildlife and people.

A new vision for HS2

A ribbon of connected, wildlife-rich landscape that improves people's access to nature

THE GREEN ZONE

A 1km wide ribbon of wildlife-rich habitat patches either side of the line creates new natural space for people and wildlife alongside farming and other land uses

NEW ACCESS TO THE COUNTRYSIDE

New habitats also create 'Low Speed 2' - a network of foot, cycle and bridle paths that connects existing routes and gives people opportunities for volunteering and education

IRREPLACEABLE HABITATS

Ancient woodlands, wetlands, grasslands and heathlands which can never be truly recreated have been saved from destruction and buffered by new green areas

GREEN BRIDGES

Bridges with trees, hedges and grasslands plug into existing or new cycle networks to reduce the severing effect for communities and wildlife populations

A NET GAIN FOR NATURE

Existing areas are linked by recreated habitat, some of it regenerating naturally. This helps avoid local species extinction by reducing fragmentation and isolation

HS2 AS PLANNED

The current proposals for Phases 1 and 2 will sever ecosystems and communities along the route, creating a net loss for communities and nature. 43 ancient woodlands will be lost or damaged, as well as 9 Wildlife Trust nature reserves, 10 SSSIs, 153 Local Wildlife Sites, 42 proposed Local Wildlife Sites and four government-funded Nature Improvement Areas. Over 300 more sites close to the route will suffer indirect impacts

GREY CORRIDOR

The 'real' HS2 line would be a 'dead zone' about 80 metres wide, with security fencing, overhead electric wires and gantries

wildlifetrusts.org/HS2

Restoring nature makes financial and social sense

Our plan delivers much-needed ecosystem services to an already fragmented landscape

Healthier, happier people

Research shows exercise in green surroundings has lifelong benefits to health and wellbeing, saving on future healthcare costs

Sustainable transport

Footpaths and cycleways link people to each other and to their local natural environment. HS2 can contribute to the National Cycle Network

Flood management

Well-sited wetlands and grasslands function as natural sponges, keeping flood water away from homes and businesses

Cooler cities

Ecological restoration is for cities too. It lowers pollution and reduces the 'heat sink' effect of hot summers

Returning wildlife

Plants and animals driven to the margins can become abundant once more

Carbon storage

New grasslands, woodlands and wetlands can lock up atmospheric carbon for very long periods

Access to nature

Playing in semi-natural green space is essential for healthy development in children

Resilient habitats

Bigger, better-connected woods and wetlands are more able to withstand the impact of climate change

AMWELL RESERVE, MATTHEW ROBERTS

What it will take to make this happen

Less than 1% of the HS2 budget – and a firm commitment to the environment

OUR VISION

c.15,000ha
of new/reconnected habitat

120 miles
of new foot and cycle paths

£130m

Plus c. £10m annual maintenance and rent

<1%

Proportion of the overall HS2 budget needed

Habitat mapping indicative and costs provisional. See over for more details.

“The Government wants this to be the first generation to leave the natural environment of England in a better state than it inherited”

Natural Environment White Paper, 2011

BROWNE'S PEACE, MATTHEW ROBERTS

It's time to restore nature

After all, it's everybody's life support system

If HS2 goes ahead, society has a choice: to keep on lowering the environmental baseline – or finally start to improve it. We believe our vision is a way of maximising the opportunity to restore nature, using local experience and knowledge to put the right connections in the right place. Crucially, our research shows that investing in green infrastructure, and habitat restoration and creation as part of HS2, is affordable and cost-effective.

We are throwing out this challenge to HS2 as a positive contribution to the debate around the project's environmental impact. Some habitats can never be recreated – but the least the HS2 project can do is to enhance the habitat network so that plants, animals and people can keep up with the pace of change it imposes on the landscape.



TOM MARSHALL

“Far more species are declining than increasing in the UK, including many of our most treasured species. The causes are

varied, but most are ultimately due to the way we are using our land and seas and their natural resources, often with little regard for the wildlife with which we share them.”

Sir David Attenborough, President Emeritus of The Wildlife Trusts, introducing the State of Nature Report, 2013



HAZEL DORNHOUSE PAUL HOBSON

Act now Put nature at the heart of HS2

If you are an MP, we ask that you:

- 1) Reduce the environmental impact of HS2, which at present is drastically understated.
- 2) Include environmental impact in the HS2 Select Committee's Terms of Reference.
- 3) Ensure HS2 Ltd commits to a significant net gain for nature and people's access to it – not just 'no net loss'.

If you are a member of the public:

Visit wildlifetrusts.org/HS2 for ideas on how to contact your MP and to download a copy of this report.

The Wildlife Trusts

With more than 800,000 members, the 47 Wildlife Trusts are the largest UK voluntary organisation dedicated to conserving all the UK's habitats and species. We have a long history of working with landowners and building partnerships to create long-term benefits for wildlife and people.

How to find out more

Please contact us at: enquiry@wildlifetrusts.org, 01636 677711.

The Wildlife Trusts, The Kiln, Mather Road, Newark, Notts, NG24 1WT.

To read a longer reference report go to wildlifetrusts.org/hs2

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About this document

We called together conservation experts from the Wildlife Trusts along the HS2 route: London; Herts & Middlesex; Berks, Bucks and Oxon; Beds, Cambs and Northants; Warwickshire; Birmingham and the Black Country; Staffordshire; Cheshire, Lancashire; Leicestershire and Rutland, Derbyshire; Nottinghamshire; Sheffield; Yorkshire. Using their knowledge of local ecology and communities, they identified indicative habitat creation opportunities along the line.

The resulting strategic corridor ensures that HS2 helps to make up for the habitat destruction it causes, enhances ecological connectivity and gives people new access to nature.

The cost benefit analysis was carried out by researchers at Newcastle University. You can examine our methodology and indicative maps for habitat creation and restoration in the extended version of this report (see above).

REFERENCES ■ HM Government (2011) *The Natural Choice: securing the value of nature* ■ UNEP-WCMC, Cambridge (2011) *UK National Ecosystem Assessment* ■ Department for Transport (2013) *The economic case for HS2* ■ Higgins and Garrod (2013) *Cost Benefit Assessment for The Wildlife Trusts' HS2 Vision* ■ Landscape Institute (2011) *Local Green Infrastructure* ■ Lawton et al (2010) *Making Space for Nature: A review of England's wildlife sites and ecological network* ■ Sunderland, T (2012) *Microeconomic evidence for the benefits of investment in environment – a review* (NERRO33) ■ The Wildlife Trusts (2006) *A Living Landscape* ■ 25 contributing organisations (2013) *State of Nature* ■ Environmental Audit Committee (2014) *HS2 and the Environment, Thirteenth Report of Session 2013-2014* ■ Institute of Economic Affairs (2013) *The High-Speed Gravy Train* ■ woodlandtrust.org.uk