



*Gloucestershire
Local Nature
Partnership*



Gloucestershire

Building a Nature Recovery Network: Linking local policy to biodiversity restoration



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Gloucestershire

Aim – To restore Gloucestershire's natural environment and see increases in biodiversity and ecosystem service provision.

Questions

- 1) Why is Gloucestershire's biodiversity continuing to decline?
- 2) What mistakes do we need to avoid repeating?



Conservation policy and local outcomes



National Parks & Access to the Countryside Act in 1949.



**Declines in
biodiversity and
ecosystem services
reversed**



Conservation policy and local outcomes

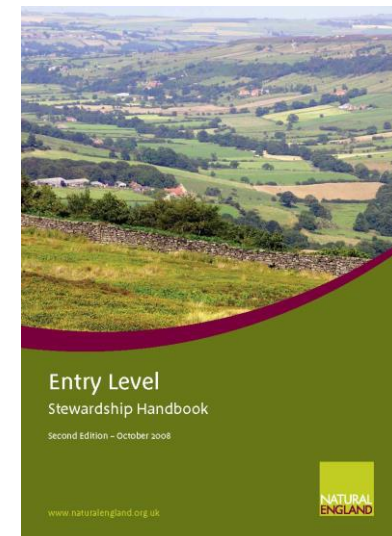


Wildlife and Countryside Act 1981

CHAPTER 69



Convention on
Biological Diversity



The Conservation of Habitats and Species Regulations 2017

Made	- - - -	30th October 2017
Laid before Parliament		31st October 2017
Laid before the National Assembly for Wales	31st October 2017	
Coming into force	- -	30th November 2017

Declines in
biodiversity and
ecosystem services
reversed



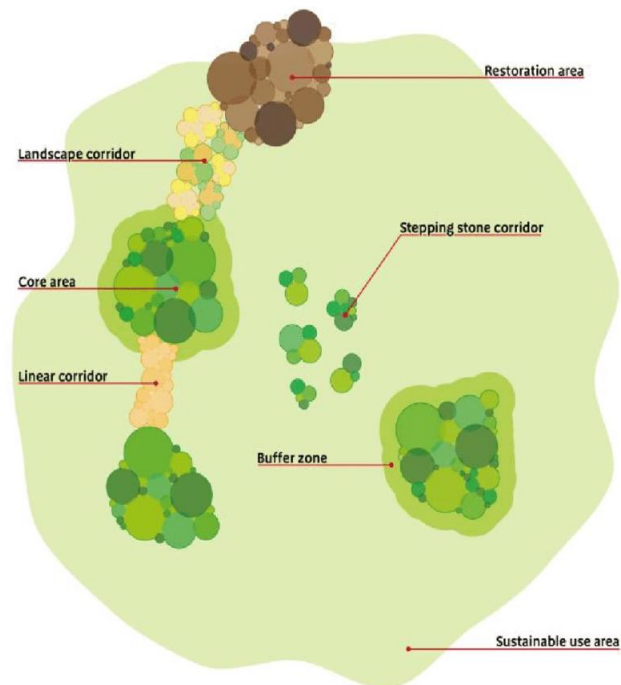
Conservation policy and local outcomes

HM Government

The Natural Choice:
securing the value
of nature

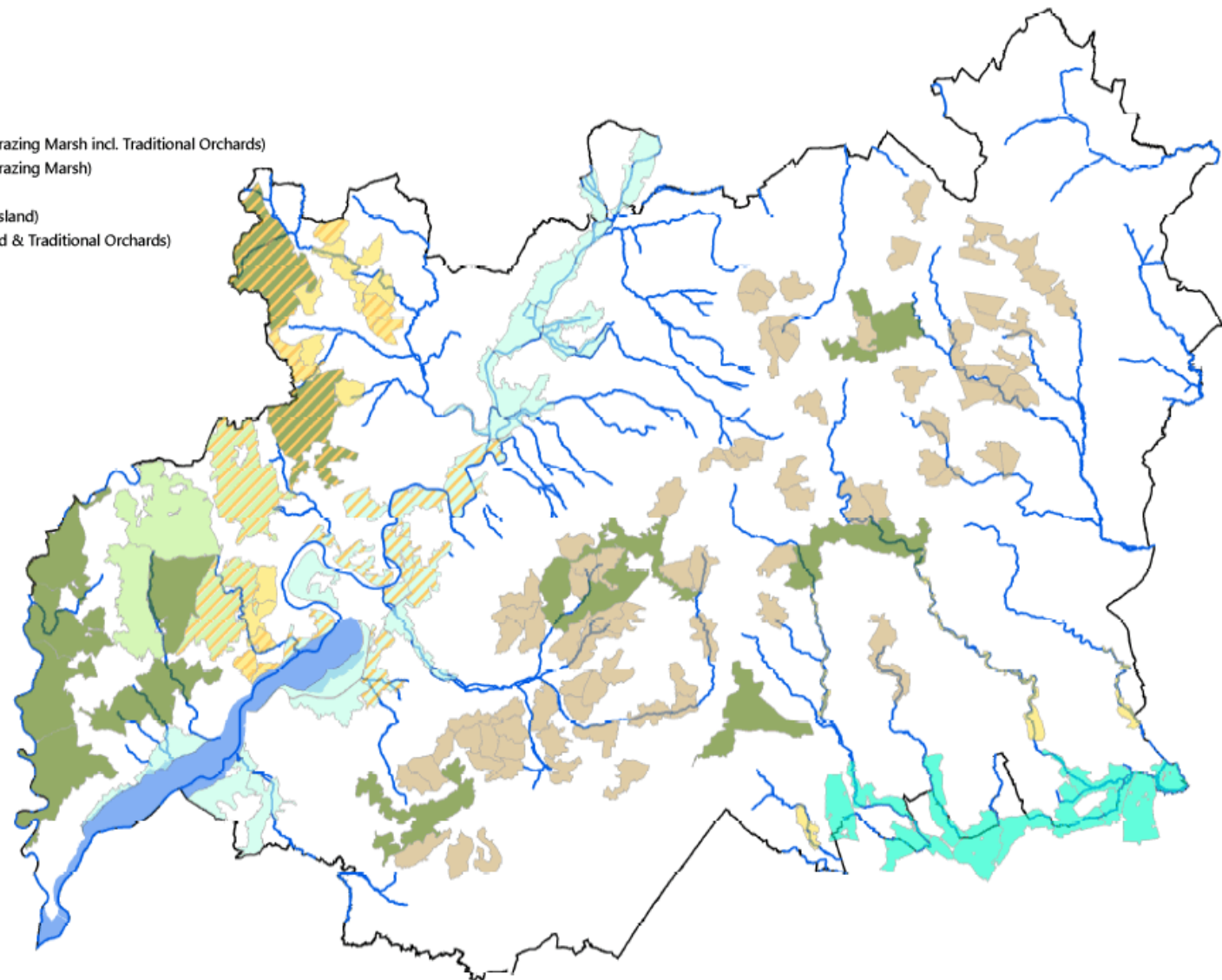


Bigger, better and more joined up



Gloucestershire Nature Map Strategic Nature Areas

- Coastal and Floodplain Grazing Marsh
- Lowland Calcareous (Limestone) Grassland
- Lowland Meadows
- Lowland Meadows (incl. Traditional Orchards)
- Wet Grassland (as part of Coastal & Floodplain Grazing Marsh incl. Traditional Orchards)
- Wet Grassland (as part of Coastal & Floodplain Grazing Marsh)
- Woodland Mosaic
- Woodland Mosaic (incl. Heathland and Acid Grassland)
- Woodland Mosaic (incl. Heathland, Acid Grassland & Traditional Orchards)
- Woodland Mosaic (incl. Traditional Orchards)
- Rivers
- Severn Estuary



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Declines in
biodiversity and
ecosystem services
reversed



What have we learnt?



- Policy and practice lags behind scientific knowledge
- National policy doesn't necessarily cascade to local policy
- Critical weakness gap between policy and delivery.
- Legislation drives action.
- Public sector investment will be insufficient.
- Conservation organisations can't succeed on their own.

Nature Recovery Network

‘A Nature Recovery Network to protect and restore wildlife, and provide opportunities to re-introduce species that we have lost from our countryside.’

Which will

‘complement and connect our best wildlife sites, and provide opportunities for species conservation and the reintroduction of native species’

‘provide 500,000 hectares of additional wildlife habitat, more effectively linking existing protected sites and landscapes, as well as urban green and blue infrastructure.’



A Green Future: Our 25 Year Plan to
Improve the Environment



Delivery

mechanisms

1. Conservation organisations

Challenge = Not enough joined-up landscape working outside of funded projects.

2. Development Planning

Challenge = lack of tools to support planners to implement Nature Recovery Network approach and work across boundaries.

3. Agri-environment schemes

Challenge = Structure of post-Brexit schemes currently unclear.

4. Management of public green space

Challenge = Often locked into long term contracts and have to balance with finances and public perception.

5. Citizen action

Challenge = People are time-poor and requires cultural change both in taking action and in what green spaces should look like.

National Planning Policy Framework

Defines Nature Recovery Networks as

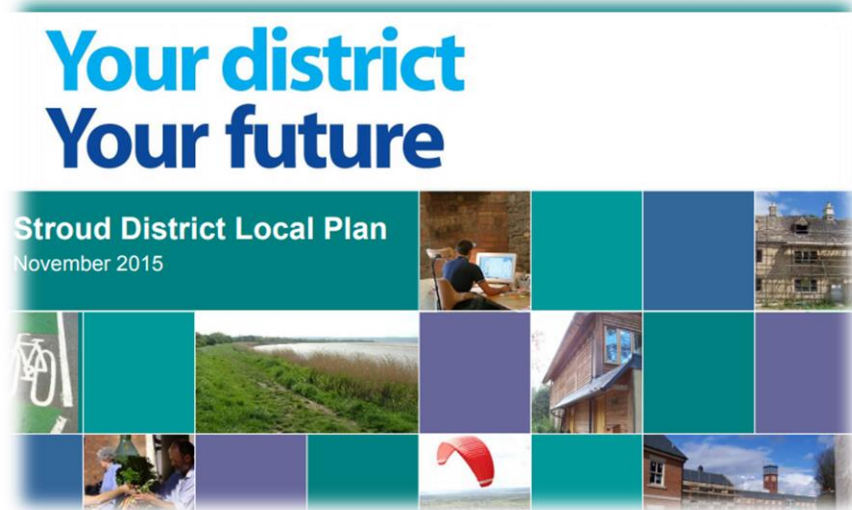
‘An expanding, increasingly connected, network of wildlife-rich habitats supporting species recovery, alongside wider benefits such as carbon capture, water quality improvements, natural flood risk management and recreation. It includes the existing network of protected sites and other wildlife rich habitats as well as and landscape or catchment scale recovery areas where there is coordinated action for species and habitats..’

And requires Local plans to

- *Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks.*
- *Promote the conservation, restoration and enhancement of ecological networks, and identify and pursue opportunities for securing measurable net gains for biodiversity.*



Key local policies

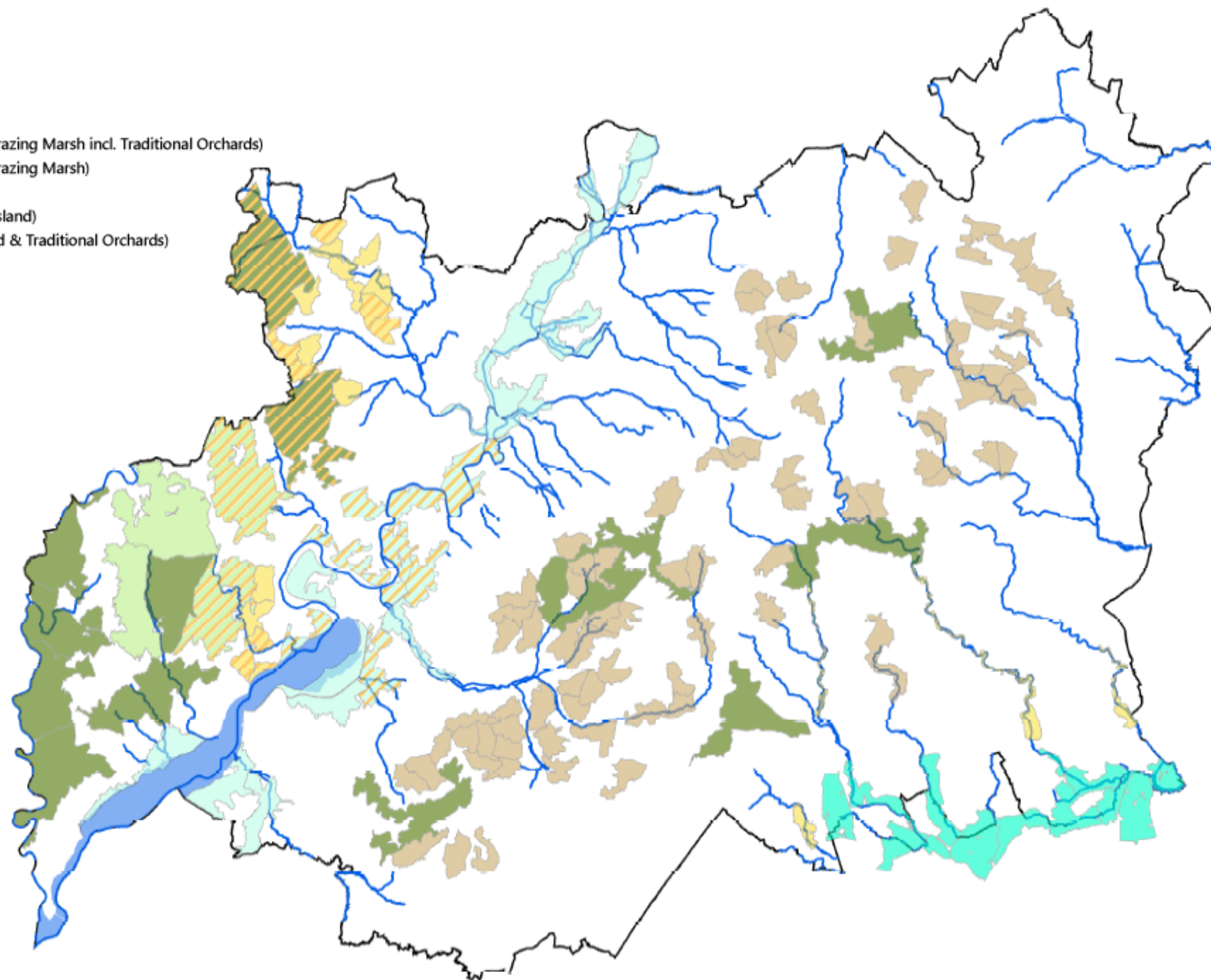


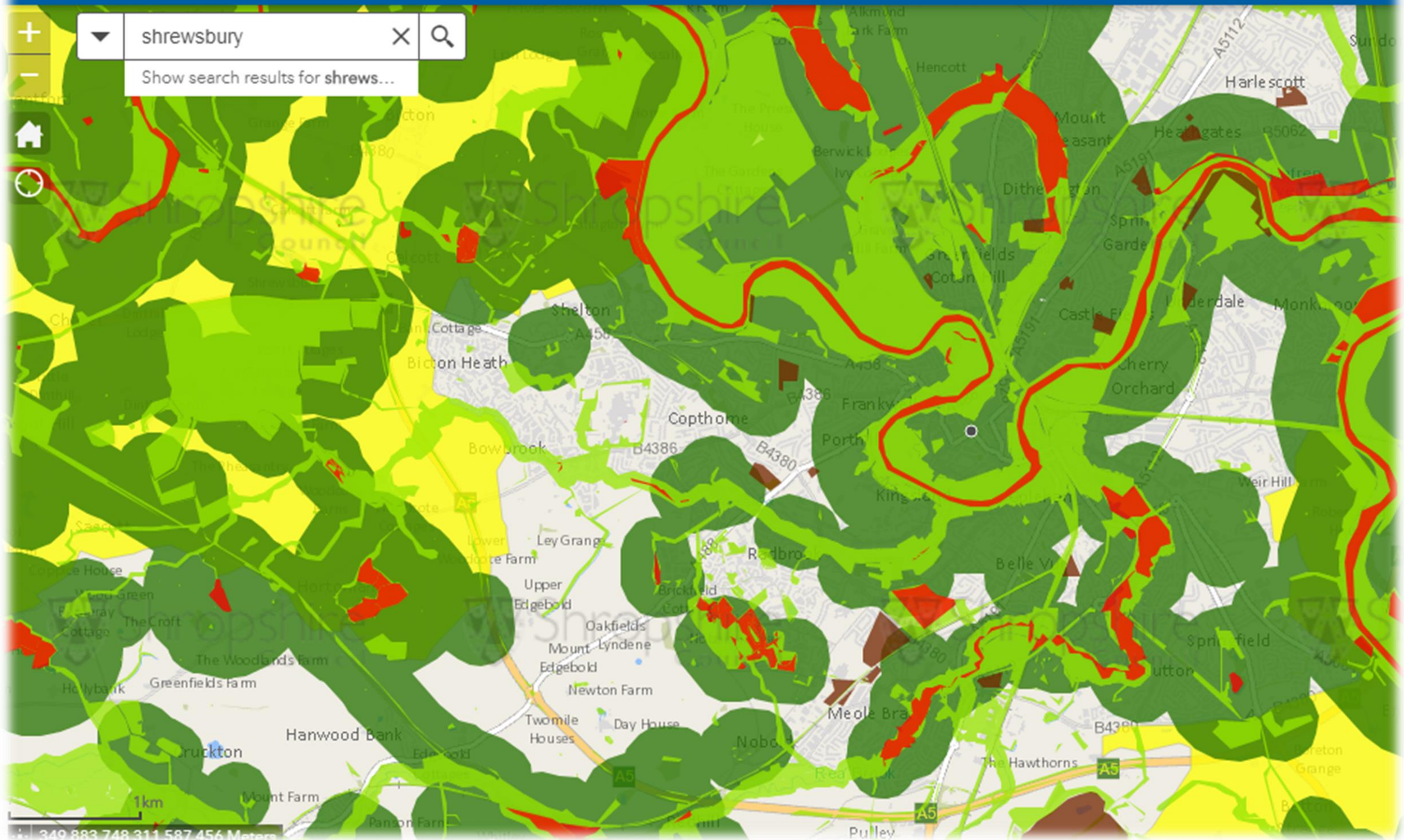
- Placemaking is an important local policy lever to deliver nature restoration
- Requires a spatial planning approach

Gloucestershire Nature Map

Strategic Nature Areas

-  Coastal and Floodplain Grazing Marsh
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-  Rivers
-  Severn Estuary





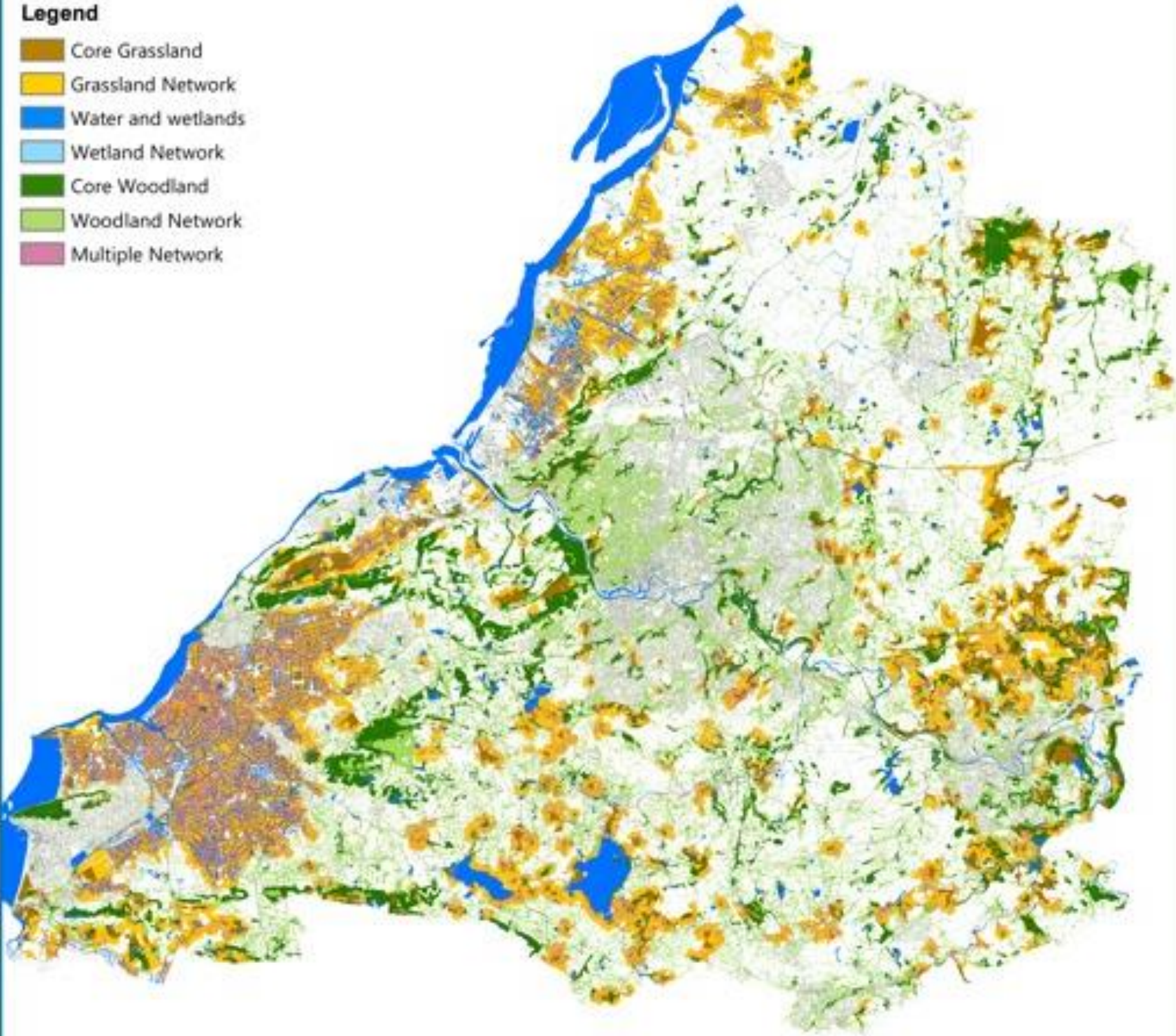
- Opportunity mapping based on phase- habitat surveys, aerial mapping and extensive ground-truthing.
- Shows core and supporting areas.

Ecosystem Map #7. Combined Ecological Networks

The grassland, wetland and woodland networks combined

Legend

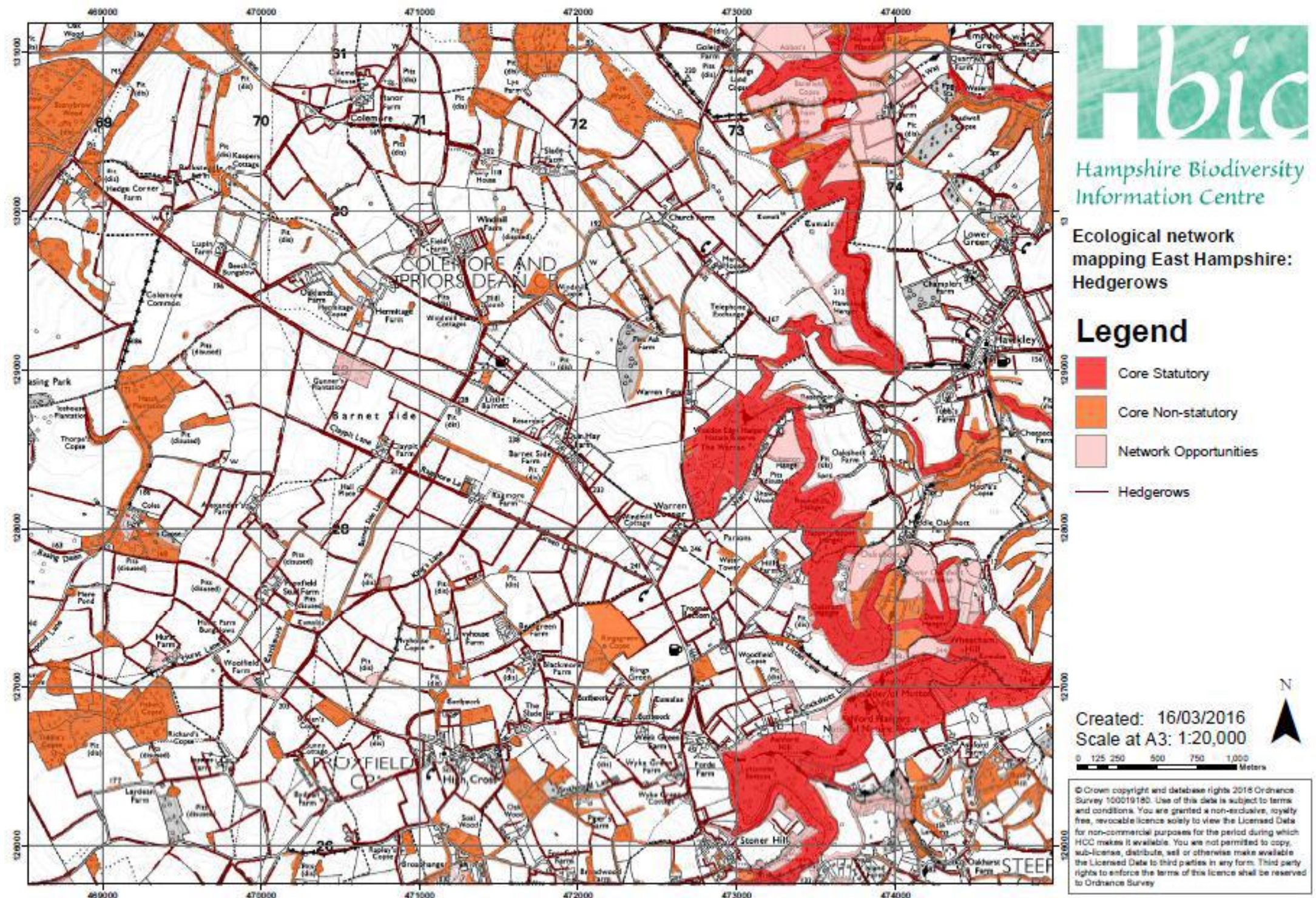
- Core Grassland
- Grassland Network
- Water and wetlands
- Wetland Network
- Core Woodland
- Woodland Network
- Multiple Network



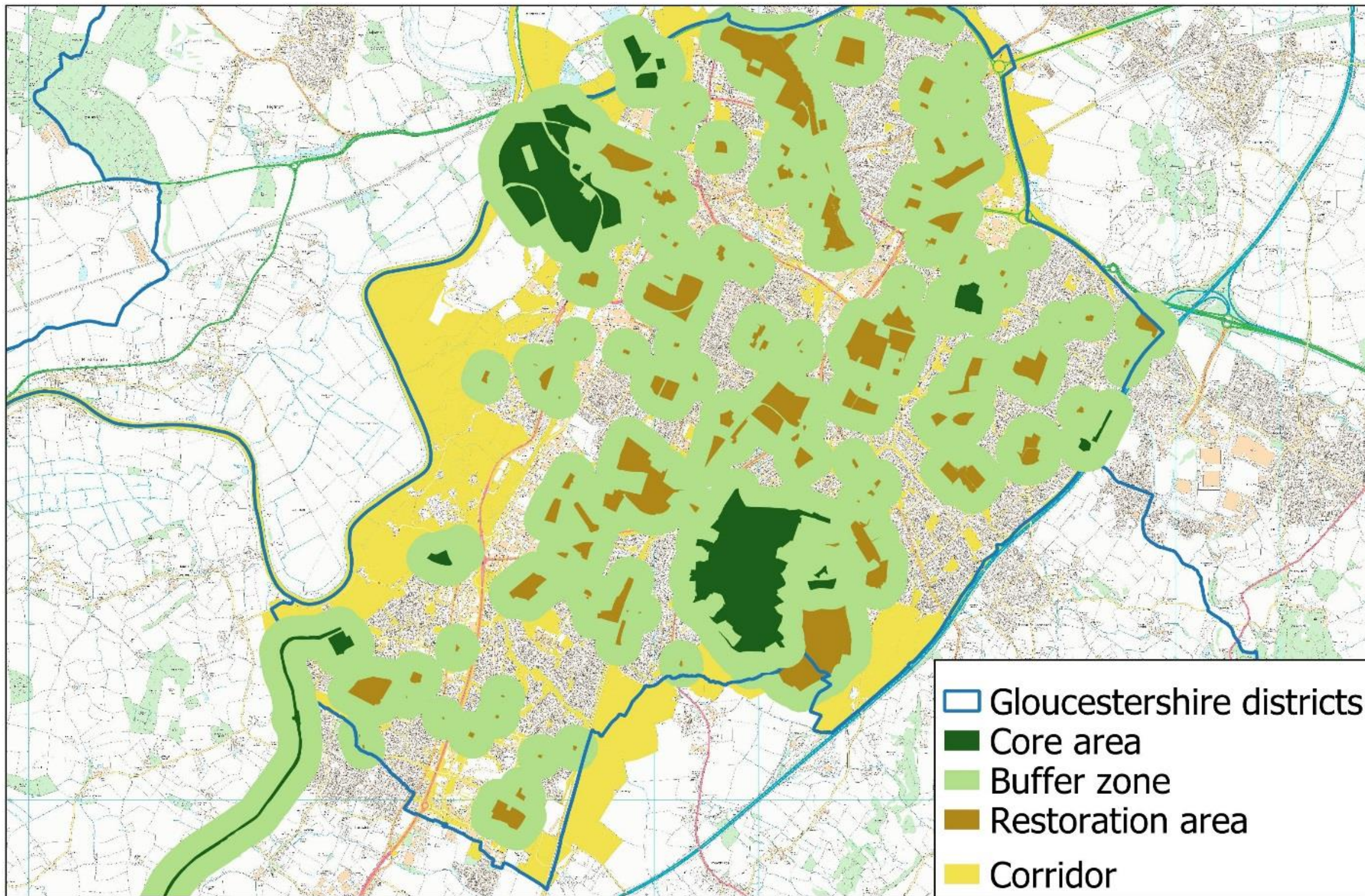
West of England Nature Partnership
joining up the dots for nature

ECOSYSTEM SERVICE ASSESSMENT

- Opportunity mapping based on land use, geology and topography.
- Shows core and supporting areas.
- Areas of land supporting multiple functions.



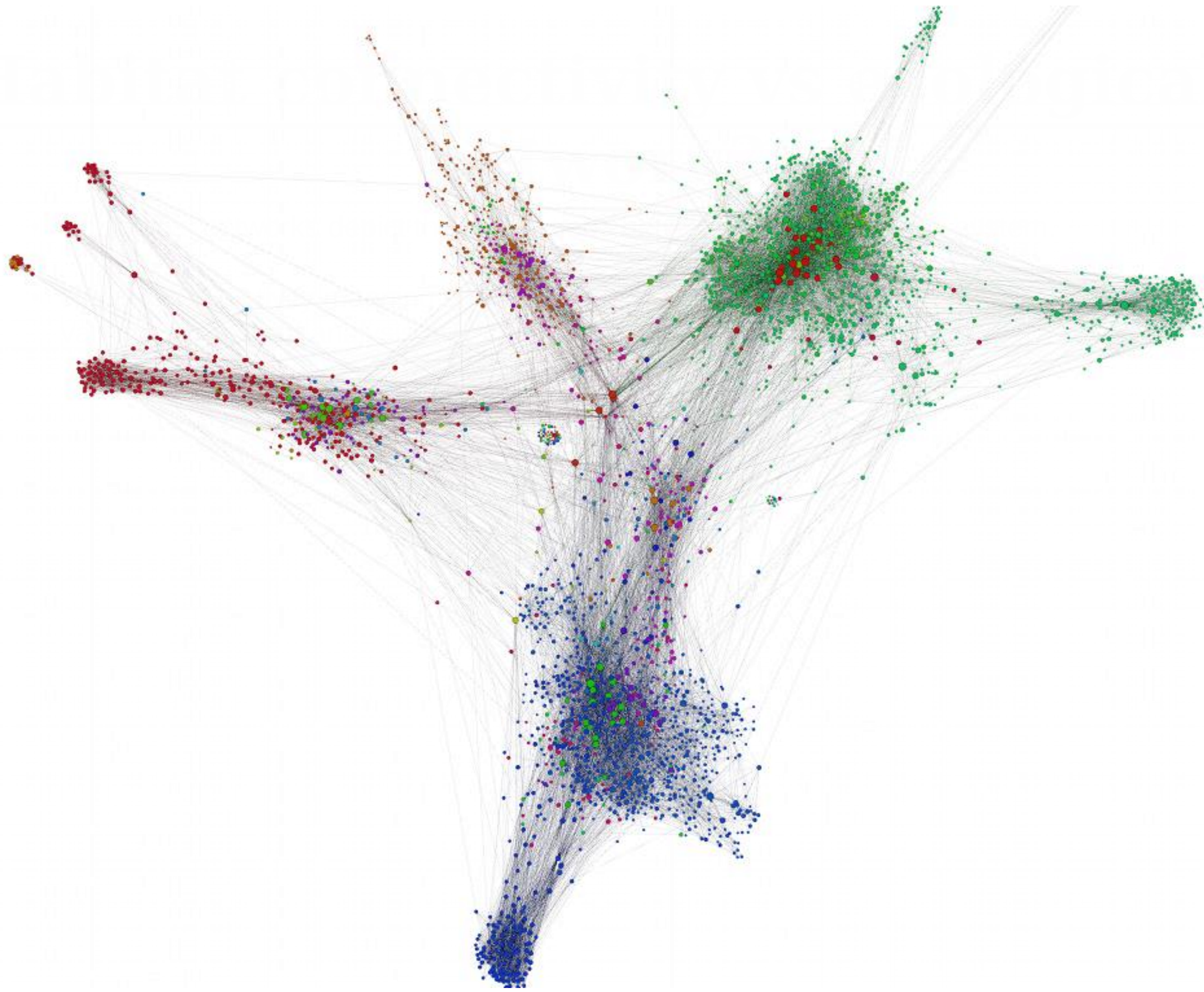
- Habitat opportunity index based on mapping land suitability for priority habitats.
- Based on a ranked index considering; geology, soils, fluvial, topography, current land use, historic habitat distribution, and presence of existing priority habitats and indicator species.



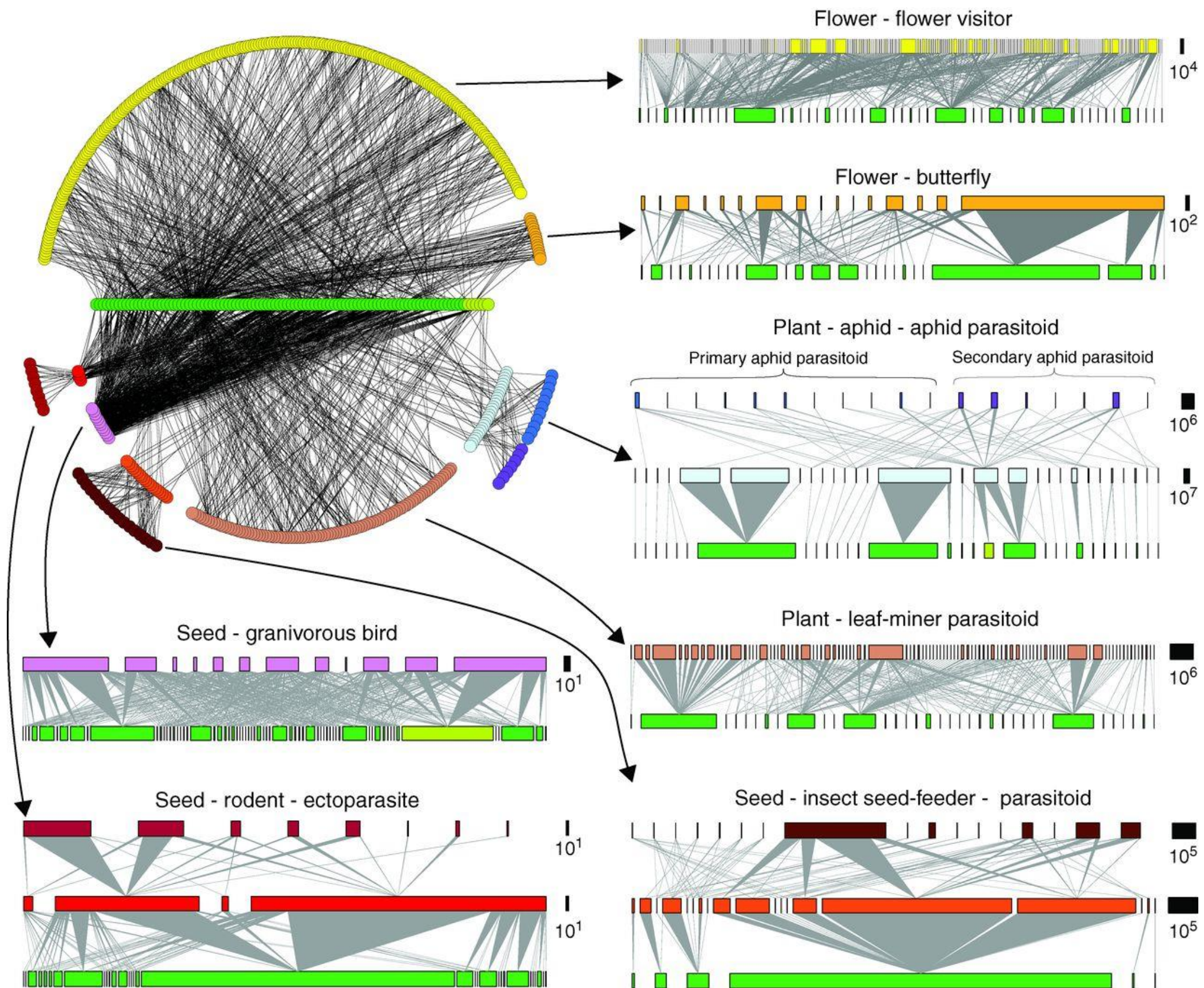
Gloucester Nature Recovery Network Draft
30/08/2018

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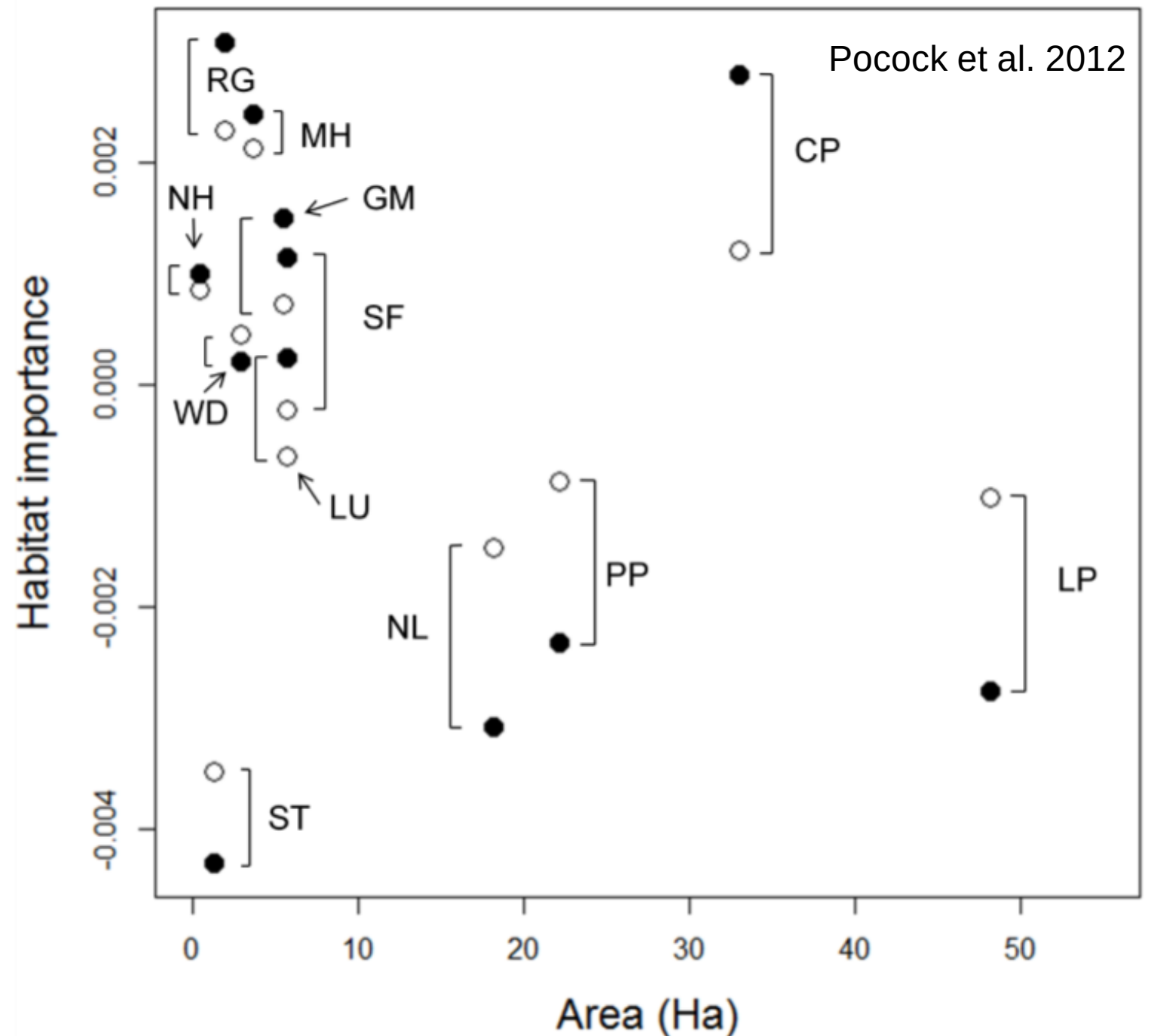
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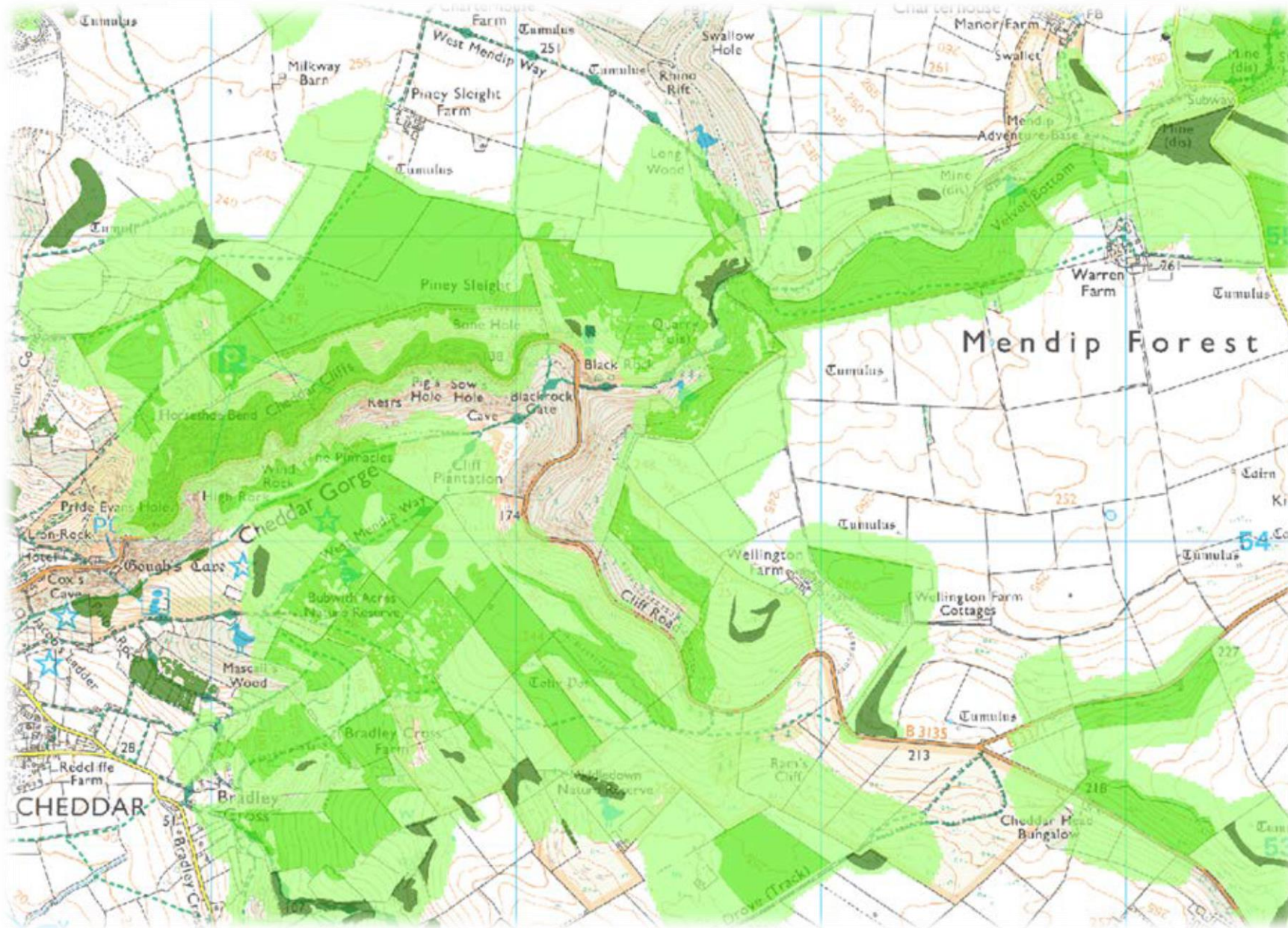
Not all habitats

are equal

- The loss of all semi-natural habitats resulted in a 43% reduction of species and 57% of species interactions
- If reduced to just crops then 66% of species and 87% of interactions were lost.
- Smaller number of habitats account for most of the species and interactions.



Does proximity = connectivity ?

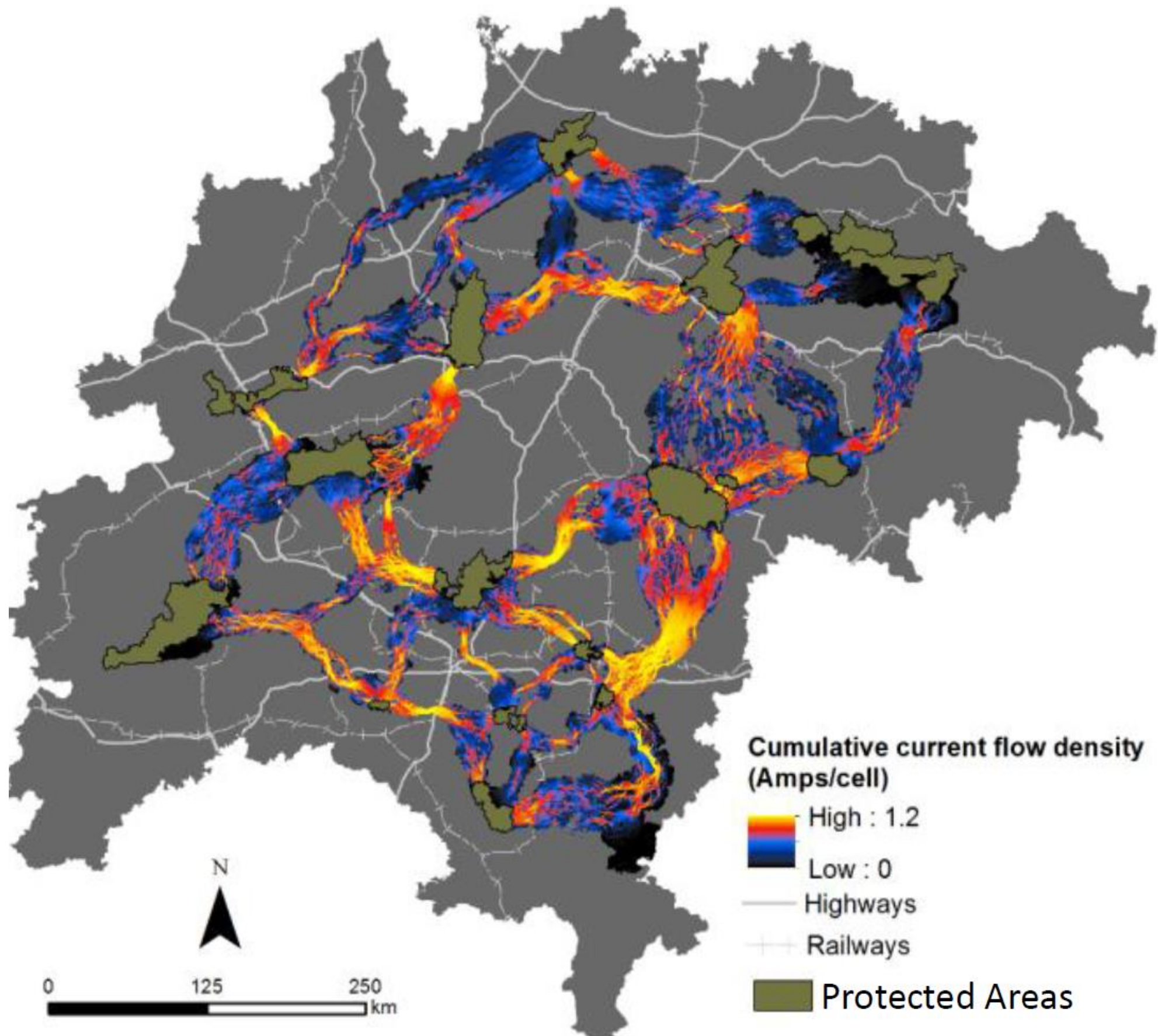


BEETLE GIS model developed by Forest Research (Watts *et al.* 2010), combined with a connectivity analysis of rivers and streams.

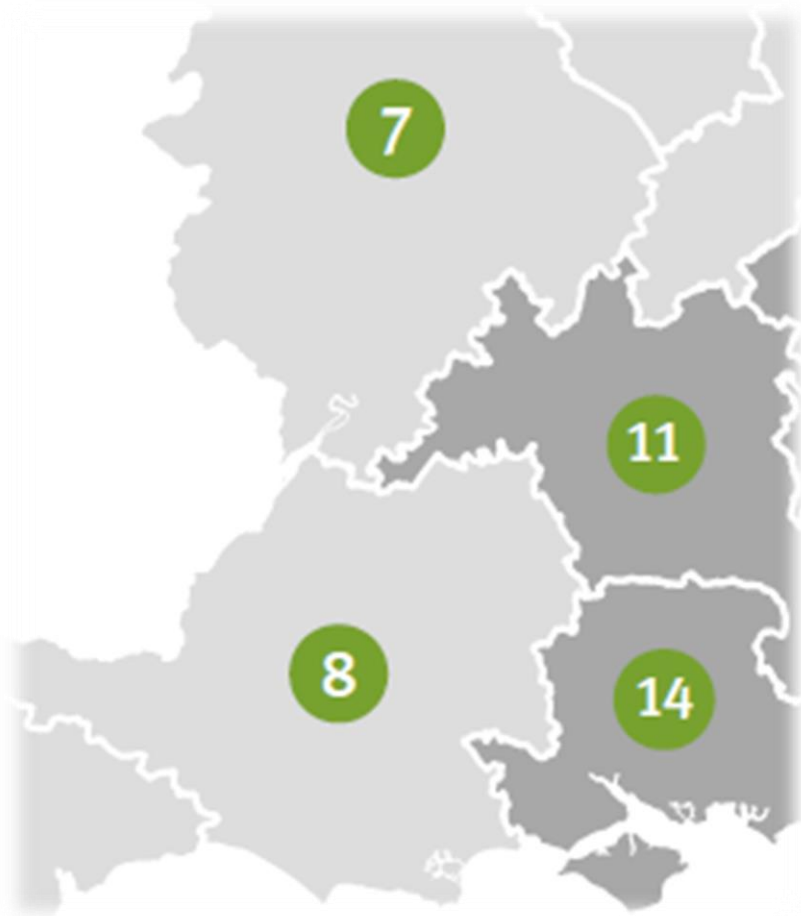
Least-cost modelling based on habitat permeability and key parameters of focal species e.g. minimum viable area, dispersal ability.

Can produce measures of connectivity.





Free movement across boarders?



Making the case for investment

Harnessing LAs Placemaking approach

- Improve Infrastructure
- Increase delivery of new development
- Boost trade and investment
- Quality of life and wellbeing improvements

‘Public money for public goods’

- Deliver restoration through natural capital focused agri-environment schemes.

Need to overcome the issue of ‘investors’ not always realising the savings through a natural capital approach

