



THE NATIONAL TRUST

Nature's Capital

Investing in the nation's natural assets



Right: Wicken Fen: a
healthy natural
environment delivers
many public benefits.
NTPL/JOE CORNISH

Introduction

The climate is changing.
Populations are rising.
The pressure on land use
is increasing. We need
space to produce food,
build our homes and
workplaces, and generate
energy. We also need to
restore the health of
precious natural resources
which are being pushed to
their limits. So what does
this mean for our land?
What do we really want
from it in the 21st century?
And who decides?



The National Trust is the largest non-government landowner in the UK, managing more than 250,000 hectares, of which around 80% is farmed. But unlike many other landowners, our land is held in perpetuity for the benefit of the nation. It is therefore important for us to understand what the nation needs from land, and how best to deliver it on the ground.

Land provides the nation with a range of environmental services, including clean water, protection from flooding, carbon storage and green space for the health of us all. We all need these vital services, but they are not yet properly valued or provided for. The current markets in water and carbon are inadequate and do not invest in these assets, though there are opportunities to remedy this. Agri-environment funding can play a part, but it is no panacea. Current investment in land for its role in promoting health and wellbeing is too small. New sources of investment are needed.

There is great potential for creative measures to pay farmers and land managers for providing these environmental services.

Such measures also have other benefits, including boosts to biodiversity and an enhanced landscape, and are often cheaper than end of pipe solutions. Encouraging management techniques and land use changes that deliver multiple benefits for the environment, society and economy will also mean that future investment could buy far greater public benefits than is currently possible, making the most of every pound spent on the natural environment.

This briefing sets out the case for investment in four of the key environmental services the nation needs from land:

- clean water;
- flood risk mitigation;
- carbon stewardship; and
- access to green space for health and wellbeing.

Our arguments are based on the National Trust's practical experience of managing our land for these purposes wherever possible and the briefing provides examples. By working with partners and with additional investment we can, and often do, achieve much more, thereby delivering multiple benefits for the whole nation.

The nation needs...

clean drinking water

Goal: Improved water quality through land management at a catchment scale.

Investment needed: Water company investment in land management to improve water quality at source, thereby reducing the need for expensive treatment.

Rationale: Clean water is essential to life, and its provision is widely taken for granted by the public. Yet the quality of water in our rivers, lakes, reservoirs and underground stores is poor. We increasingly rely on expensive and energy intensive treatment to clean water so it's acceptable for drinking – between 2001 and 2006 the water industry made capital investments totalling £1.94 billion for water treatment¹. Households and businesses pay the costs of this through their water bills.

Enabling and encouraging water companies to invest in solutions that tackle water quality problems at source provides an alternative to the current expensive and inefficient approach. OFWAT (the economic regulator of the water industry) has an important role in making this happen: by allowing water company investment in land of neighbouring land owners as well as on water companies' own land. Others have a part to play too. For example, Government investment through agri-environment schemes is also important. Aligning public and private investment in this way will reap benefits not only for the environment, but also for the economy and society.

The National Trust will: Work with water companies to invest in land management which will deliver cleaner water downstream, reducing the need for energy intensive and expensive treatment, and delivering additional environmental and social benefits.



Case study: High Peak, Derbyshire

The upland peat bogs of the High Peak in Derbyshire have been damaged by the combined effects of overgrazing, atmospheric pollution, drought and fire.

The result today is:

- Increasingly poor quality water, which requires expensive treatment before it can be supplied to surrounding communities in Sheffield, Manchester and the East Midlands as drinking water.
- Sedimentation of the Ladybower reservoir, which requires the costly and unsustainable removal of up to 10 tonnes of peat slurry every day.

Below: Investment in land management, such as our work to restore peat in the High Peak, reduces the need for expensive treatment of drinking water. STUART FRANKLIN/MAGNUM

43% of the land in England and Wales drains through National Trust properties



- The steady loss of carbon stored within the peat.
- An impoverished habitat for wildlife.

The National Trust is part of a partnership of public, private and voluntary organisations² facilitated by Moors for the Future, working across the whole catchment to tackle the root causes of peat degradation.

Stabilising and eventually restoring the High Peak's peatlands will not only improve water quality at source, thus reducing the need for excessive water treatment and the cost of water to consumers, but would also have significant benefits for biodiversity and landscape, and for wider society by reversing the loss of a significant carbon

store, crucial to the UK's efforts to tackle climate change.

While the primary driver at the High Peak is reducing siltation and colouration of water, a similar approach could be used in other catchments to reduce other forms of diffuse pollution from agriculture, including nitrates, phosphates and pesticides.

¹ Financial performance and expenditure of the water companies in England and Wales 2005-06 report, OFWAT

² Including the National Trust, Natural England, Peak District National Park Authority, United Utilities, Severn Trent Water, Environment Agency, Derbyshire County Council, Sheffield City Council and several universities

The nation needs...

protection from flooding



Goal: Reduced flood risk through investment in land management which makes space for water.

Investment needed: Invest a larger proportion of the £800 million flood risk management budget in land management that makes space for water and reduces flood risk.

Rationale: The focus of current flood defence spending is on hard defences. Hard engineering works tend to increase the speed at which water moves through rivers, thereby increasing flood risk further downstream. Canalised rivers and drained floodplains are also bad for wildlife, and increased or more rapid run-off from land has a negative impact on water quality.

Furthermore, the effects of climate change are already causing an increase in flooding, particularly as a result of extreme rainfall. Unless a new,

more strategic approach to flood risk is adopted, flood risk management will require more and more expensive (and carbon intensive) hard defences. Communities and businesses that do not qualify for defences can be offered flood warning but will become increasingly vulnerable in the face of climate change.

Although hard engineering will continue to play an important role in protecting infrastructure and populated areas, there are many advantages of looking more closely at how we manage our rivers and their catchments from source to sea. Every parcel of land, including those within built developments, can make a contribution to reducing the probability and consequence of flooding, with the uplands and floodplains playing vital roles in water capture and storage. By spending flood risk management funds in a more imaginative way, it will be possible to make much more of every public

Below: Upper Wharfedale:
Investing more of the flood
risk management budget in
making space for water will
reduce flood risk and deliver
other benefits.

NTPL/JOHN DARLEY

20 National Trust properties are in areas at very high risk of flash floods



pound spent within a catchment. Through rewarding farmers and land managers for practices that help store water and slow the speed at which it flows through river catchments and downstream we can help secure a more sustainable future, reducing flood risk with additional benefits for wildlife, landscape, cultural heritage and public access.

The National Trust will: Make space for water on our land and demonstrate the impact of land management on flood risk.

Case study: Upper Wharfedale, Yorkshire Dales

Upper Wharfedale, near Skipton in the Yorkshire Dales National Park, is a landscape of flower-rich meadows, woodlands, blanket bog and farmland bounded by drystone walls. The National Trust owns nine farms and two hamlets in Upper Wharfedale, all

of which are at very high risk of flash flooding. This not only poses a risk to the homes and businesses in the Dales, but also to communities downstream.

Guided by the Environment Agency and research by the University of Durham, the National Trust has been a partner in a project exploring sustainable water and land management techniques. A range of measures, including blocking moorland grips, wetland creation, woodland planting and ‘soft’ engineering of the river course to return it to a more natural state have all helped make space for water in Upper Wharfedale, with benefits for biodiversity and water quality, as well as reducing the risk of flooding.

The nation needs...

land to store carbon

Goal: A recognised and accredited land-based carbon market.

Investment needed: Private sector investment in land-based carbon through inclusion within carbon markets.

Rationale: Globally, soils hold twice as much carbon as the atmosphere does. Over 10 billion tonnes of carbon is estimated to be stored in UK soils, equivalent to around a year and a half of global greenhouse gas emissions. Peatlands are particularly rich in carbon and are the single largest carbon reserve in the UK, storing around 3 billion tonnes of carbon, the equivalent of 20 years' of UK CO₂ emissions³.

This enormous, natural carbon capture and storage system is under threat from past and present land use. Put simply, if peatlands are in good condition they absorb and store carbon – as well as delivering a host of other benefits such as water quality, flood amelioration,

biodiversity and landscape. In bad condition they can release this carbon back into the atmosphere. Scientists estimate that UK peatlands could emit up to 381,000 tonnes of carbon per year if not managed appropriately⁴.

Past policies have rewarded high grazing densities and encouraged land drainage resulting in damage to peatlands through loss of vegetation and erosion. Present policies do nothing to reward actions that conserve or enhance the peat's natural carbon capabilities. Nor do the emerging frameworks for carbon markets include this vital area. The final irony is that climate change itself is speeding up the degradation of peatlands, further increasing the UK's carbon footprint.

The National Trust will: Restore, create and conserve carbon banks on its land in soils, peats and woodland.

^{3/4}Peak District Moorland Carbon Flux, Moors for the Future Research Note No 12, June 2007

Case study: Wallington, Northumberland

Wallington is one of the National Trust's largest estates, comprising a mansion and gardens and over 5,000 hectares of farmland and forestry, attracting 180,000 visits a year. It is also the site of the National Trust's first estate-wide carbon stewardship project, which hopes to move the estate from net carbon emitter to net carbon fixer in a way that is transferable and inspiring to others. The project will encompass all of the estate's activities, including the house, farm and gift shops, farm and domestic tenants, agriculture, forestry, gardens, volunteers and visitors.

The first phase of the project, a 'carbon audit' is currently underway. The audit is looking at how much carbon is stored on the estate in its soils and biomass, and how much is emitted through the use of

fossil fuels and management of the land. Following the audit, initiatives will be put in place to reduce the use of fossil fuels, maximise the use of renewable energy and change land management practices to maximise carbon uptake and storage. A particular focus will be the restoration of a significant area of peaty soils, a habitat of global importance as well as a carbon store.

The Wallington estate aims to become a model of carbon stewardship, demonstrating good practice in the management of carbon locked in soils (especially peat), biomass and built structures. It will also be used to inform and raise awareness of the challenge of climate change, and provide positive solutions for how we can respond to this challenge through effective carbon stewardship.

Below: The Wallington estate, where the Trust's first estate-wide carbon audit is under way. Investing in land-based carbon will help mitigate against climate change.

NTPL/MARIANNE MAJERUS

More carbon is stored in UK peat than in all the woodlands of the UK and France combined



The nation needs...

access to green space for health

Goal: To create more valued places out of open spaces by promoting and encouraging people to enjoy and use attractive wildlife rich green places close to where they live for improving their health.

Investment needed: NHS/Primary Care Trust and District Council funding for green exercise and wellbeing prescriptions.

Rationale: Increases in heart disease, obesity and stress related illness have catalysed recognition of, and support for, a much greater emphasis on enhancing wellbeing and on preventative health care, particularly through encouraging more active lifestyles.

The 'natural health services' provided by our green spaces and countryside are often overlooked, yet access to green space and the natural environment plays a significant role sustaining people's physical and mental health and wellbeing, in addition to helping people on the road to recovery after illness⁵.

For many people, taking up exercise, especially to improve health, needs some form of structured programme and inspiration. Activities such as walking, running and cycling are growing in popularity and are the most affordable means of improving physical health. Initiatives such as BTCV's Green Gym and the British Heart Foundation's sponsored programme, 'Walk your Way to Health' indicate the valuable contribution that formalised outdoor activities can make to improving health and wellbeing.

There are potentially very significant cost savings for Primary Care Trusts in more widely recognising green exercise as a clinically valid treatment option for mental and physical ill health. It has been estimated that a 10% increase in adult physical activity would benefit the UK by £500 million per year, saving 6,000 lives⁶.



Research by Mind (The National Association for Mental Health) has also shown that a supervised programme of exercise can be as effective as antidepressants in treating mild to moderate depression. This could present another potentially significant saving when in 2006, 31m antidepressant prescriptions were written in England at a cost of nearly £300m.

More could be done to maximise the health benefits that our land can provide by introducing a framework in which local health funding is directed towards prescribing greater activity, encouraging green exercise and through partnership working. We should also expect more by way of green space provision on the back of new development.

The National Trust will: Work with local health services and others to provide greater opportunities for making our spaces accessible for everyday exercise needs and programmes of organised activity aimed at contributing to particular health requirements.

Below: NHS/Primary Care Trust funding can deliver opportunities for green exercise, as provided by the National Trust at Clumber Park. NTPL/IAN SHAW

60% of the UK population is likely to be obese by 2050 according to a UK Government Foresight report

and wellbeing



Case study: Clumber Park, Nottinghamshire

The East Midlands has the highest number of obese women and the second highest number of obese men in the UK. To tackle the rise in ill health caused by obesity the health service has prioritised encouraging physical exercise, with a target for all local health authorities to develop opportunities for healthy walking activities.

As part of this initiative the National Trust has been working in partnership with the Doncaster & Bassetlaw Primary Care Trust and Bassetlaw District Council to provide opportunities for guided health walks at Clumber Park, in north Nottinghamshire. Clumber Park provides an extensive area of parkland, including peaceful woods, open heath and rolling farmland and is already heavily used by the local population for walking, cycling and other activities.

Initially organised as 'Walkabouts', this is a series of guided walks from one to twelve kilometres in length, taking place throughout the year. The project now includes 'Buggyabouts' that encourage new mothers to visit the Park and exercise with their children. Whilst the National Trust provides the venue and the expertise of guided walkers, the Primary Care Trust funding enables the scheme to be promoted through hospitals, libraries, GP surgeries, maternity units and Sure Start.

The Primary Care Trust has recognised cost savings as a result of teaming up with the National Trust. The project team is now looking to introduce a 'Cycleabout' scheme and more flexible times for working mothers who value the events.

⁵ Ulrich R S. 1984. View through a window may influence recovery from surgery. *Science* 224, 420-21.

⁶ Department of Health. 2004. At least five a week: Evidence on the impact of physical activity and its relationship to health. A report from the Chief Medical Officer. London

Investing in the land

The National Trust is committed to doing what we can to increase the environmental services provided by the land in our care. We know from experience, however, that we could do much more with the right investment and partnership working. Other land managers would also benefit, for the good of us all.

We believe the following investment is needed:

- Water company investment in land management to improve water quality at source, thereby reducing the need for expensive treatment.
- A greater share of the £800 million flood risk management budget in land management that makes space for water and reduces flood risk.
- Private sector investment in land-based carbon storage through inclusion within carbon markets to help mitigate against dangerous climate change.
- NHS/Primary Care Trust funding for green exercise prescriptions for people's health and wellbeing.

By aligning public and private investment from water companies, flood risk management, the health service and a new carbon market as well as better support from farm payments, we can secure a better return on existing public investment, move towards a more sustainable future for land use, and deliver multiple benefits for everyone.

If you require this information in alternative formats, please telephone 0207 799 4541 or email externalaffairs@nationaltrust.org.uk



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Front cover: Children enjoying the amazing landscape in Dovedale, the Peak District. As well as providing green space for people's health and wellbeing, land can deliver a range of other benefits.

NTPL/JOE CORNISH



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