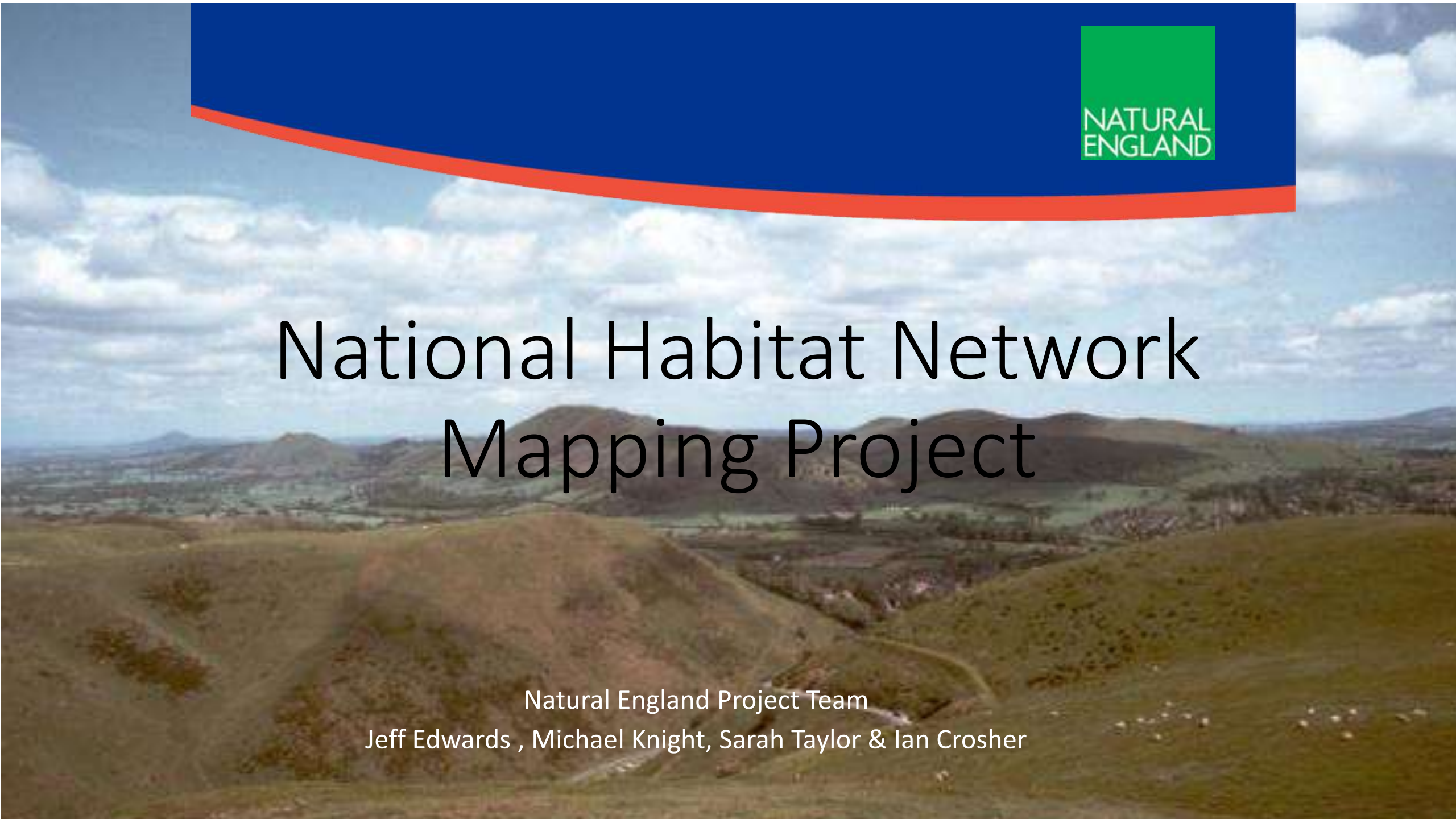


National Habitat Network Mapping Project

Natural England Project Team
Jeff Edwards , Michael Knight, Sarah Taylor & Ian Crosher

Habitat Network Mapping Project

The Mapping project…..

- Recognised as one of the main spatial tools within the NE's Ecological Networks Handbook
- Provides the spatial distribution of habitat networks to compliment the work to develop more natural functioning of habitats & ecosystems.
- Has developed 3 separate outputs
  - 19 separate habitat network maps for England
  - 1 combined all habitats map
  - Series of habitat potential maps
- Intended for use at a national level for a range of work and at a local level to feed into the development of local ecological networks

Growing Natural Capital

Putting People at the Heart

Habitat Network Mapping should feed into a wide range of NE's activities

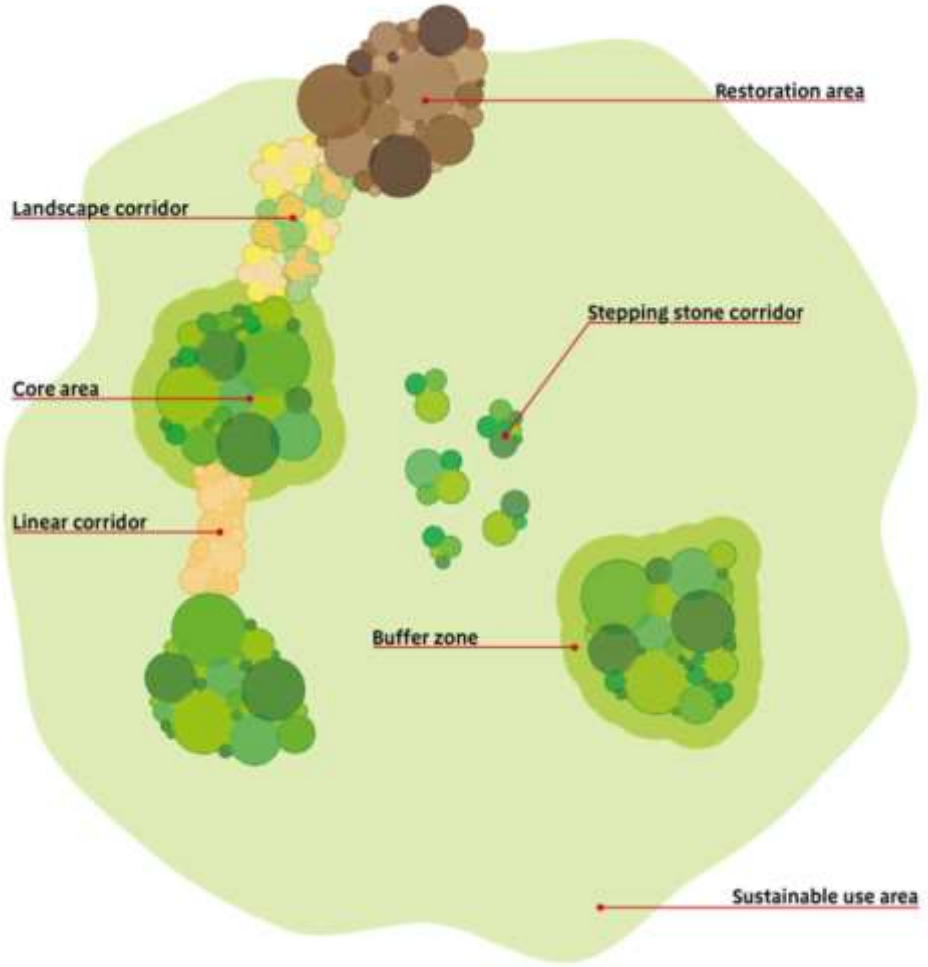
Resilient Landscapes and Seas

Lawton Principles for an Ecological Network

Making Space for Nature Lawton et.al. 2010

Overarching aim:

"Biodiversity is enhanced and the diversity, functioning and resilience of ecosystems re-established in a network of spaces for nature that can sustain these levels into the future"



To enhance the <u>resilience and coherence</u> of ecological networks can be summarised in four words: *more, bigger, better* and *joined*.

Network Components

- ***Core areas***
- ***Corridors and 'stepping stones'***
- ***Restoration areas***
- ***Buffer zones***
- ***Sustainable use areas – 'softening the matrix'***

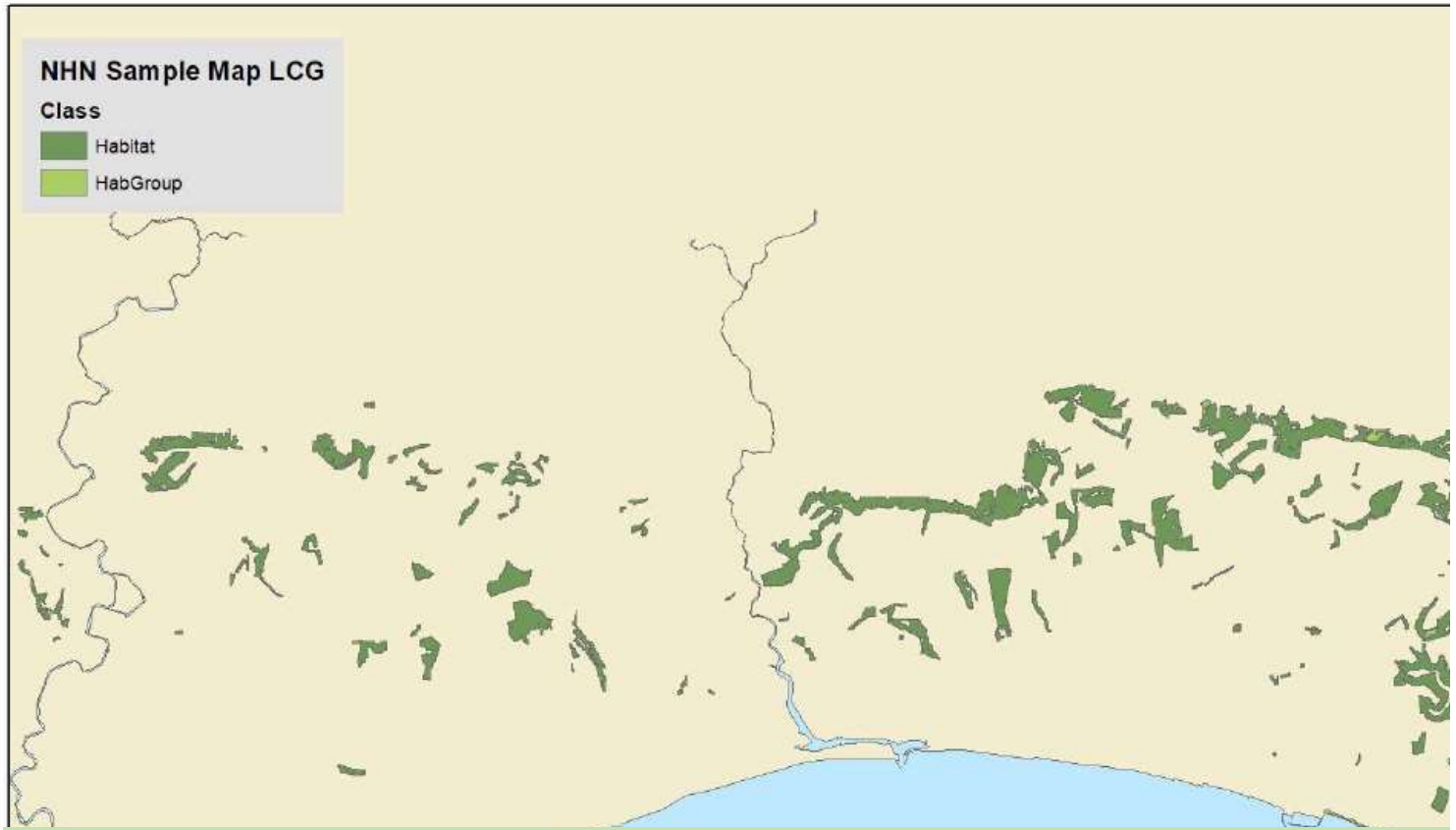
19 Habitat Network Maps

Upland calcareous grassland
Lowland calcareous grassland
Reed-beds
Lowland meadows
Upland hay meadows
Purple moor-grass and rush pastures
Lowland dry acid grassland
Lowland heathland
Upland heathland
Upland flushes fens & swamps

Lowland fens
Lowland raised bog
Blanket bog
Limestone pavements
Coastal sand-dunes
Coastal shingle
Maritime cliff & slope
Saltmarsh
Ancient Semi-natural Woodland

Habitat Network Maps

- 19 separate habitat network maps that cover the whole of England using a standard process/framework.
- National overview of the distribution of habitat networks with suggestions for future actions to address fragmentation and enhance biodiversity.
- Information can be interpreted at a local scale to help stimulate local engagement with partners to help agree priorities and identify opportunities for action.
- Ideally the maps are used in conjunction with other data sets and with local knowledge and will be updated using additional relevant data e.g. information on areas of priority habitat information, locations where additional habitat creation or restoration is taking place.

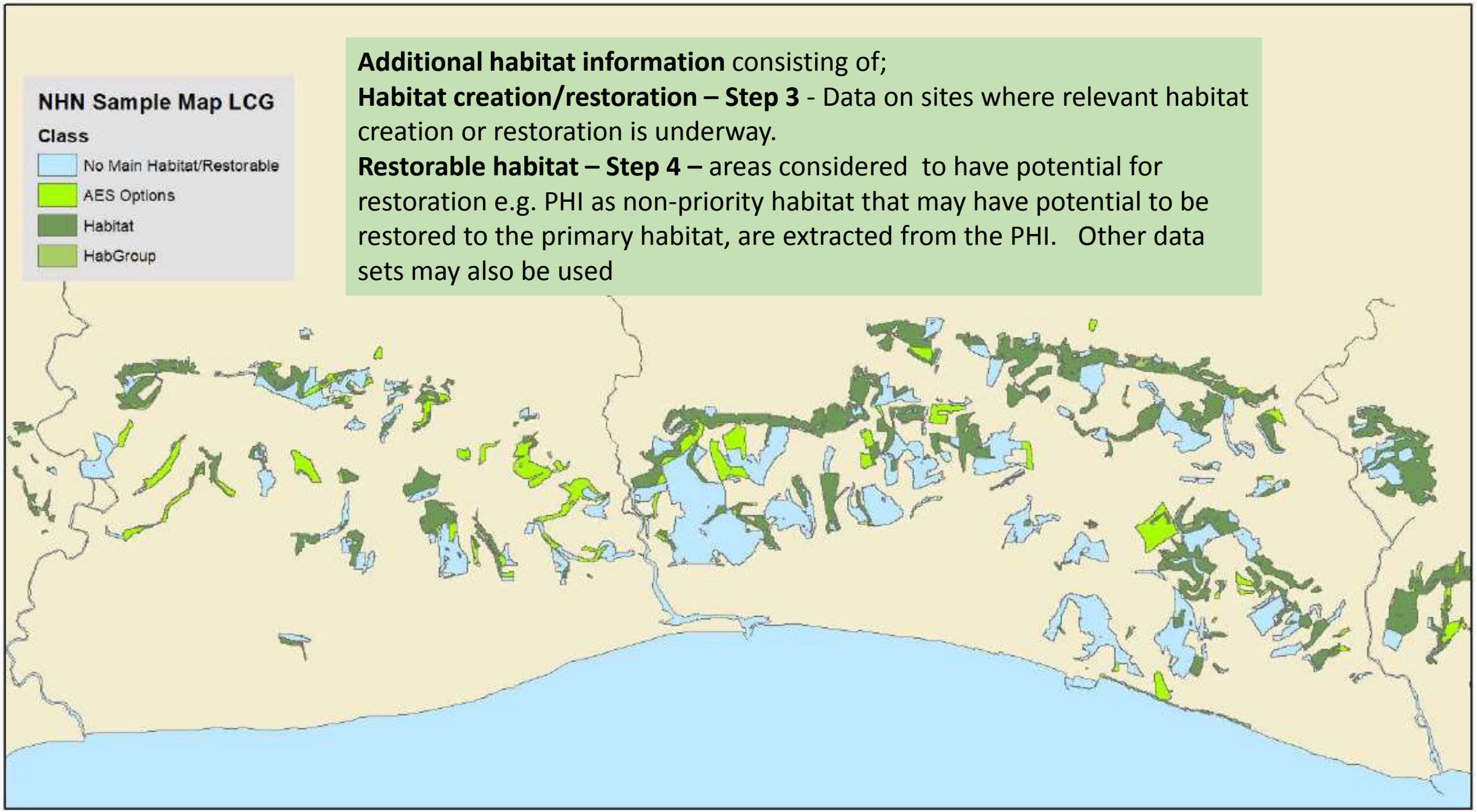


Associated Habitats within a Habitat Group ↓	Primary Habitat: UPLAND					COASTAL				WETLAND				GRASSLAND & HEATHLAND				
	Blanket bog	Upland Heathland	Upland calcareous grassland	Upland hay meadows	Limestone pavements	Coastal saltmarsh	Coastal sand dunes	Coastal vegetated shingle	Maritime cliff & slope	Lowland fens	Lowland raised bog	Reedbeds	Purple moor grass & rush pastures	Lowland heathland	Lowland calcareous grassland	Lowland dry acid grassland	Lowland meadows
Blanket bog		X															
Coastal saltmarsh							X	X		X		X					
Coastal sand dunes						X		X		X		X				X	
Coastal vegetated shingle						X	X			X		X				X	
Mudflats						X	X	X				X					
Saline Lagoons						X	X	X				X					
Limestone pavements			X	X						X					X	X	
Lowland calcareous grassland			X	X	X		X	X	X	X					X		X
Lowland dry acid grassland				X		X	X	X	X	X			X	X	X		X
Lowland fens				X		X	X	X	X	X	X	X	X	X		X	X
Lowland heathland							X	X	X	X			X			X	
Lowland meadows				X		X	X	X	X	X			X	X		X	
Calaminarian Grassland		X	X		X				X	X				X	X		
Lowland raised bog										X		X	X	X			
Maritime cliff & slope													X	X	X	X	X
Purple moor grass/rush pastures				X						X	X			X			X
Reedbeds						X	X	X	X	X	X		X				
Upland calcareous grassland		X			X					X					X		
Upland hay meadows					X					X			X				
Upland Heathland	X																
Upland flushes fens swamps	X	X	X		X					X							
Traditional orchards										X							X
GQSIG														X			

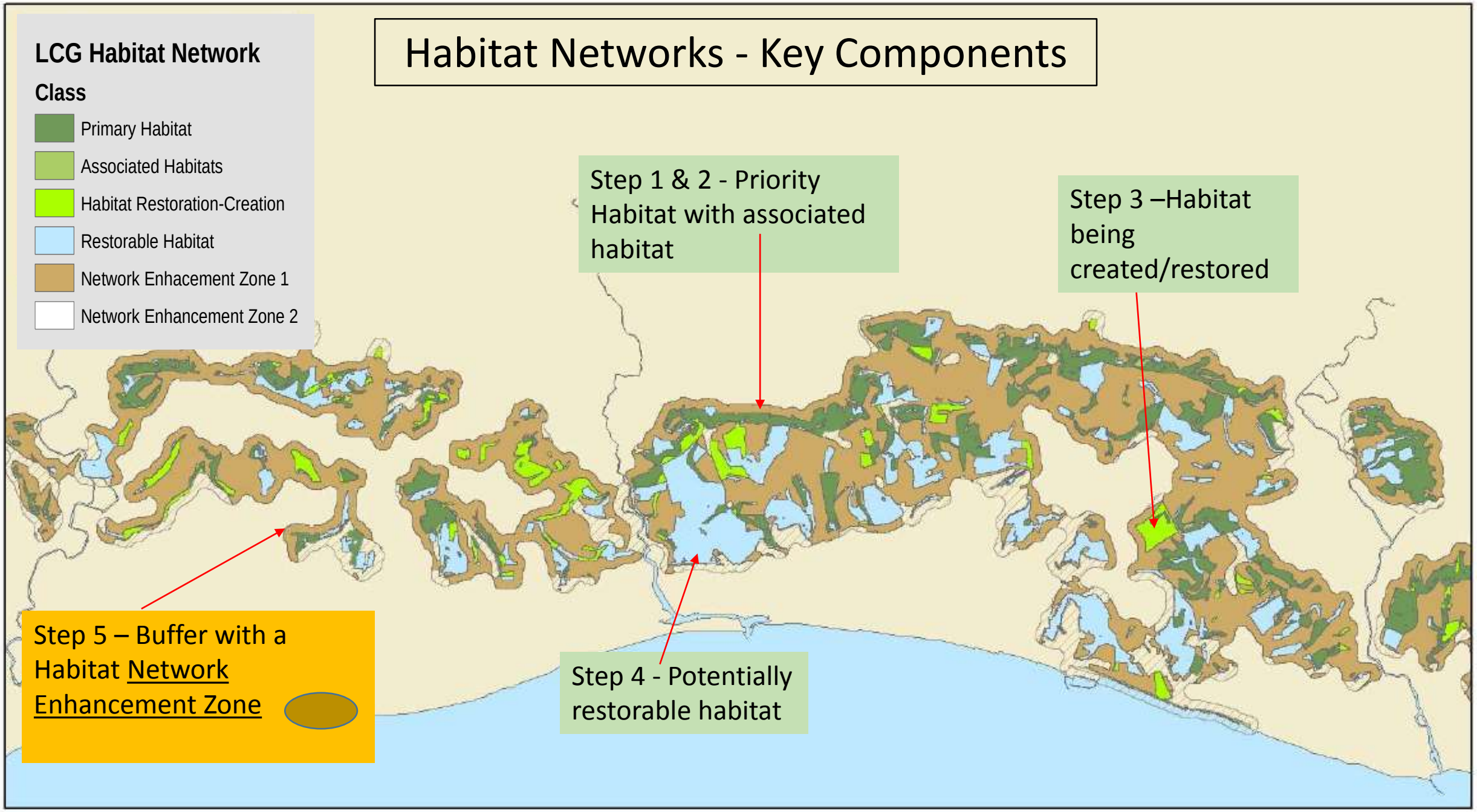
Habitat Group consisting of;

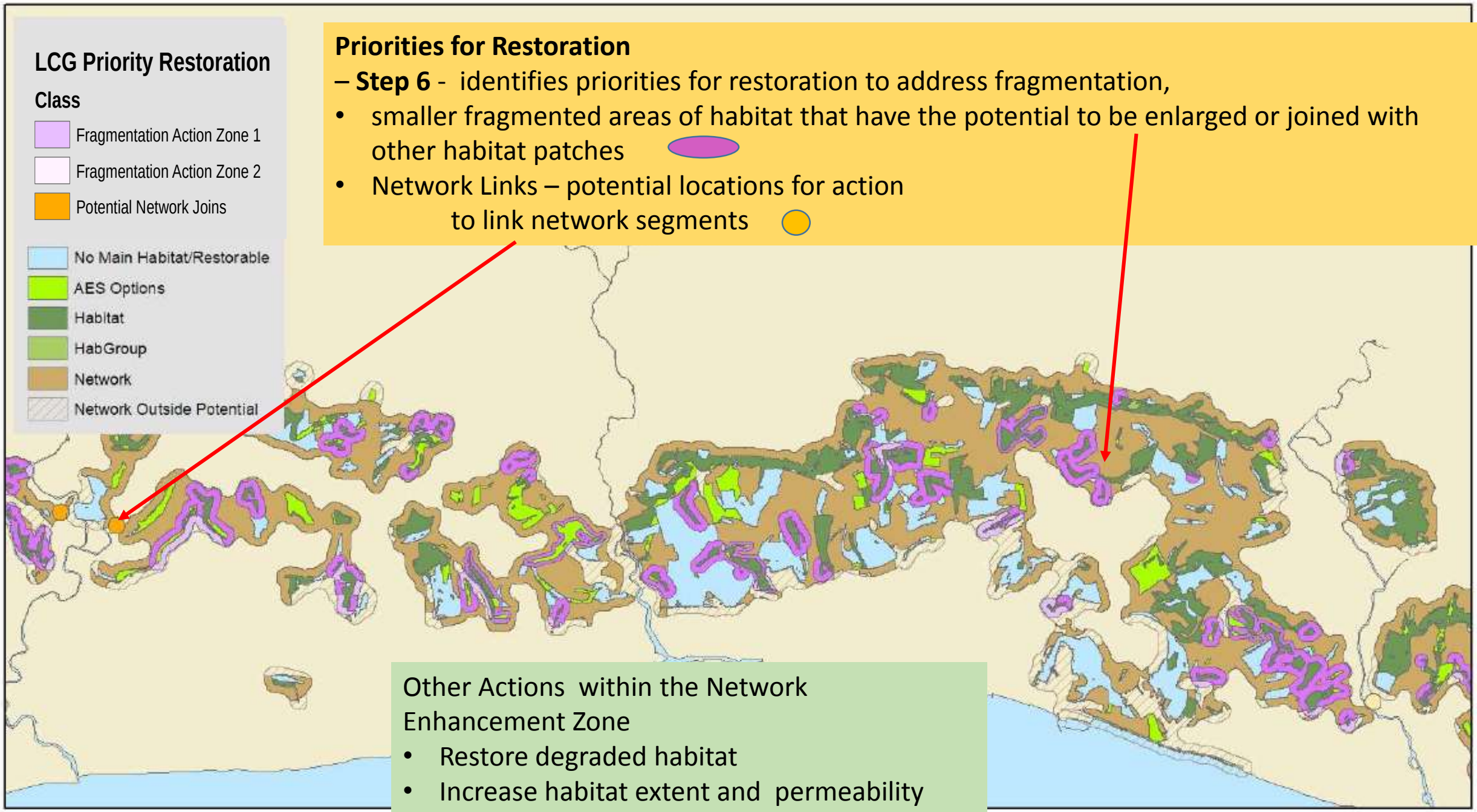
- **Primary habitat** – Step 1 - existing patches of priority habitat for each network e.g. lowland heathland, is extracted from the PHI.
- **Associated habitat** – Step 2 - other habitat types that form a mosaic or an ecologically coherent grouping

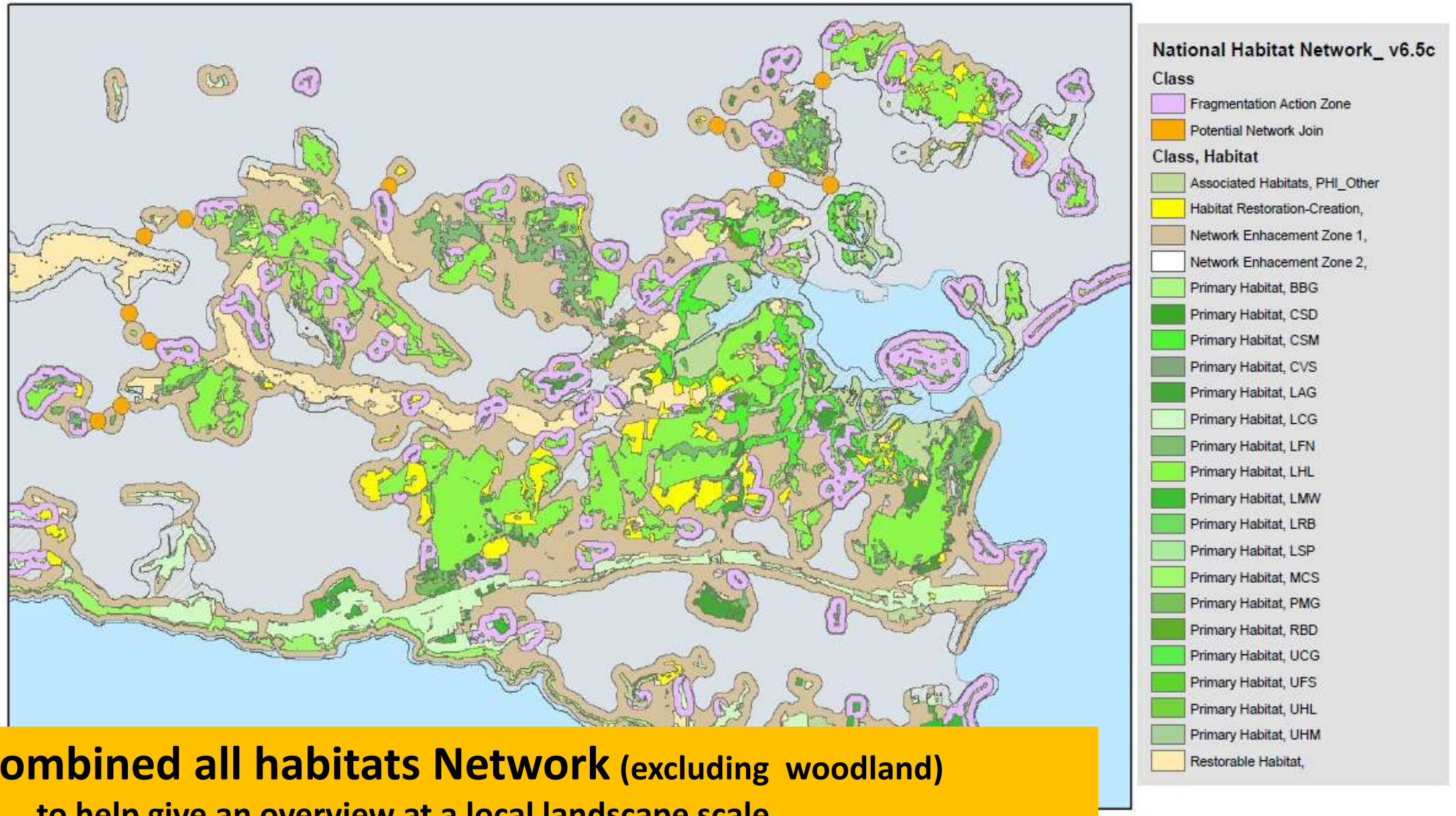
Additional habitat information consisting of;
Habitat creation/restoration – Step 3 - Data on sites where relevant habitat creation or restoration is underway.
Restorable habitat – Step 4 – areas considered to have potential for restoration e.g. PHI as non-priority habitat that may have potential to be restored to the primary habitat, are extracted from the PHI. Other data sets may also be used



Habitat Networks - Key Components



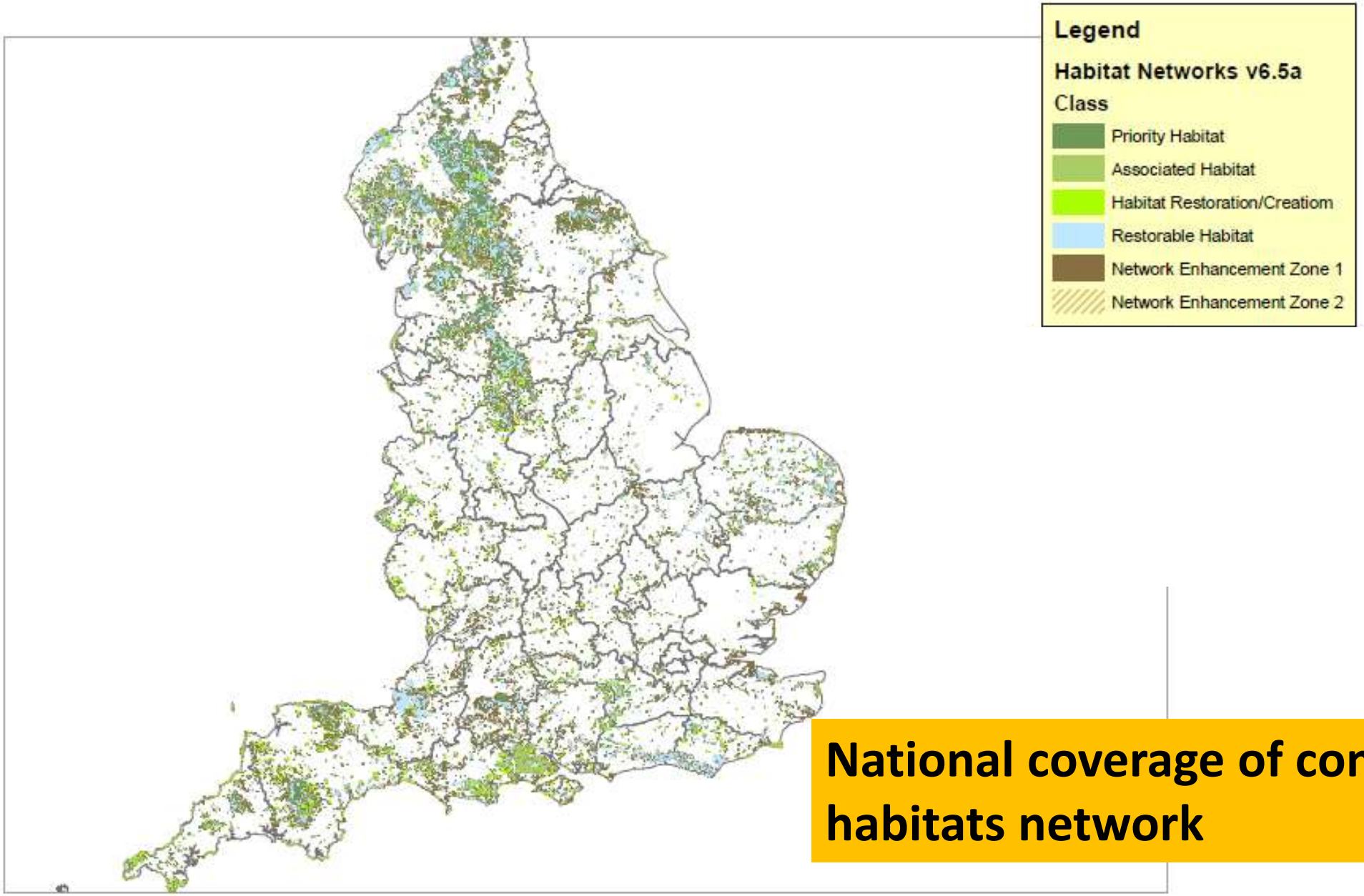

LCG Priority Restoration
Class
Fragmentation Action Zone 1
Fragmentation Action Zone 2
Potential Network Joins
No Main Habitat/Restorable
AES Options
Habitat
HabGroup
Network
Network Outside Potential
Priorities for Restoration
– Step 6 - identifies priorities for restoration to address fragmentation,
• smaller fragmented areas of habitat that have the potential to be enlarged or joined with other habitat patches
• Network Links – potential locations for action to link network segments
Other Actions within the Network Enhancement Zone
• Restore degraded habitat
• Increase habitat extent and permeability



Combined all habitats Network (excluding woodland)

- to help give an overview at a local landscape scale

Habitat Networks

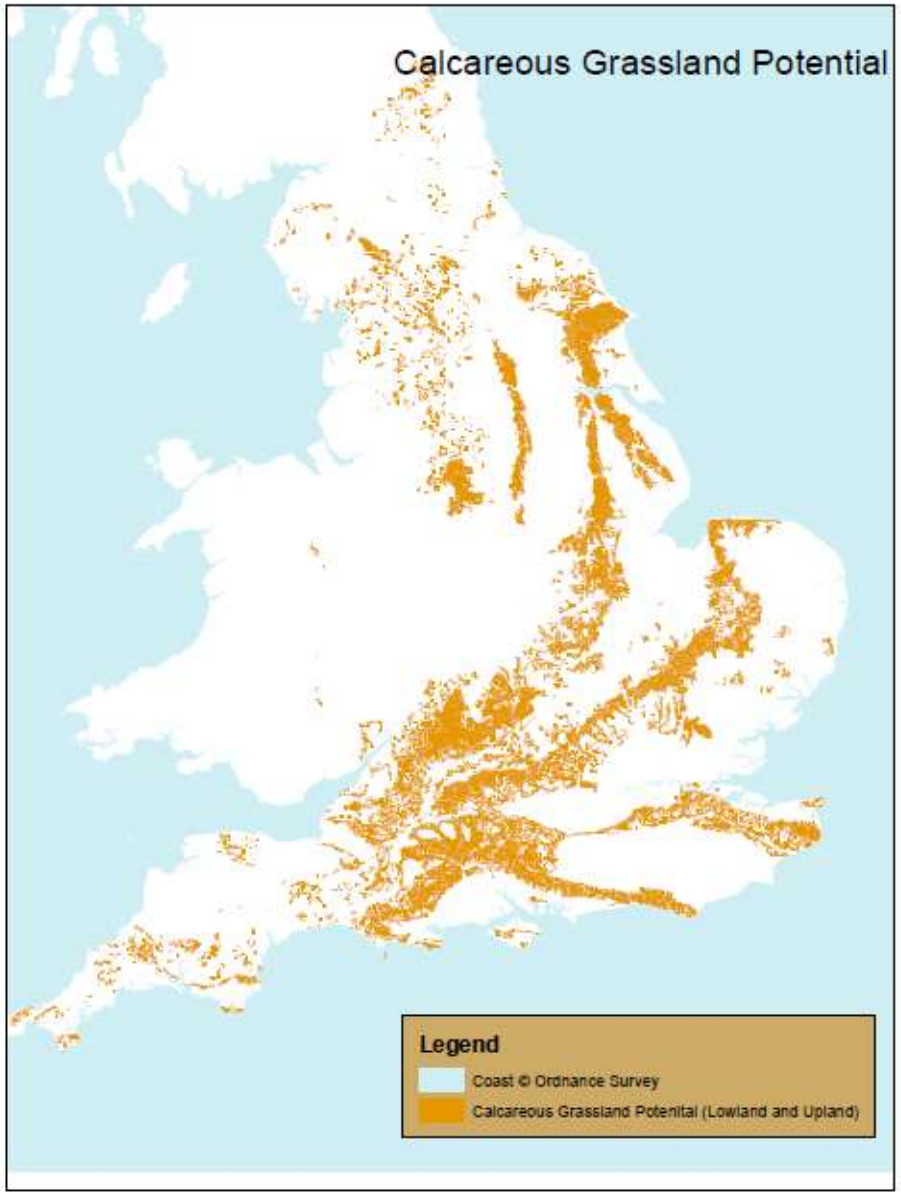


National coverage of combined all habitats network

Habitat Potential Maps

Habitat Potential Maps…..

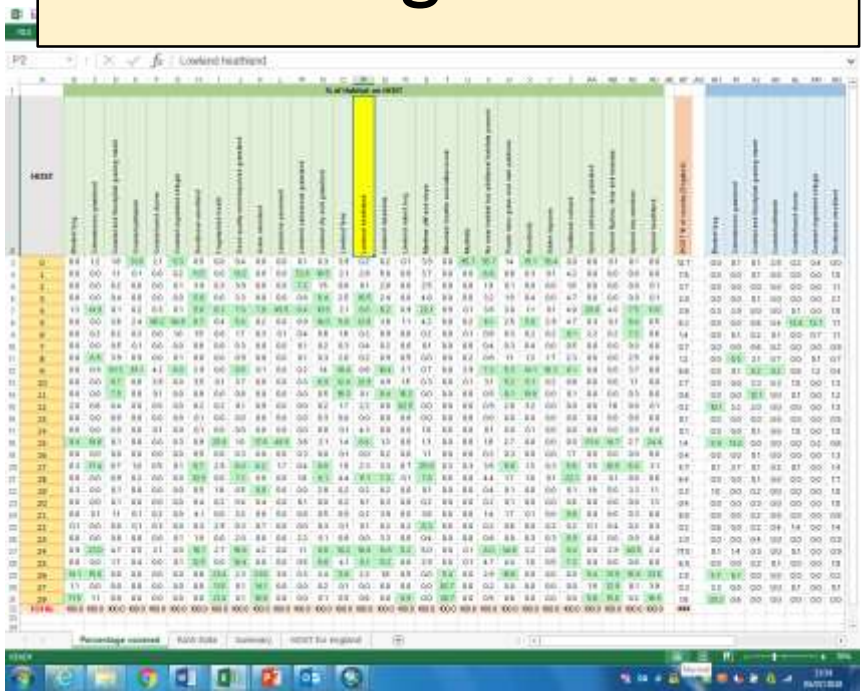
- Indicate where appropriate conditions exist to support habitat creation and/or restoration
- Usually the extent far exceeds current habitat, possibly representing what was previously lost or degraded?
- Help to understand the maximum potential area of habitat restoration
- May highlight where habitat restoration priorities may be targeted even though little of the habitat still exists
- May help target ecosystem restoration in the key locations
- Provides a link to ecosystem services/Natural Capital and identify opportunities to deliver wider societal benefits



Using HOST

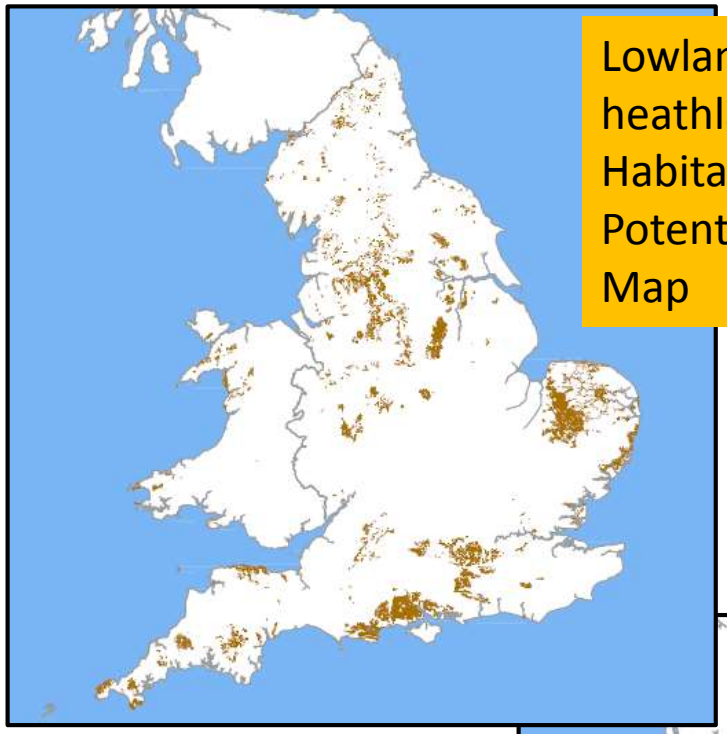
Dry soils

Wet soils

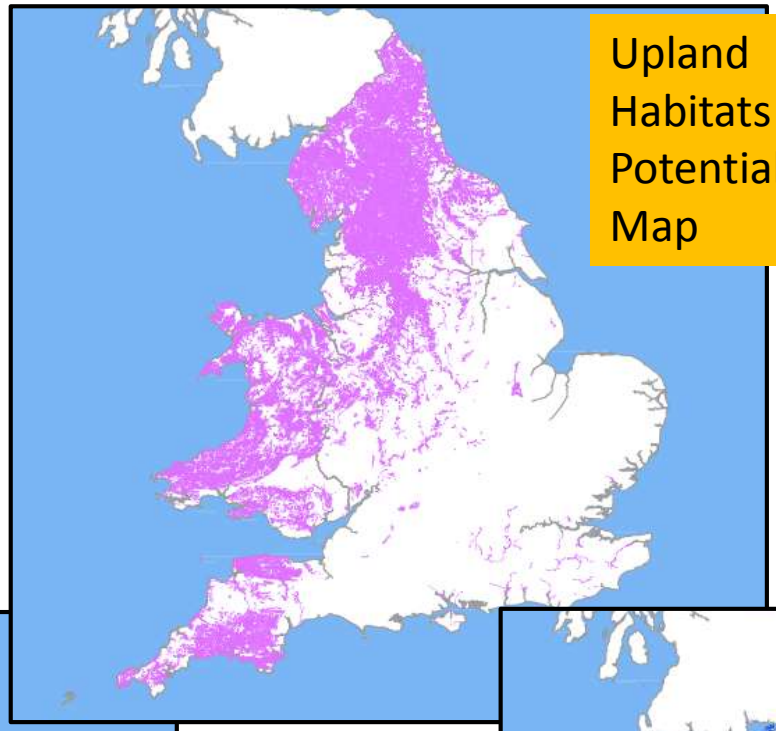


Using Soil Association

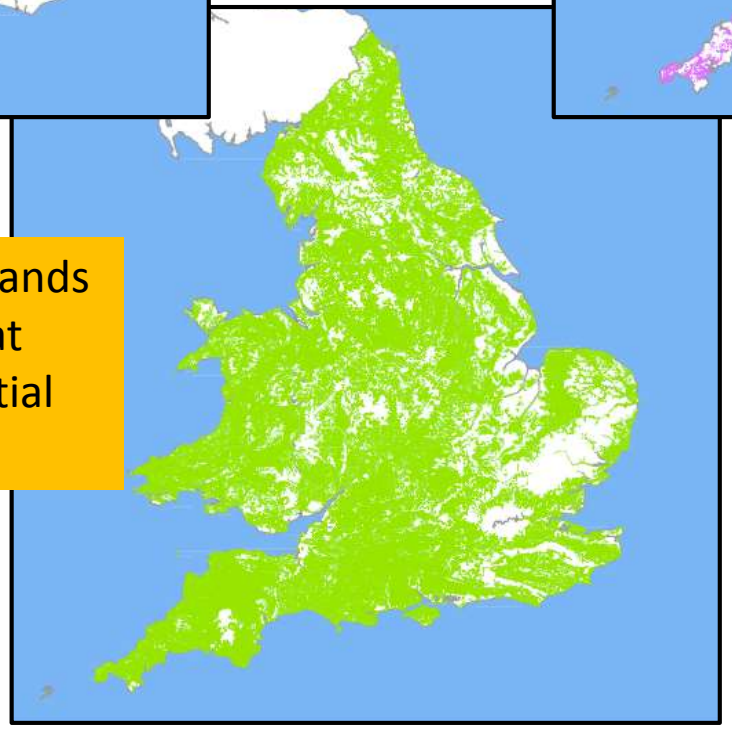
- Priority Habitat Inventory's analysed against soil associations
- Topography used to help determine flat areas (for fens & reedbeds) or steepness for Maritime Cliff.
- Location was also used for Coastal habitats. (also up/ lowland possibly)
- HOST data on soil wetness class
- Other data may be used such as Wetland Vison



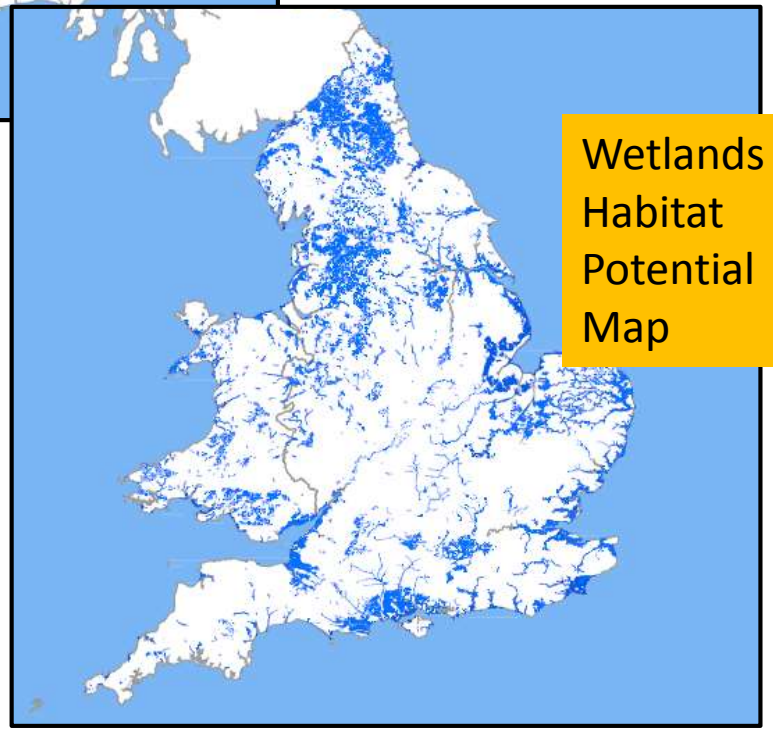
Lowland heathland Habitat Potential Map



Upland Habitats Potential Map



Grasslands Habitat Potential Map



Wetlands Habitat Potential Map

Questions?