



INVESTING IN OXFORDSHIRE'S NATURAL ENVIRONMENT

INTRODUCTION

The goal of an Environmental Investment Plan for Oxfordshire is to place the environment, through the concept of natural capital, at the heart of a developed economy in Oxfordshire. This note aims to create a framework to identify how this could be achieved and is a first step to enable local Government, business and civil society monitor and improve the condition of Oxfordshire's natural environment.

This aim is consistent with:

- (1) The Government's commitment that this should be *"the first generation to leave the natural environment of England in a better state than that in which we found it since the industrial revolution."*¹
- (2) The Government's 2020 mission to halt overall biodiversity loss, support healthy well-functioning ecosystems and establish coherent ecological networks, with more and better places for nature for the benefit of wildlife and people.²
- (3) Defra's 25 Year Environment Plan³ which will use a natural capital approach to meet its aims and states that *"making the vision of a healthier environment a reality requires solid foundations: comprehensive, reliable data; strong governance and accountability; a robust delivery framework, and everyone to play a role."*
- (4) The State of Nature in Oxfordshire⁴ which highlighted the necessity of achieving the principles set out in the 2010 Making Space for Nature Report⁵ in order to improve the natural environment in Oxfordshire. These four principles are More, Bigger, Better, Joined.
- (5) OxLEP's 2015 Strategic Environmental and Economic Improvement Plan (SEEIP)⁶ which expressed the wish to address this "immense" challenge and stated that Oxfordshire is "a true living laboratory of environmental innovation" and as such has the potential to be an exemplar.
- (6) Oxfordshire County Council's vision of *"thriving communities for everyone in Oxfordshire"*⁷.

¹ Environment Secretary speaks at State of Nature report launch – 14th September 2016

² Biodiversity 2020: A strategy for England's wildlife and ecosystem services

<https://www.gov.uk/government/publications/biodiversity-2020-a-strategy-for-england-s-wildlife-and-ecosystem-services>

³ <https://www.gov.uk/government/publications/25-year-environment-plan>

⁴ The State of Nature in Oxfordshire. Coordinated by Wild Oxfordshire with input from a wide range of environmental organisations. 2017.

⁵ Making Space for Nature, Lawton 2010

<http://webarchive.nationalarchives.gov.uk/20130402154501/http://archive.defra.gov.uk/environment/biodiversity/documents/201009space-for-nature.pdf>

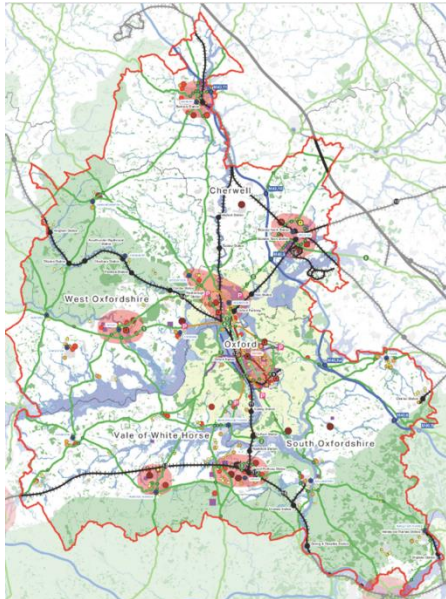
⁶ Creating the Environment for Growth - Strategic Environmental and Economic Investment Plan for Oxfordshire.

⁷ <https://www.oxfordshire.gov.uk/cms/content/our-vision-0>



WHY AN ENVIRONMENTAL INVESTMENT PLAN?

Natural capital has been defined as “the elements of the natural environment which provide valuable goods and services to people”. It is now well understood across all sectors that the effective management of natural capital is an environmental necessity that underpins a thriving economy with Defra setting “long-term goals” to halt “decades of decline”.⁸



Oxfordshire is currently home to around 661,000 people and supports around 381,000 jobs. In addition, the county contributes £15.5 billion annually to national output¹. The Oxfordshire Infrastructure Strategy (OXIS)⁹ provides a view of emerging development and infrastructure requirements to support growth and includes significant increases in Housing, Employment, Roads, Rail, Transport (other) and Utilities. Oxfordshire authorities are forecast to build 123,500 homes between 2016 to 2040 which would require building 5,100 dwellings per annum.

SEEIP and The State of Nature in Oxfordshire both identified that the extent and condition of many of the county’s natural capital assets have been declining over the course of decades, with major challenges including air and water pollution, land contamination, fragmentation of habitats and a decline in biodiversity¹. We know that planned development will impact on our natural environment and the benefits we derive from it. But we need to know:

- **What will the impact be?**
- **What is required to mitigate the impact?**
- **How much that will cost?**

An Environmental Investment Plan (EIP) will provide answers, in line with Natural Capital Committee¹⁰ recommendations, that changes in natural capital should be measured, valued, reflected in corporate and national accounts, and taken into account in decision making processes.

⁸ Decline of England's natural environment 'hits economy'. BBC. 27 January 2015

⁹ Oxfordshire Infrastructure Strategy (OXIS) AECOM. September 2017.

<https://www.oxfordshire.gov.uk/cms/content/oxfordshire-growth-board>

¹⁰ The Natural Capital Committee (NCC) was set up in 2012 and provides expert, independent advice to Government on the state of England’s natural capital and how action to protect and improve natural capital should be prioritised.



HOW WILL WE DO ENVIRONMENTAL INVESTMENT PLAN FOR OXFORDSHIRE?

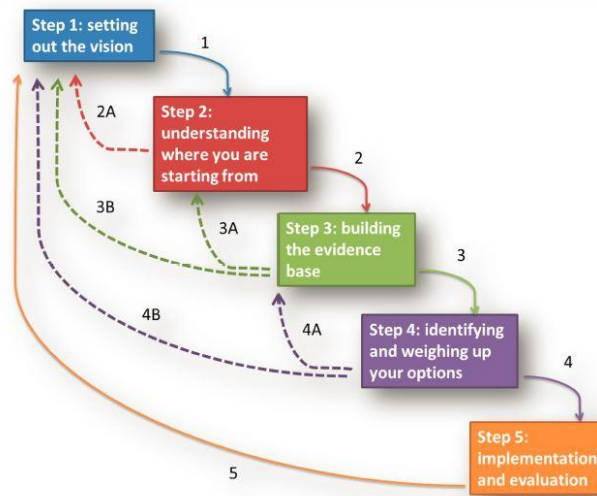
WHO'S INVOLVED

We are privileged in Oxfordshire to have many skilled and well-respected individuals and organisations working in the environmental sector¹¹. Their involvement is essential to ensure a robust assessment is carried out, with pragmatic outcomes which can be integrated into strategic plans and policies.

Thames Valley Environmental Records Centre (TVERC) will lead the work as they have the knowledge¹², skills¹³ and capacity to carry out a scientifically robust assessment. TVERC holds the environmental data for Oxfordshire, so will ensure the results are relevant and specific. TVERC have good working relationships with the local and national environmental sector.

NATURAL CAPITAL COMMITTEE WORKBOOK

In April 2017, the NCC published a workbook¹⁴ for how to use natural capital approaches in making decisions about the natural environment. It is intended to support decision makers, including planners, communities and landowners, but has particular relevance for place-based decisions. The workbook advocates a five-step process for managing a defined area's natural capital.



¹¹ Centre Ecology and Hydrology, Oxford University, Sylva, TOE2, BBOWT, Local Authority ecologists and planners, Natural England, Environment Agency, Environmental Change Institute, Earth Trust, CPRE, Chilterns AONB, Cotswolds AONB, North Wessex Downs AONB, Ox-LEP, Forestry Commission, Wild Oxfordshire, RSPB, Freshwater Habitats Trust.

¹² DC has attended BES Biodiversity and Ecosystem Services Sustainability conference in March 2017, attended NE workshop on Natural Capital, Ecosystem Knowledge Network natural capital seminar, numerous net gain meetings, NE/EKN natural capital meeting in December, ALERC conference on Natural Capital, Bicester/Oxford Uni Natural Capital meetings

¹³ <https://www.linkedin.com/company/thames-valley-environmental-records-centre/>

¹⁴ Natural Capital Committee - How to do it: a natural capital workbook - Version 1 (April 2017)

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/608852/ncc-natural-capital-workbook.pdf



STEP 1 – SETTING OUT A VISION

There isn't currently an agreed vision for Oxfordshire, but one could be set out by stakeholders based on some or all of the following:

- OxLEP's SEEIP: *"Our vision is for Oxfordshire to benefit from a high quality, resilient environment which supports economic growth, development, health, wellbeing and prosperity for all"*.
- BBOWT's Strategic Plan 2016-2021 *"Our vision is an environment rich in wildlife, valued by all."*
- Wild Oxfordshire's *"a vision for Oxfordshire's environment to be rich in nature, healthy and sustainable for the benefit and enjoyment of all."*
- Natural England's vision to *"establish a natural environment, on land and at sea, which is: healthy, resilient and functioning properly and recognised as the foundation for sustainable economic growth, prospering communities and personal wellbeing"*
- Oxfordshire County Council's vision for *"thriving communities for everyone in Oxfordshire"*
- Defra's 25 Year Environment Plan *"Our vision for the natural world of the future is one in which economic growth, development and environmental protection go hand in hand"*

As the EIP process progresses, input from stakeholders will be essential in developing and refining the vision. TVERC would welcome offers from other organisations to lead on setting an agreed vision, if anyone wished to take on this facilitation role.

STEP 2 – UNDERSTANDING WHERE YOU ARE STARTING FROM

Thames Valley Environmental Records Centre¹⁵ already holds high-quality data on species, sites and habitats. Additional information is also available, including that collected for Oxfordshire State of Nature, Conservation Target Areas, Oxfordshire Wildlife and Landscape Study, Access to Natural Greenspace Standards, modelled habitat connectivity for woodlands and grasslands. However, much of what we already know is quite narrow in scope, mainly focussed on biodiversity and green infrastructure and does not address Natural Capital in its entirety. The information we currently have does not quantify the need or help to prioritise investment or answer the question of where to invest.

There are tools and methods already available, along with audits and reviews¹⁶. We need to ensure we pick the right tools and methods to fit the data we have and the answer the questions we are asking.

TVERC will work with technical experts¹⁷ to devise a detailed method outlining how we will carry out a EIP for Oxfordshire. This method will be shared and discussed with the wider environmental sector to ensure the method is robustly peer-reviewed and will stand-up to scrutiny.

Once a detailed method has been approved, TVERC will carry out the natural capital assessment.

¹⁵ <http://www.tverc.org/cms/content/tverc-data>

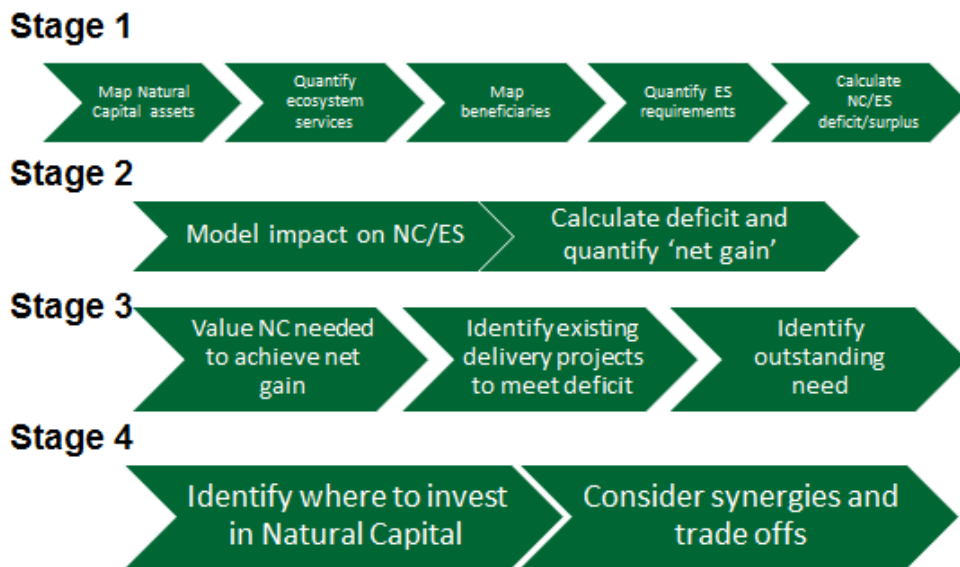
¹⁶ <https://ecosystemsknowledge.net/resources/guidance-and-tools/tools/tool-assessor>

¹⁷ Charlie Stratford, Wetland Hydrologist (Centre for Ecology & Hydrology); Alistair Yeomans, Forester (Oxford University); Richard Harding, Biogeochemist (Centre for Ecology & Hydrology)

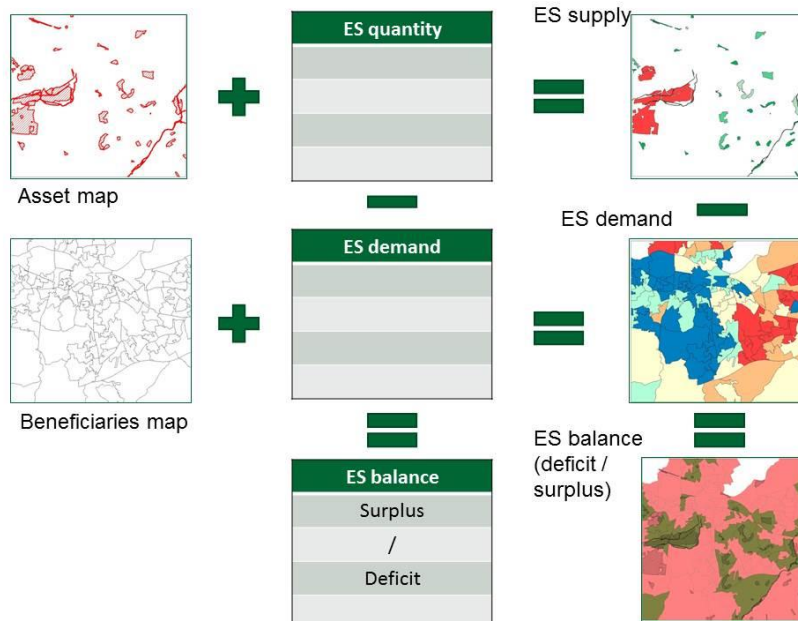


STEP 3 – BUILDING THE EVIDENCE BASE

The method for building the evidence base for Oxfordshire is split into four stages. Stage 1 is to audit natural capital, the ecosystem services they provide and demand for these ecosystem services. Stage 2 is to model the impact of change (proposed development, climate change, etc.) on natural capital and ecosystem services. Stage 3 is to calculate the cost, and value the benefits, of meeting the natural capital need and identify projects to deliver the identified need. Stage 4 is to identify where to invest in natural capital.



TVERC will use both spatial and non-spatial data to map the demand and supply of ecosystem services and identify which of these are in surplus or deficit. TVERC will then model the impact of change on natural capital and calculate the resulting surplus or deficit that results.





STEP 4 – IDENTIFYING AND WEIGHING UP YOUR OPTIONS

The EIP will need to be spatial in order to identify where the best places are to put new natural capital.

Some projects have been identified to deliver natural capital gains (projects collected for the SEEIP, spreadsheet started by OxonCC and now held by Wild Oxfordshire, woodland and scrub management and monitoring projects collected for the National Rail offsetting fund, projects from 'In a Nutshell', River Catchment Partnership projects). But these have not been prioritised, or assessed for how well they meet the requirement to deliver a net gain in natural capital.

The involvement of the environmental sector will be essential at this stage of the EIP process to help identify where to invest in natural capital, and to consider synergies and trade-offs.

STEP 5 – IMPLEMENTATION AND EVALUATION

Crucial to the success of the EIP in achieving its aim of improving our environment, is that the results are seamlessly and fully integrated into all relevant spatial plans and policies in Oxfordshire, in particular the Joint Strategy Plan. This will require all those involved in the production and implementation of such plans and policies to proactively ensure that natural capital is fully considered at all stages of the process. The EIP will also need to be monitored to show that investments in natural capital are successful and the aims of the EIP are being delivered. This will require a robust monitoring system to be put in place and delivered over the lifetime of the EIP.

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