Green Infrastructure, Re-wilding & Biodiversity

Fragmented Basingstoke!

Paul Beevers – Hatch Warren Nature Group
Agenda

• Causes and consequences of habitat and biodiversity loss
• National and local situation
• Green Infrastructure/Nature Recovery Networks
• Rewilding
• Communities and nature
UK State of Nature 2019

The start point for species reporting is 1970 but prior to 1970 species had already been hugely depleted.

- 15% of 8,341 species assessed threatened with extinction and 2% already extinct
- 13% decline in average species abundance
- 41% of species have decreased in abundance
- 5% decline in average species distribution

Welcome to the Anthropocene.

10,000 years ago 99% wild animals, 1% humans
TODAY 1% wild animals, 32% Humans; 67% livestock
Consequences of Habitat and Biodiversity Loss in England

- England 7th from bottom of 240 countries for biodiversity intactness
- Maximum 7% of England has high value habitats
- Only c3% of England has ancient woodland, all fragmented
- 97% of wildflower rich meadows ploughed, “improved”, built on
- Not 1 river, lake or stream in England in good health - a decline of 16% since 2016
- Fisheries around UK damaged by overfishing, ruinous fishing techniques and pollution. (International fisheries even worse because of unregulated plundering).
Causes of Habitat and Biodiversity Loss

• **Causes:**
  – loss and fragmentation of forests, heathlands, meadows, marshes, hedgerows. *Between 1990 and 2016, the world lost 502,000 square miles (1.3 million square kilometers) of forest, according to the World Bank.*
  – damage to life in soils caused by agricultural intensification and fossil fuels
  – overuse of pesticides affecting organisms above and in the soil
  – climate change caused by fossil fuels
  – rivers, lakes and ponds polluted by chemicals, sewage, manure, plastics; choked by invasive weeds; dried out by over extraction and changes in climate
  – land take for housing, transportation, commerce
  – over consumption of resources e.g. renewables (timber, fish and animals for food) and non-renewables (land, minerals)
  – poor utilisation of natural resources resulting in high levels of unrecycled waste

• **Caused by:** An economic model that prioritises investment to produce products and services cheaply and profitably and ignores the true cost.
  – intensive meat production that treats animals cruelly to keep prices low
  – timber production that reduces carbon dioxide absorption, water storage and filtration; kills wildlife and the services they provide, increases dry conditions and temperatures
  – fossil fuels generate energy and plastics but pollute air, water, soils and most life
  – crops grown for animal feed or fuel for anaerobic digestion energy e.g. maize which uses land that could feed humans directly or to restore biodiversity
  – cotton, fruit and nuts produced using unsustainable volumes of scarce and declining sources of fresh water

Nature cannot supply the volumes of products and services populations have come to take for granted.
The economy. We are part of nature not separate from it.

• Economic activity is embedded within nature, not external to it
• HM Treasury (Economics of Biodiversity); Climate Change Committee and Natural Capital Committee have all acknowledged that “markets” and financial institutions have failed.
• People rely on Nature to;
  – provide food, water and shelter;
  – regulate climate and disease;
  – recycle dead plant and animal material into nutrients to repeat the food cycle;
  – provide spiritual fulfilment
  – provide recreation and recuperation to enhance health and well-being.
• We also use the planet as a sink for our waste products, such as carbon dioxide, plastics and many forms of waste, that pollute air, soil, water and light including many that kill.
Hampshire 2050 – Extract from State of Hampshire’s Natural Environment Report - September 2020

Loss of priority habitats over the last 10 years.

Losses of woodlands due to development, garden extensions and conversion to more managed parklands. Loss of wood pasture due to removal of veteran trees and conversion to arable farmland.

Losses of species-rich chalk grassland and lowland meadow due to agricultural improvement, abandonment or development.

48% of a sample of 50 of Hampshire’s most notable species are in decline.

This is a deterioration from the 35% previously observed.

Over 14,000 species so far identified in Hampshire
Basingstoke has over 800 species classified as priority or notable species
A Few Facts about Basingstoke Land Use

B&DBC Area and Usage  
63,500 hectares

- Built form  
  - Includes some grassland
  
- Farmland/other land in greenfield use  
  46,355 h  73.0%

- Trees and woodland
  - Ancient woodland
  
- Existing Priority Habitats Total
  8,644 h or 13.6%

- SSSI\(^1\) on 20 sites
  806 h  1.27%

- SINCS\(^2\) on 809 sites
  6,227 h  9.8%

- Other Designated or Unknown Status
  1,611 h  2.5%

Sites variable condition and highly fragmented.  
At least 82% is “developed”. Built on or intensively farmed.

International, National minimum target 19,050 h or 30% in “Favourable Condition” for nature.

\(^1\) SSSI – Site of Special Scientific Interest
\(^2\) SINCS – Site of Importance for Nature Conservation

B&DBC Key Facts  
HBIC Annual Biodiversity Monitoring Report
Green Infrastructure/Nature Recovery Networks – Strategy to Reverse Habitat and Biodiversity Losses

Figure 1. The components of ecological networks (see text for more details)
B&DBC nature fragments for Nature Recovery Network
Basingstoke – Positioned between North Wessex AONB, South Downs National Park and also Surrey Hills AONB
B&DBC Landscape Scale
Biodiversity Opportunity Areas

B&DBC B- Lines Buglife
3 – 5 kms in width
Natural England have used available knowledge and maps to propose areas supporting Priority Habitats that might be expanded and connected. Local knowledge can bring improvements. Plans for development have overridden but should be influencing land designation and development decisions.
Proposed new managed areas

Existing managed areas (within area of map)

Notional connections

Hatch Warren
Green Infrastructure
Rewilding.
The Knepp Estate – Before and After

Copyright Knepp Wildland
Progressive Natural Re-colonisation combined with
Red, Roe and Fallow Deer, Longhorn Cattle, Tamworth Pigs,
Exmoor Ponies
Oak and Hawthorn “nursed” by Bramble
Soil Disturbance from Rootling Tamworth Pigs
Rewilding Britain

Rewilding Project

Rewilding Network

https://www.rewildingbritain.org.uk
Some Thoughts on Rewilding

• Rewilding really needs nearby tree seed sources e.g. woodlands, hedgerows
• Nature will nurse life back to good health quicker and stronger with minimal human intervention
• Different grazing and browsing species have different impacts that attract different colonisers
• Big herbivores carry and disperse seed and larvae to new areas
• Beavers restore wetlands so better water retention and filtration, more plants, insects, fish and then more birds, reptiles, mammals
• “Harvesting” animal surpluses controls numbers but predators like Lynx and Wolves could do so naturally.
Communities - Changes to Lifestyles

• Basingstoke expanded from 15,000 to 180,000 in 70 years, perhaps 250,000 in next 20 years
• Children no longer grow up to experience countryside or towns with plentiful wildlife
• Communities have lost understanding and respect for nature and expect mown green spaces
Do we need change?

- Council manages 3,000,000 square metres top down and remotely
- Communities remote from nature, its care and the benefits it brings
- Nature can improve quality of life, restore awe and understanding
- Should we encourage local knowledge, skills, leadership, community sense of "ownership"?
How?

- Communities organise to hold council/service providers accountable for plans, services and outcomes
- Residents incentivised to reconnect with nature through, devolution of responsibilities, learning, local leadership and voluntary action
Vision for Nature Connectivity

Knepp Rewilded - 1min 26 secs:

https://youtu.be/ikNVLbRKI_8

Knepp - Vision for nature connectivity in the UK – 1 min 38 secs:

https://youtu.be/CLKGbMI6RKI

Rewilding Britain. What does rewilding look like - 8 minutes

https://www.rewildingbritain.org.uk/explore-rewilding/what-is-rewilding/rewilding-the-uplands
Thank you for listening