



**A Natural Capital Strategy
for North Devon – Summary**



This Natural Capital Strategy is a product of the North Devon Landscape Pioneer. It will be of interest to those with responsibility for people and nature in North Devon. It will also interest a wider audience committed to protecting and enhancing the benefits people get from nature everywhere.

Environmental Challenges

North Devon faces many environmental challenges. Our strategy identifies four priorities for urgent action. These are:

Protect and improve water quality

Many of the waterbodies in North Devon have poor water quality, including rivers, wetlands, the estuary and coastal bathing waters. This damages tourism, commercial shellfish production and wildlife. The problem is caused by industry, human waste treatment and agriculture. Because we are taking a natural capital approach we have focussed on changes to agricultural practice as a central part of resolving the problem. The most significant agricultural cause of water pollution is livestock. An additional cause is the poor management of nutrients and soil.



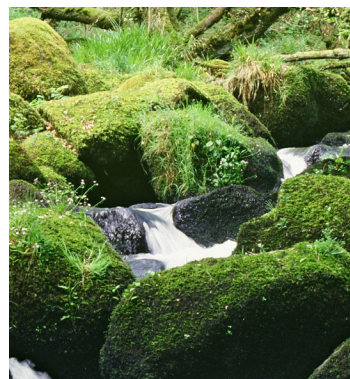
Minimise flood risk

Flooding is a significant and growing issue in North Devon, which impacts negatively on the health and prosperity of the local population. The area is prone to flooding because of steep gradients and impermeable rocks, but the problem is intensified by the way land is used and managed. Natural approaches to reduce flood risk can form part of a cost-efficient response to this problem. For example, implementing farm management practices that reduce the rate of run off, as well as restoring semi-natural habitats, such as peatland, Culm grassland and woodland.



Increase carbon capture and storage

To mitigate climate change we need to capture and store as much carbon as possible. Woodland and Culm grassland are particularly effective in sequestering carbon. These habitats are present in North Devon but there is great potential for more. We need to increase their extent and manage them for maximum carbon storage, wildlife recovery and sustainable timber.



Manage tourism and recreation pressure

North Devon attracts nearly 6 million visitors a year, with the visitor economy supporting a business turnover of £0.56 billion and around 11,000 jobs. Tourism is highly seasonal and concentrates on the coastal strip. It's difficult to accommodate this many visitors without damaging the local environment. Negative impacts include littering, damage to fragile habitats, and overloading waste-water treatment facilities. These pressures can be addressed by careful management of the coastal strip area and developing alternative tourist destinations away from the coast.



“As Chair of the North Devon Biosphere Partnership I am delighted that this Natural Capital Strategy has been produced as a result of the work that has been undertaken in the North Devon Biosphere as part of the North Devon Landscape Pioneer.

The Biosphere Partnership has taken ownership of the Strategy and will develop an implementation plan that will include identifying and securing sustainable finance mechanisms to enable this, and engaging with wider key stakeholders and the public to deliver it. We are doing so because we strongly believe that this will be of benefit to the nature within the North Devon Biosphere, to the people who live and work in it, to those who visit it, and to the future generations that follow them.”

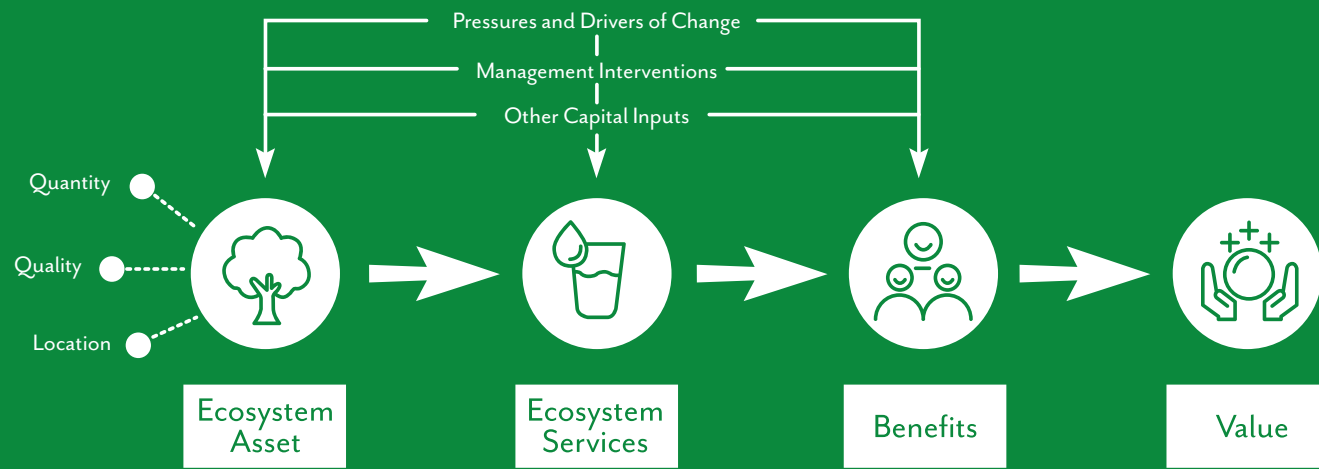
Mel Austen, Chair of the North Devon UNESCO Biosphere

This strategy covers the land area of the North Devon UNESCO Biosphere.

The Biosphere is a rural area which is home to 166,000 people. Tourism, agriculture, food and health care are the largest sectors. It also has a smaller number of higher paid jobs in sectors such as advanced manufacturing, energy, marine and business services. The Biosphere is home to many protected areas, both on land and sea. These protect rare wildlife, significant geology and beautiful landscapes. At its core is Braunton Burrows, the largest sand dunes in England, which are internationally important for wildlife. The Biosphere also contains a large proportion of the UK's Culm grassland, a habitat valued for its rare plants and animals.

Above: North Devon Biosphere
Contains OS data
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Our approach to natural capital



The environment is often ignored or understated in decision-making, leading to environmental degradation. A natural capital approach seeks to address this problem by treating the environment as an asset which provides benefits to people. Natural England's logic chain shows that our natural assets provide a flow of ecosystem services, which provide benefits to people. These benefits provide value to society which can sometimes be quantified. The quantity, quality and location of natural assets can influence the ecosystem services they are able to provide. Natural capital evidence provides an economic rationale for protecting and investing in the natural environment.

In addition to its role as an asset providing benefits to people, the environment has intrinsic value and is worth protecting for its own sake. This makes natural capital an additional, rather than the only, reason to invest. In principle, natural capital should also address concerns about sustainability and inter-generational equity. But, in practice, it often focusses on the near-term, meaning that we must consider sustainability separately.

A wisely applied natural capital approach will enhance decision-making. But to do so there are some traps to avoid. The first of these is including only quantified evidence in the final results. This will exclude a great deal of important qualitative information. Restricting results to benefits such as water and carbon which can be economically valued leaves out other important benefits such as wildlife and a wide range of cultural benefits. There is also a danger of losing sight of the underlying assets, and of wildlife. Nature is a system that we depend on, didn't make and can't always fix if it goes wrong. This makes a precautionary approach appropriate. It's important to flag for decision-makers what we don't know and what we're uncertain about. Decision-makers need a transparent and balanced report of the state of our knowledge.

Responding to the Challenges

A strategic response

Rather than responding to individual issues in isolation we have identified strategic changes that, together, help address them all.

We have only proposed changes which will:

- deliver a wide range of benefits; **and**
- are good for wildlife; **and**
- are affordable.

The heart of the change required is the way land is used and managed. We turn first to land management.

Changes to land management

Farmland, woodland and the coastal strip are the priority areas for land management change, they cover a large area in North Devon so improvements will have a large impact overall. Our strategy identifies a suite of actions for each. These actions vary from mitigatory responses to more strategic changes.

For example, fencing rivers to keep cattle out reduces the amount of manure entering it. But this measure is not always adopted. Even with fencing in place, rain will wash slurry into rivers, unless there is an effective slurry management plan. This plan might include buffer strips, slurry storage and the carefully planned use of slurry as fertilizer. However, in some fields the stocking rate is too high for a management plan to prevent pollution run off. Meeting environmental targets would then require restructuring the business. The management of arable, sown grass and soil is another example. Careful management would prevent erosion, improve soil fertility, reduce water pollution and increase carbon storage.

Woodland has the potential to deliver significant benefits, including sequestering carbon, providing timber, improving water quality, reducing flood risk, providing recreation opportunities and wildlife habitat. Bringing unmanaged woodlands into management and changing management in areas under an intensive forestry regime can support the provision of these benefits. Less intensive management approaches that mimic natural processes or which integrate ecosystem service provision with timber goals have the most positive impact on carbon storage, biodiversity, recreation, water quality and flood protection. Threats from pests and disease, including deer and grey squirrel, makes new planting less attractive, therefore new planting needs to be integrated with strategies for pest and disease control.

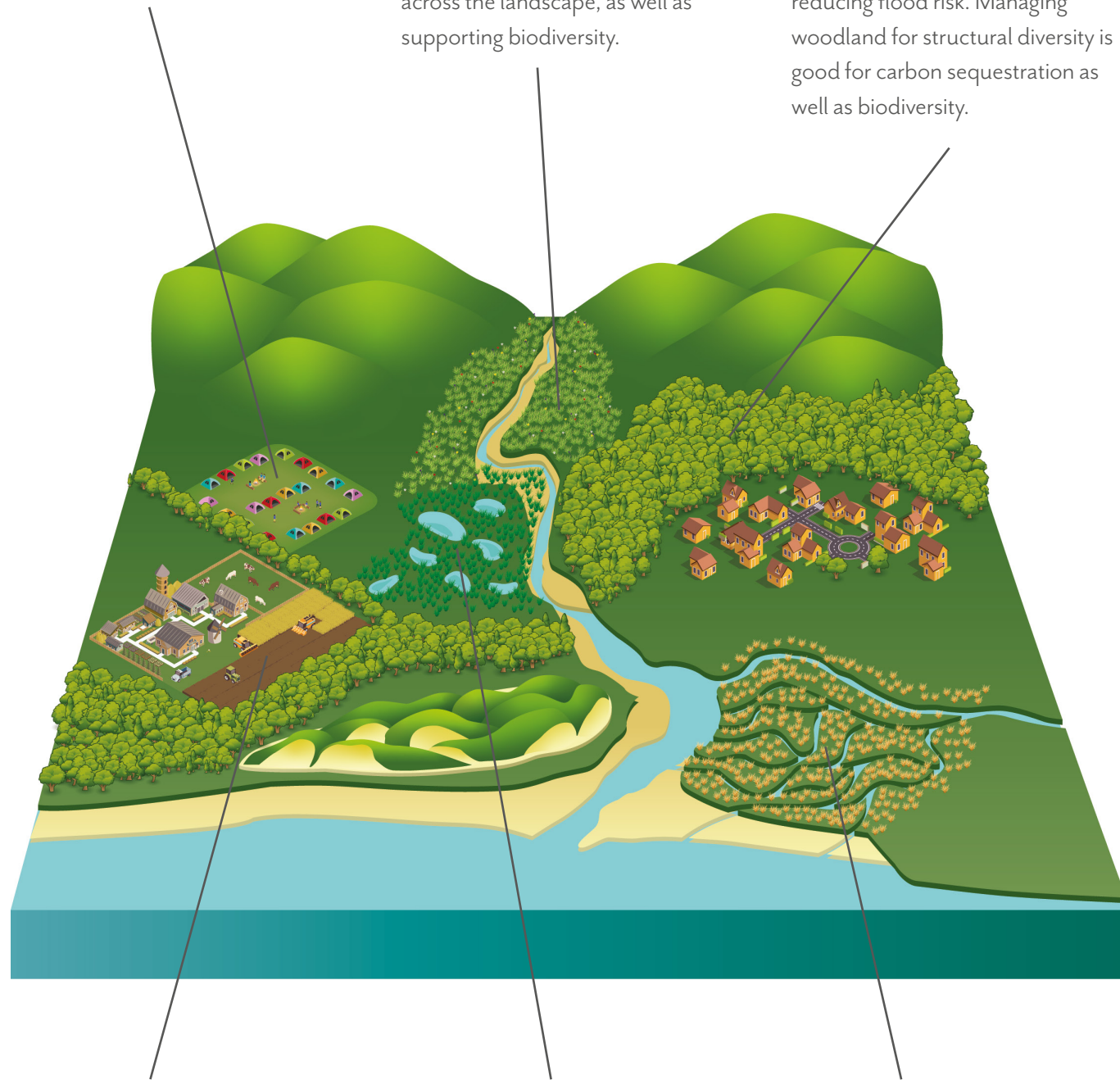
A recent survey asked the top five reasons for visiting North Devon. These were beaches and coastline, coastal towns, scenery, tranquillity and walking opportunities. This highlights the importance of the coast, and protecting its tranquillity. It also points to the potential to diversify the tourism offer. For example, inland tourism opportunities could be built around walking, tranquillity and wildlife.

Left: Flowers at Knowstone Moor
© Natasha de Vere & Col Ford

Creating more inland tourism opportunities may lead to reduced visitor pressure on the coast.

More Culm grassland can help improve water quality and contribute to reducing flood risk across the landscape, as well as supporting biodiversity.

Planting more native woodland in the right places can contribute to improving water quality and reducing flood risk. Managing woodland for structural diversity is good for carbon sequestration as well as biodiversity.



A suite of soil and nutrient management interventions can help reduce diffuse pollution from farmland. This will improve water quality downstream in rivers, estuaries and bathing waters, supporting wildlife, tourism and fisheries.

Well-designed and sited wetlands can help improve water quality in the catchment and adjacent marine areas, support biodiversity and contribute to reducing flood risk.

Increasing intertidal habitats, especially saltmarsh, can help to reduce coastal flood risk, as well as sequestering carbon.

25 Year Environment Plan and the pioneers

The 25 YEP is the first all government, long term plan for the environment. It aims to protect and enhance the natural environment within a generation. As part of the Environment Plan the Department for Environment Food and Rural Affairs (DEFRA) set up four Natural Capital Pioneers. These were asked to experiment with applying a natural capital approach. This strategy is a product of the North Devon Landscape Pioneer and covers the land area of the North Devon Biosphere. The Marine Pioneer covers both the marine and coastal areas of the North Devon Biosphere and the Suffolk coast. The others are the Greater Manchester Urban Pioneer and the Cumbria Catchment Pioneer.

Changes to land use

We've also identified land use changes which are needed. These are new woodland, semi-natural grassland and Culm grassland, wetland and inter-tidal habitat. New habitats replace the habitat on which they are created, so there are losses as well as gains and therefore they need to be carefully planned. For some benefits the location of the new habitat is critical. For example, for woodland to reduce flood-risk it needs to intercept the flow of water from the upper catchment. New semi-natural grassland and Culm grassland also have a role to play. They can reduce flood risk, improve water quality, sequester carbon and provide wildlife habitat. New wetlands also reduce flood risk, improve water quality and provide wildlife habitat as well as providing water availability in drought conditions. New inter-tidal habitat reduces flood risk from the sea, as well as storing carbon and providing nursery grounds for the fish stock.

The adaptive management cycle



The adaptive management cycle.
Adapted from DPIPWE 2014 after Jones 2005, 2009

Investment cases

This strategy considers what strategic changes would be necessary to address our priorities for successful long term delivery and at scale. We found that strategic change to national funding, area delivery and partnership structures are needed.

A related question is about bringing in funding. In what ways could natural capital ideas bring in extra funding? A separate investment cases document has been commissioned. It will be published with this document. It presents immediately investable ideas which do not depend on the strategic changes outlined in this document.

Key stakeholders

Most people in North Devon are affected by the issues set out in this strategy.

The natural environment underpins wellbeing and economic prosperity therefore most people in North Devon are affected by the issues set out in this strategy. Local authorities, central government, businesses, charities and local communities all have an important stake in the outcomes.

Delivering the changes we have set out requires action by those who own and manage the land. We identified three groups of people essential to the success of this strategy. These are farmers, woodland managers and those involved in managing the coastal strip. Influencing these groups will require three things: an appreciation of their motivations and goals, provision of the right skills and knowledge and changing the incentives they face through markets and regulation.

The wider group of stakeholders have important roles to play in influencing these factors. Taking farming as an example, customer demand for food products has an enormous influence on the landscape. Supply-chain accreditation schemes can therefore change land use in the directions we have highlighted. Regulation and incentives (such as agri-environment subsidies) from central government also have a significant impact. Farmer training, agricultural innovations and advice also impact how land is managed. The tourism industry has important differences, but is also driven by customer demand. Accreditation or quality schemes could direct demand beneficially. Shared management of congested or sensitive spaces by those with a stake in them could also help.

The Strategy development process

To develop this strategy we followed an evidence-based, participatory and deliberative process. We worked closely with biosphere partners. We used the following steps:

1. Built an agreed evidence base. This covered:

- what natural capital we had;
- what state it was in;
- what had happened to it in the past;
- and what was likely to happen in the future

2. Agreed some priority problems for further investigation

3. Worked out the systemic causes of the problems and possible solutions

4. Wrote the strategy

Our process was innovative and experimental. Some elements were more successful than others. An evaluation and lessons learnt will follow this strategy.

Management principles: clear responsibility and shared commitment

The changes we highlighted above are happening, but not yet comprehensively or consistently enough.

To deliver change at the scale that is needed we need to transform the way we manage the environment. Specifically, we need an approach designed for engaging with a complex system. Successful experimental approaches, such as South West Water's Upstream Thinking, point us in the right direction. To progress this organisational shift we recommend four management principles: These are:

A) Institutional responsibility:

Each environmental problem needs to be owned by an organisation (or formal partnership). This institution must be legitimate. It must have the expertise and levers (for example, regulation, incentives, influence) to change the outcome.

B) Adaptive management:

There are many uncertainties in the evidence base. This means that we cannot calculate exactly which, and how many, interventions we need. Instead, we need an adaptive management cycle. This means declaring a target, tracking progress against it and adapting plans and investments as required.

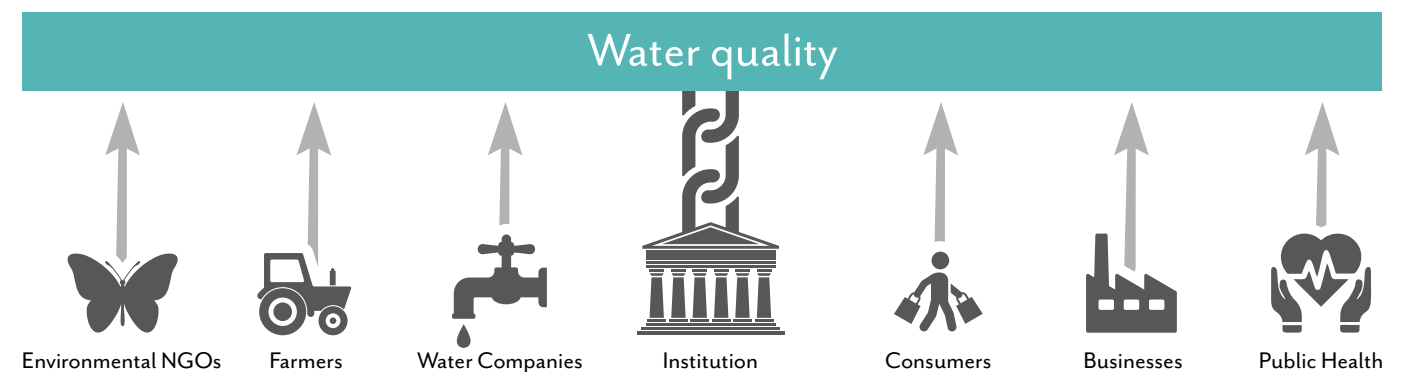
C) Localisation:

Environmental management issues are inter-connected. This means that they need to be managed as part of a single planning system. This means devolving responsibility to a geographical level discrete enough for integrated planning.

D) Shared commitment:

The 'hard levers' of regulatory, incentive and certification schemes are not enough. These schemes are much more effective if co-developed rather than imposed. We need broadly shared understanding and commitment to addressing these priorities.

Institutional responsibility needs the support of shared commitments by other stakeholders.





Left: Clovelly, North Devon

By Peter Titmuss

Below:

Black-a-tor Copse,

Dartmoor National Park

Natural England/Paul

Glendell 2000

Next steps

This strategy has highlighted a range of workable and affordable interventions.

The next steps are to get these interventions delivered in a consistent and organised way. This requires adoption and progression of the management principles highlighted above. How could these become a reality in North Devon? The Biosphere is keen to engage in this conversation with national and local partners. North Devon partners may wish to develop a natural capital spatial plan to ensure that the right investments go in the right places.

“This Strategy will inform the 2050 Vision for the Local Plan and the Biosphere mid-term review. It will be crucially important that we identify and ensure linkages and integration with the Marine Natural Capital Plan and also join up with local and national priorities including making best use of funding to deliver improvements across the whole of North Devon.”

Mel Austen, Chair of the North Devon UNESCO Biosphere

How does this strategy relate to you?

In what ways do your organisation’s targets depend on the natural environment in North Devon?

Considering your dependencies may point to a starting point for engagement and action.

In what ways does your organisation impact natural capital in North Devon?

You can consider how to maximise positive contributions.

How negative impacts can be minimised?

Does your organisation have responsibility for any environmental outcomes in the Biosphere area?

Is this clear enough?

Are the partnership arrangements delivering in the best possible way?

Could you raise this issue with key partners?

Does your organisation own or manage land in the Biosphere area?

Could you adopt the changes advocated in this document?

Are there other organisations who influence you whose support you would need?

Do you influence or engage with those that own or manage land?

How could your organisation support land managers to make the changes advocated in this document?





Producing the strategy

This strategy has been led by a Natural England team, with significant contributions from North Devon UNESCO Biosphere partners, stakeholders and consultants. It is based on an evidence-based and participatory process.