White Peak Dales Focus Area

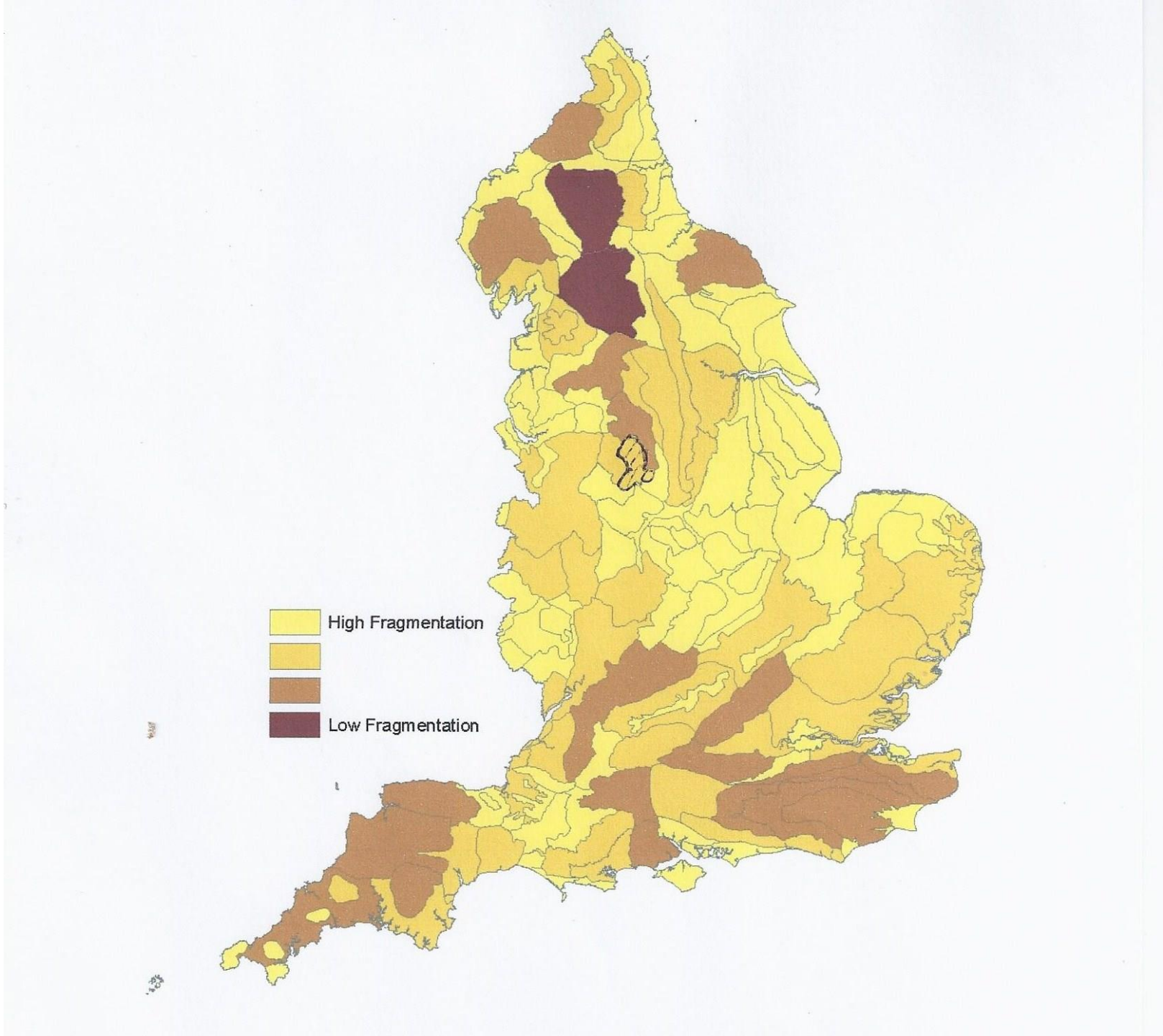
Opportunity Mapping

Opportunity mapping - What it is and why do we need it?

- Despite our best efforts, nature continues to decline in the White Peak
- Other threats such as ash dieback, nitrogen deposition, uncertainty over the future of agri-environment and impacts from climate change
- The State of Nature report (2016) for the Peak District said "*A new large scale project is urgently needed across the White Peak with its main objectives focused on 'better, bigger, more and joined'*
- An attempt to illustrate for the first time what a resilient landscape might look like in the White Peak, where the priorities should be, and how to go about it.

Fragmentation

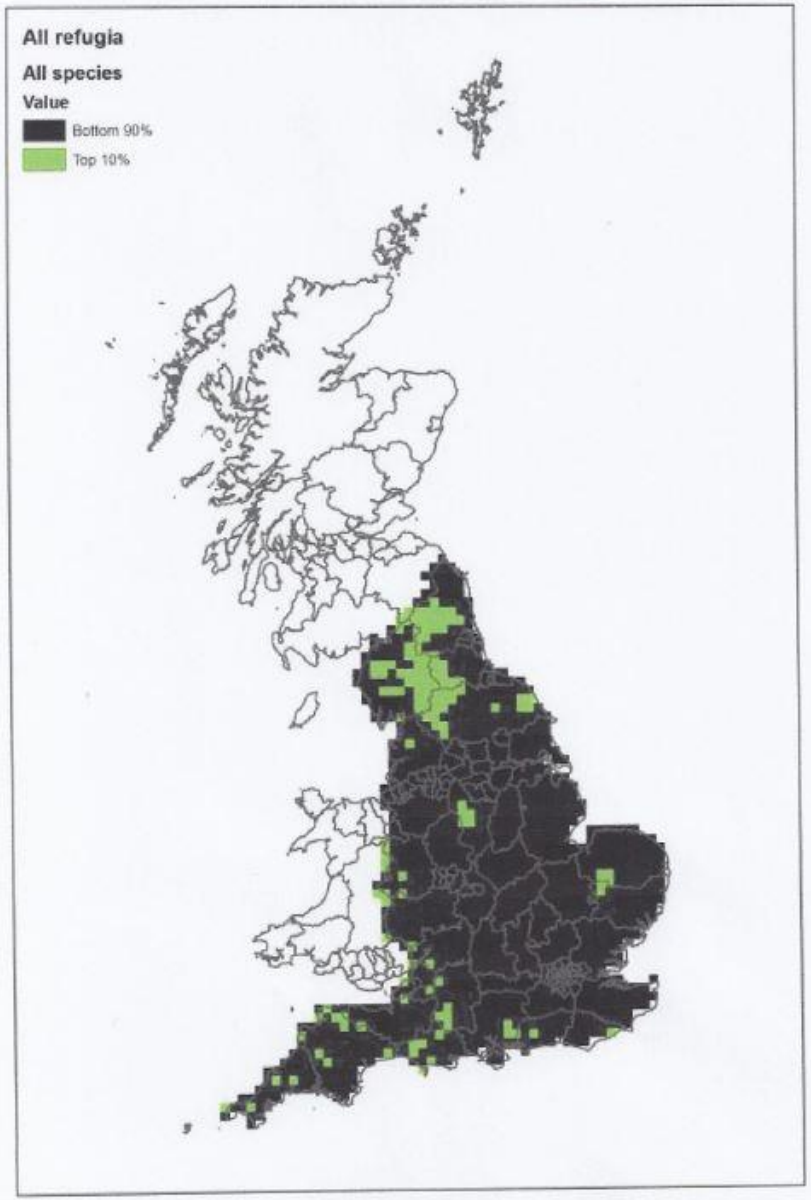
The white peak was mapped in the Lawton report, as having the highest levels of fragmentation within any English National Park.



Climate Change and Refugia sites

Due to its altitudinal and geographical position, The Peak District is the place where the northern and southern ranges of many plants end in Britain– many of which are of restricted distribution eg Dark Red Helleborine, Globeflower, Dwarf thistle, and may be most vulnerable to a changing climate.

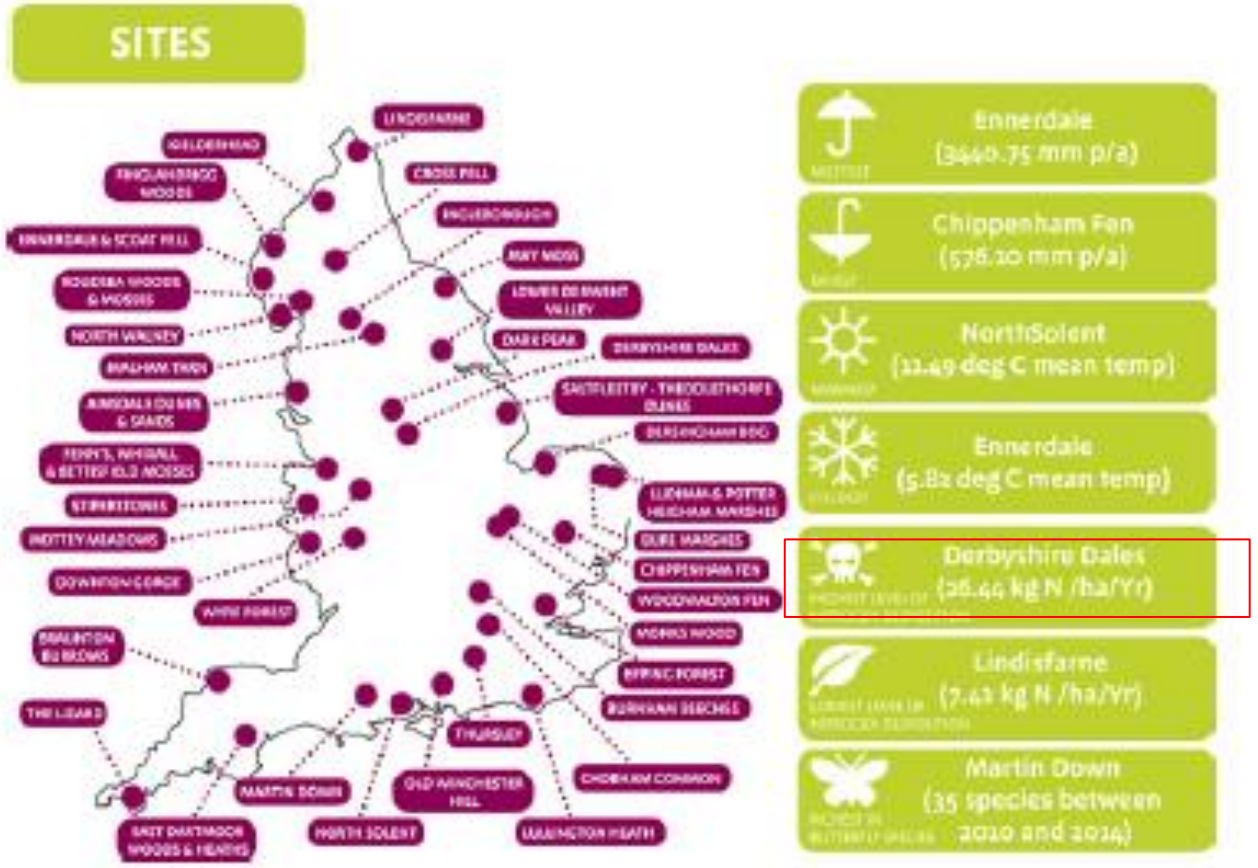
The limestone dales of the White Peak were highlighted in a recent NE report as potentially being within the top 10% of refugial areas in England.



Appendix 2 Figure 1 Map showing the location of the top 10% of refugial areas calculated using all relevant variables, not just those related to climate change. In this map, in addition to climatic determinants, locations with appropriate geology or subject to low agricultural intensity are considered to be good refugia. Green colouring represents squares in the top 10%, while black represents those in the bottom 90%.

Nitrogen Deposition and Ammonia

The Long Term Monitoring Network is made up of 37 sites across England and extends from Lindisfarne in Northumbria and Ludham - Potter Heigham Marshes in Norfolk to The Lizard in Cornwall. Figure 7 shows this geographical spread and some of the environmental variation across the network.



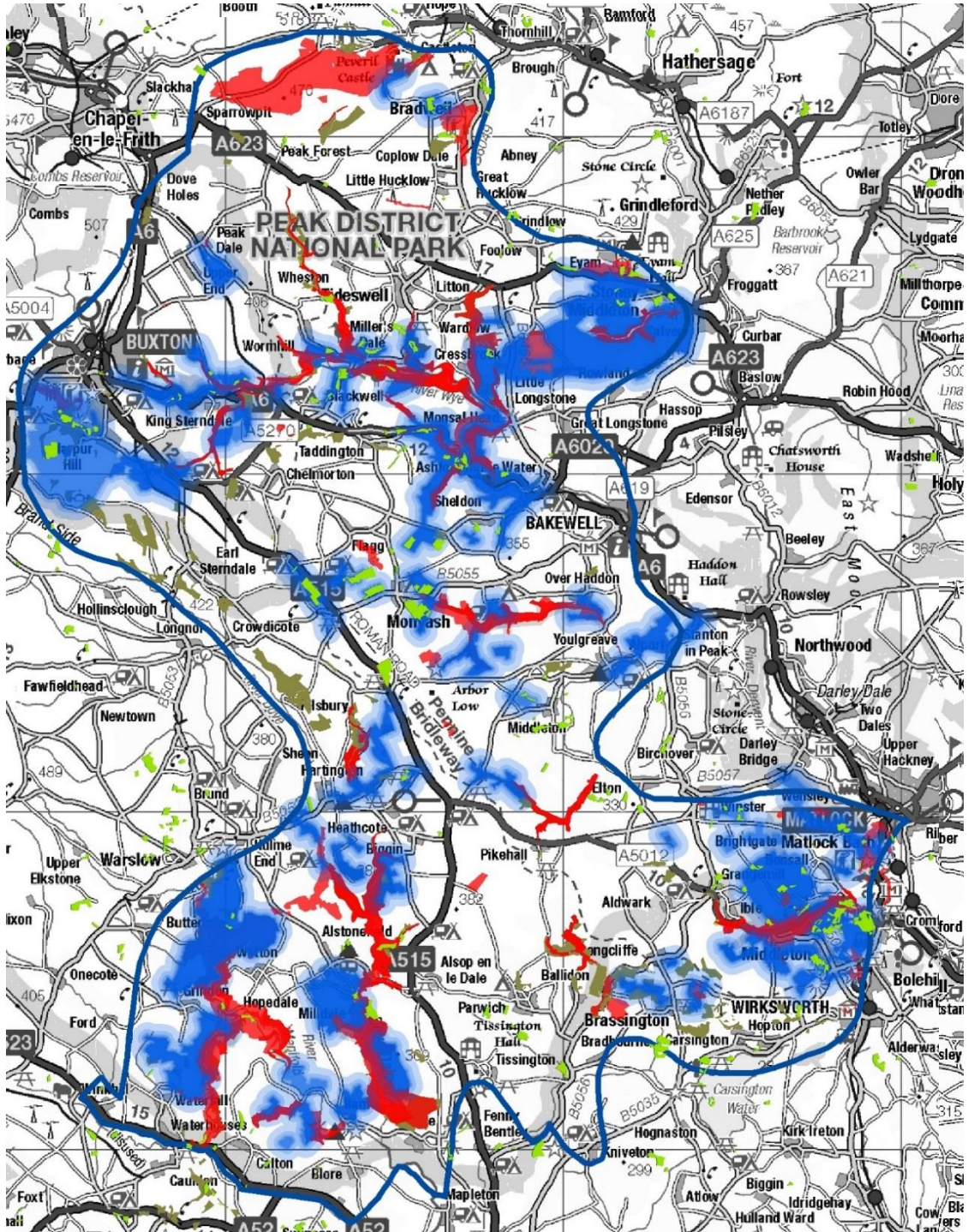
Sites vulnerable to Ammonia

STOP PRESS! Defra just released £3million for tackling agricultural air emissions through CSF

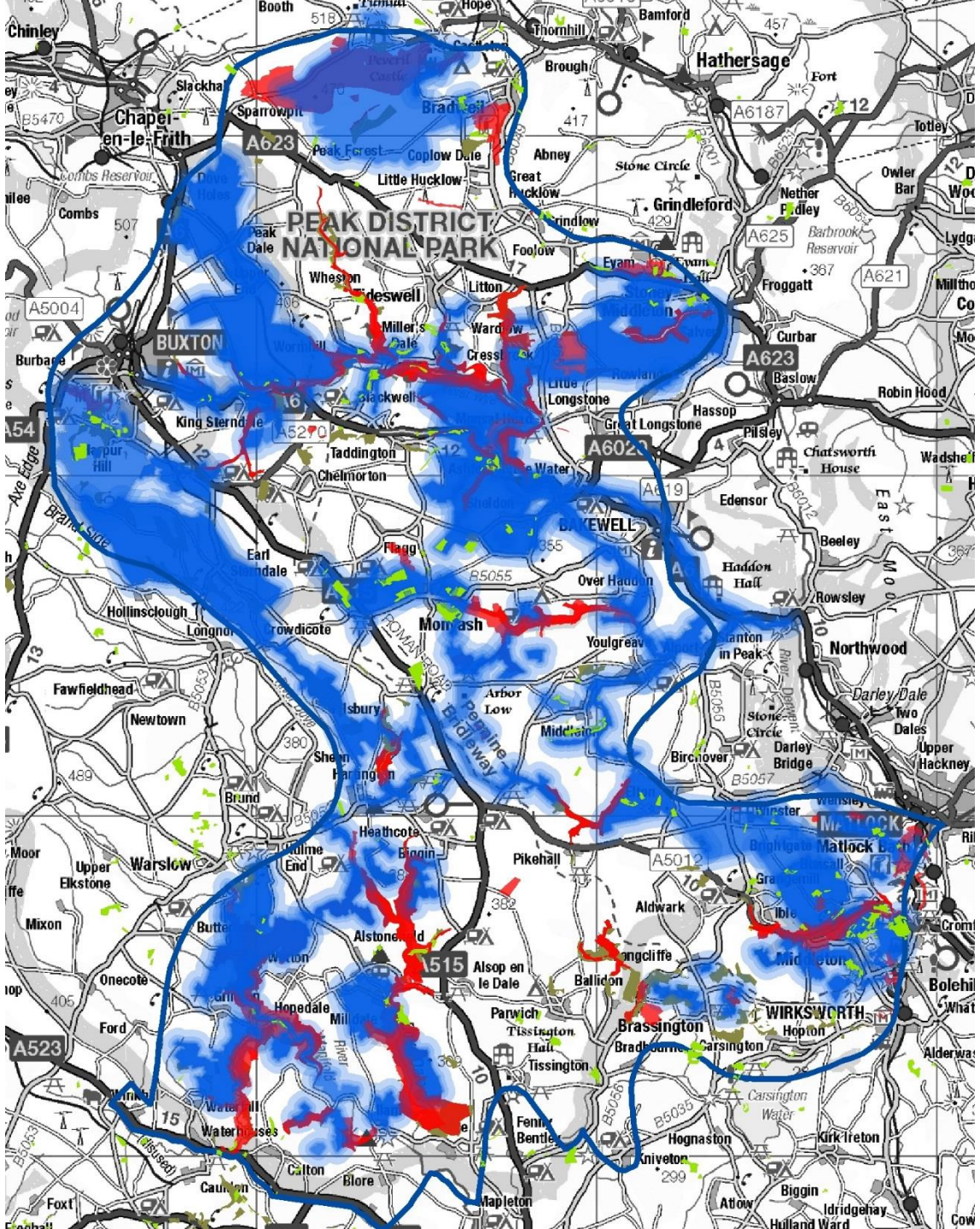
White Peak Opportunity Mapping

- Collaborative shared plan for long term, landscape scale improvements to the natural environment
- Pragmatic approach, not wholly objective
- Based on over 500 yrs experience of working in the White Peak!

Priority Opportunity Areas



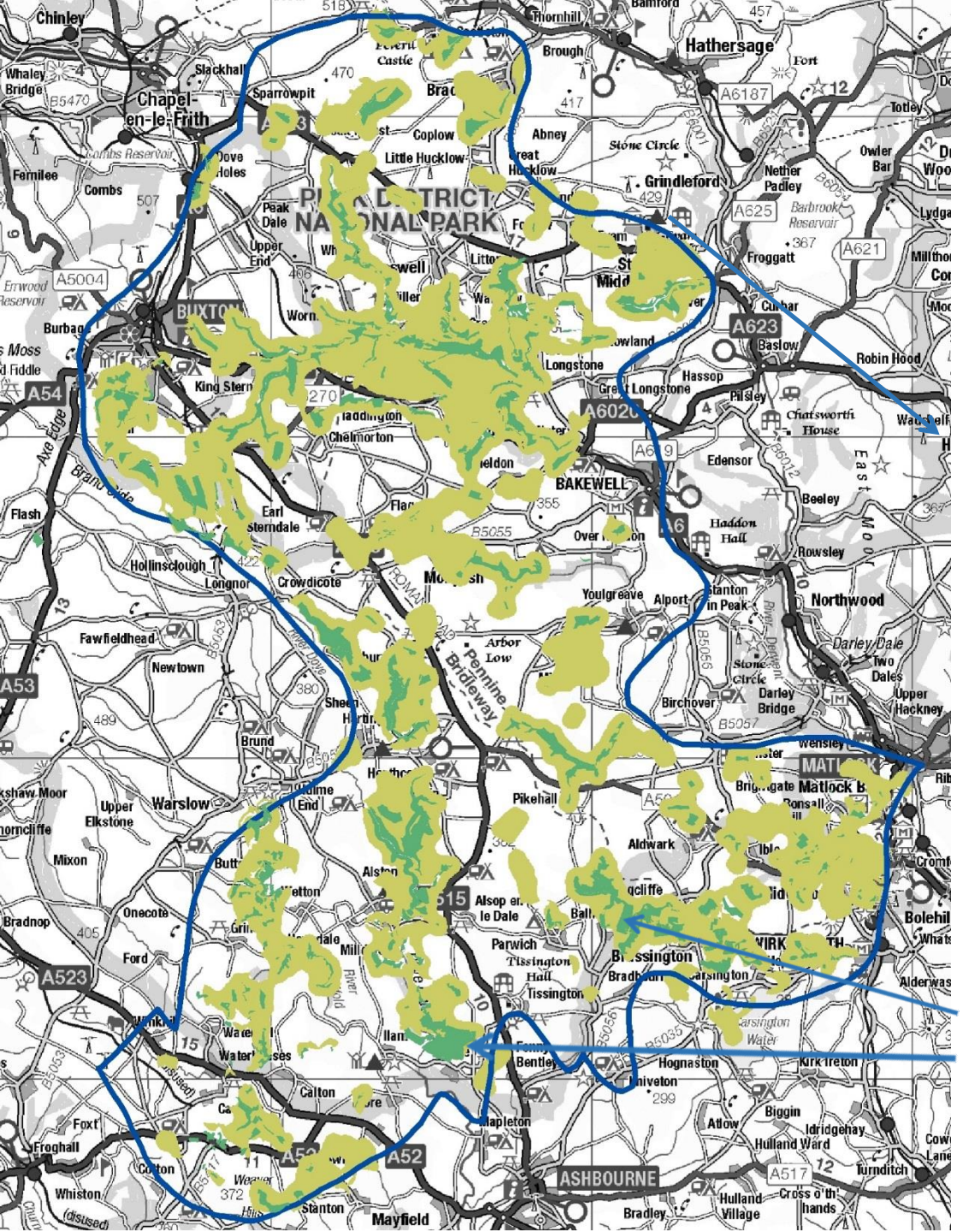
Secondary Opportunity Areas



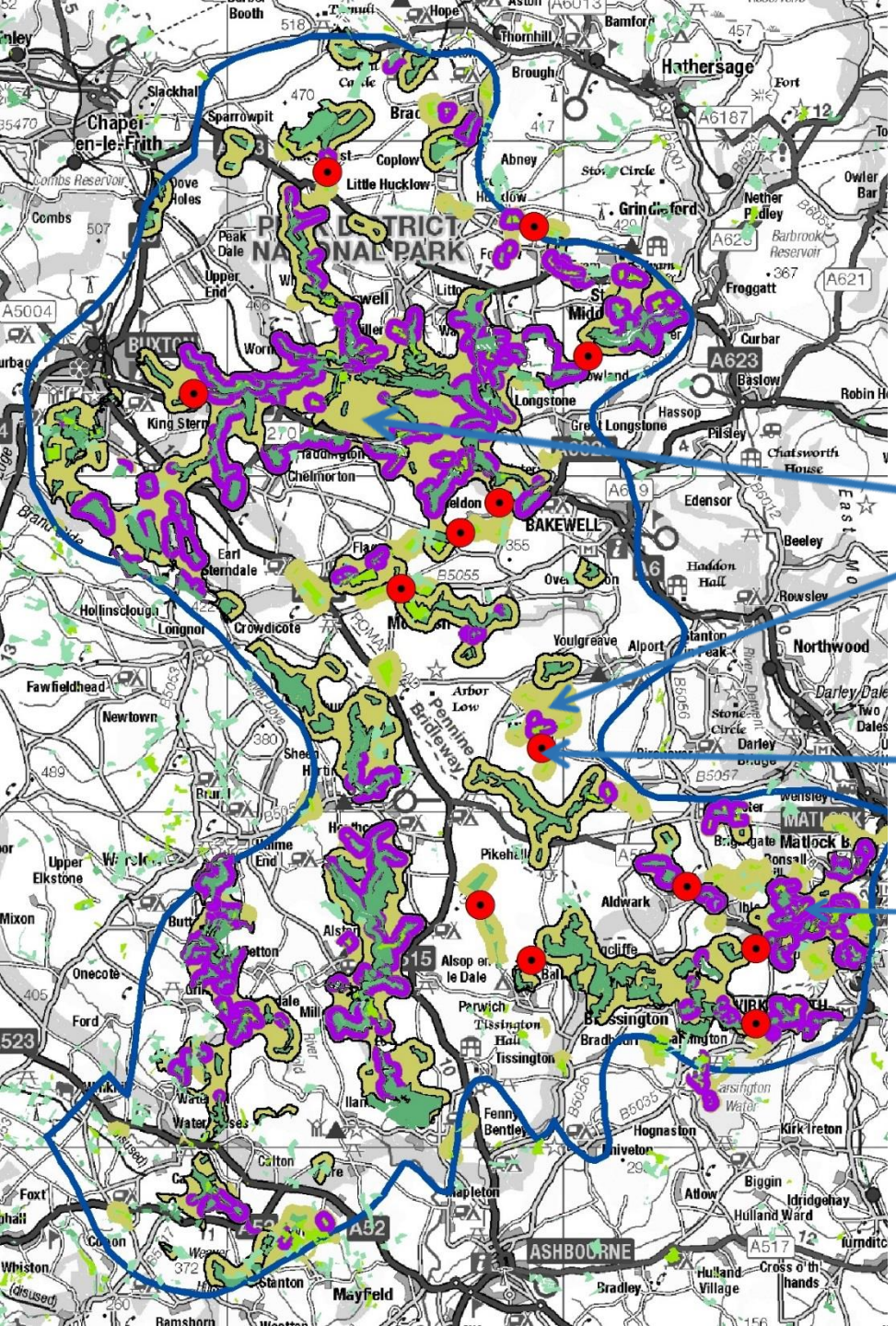
Partners liked it but wanted it refining with a more rigorous scientific basis

National Habitat Network Mapping

- The project identifies **priority locations for new priority habitats** to improve the functioning of ecological networks as a key component of more resilient landscapes.
- 17 individual national habitat network maps have been prepared
- Each map identifies **clusters of existing habitat** that are likely to function in terms of species movement.
- The maps also identify **priority locations to reduce habitat fragmentation**, establish stepping stones and provide network links.



Define Primary Habitat (Limestone grassland)



Fragmentation and Enhancement

Network Enhancement Zone

Target habitat creation here to strengthen the network

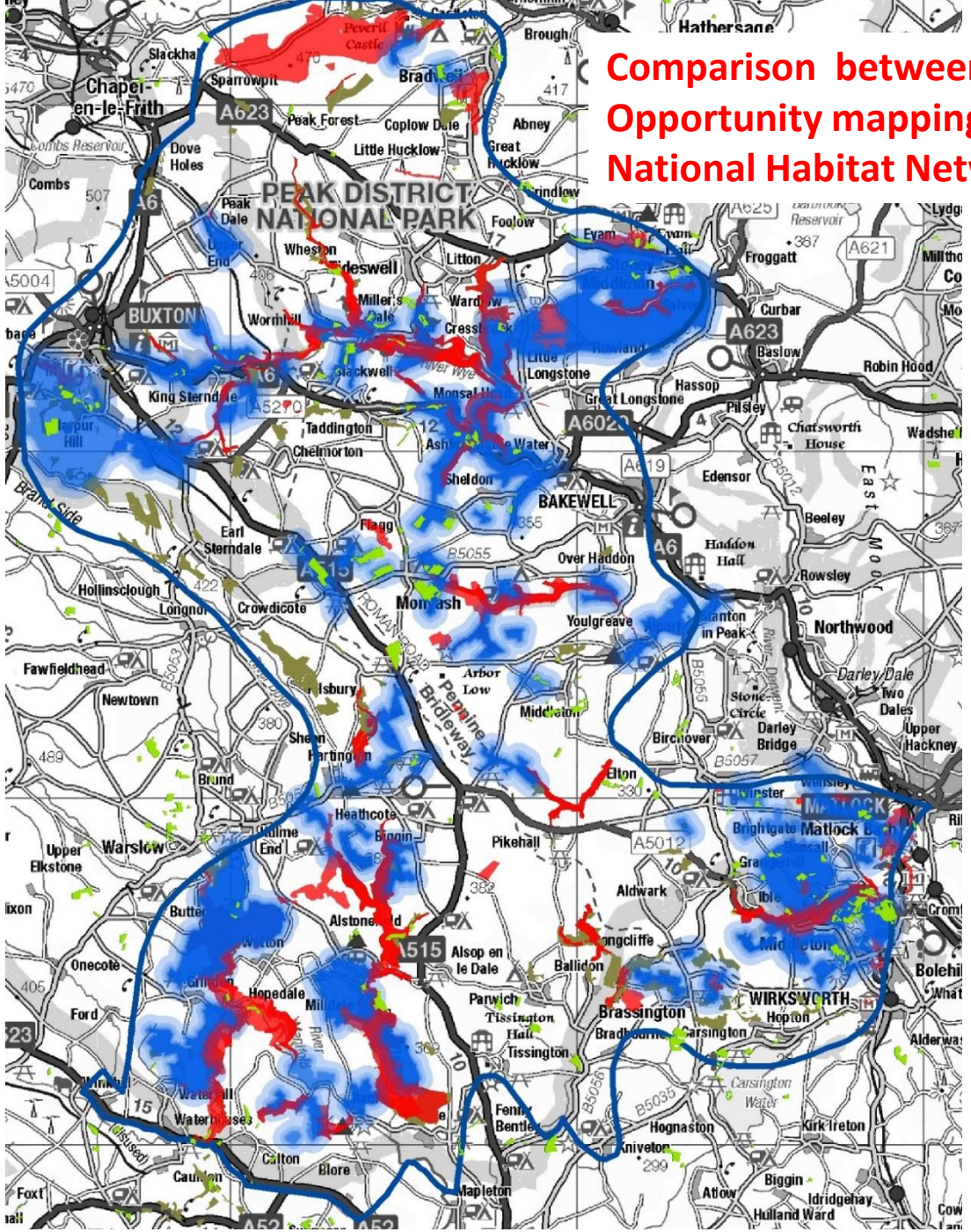
Network Joins

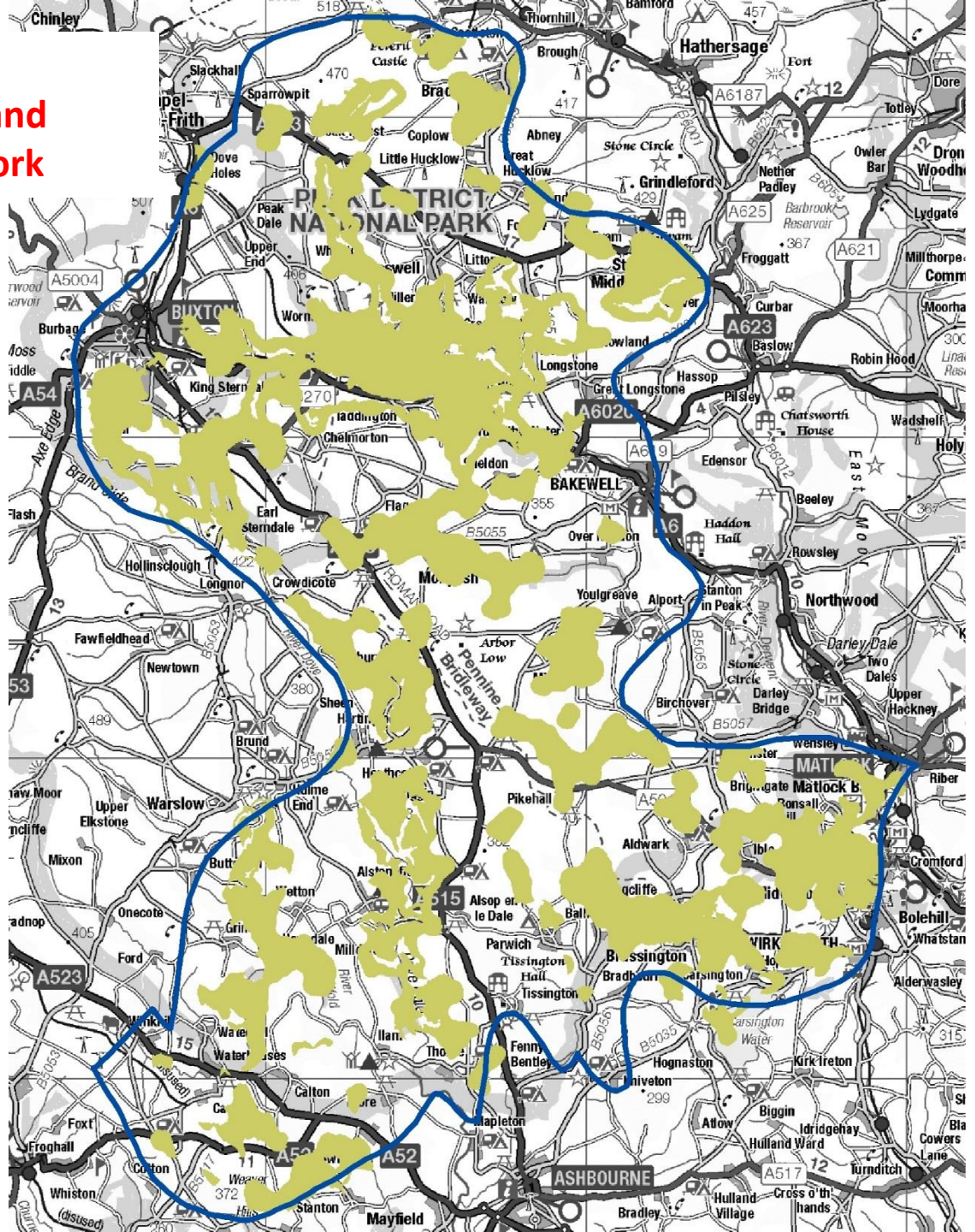
Strategically important areas to link network patches

Areas of Fragmentation

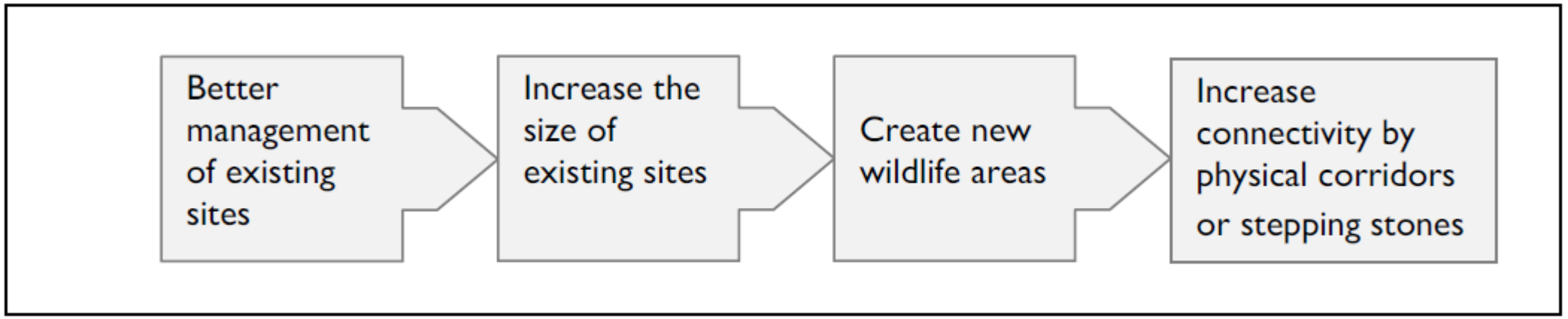
Areas of primary habitat with high levels of fragmentation or with a large edge to surface area. Target habitat creation here.

Comparison between Opportunity mapping and National Habitat Network





Lawton Hierarchy of Benefits



- Core areas
- Wildlife bank
- Refugia sites
- SSSI condition
- Site fabric

- Reduce fragmentation and “edge”
- Greater resilience
- More species
- More opportunity for natural processes

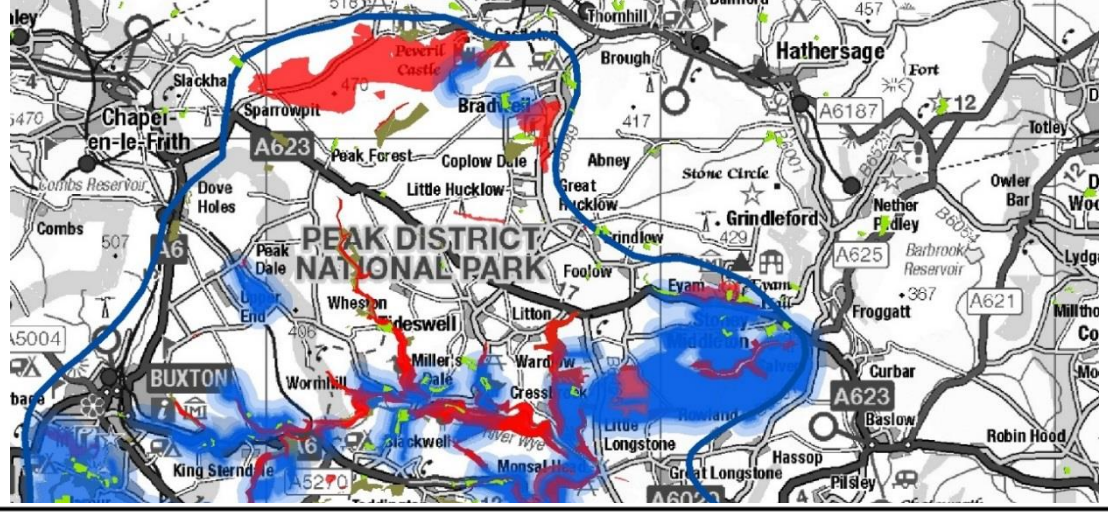
- Stepping stones between core areas

- Evidence not strong on the value of corridors.
- Only benefits some species

25 Year Environment Plan

- Restoring **75% of SSSIs to favourable condition**, securing their wildlife value for the long term.
- Develop a **Nature Recovery Network** to protect and restore wildlife, and provide opportunities to re-introduce species that we have lost from our countryside.
- Creating or restoring **500,000 hectares** of wildlife-rich habitat outside the protected site network, focusing on priority habitats as part of a wider set of land management changes providing extensive benefits.

Structurally rich AND species-rich habitats



Better management of existing sites

Increase the size of existing sites

Create new wildlife areas

Increase connectivity by physical corridors or stepping stones