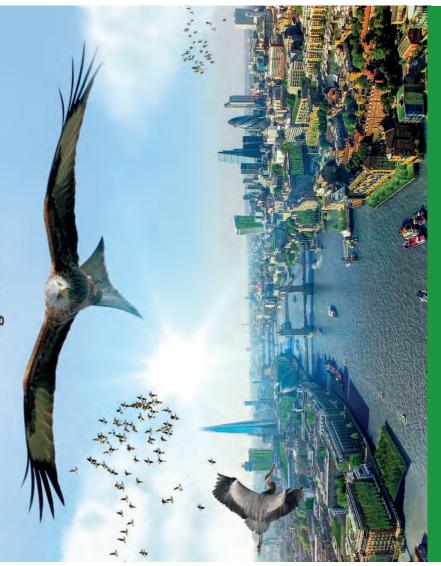




A Wilder Britain

Creating a Nature Recovery Network to bring back wildlife to every neighbourhood



A report for the Westminster Government by The Wildlife Trusts

The common lizard used to live up to its name. It could do again

Contents

4 Britain in 2040

It could be healthier, happier and greener - if we take the right decisions now

6 Britain in 2018

A lack of joined-up thinking has produced a raft of social and environmental problems

8 The solution: a Nature Recovery Network

Local networks of places that are good for wildlife, joined together into a national Nature Recovery Network

12 How the network can become reality

A combination of strong new laws, nature maps and a change in our national culture to value nature once more

14 Pioneer project: the Aire Valley, Yorkshire

How a Nature Recovery Network would strengthen the local economy

16 Pioneer project: the Irish Sea

The principles of a Network applied in the marine environment

17 Pioneer project: Lincolnshire's road verges

Six years of surveys show how verges can contribute to the Network

18 Pioneer project: Kidbrooke, London

A nature-rich development that will build almost 5,000 houses

19 Support our vision

Help us build momentum for an Environment Act

The Wildlife Trusts

Tel: 01636 670000 Email: enquiries@wildlifetrusts.org Website: wildlifetrusts.org

Registered Charity No 207238

Contact Us Dr Sue Young

Head of Land Use Planning and

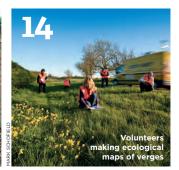
syoung@wildlifetrusts.org

Cover picture: red kite over a greenroofed London, by Dan Hilliard. Pics: iStock (city), David Chapman (kite), Paul Hobson (heron), Mike Read

(wigeon flocks). **This page:** Common lizard by Ross







t a time when Britain stands on the brink of its biggest ever shake-up of environmental rules, The Wildlife Trusts are calling for a wilder, better Britain.

It's time to give it the space it

We all

need nature

Most people agree that wildlife and wild places are valuable for their own sake. We now know from research across the globe that a healthy, wildlife-rich natural world is essential for our wellbeing and prosperity.

But wildlife has been getting less and less common, on land and at sea, for decades. Wild places are more scarce, smaller and more isolated. There is less nature and greenery in the places where we live and work. And not everyone has equal access to nature or the benefits it brings.

Nature needs to recover - for the sake of wild plants and animals, and for everything it brings us: better health, climate control, flood management, enjoyment, employment and more.

To make this happen, we need to change the way we look after our land and seas. We need a Nature Recovery Network to put space for nature at the heart of our farming and planning systems; to bring nature into the places where most people live their daily lives.

We need new laws, including an Environment Act passed by the Westminster government, to ensure this happens. In it, local Nature Recovery Maps would be produced to achieve key Government targets for increasing the extent and quality of natural habitats, turning nature's recovery from an aspiration to a reality. Local Authorities would have a requirement to do this.

A Nature Recovery Network

is a joined-up network of habitats that allow wildlife and people to thrive: ■ in housing estates ■ on farms ■ in nature reserves ■ on road verges ■ along riverbanks ■ in parks and gardens ■ on office roofs ■ in the hills

How it should be: a heron

and a human in Regent's

Park, London

A world where seeing a hedgehog is an everyday experience

f you could travel forward in time, and visit your home town two decades from today, the last thing you'd expect is that people would feel sorry for you. It might be hard to work out why at first. Of course, there are little differences, but each one doesn't seem that strange on its own. The air is cleaner, and the hubbub of vehicle noise has almost vanished from the streets. Nearly all buildings seem to have green roofs, or even green

walls. Housing estates now come with green arteries, many of them incorporating old hedgerows and trees. Farm fields have colourful wildflower strips running alongside,

 Housing estates now come with green arteries: hedges, trees or ponds, or thick hedges. There are more hedgehogs, swallows and housemartins, and a lot more insects.

Finally, you realise what it is. The people. They simply look healthier and happier, more willing to talk. There's less stress and anxiety than there used to be. Children especially seem to understand that the natural world is the foundation of our wellbeing and prosperity; that we depend on it, and it depends on us. Which is, after all, how it is.

A recovering landscape

1 Nature is normal

Children grow up with trees to climb, ponds to investigate and fields to explore. They don't know it, but their childhood is better than their parents'.

2 Green developments

For 20 years all new housing and other development has resulted in a net gain for wildlife.

3 Wilder cities

Green roofs, green walls, pocket parks and trees are common.

4 Buzzing countryside

Farmland is crisscrossed by colourful habitat for its most important wild residents; pollinators.

5 Sustainable fisheries

After two decades of protection the UK's seas have regained much of their former bounty. All fishing is sustainable and jobs are secure.

6 Returning whales

Sightings of whales and other large sea

creatures which used to be common around the coasts are increasing.

7 Fertile soils

The most productive land is renewing itself. Nutrients are staying put in soils that are accumulating rather than eroding and blowing away.

8 Restored uplands

Instead of just closegrazed grasslands, the trees and peat bogs are back, reducing flooding and locking up CO₂ from the air.





Britain in 2018 Depleted, fragmented, fragile

We have torn great holes in the web of life that supports us

he UK today is a humandominated landscape. Most original habitats have gone, and natural ecosystems are fragmented. Woods, meadows, ponds and other places with lots of wild plants and animals are getting smaller, fewer, more polluted, and more cut-off from each other. Most of our plants and animals are declining. One in ten face extinction.

Given the pressure on land for food, roads and housing, this is not surprising. However, our separation from nature has led to other unintended effects.

We have an epidemic of chronic disease, and the worst obesity

problem in Europe. Air quality limits are regularly breached. Floods are becoming more common and more destructive. Damage to farmland soils costs us around £1bn a year.

For most of us, our material standard of living is still improving. But our lifestyles are unsustainable and overlook the value of natural systems – even though they underpin everything we do. We need healthy soil to grow food in, clean air to breathe, clean water to drink, and green space for exercise and relaxation. No one disputes this – yet our farming and planning systems have often taken us in the opposite direction.

Sir John Lawton, who led a Government review of England's wildlife sites, said: "There is compelling evidence that they are generally too small and too isolated. We need more space for nature."

Conservation work by charities, farmers, community groups and individuals shows that wildlife can be brought back when the will and the space is there. Previous generations lived with clouds of butterflies, snowstorms of moths, and hedges shaking with dense flocks of farmland birds. These are biological riches denied to younger people.

We need to decide what kind of future we want - wilder, or not?



People vs nature: the disconnect



250,000 miles of tarmac divide our landscape. To many species they are a barrier



Plastics, pesticides and atmospheric pollution are causing problems for wildlife



Every year 36 square miles of new developments put pressure on local ecosystems



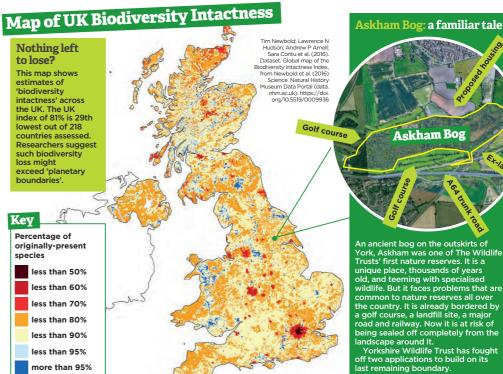
Hedges conserve soil and wildlife - but in arable areas many are not in good shape*



Wilder areas of amenity grassland could increase benefits for wildlife and people



Nature is vital for our health, but for most our daily surroundings are artifical



The solution

A Nature Recovery Network

Wildlife and natural systems joined up, and working, everywhere

Nature Recovery Network is response to climate change. It important for wild plants and animals, on land and at sea.

It allows plants, animals, seeds, nutrients and water to move from place to place and enables the natural world to adapt to change. It provides plants and animals with places to live, feed and breed. It creates the corridors and areas of habitat they need to move in

a joined-up system of places—connects wild places and it brings wildlife into our lives.

> It can only do this effectively if, like our road network, it is treated

We must invest time. effort. and money into bringing wildlife back

as a joined-up whole. The Network would include nature reserves and Local Wildlife Sites, and parts of National Parks. It would also contain peat bogs, heaths, meadows and cliffs; road verges, parks, gardens, hedges and woods; and rivers, streams, ponds and lakes. At sea, it would include reefs and sandbanks. rocky shores and seagrass beds many of them designated as Marine Protected Areas; Britain's `Blue Belt'.



The Network in four stages

Part of a map of Somerset's Ecological Network, around the city of Wells

Stage 1

Protect the wildest places

These are nature reserves, Sites of Special Scientific Interest and Local Wildlife Sites - our core sources of wildlife. At sea they include Marine Protected Areas. These places need to be protected from harm, improved through good management and where possible increased in size.

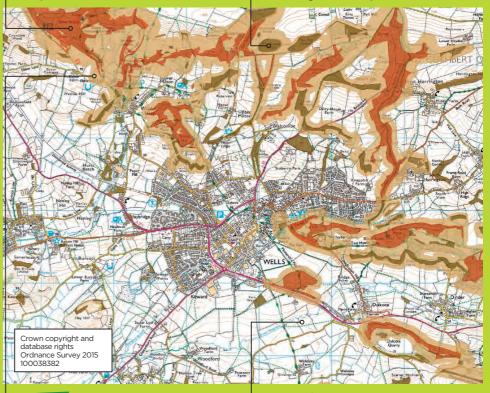
Stage 2

Make connections between them

Smaller patches of habitat can act as 'stepping stones' and 'corridors' between bigger areas. This means creating and looking after features like hedges, ponds, streams, small woods and meadows to provide habitat and make it easier for wildlife to move through the landscape.

Recovery

Network



Stage 3

Provide a bigger overall area for wildlife

By looking after our wildest places and creating habitat between them, the overall area of wildlifefriendly land increases. This area needs to be safeguarded. Here land management or development should be required to strengthen the network of habitats and not weaken it. This makes wildlife populations less likely to decline.

Stage 4

☐ Find space for wildlife in the wider landscape

This Network should sit within a wider landscape characterised by nature-friendly development and farming. This would include encouraging a wide range of people to increase the amount of wildlife habitat in places like farms, parks, retail parks, churchvards, road verges, gardens and golf courses. It would need high standards of basic regulation.



Our vision for a Network

Making space for nature to meet the needs of wildlife and people

ature conservation in the last century succeeded in protecting some vital wildlife sites. But wildlife has still declined as a result of damage to the wider environment.

Protected wildlife sites alone cannot meet the needs of wildlife or our society. To achieve that, we also need to provide effective protection for the many other places in the landscape that are still rich in wildlife despite the many pressures they face.

And we must invest time, effort, commitment and money into bringing wildlife back across a far wider area – stitching back together Britain's tattered natural fabric of wild land.



"Every space in Britain must be used to help wildlife."

Sir David Attenborough

We need to create a Nature
Recovery Network that extends into
every part of our towns, cities and
countryside, bringing wildlife and
the benefits of a healthy natural
world into every part of life. Letting
flowers bloom along road verges,
installing green roofs across city
skylines, planting more street trees
to give people shady walks in the
summer, encouraging whole
communities to garden for wild
plants and animals.
A network that brings wildlife into

A network that brings wildlife into every neighbourhood would also provide fairer access to nature for people. Studies have shown the benefits of living close to nature, but many people are deprived of these benefits.

From this

Our roads



Major roads are impassable barriers for many species

Our homes



Many streets are now sealed under tarmac and concrete

Our cities



The sheer mass of concrete in cities heats them up in the summer

Our public spaces



Two-thirds of amenity grassland is close-mown...

Our farmland



Grazing too close to riverbanks erodes soils and destroys water vole habitats

To this



Green bridges allow wildlife to shift as the climate changes



Plants and trees improve the street atmosphere and help reduce flooding



Green roofs and spaces absorb heavy rain and cool things down

THE PROPERTY OF THE PROPERTY O

...but research demonstrates benefits of meadows to people and wildlife



With a fence the stream bank becomes stable again and plants return



Viper's bugloss on a green roof at Eversheds, near St Paul's Cathedral

What is the UK's network potential?

■ 250,000 miles of road verges

More could be managed for wildlife by mowing later in the year, and removing the cuttings. Green bridges should be a part of transport infrastructure projects.

c.430.000 hectares of gardens

Wildflowers in gardens have huge potential to help pollinators such as bees. A network of small patches could help bees thrive in urban areas.

■ 52 million people

80% of the UK's population live in urban areas. New parks, street trees, green roofs and walls are an important way to help everyone experience nature in daily life.

Our public spaces

Two thirds of amenity land is short mown grass, but meadow habitats support eight times more wildlife. Greener and more biodiverse neighbourhoods provide health and wellbeing benefits for people.

Our farmland

70% of UK land is farmland, so creating and managing habitats for wildlife on farms is vital. Hedges, ponds, ditches, field margins and trees all help to provide a network of habitats for farmland wildlife.

1

How to make the network

The most important requirement is an Environment Act

o bring about nature's recovery, we need a new Environment Act, passed by a Westminster Parliament. This would commit successive future governments to increasing the diversity and abundance of our wildlife and making it a bigger part of everyone's daily lives; and to improving the health of our air, soils, rivers and seas.

This Act would build on the foundations of existing wildlife laws. It would be about nature's recovery and rebuilding society's connection to the natural world.

It will need to ensure that regulation, investment, public spending and practical action work effectively together. To achieve this, it must place a duty on Local Authorities to produce Local Nature Recovery Maps, setting out where and how nature's recovery will be achieved.

And it must require government departments and agencies to use these maps to guide and coordinate their efforts.

A new Environment Act will need:

Ambitious goals

These would include: more abundant and diverse wildlife; beautiful landscapes; fair access for everyone to wild places and green spaces; clean water for wildlife and people; healthy and productive soils; and resilient ecosystems.

Strong principles

These would ensure the needs of the natural world are central to all government decision-making. Polluters would pay for their polluting activities. Where harm might be caused by particular actions, caution would prevail.

Clear standards

These would set out how governments and other organisations will be held to account. They would establish how the activities of key players are measured and reported, showing their contribution to nature's recovery.

Independent institutions

We need institutions to monitor, review and report progress; to oversee compliance with the law; and to ensure that everyone can challenge public decisions effectively when necessary.

Building nature into 'our' space is simple and beneficial. Now it needs to be legally mandated



2 The critical tool: Nature Recovery Maps

Building a Nature Recovery Network requires detailed information: where wildlife is abundant or scarce; where it should be in future; which places are most important; and where there is opportunity for positive change.

The critical tool is a Local Nature Recovery Map. Government must require Local Authorities to publish these maps, which would identify areas where the greatest benefit for wildlife and people can be achieved. They would focus and co-ordinate effective action, funding and regulation.

The maps should be: Developed locally

with the full involvement of civil society and other stakeholders:

- Evidence-based using the best
- available data and technology;

 Long-term but reviewed regularly;
- Part of a national network aligned with neighbouring Nature Recovery Maps to create a national Nature Recovery Network:

Endorsed by Government statutory documents approved by the Secretary of State.

The maps would be used to ensure that:

■ Key wildlife sites are strongly protected as the base of nature's recovery (critically, Sites of Special Scientific Interest and Local Wildlife Sites) and other sites are protected for future restoration:

New housing, industrial or commercial development

and infrastructure only gets permission in the right places and has a net positive impact on the Network;

■ There is effective regulation of potentially damaging land

or potentially damaging land management activities such as hedgerow removal or ploughing permanent pasture;

■ Public and private funds are

channelled the right way. Contributions from developers, future farm payments and other funds are targeted for maximum wildlife benefit.

■ Public authorities are required

by law to contribute to the implementation of the Network.





in a built-up area even the smallest wildlife feature is an asset

The people to make it happen

Farmers, foresters and other land managers can provide more space for nature if the government focuses public payments in the right places, and ensures good regulation and sensible standards.

Developers and investors can make the best decisions for their business and wildlife if they know where development is best located and how best to build and invest for wildlife.

Public bodies (not least local government) are important convenors. They can help to ensure that decisions affecting nature are better integrated across government to maximise benefits to people and wildlife.

Regulators will regulate most effectively if they have a shared plan so they can see how their different areas of responsibility interact in practice, and how they can contribute most effectively to nature's recovery on the ground.

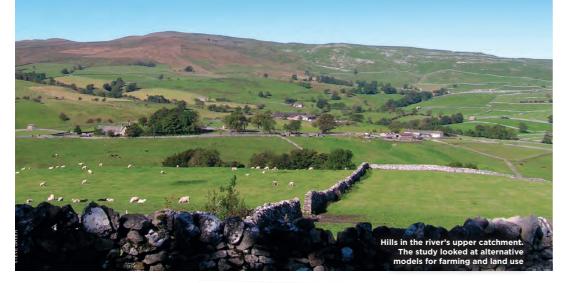
All of us can help by taking action for, and providing space for, wildlife where we live and work. On their own our actions can feel isolated or small, but linked together every garden, window box, field margin, street tree and riverbank makes a difference.

LONDON WILDLIFE T

Pioneer project

River Aire, Yorkshire

Long-term study reveals another way to spend farm subsidies



hat would happen if farmers were paid to provide a wide range of public goods, rather than being paid for how much land they own?

Yorkshire Wildlife Trust's study of the River Aire catchment has an answer. For a similar cost to today's subsidy system, public benefits would massively increase: more wildlife habitat, improved flood prevention, a healthier population, climate change mitigation, new woodlands and sustainable food production. Research using three upland farms in Yorkshire as case studies shows current farm incomes would be maintained or increased.

A long, thin river catchment, the Aire starts in the Yorkshire Dales,

These huge benefits would cost about the same as today's system 🐽



Land management upstream affects the Aire's flood risk in central Leeds

running through the heart of Leeds and out to the Humber estuary. Although it has some very high quality habitats, much of the catchment is now too wildlife-poor and fragmented to prevent local species extinctions

Changes of land use in the Aire catchment have made flooding more likely. The Aire also suffers

from pollution - mainly urban and agricultural run-off, particularly in failing parts of the river identified by the Environment Agency. But if land managers take land out of production to help with this (eg by fencing off a riverbank to create a vegetated streamside buffer), their farm payments are reduced.

The study brought these problems together using ecological mapping, and used the resulting data to model subsidising farmers for the greatest public good. It concluded that for the same amount of money paid to land managers and farmers at present - £163m over 10 years - a wide range of social and environmental benefits could be delivered.

To get the greatest public benefit from future farm payments, farmers and land managers will need to promote nature's recovery. They must fund the right actions in the right places, guided by local Nature Recovery Maps.



ree planting on high ground to help reduce run-off and flood risk



The insect-eating round-leaved sundew is adapted to upland bogs

The Network would...

Double the area of good

quality habitat, for example planting 4,200ha of new broadleaved woodland Create 4.400 hectares of upland heath or 600 hectares of new grazing marsh ■ Invest £14m in natural flood management over 10 years (currently DEFRA invests £15m across all of England) Significantly reduce the impact of flooding in Leeds, Castleford and other areas ■ Enable the land to absorb carbon from the air instead of adding to it, helping the UK meet its climate change commitments under the Paris Agreement Increase opportunities to enjoy the countryside responsibly by creating 36,000 hectares of

access land

Better information, better decisions

To show how current farm payments could be applied differently to achieve environmental outcomes, Yorkshire Wildlife Trust used data from a range of sources



(including Natural England and the Environment Agency) to create a series of ecological maps of the Aire Catchment. These showed where habitats are and could be, current payments to farmers and land managers, water quality, flood risk and access.

To apply the modelling in real life, three farms were chosen using data from Natural England. Their boundaries were simplified to anonymise the sites.

The study showed that under a new system, based on public goods for public money, a huge range of environmental and social benefits could be provided at no extra cost.

Improved access to the countryside

Up to 36,000ha of countryside (pale orange) could be opened up to responsible access, including

some farmland around towns. The current areas of open access land (orange) are mostly in the remoter uplands.

Reduced carbon emissions

Changes in land management would turn soil from a carbon source to a carbon sink, helping the UK meet its commitments under the Paris Agreement. Potential new carbon sinks in purple, existing in pink.

Reduced flood risk

£14m would be invested in Natural Flood Management over 10 years. £1.2m investment would also be

made to improve water quality (polluted watercourses shown in red).

Increased natural habitats

The area of good quality habitat would be doubled, for example by planting 4,200ha of green) and 4,400ha of upland heath (pale green)







Lincolnshire's verges

Six years of research reveal a trove of linked habitats

magine if an area of the UK the size of a county could be restored for wildlife. Imagine if that area could be built as an interconnecting network of ecological corridors.

In fact, such a network already exists - in potential form. The total length of public roads in England, Scotland and Wales is roughly 250,000 miles. The verges that flank these roads make up around 800 square miles.

A six-year study by Lincolnshire Wildlife Trust has shown the nature recovery potential of road verges. Between 2009 and 2015 the Trust trained and co-ordinated volunteers to search 4,800 miles of the county's verges for wildflowers. This resulted in better protection for 150 miles of verges, amounting to 200 hectares of wildflower-rich grassland.



Clustered bellflower - one of several scarce species discovered

The first step towards good conservation action is good data. The new information led to 159 new Local Wildlife Sites being designated, which gives them improved protection through the planning system. Many of their plants are only found elsewhere on nature reserves. Bees, butterflies, birds and bats use these verges too.

By working with local people with local knowledge, Lincolnshire Wildlife Trust has formed a conservation strategy to bring back the county's vanishing wildflowers. Trials are now underway with the County Council to fund road verge management for biodiversity.

Understanding and then managing verges is a huge opportunity for nature's recovery that's been hidden in plain sight. Land management across the country is paid for with public funds. The management of road verges, parks and similar places, could deliver greater public benefit as part of a statutory local Nature Recovery Plan.

Pioneer project

Kidbrooke, London

A development making space for nature among 4,800 new homes

idbrooke Village is a visionary new housing development in London. It will provide more than 4.800

new homes and 35 hectares of varied, semi-natural open space for the people who will live in them.

It's the result of a partnership between London Wildlife Trust and Berkeley Homes. The centre of the site is Kidbrooke Park, which will be designed to be a green corridor for people and wildlife - a natural area weaving between the new houses.

There will be play areas bordered by species-rich grassland, heather and copses of trees, a chalk stream meandering beside open lawns, and



Kidbrooke uses learning from Woodberry Wetlands, another London Wildlife Trust project

a reed-fringed wetland nestled between high-rise buildings. These green spaces will provide habitat for birds, bees and other wildlife as well as helping with local flood mitigation and water management, and providing places for the local community to spend time outside. These new habitats will also connect to a wider network of green infrastructure beyond the site.

If our towns and cities are to be great places for wildlife and people, we will need the right development, in the right place, done in the right way. Investors and developers will need local Nature Recovery Maps to auide their decisions.



Support our vision

Share these facts

...and help build the momentum for an Environment Act

Use our verges

250.000 miles



There are 250,000 miles of road verges in the UK. Bringing more verges into wildlifefriendly management

would help flowers and wildlife to thrive and move around.

#naturenetwork

More green bridges



There are fewer than ten green bridges in the UK compared to 125+ in France, 50+ in

Germany. But our landscape is very fragmented. Let's have more.



Make towns bee-friendly



Much amenity land is closely-mown grass but studies have shown that people prefer areas of long grass and flowers

too. More urban meadows will help pollinators and people.

Build homes that don't eat nature

sq miles



Each year new housing is built on an area of land the size of Brighton and Hove, Habitats and natural features need to

be part of all new housing developments, #naturenetwork

Rewild our public parks





parks in the UK. What if more parkland was devoted to nature alongside other uses

for people? #naturenetwork

Make farms wildlife-friendly

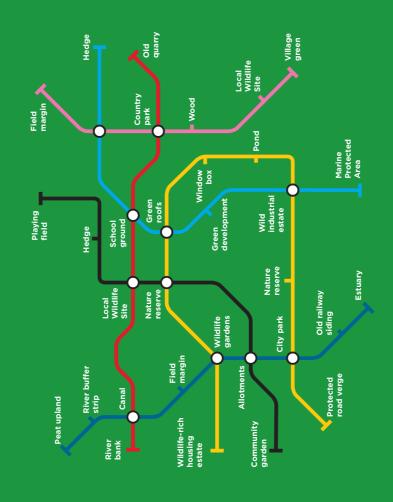


By creating and managing hedges, ditches, ponds and field margins farmers provide a network of spaces for wildlife

alongside crop production.

Be part of the Nature **Recovery Network**

A Nature Recovery Network will protect, join up and enhance the fragments of nature that remain – for people and wildlife





© The Wildlife Trusts 2018