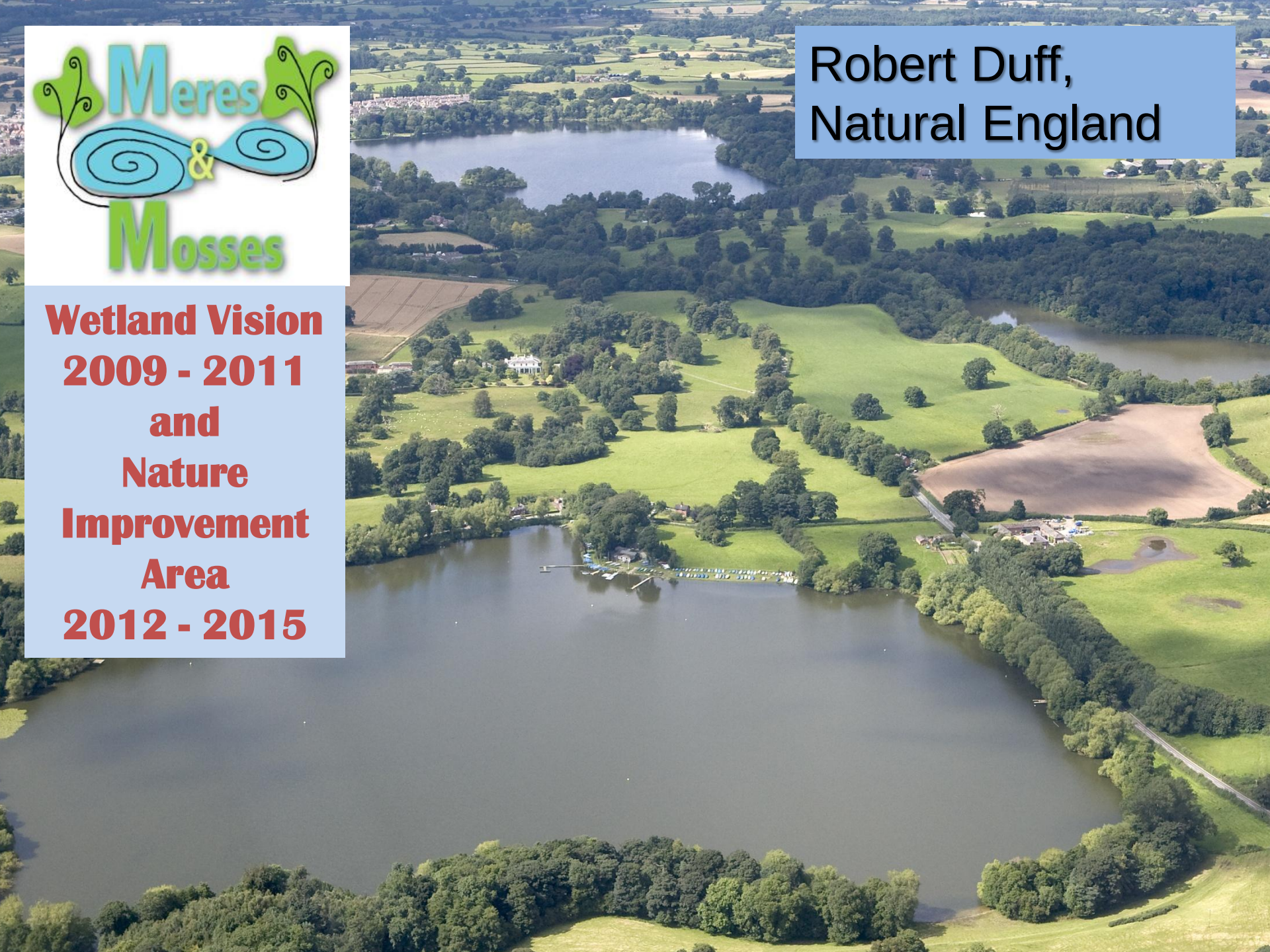


Meres & Mosses

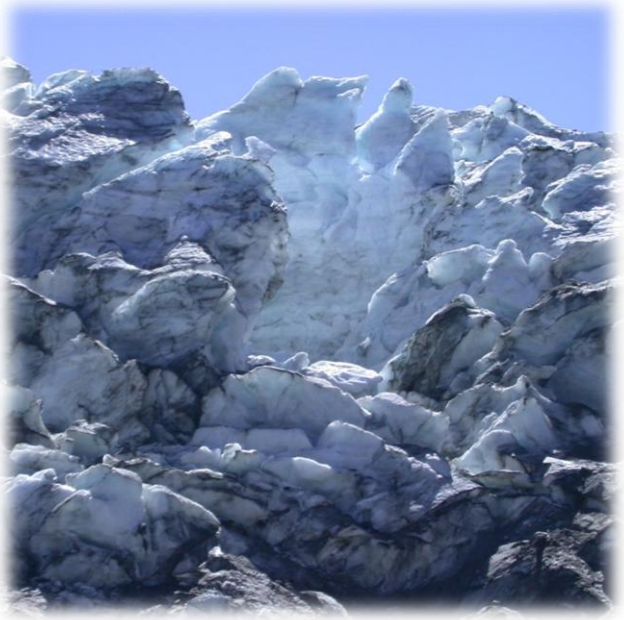
Wetland Vision 2009 - 2011 and Nature Improvement Area 2012 - 2015

Robert Duff,
Natural England


Mosses Revival
Natural England
Gowy &
Mersey
Washlands
Cheshire WT
Staffordshire Meres
& Mosses Project
Staffordshire WT
Lapwing
Meadows
RSPB
Mersey Estuary
Runcorn
Ellesmere Port
NNR
The Mere, Mere
Lindow Moss
Tatton Mere
Wilmslow
Knutsford
Tabley Mere
Hatch
Mere
Flaxmere Moss
Northwich
Delamere
Meres &
Mosses
Abbots Moss
Oak Mere
Winsford
Middlewich
Gleads M
Cocks Moss
Bagmere
River Dane
Congleton
Sandbach
Brookhouse
Moss
River Weaver
Crewe
Oakhanger
Moss
Nantwich
Betley
Mere
Black Firs & Cranberry Bog
Wrexham
Cholmondeley
Meres
Wybunbury
Moss NNR
Craddocks
Moss
Stoke &
Newcastle-
under-Lyme
Quoisley Meres
Oss Mere
Comber Mere
Cholton Moss
Whitchurch
Maer Pool
Brown Moss
Fenn's, Whixall & Bettisfield Mosses NNR
Clarepool Moss
Ellesmere
The Mere
Wem Moss NNR
White Mere
Cole Mere
Market
Drayton
Cop Mere
Sweat &
Crose
Meres
Brownheath
Moss
Oswestry
Wem
River Roden
River Tern
Doxey Marshes
Loynton
Moss
Baggy Moor
Top Moss
Aqualate Mere NNR
Stafford
Fenemere
Weald Moor
Newport
Doley
Common
Telford
River Severn
Shrewsbury
Bomere, Shomere
& Betton Pools
Berrington Pool
Meres and standing waters
Areas of prime importance / potential
Rivers
Wolverhampton & Walsall

Features

- The most important natural lake cluster in lowland England
- Diverse wetlands - 32 individual wetlands make the Meres & Mosses Ramsar Site + 5 SACs
- Floating bogs
- A third of basin (poor) fen SSSIs
- Highest concentration of ponds in Europe
- 13,000 ha dispersed, fragmented, privately owned peatland resource set in intensively farmed lowland landscape



What are the problems?

- 90% of wetlands drained since 1600
- Decline in biodiversity. 24 plants species extinct since 1841 – almost 1 per decade
- Fragmentation, isolation & disconnect
- Management neglect
- Impact of intensive agriculture, afforestation & diffuse pollution
- Lack of public awareness and concern
- Effort focused on protected sites 1992 - 2008

ENGLISH HERITAGE

Environment Agency

NATURAL ENGLAND

RSPB

THE wildlife TRUSTS

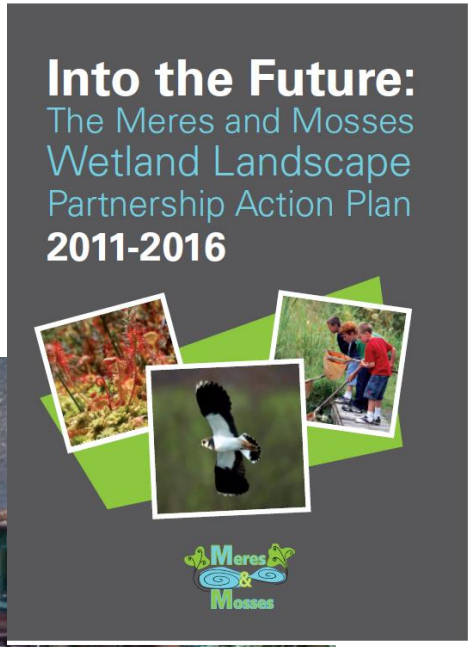
A 50-YEAR VISION FOR WETLANDS

England's Wetland Landscape: securing a future for nature, people and the historic environment

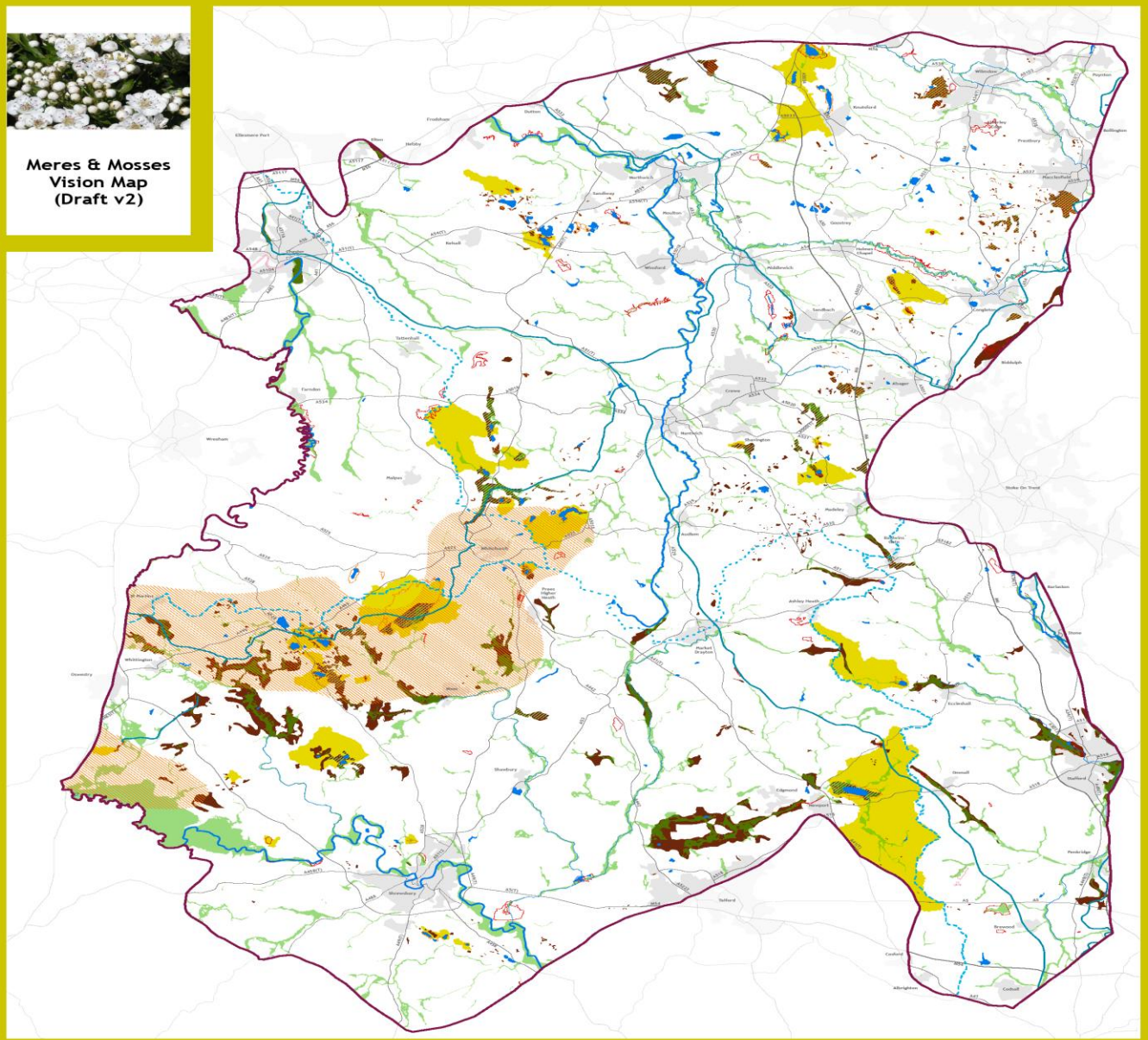
Meres and Mosses – a national priority wetland landscape

2009 – 2011 Natural England awarded grants of £400,000 for a Meres and Mosses Revival Partnership Project

Developed our partnership



Meres & Mosses Vision Map (Draft v2)



Key

Project Area
SSSI
Ramsar
SAC
Potential Basin Fen
High Priority Areas for LRBs
Potential Floodplain Habitat
Peat
Meres and Mosses Catchment
Major Rivers
Other Rivers
Canal
River Basin
Open Water
Built Up Area
Motorway
Primary Route
A Road

Scale - 1:90,000

0 2.5 5 10 Km

Map Produced by Matt Cotterill, Natural England Regional GI Unit, Wolverhampton.

v1, 15th October 2009, 555

NATURAL ENGLAND

Mosses Revival - *Aims*

1. **To assess the habitat restoration potential of relic 'mosses'** (outside of the existing SSSIs)

   How: By desk top GIS filtering exercise by PAA of 700 peat sites covering 13,0000 ha

2. **Assess/validate the restoration potential in the field**

   How: Undertake targeted 'rapid' assessment field visits to 70 (plus 30 'others') mosses (PAA & Colin Hayes)

3. **To secure the restoration of sites**

   How: Outline restoration plans prepared, landowner liaison, & entry to HLS, management

Headlines

- 100 peatlands examined covering 543 ha
- 47 sites small less than 3 ha
- Nearly all significantly degraded
- Restoration potential 50% ‘high’ (209ha) & 25% ‘low’(208 ha)
- *Sphagna* species present at 53% of sites

Occurrence Relic 'Moss' Species

Relic 'moss' indicator	Common name	Occurrence (out of 100 sites)
Sphagna species	bog-moss	53
Carex rostrata	bottle sedge	7
Carex curta	white sedge	6
Carex elongata	elongated sedge	1
Eriophorum angustifolia	common cottongrass	7
Eriophorum vaginatum	hare's tail cottongrass	9
Vaccinium oxycoccos	cranberry	8
Frangula alnus	alder buckthorn	5
Andromeda polifolia	bog rosemary	1
Osmunda regalis	royal fern	4
Erica tetralix	cross leaved heather	7
Myrica gale	bog myrttle	2
Hottonia palustris	water-violet	3
Drosera rotundifolia	round-leaved sundew	1
Cicuta virosa	cowbane	1

Restoration of Pierson's Moss

Scrubbed up & drained

Scrub removal

Action initiated on 24 sites (99 ha) & planned at 11 more (70 ha)

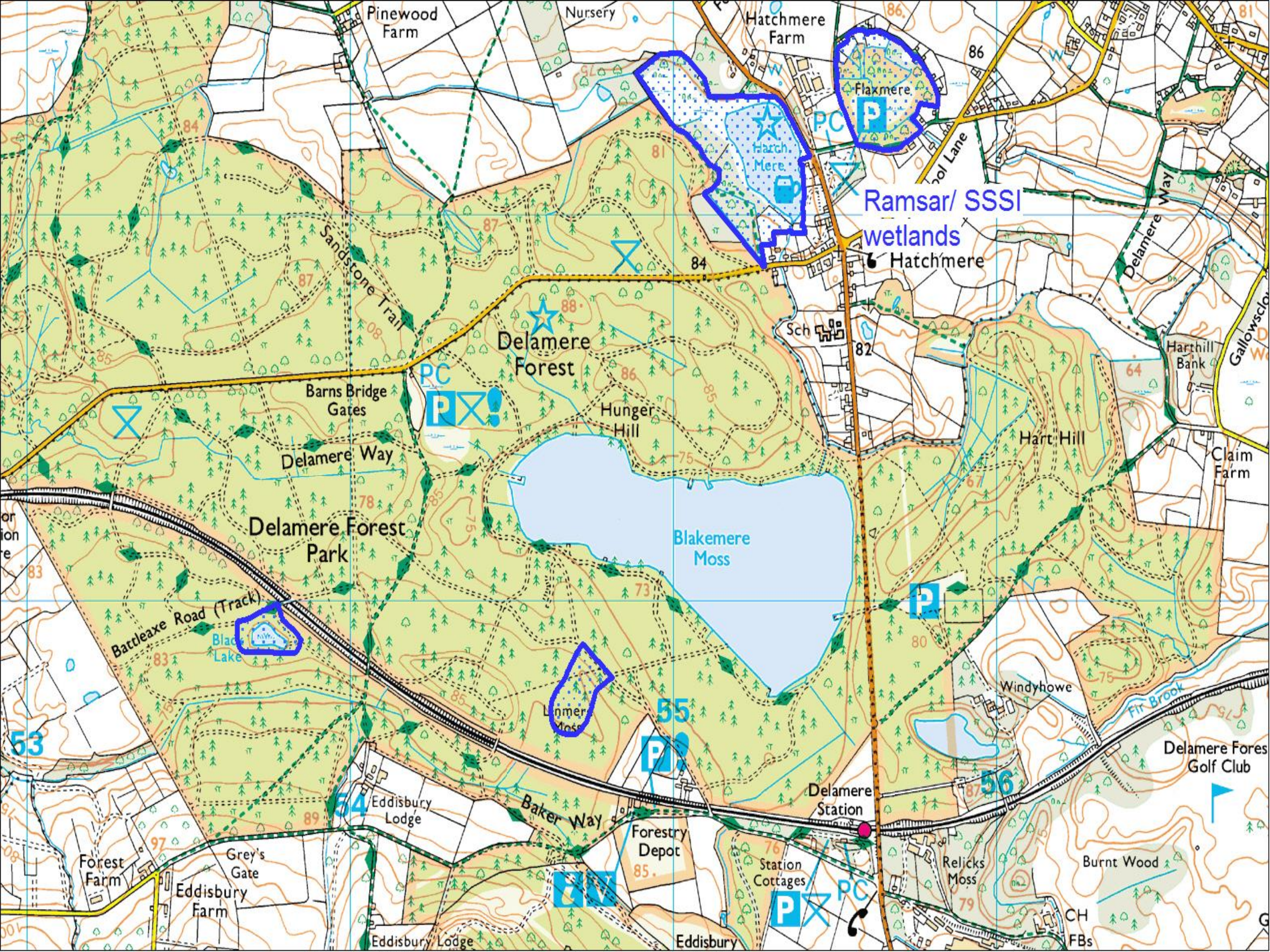
Clearance of scrub completed

Rewetting Feb 11 after ditch blocking

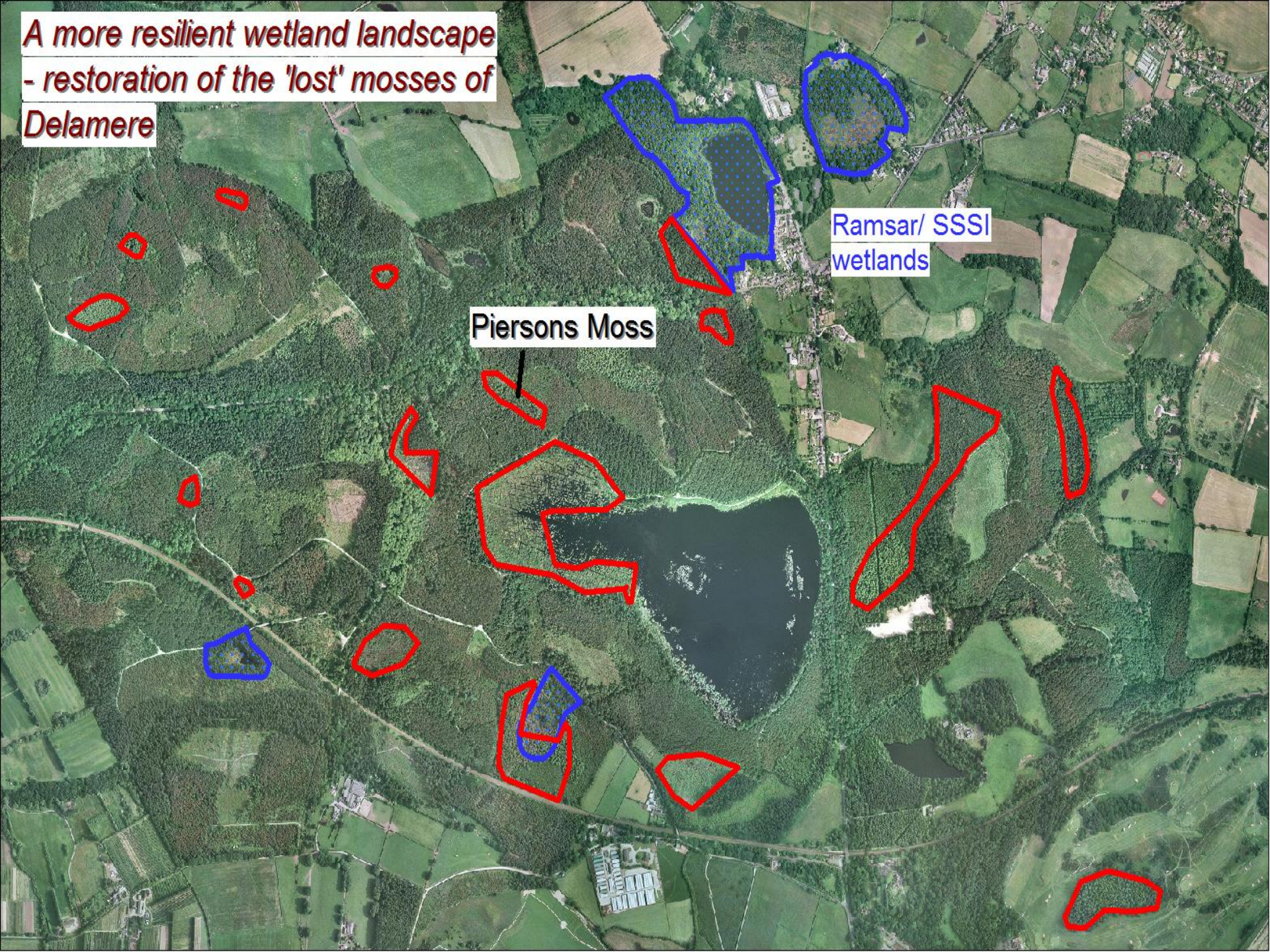
Project Case study

Delamere Forest, Cheshire

- 1000 ha FC estate
- Features 150 glacial peat filled basins
- Majority drained & afforested
- Joint FC/ NE MoA to restore 10 ‘lost’ mosses

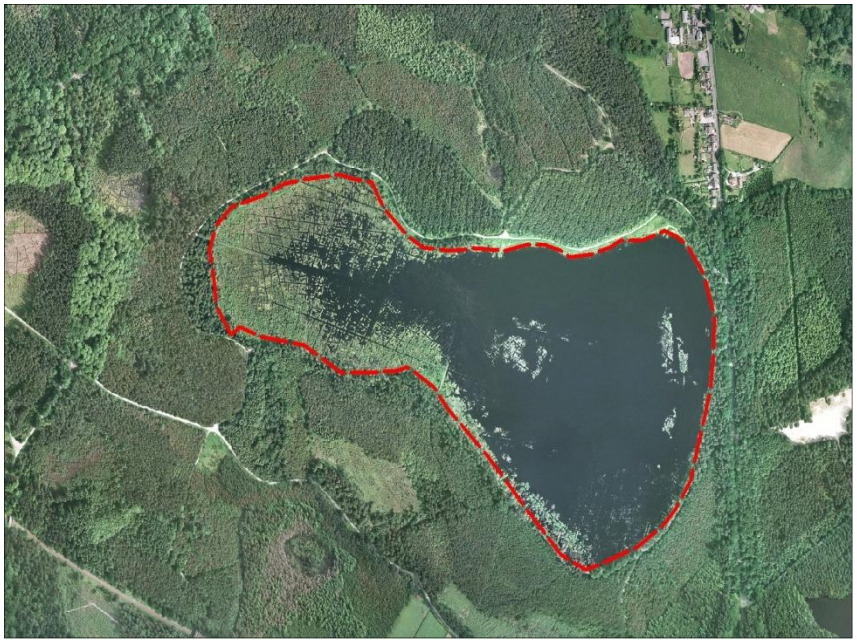


Ramsar/ SSSI
wetlands
Pinewood Farm
Nursery
Hatchmere Farm
Flaxmere
Hatch Mere
Hatchmere
Sandstone Trail
Delamere Forest
Barns Bridge Gates
Delamere Way
Hunger Hill
Delamere Forest Park
Blakemere Moss
Battleaxe Road (Track)
Black Lake
Linmere Moss
Hart Hill
Harthill Bank
Claim Farm
Windyhowe
Fir Brook
Delamere Forest Golf Club
Delamere Station
Relicks Moss
Burnt Wood
Station Cottages
Forestry Depot
Baker Way
Eddisbury Lodge
Eddisbury Farm
Grey's Gate
Forest Farm
Eddisbury


A more resilient wetland landscape - restoration of the 'lost' mosses of Delamere
Ramsar/ SSSI wetlands
Piersons Moss

Blakemere Moss – a 40 ha drained peatland since 1812 and under a dense conifer crop.

Since 1998 under restoration as a 40 ha wetland (open water, fen and mire habitat) – very popular with the 0.5 million visitors

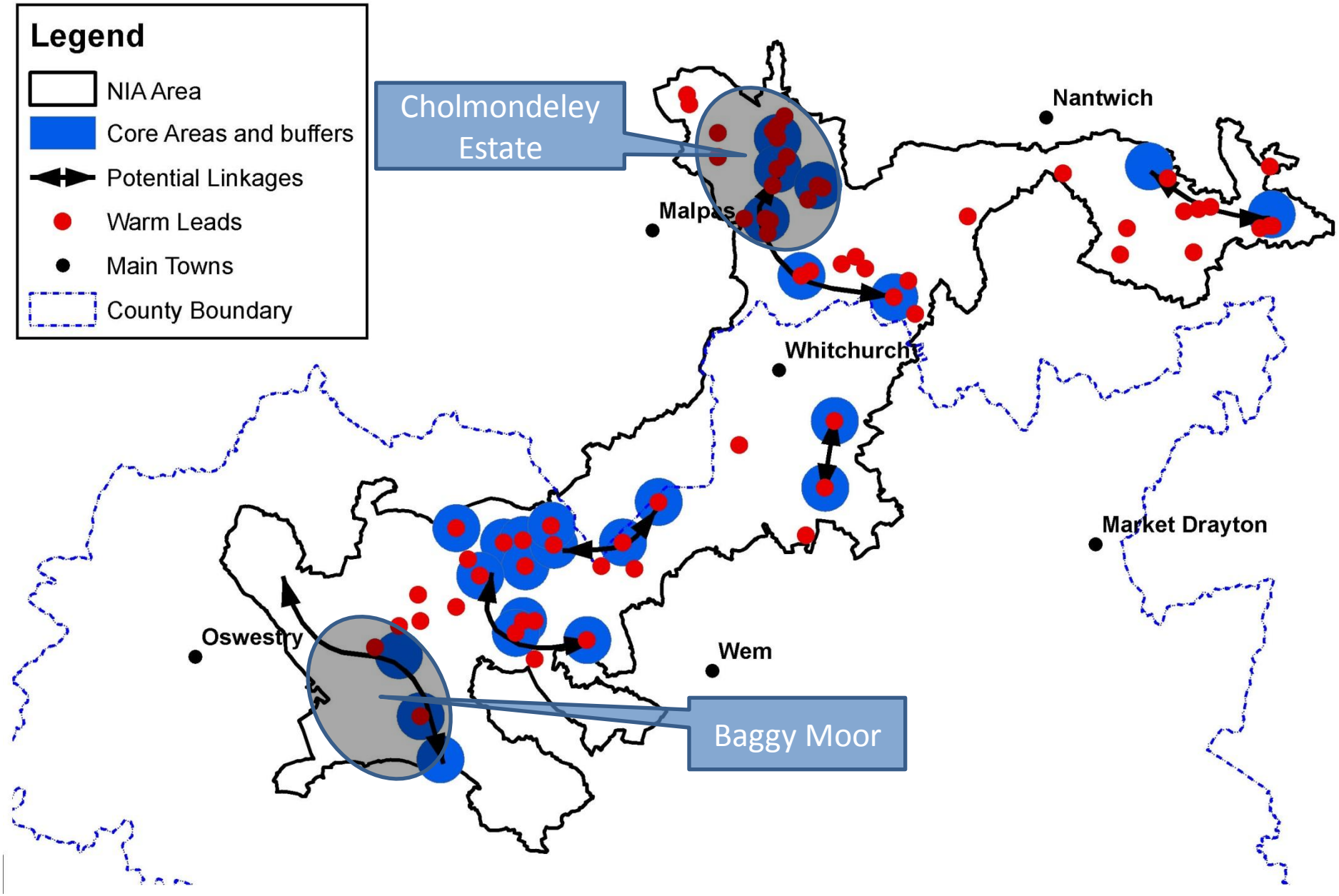


• A rare occurence - favourable conditions in the lowlands for poor fen eg adequate acidic low nutrient water supply from an unmodified perched catchment

• Mire –type community re-developing over 10 ha Sphagnum dominated with *Eriophorum angustifolium, Erica tetralix, Drosera rotundifolia*

The Meres & Mosses of the Marches NIA

- **Wildlife Trust, RSPB, NE, Council partnership project**
- **Government held a competition to select 12 landscape-scale projects to receive £600,000 over three years**
- **Multiple objective approach with biodiversity at its heart**
- **‘More, bigger, better, joined up sites’**


Legend
NIA Area
Core Areas and buffers
Potential Linkages
Warm Leads
Main Towns
County Boundary
Cholmondeley Estate
Nantwich
Malpas
Whitchurch
Market Drayton
Oswestry
Wem
Baggy Moor

Case study 1: Cholmondeley Estate

Restoring peat-based Local Wildlife Site

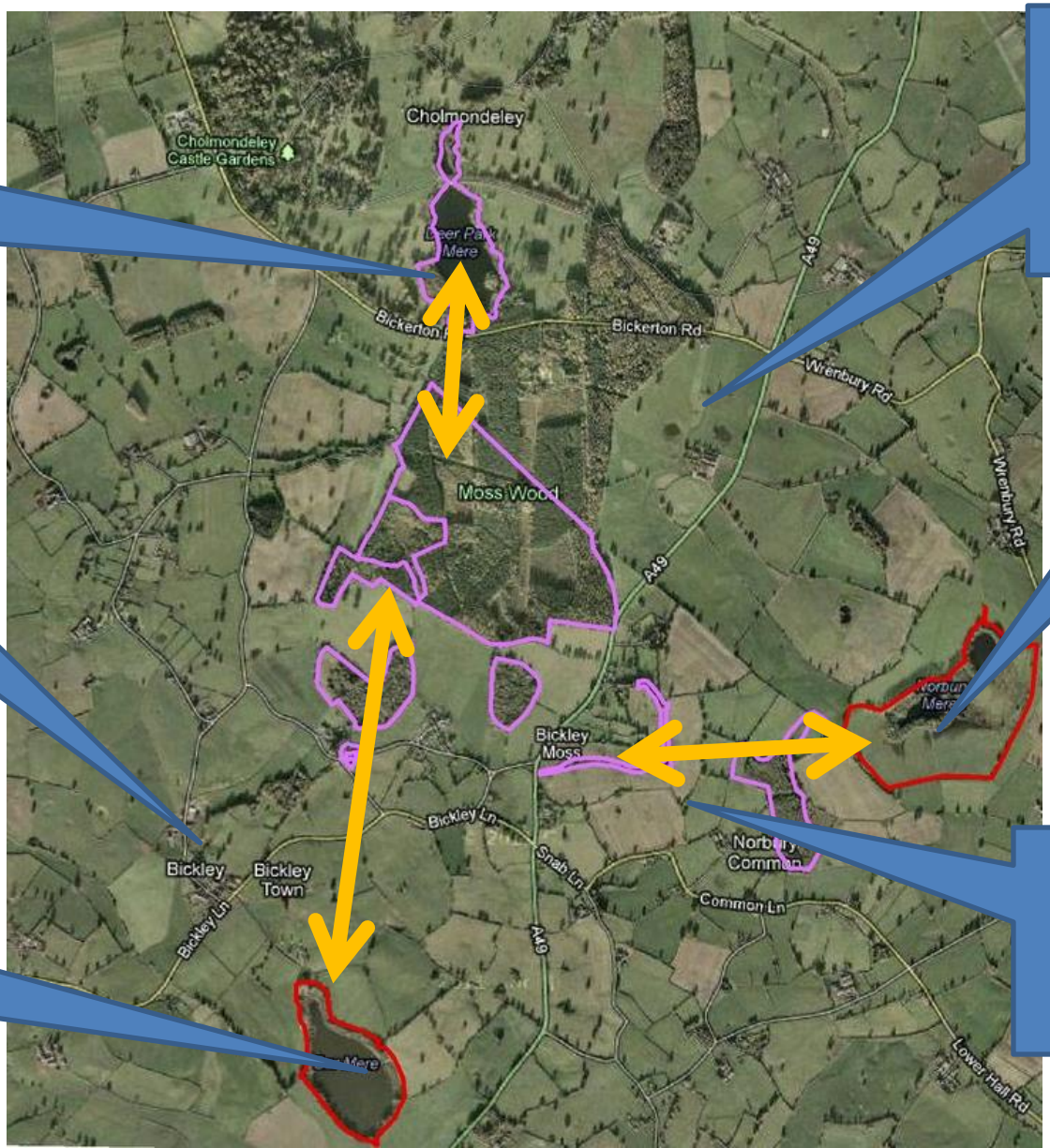
27 tenant farms, 324 ponds, stepping stones project

Cheshire WT HQ for public events

Norbury Mere SSSI tree management

Buffering of Bar Mere SSSI

Improve nutrient management



Action	BAP Habitat	Species	Site example	Area
Wet grassland restoration	Floodplain grazing marsh	Snipe Lapwing	Baggy Moor	400 ha
Riparian improvements	River	Water vole Fish populations	River Perry River Roden	4 km
3 SSSIs/ Ramsar sites in active management	Lowland raised bog Lowland fen Quaking bog (schwingmoor) Eutrophic water bodies Mesotrophic lakes Wet woodland	Floating water plantain Least water lily White-faced darter	Brown Moss Cole Mere	111 ha
12 Local wildlife sites in positive management		Desmoulin's whorl snail Lesser silver water beetle Six-stamened waterwort	Deer Park Mere Boreatton Moss Brets Mere	133 ha
Improve 15 undesignated peatlands		Cranberry Sphagnum Cowbane	White Moss Blake Mere	60 ha
Wider/integrated HLS delivery	Various	Farmland birds	Perry and Roden Catchments	900 ha

Adding value

- **Step up our delivery of 50 year vision**
- **NIA unlocks £1m+ secured funding**
- **NIA puts ecological connectivity at the heart of a programme of activity**
- **Holistic approach to catchment restoration**
- **Direct and make better use of academic research**
- **Test-bed for innovation and learning**
- **More HLS delivering better quality and outcomes**