

# Catchment Management Challenges

John Gorst

Catchment Partnership Officer

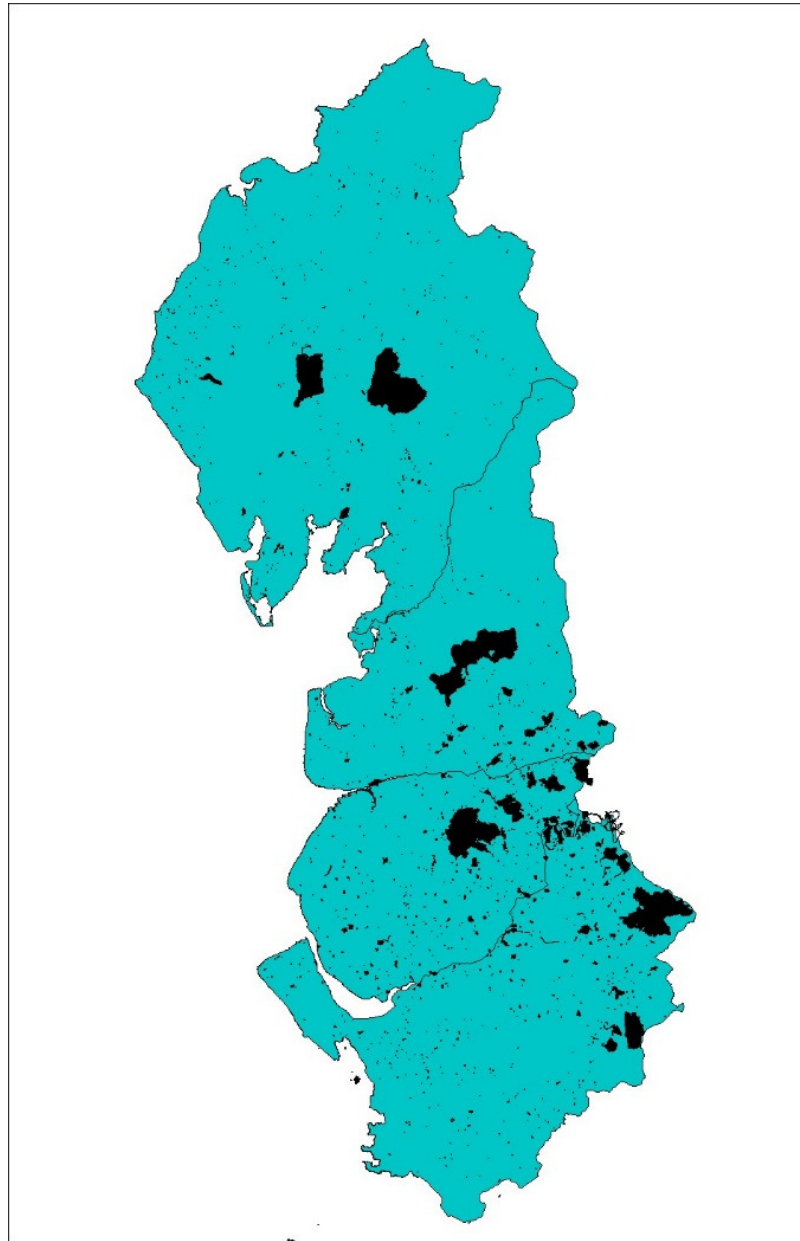
United Utilities

# UU Land Ownership

57,000 Ha across the North West

Majority of land ownership in upland and mountainous areas with C. 35,000 Ha of peat soils

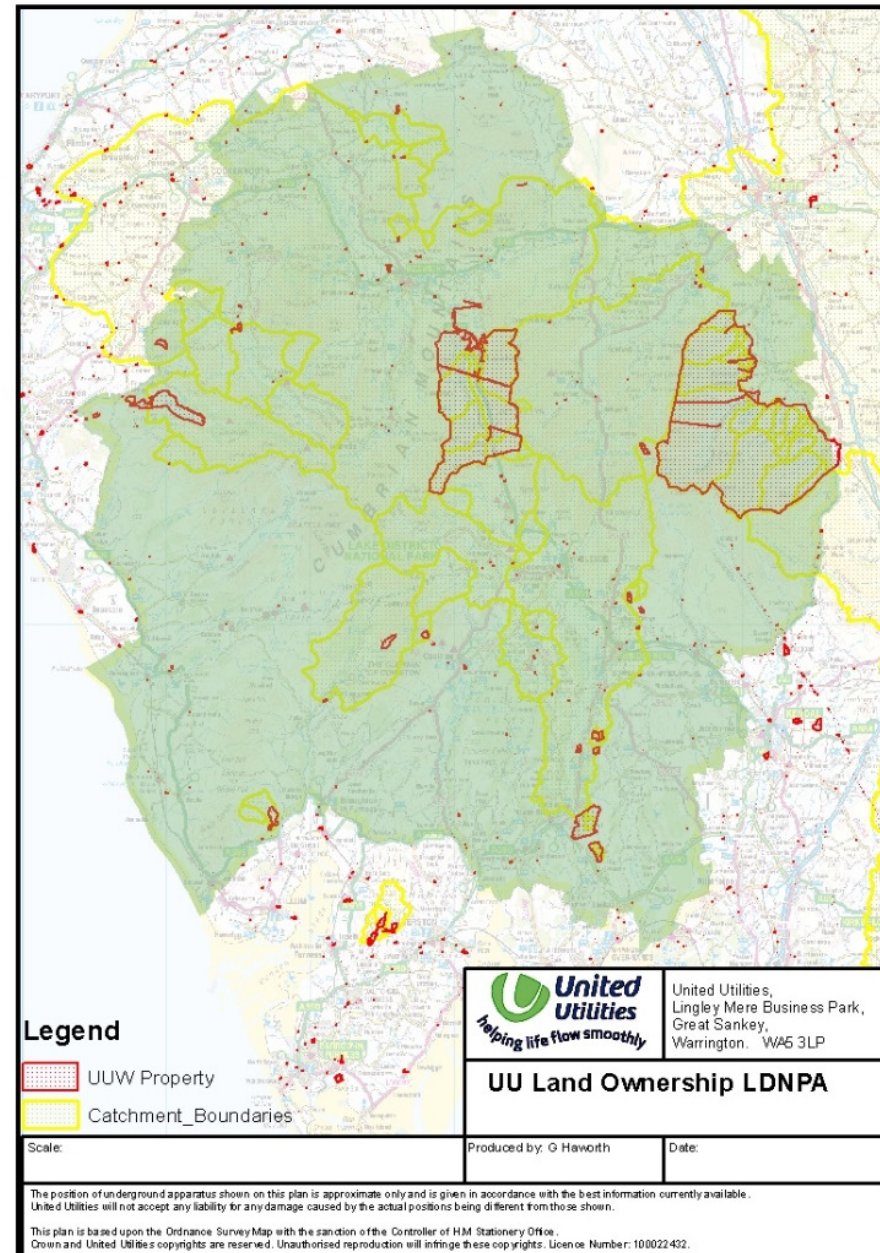
Over 180 reservoirs



# UU Land in Cumbria

16,000 Ha of land in Lake District National Park, about 8% of the National Park

Large area of the National Park is none owned catchment-approximately 36%



# Reservoirs in Cumbria

Thirlmere  
250 MI per day





# Reservoirs in Cumbria

Haweswater  
400 MI per day



# Reservoirs in Cumbria

Ennerdale

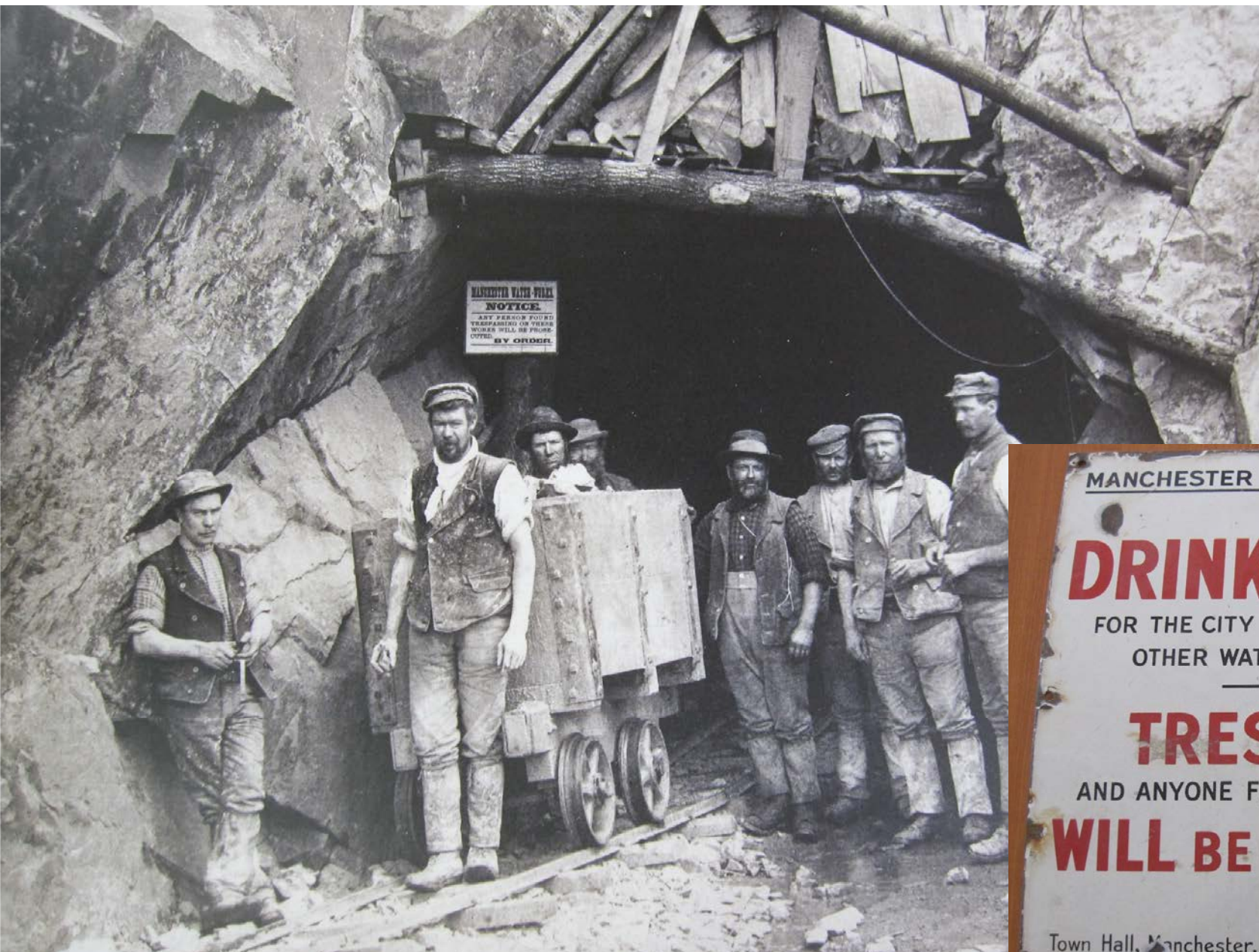
24 MI per day



# Water network







MANCHESTER CORPORATION WATERWORKS.

THIS IS

**DRINKING WATER**

FOR THE CITY OF MANCHESTER AND MANY  
OTHER WATER SUPPLY AUTHORITIES.

**TRESPASSERS**

AND ANYONE FOUND POLLUTING THE WATER

**WILL BE PROSECUTED**

Town Hall, Manchester.

PHILIP B. DING  
TOWN CLERK.



# Catchment Management-what we do and where we do it.

- Sustainable Catchment Management Programme- SCaMP

Blanket bog restoration





# SCaMP

Tree and Scrub planting





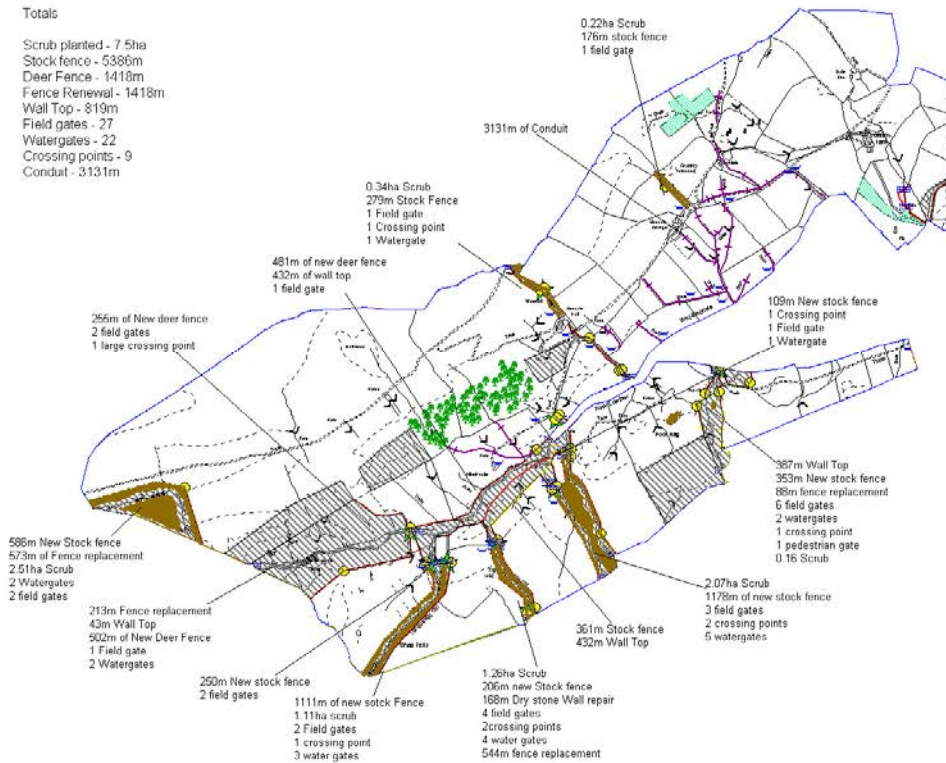
# SCaMP



## Thorney Bank and Green Farm Management Plan Map 8: Capital Works

### Totals

Scrub planted - 7.5ha  
Stock fence - 5386m  
Deer Fence - 1418m  
Fence Renewal - 1418m  
Wall Top - 819m  
Field gates - 27  
Watergates - 22  
Crossing points - 9  
Conduit - 3131m



COPYRIGHT ACKNOWLEDGEMENT: THIS PLAN IS BASED UPON THE ORDNANCE SURVEY MAP BY UNITED UTILITIES PLC WITH THE SANCTION OF THE CONTROLLER OF H.M. STATIONERY OFFICE. CROWN COPYRIGHT RESERVED. UNAUTHORISED REPRODUCTION INFRINGES COPYRIGHT.

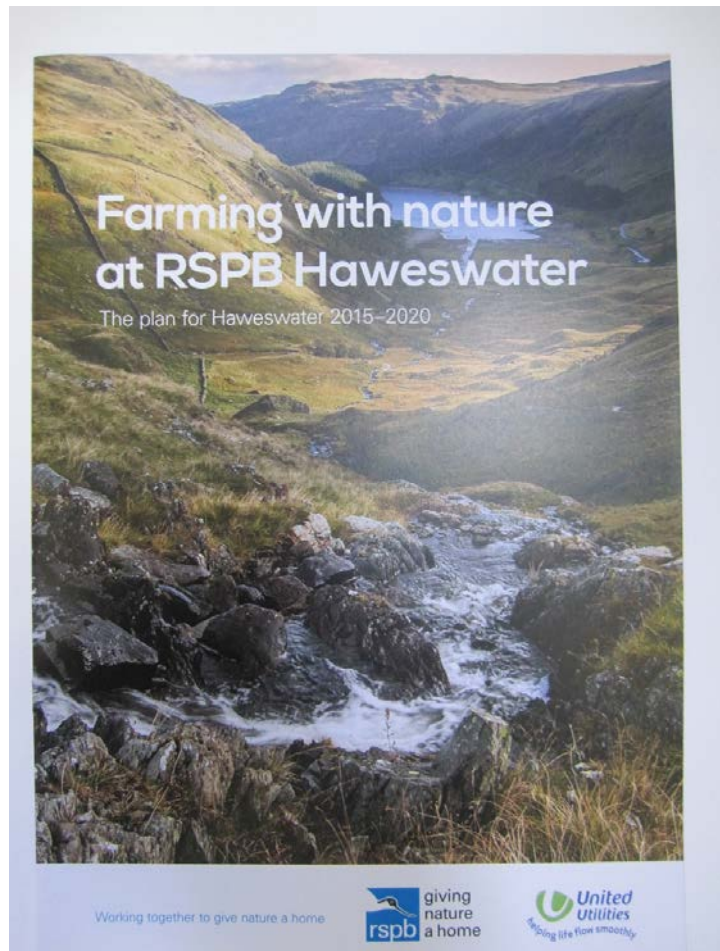


# Forestry Management





# Land Management partnerships



United Utilities and the RSPB have entered into a 45 year land management partnership on the Haweswater estate.

The management agreement covers approximately 30% of the estate area and comprises of 2 farms, valley bottom land and high fell Common land.

















# Wild Ennerdale

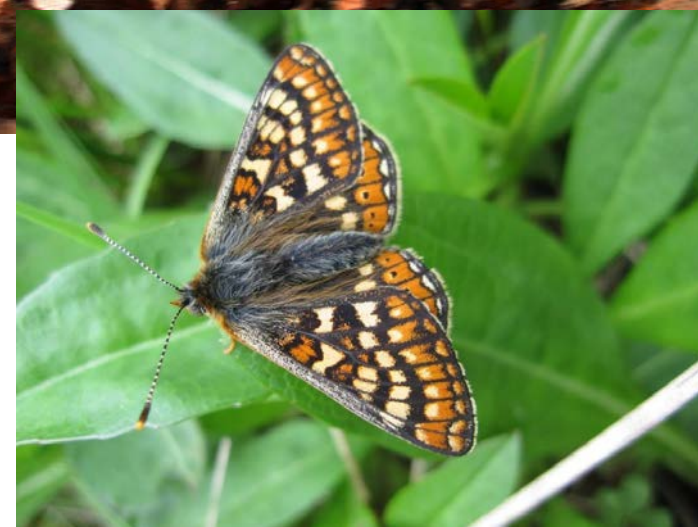
Partnership between United Utilities, Forestry Commission, National Trust and Natural England





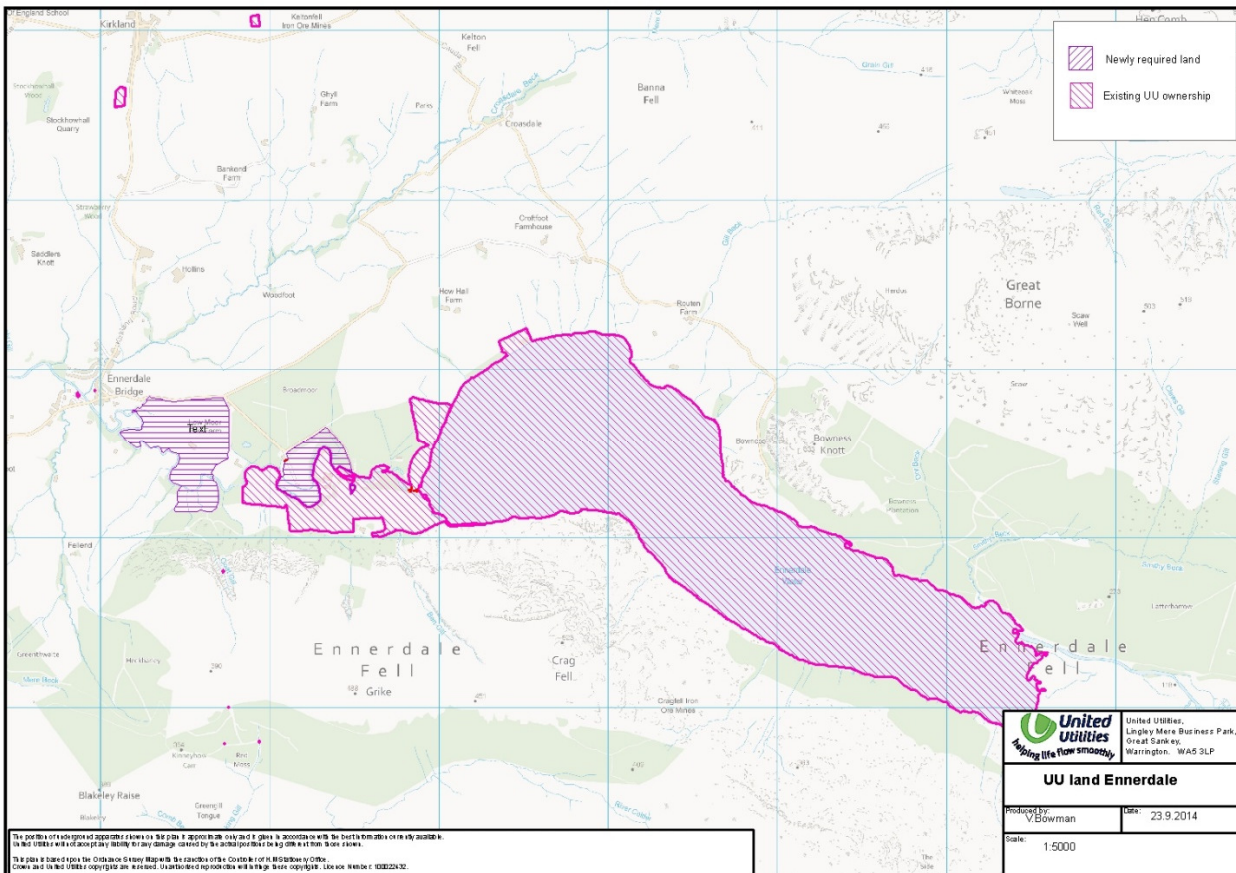








# Compensatory Measures



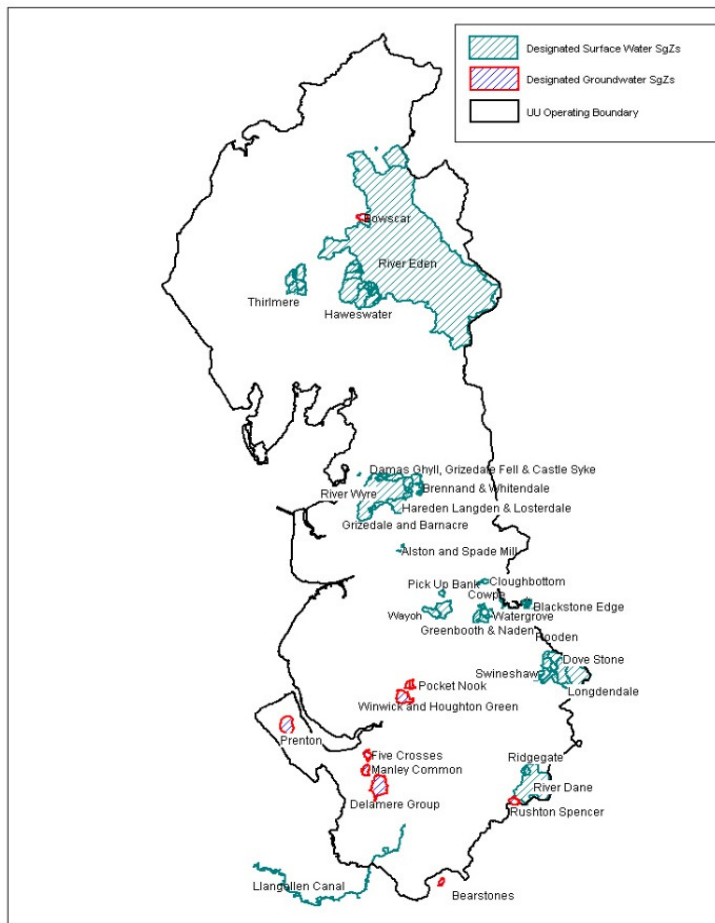
The Compensatory Measures project aims to ensure a viable, healthy and functioning Fresh Water Mussel population in the Ehen.

The project consists of a wide range of catchment improvements and a large programme of research measures to improve our understanding of this rare and threatened species.





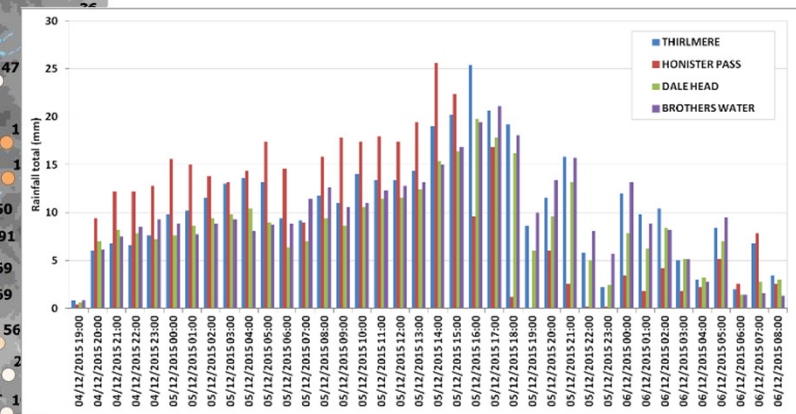
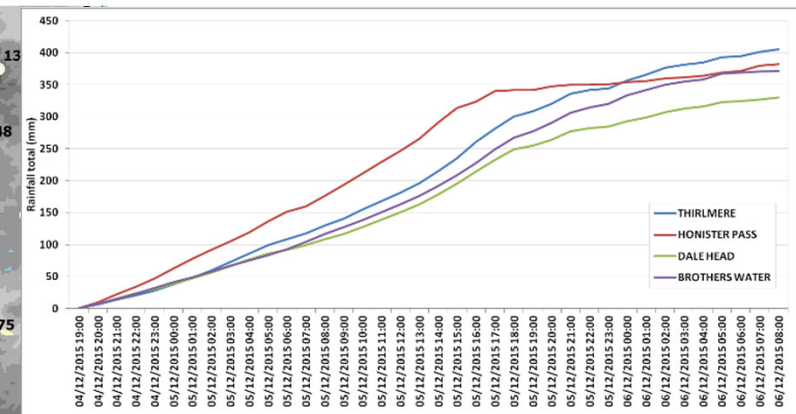
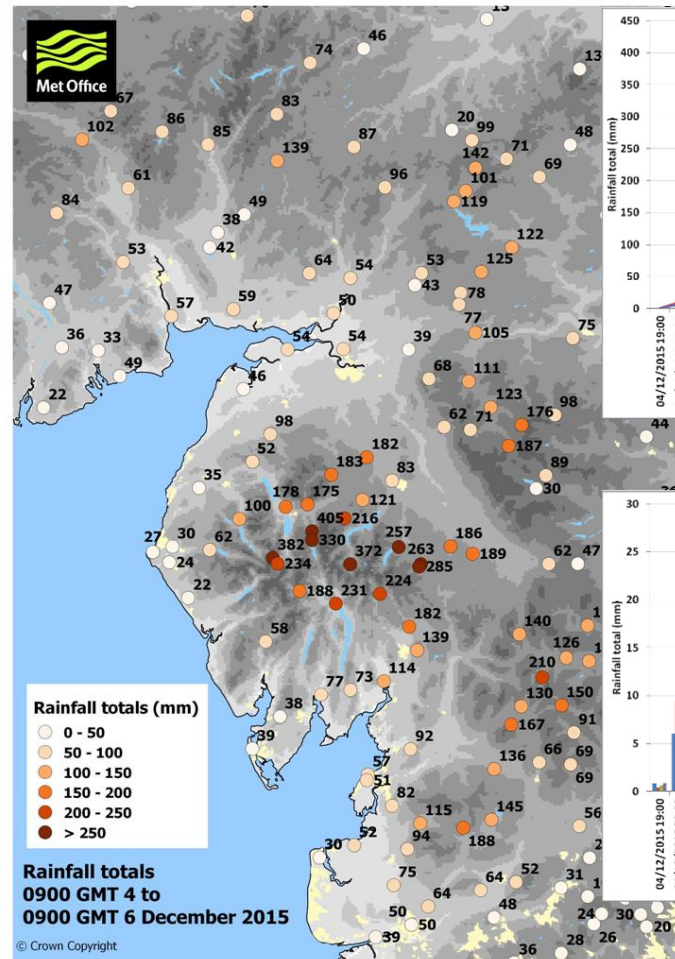
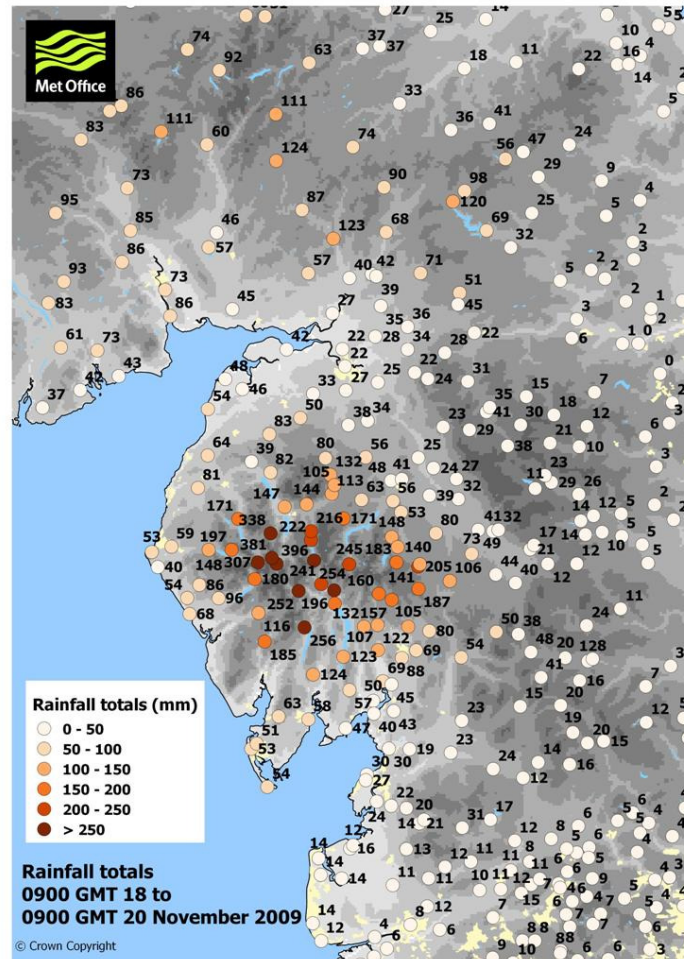
# WFD Safeguard Zones



Safeguard Zones (SgZ) are areas within a drinking water catchment where deterioration in raw water quality has been identified.

Under Article 7.1 of the Water Framework Directive all abstractions where water is intended for human consumption are designated as Drinking Water Protected Areas, from this, if raw water quality is shown to be deteriorating due to anthropogenic causes, Article 7.3 allows member states to establish SgZ.

# Catchment resilience.... Or not























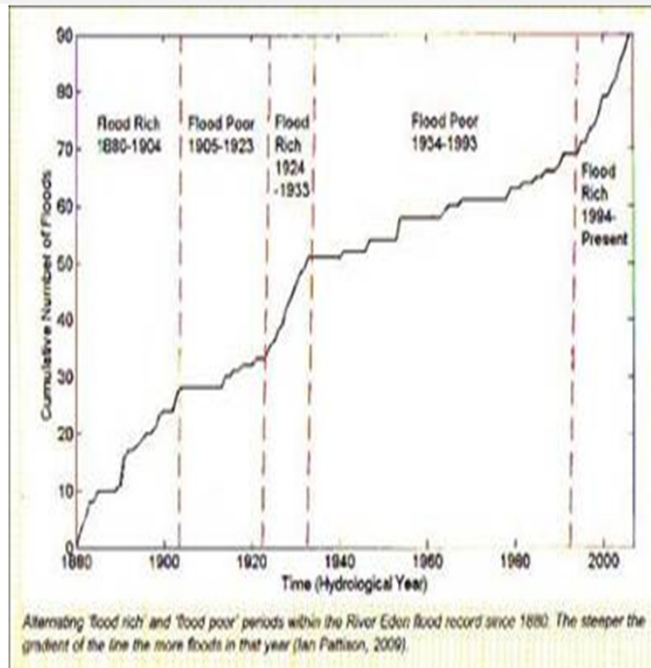








# ‘Flood rich’ means implications for both sediment *supply* and transport



Slide courtesy of Malcolm Newson



# Future flood resilience- what can be done?

Vegetation change

















## River management





## Reservoir level management





# Future catchment management challenges

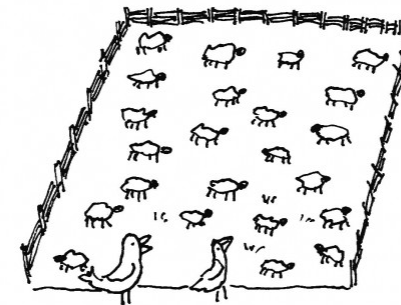
Brexit- What will future Agri-environment support look like?

Public perception- Post truth, fake news and lack of trust in expert opinion.

Climate change- will we act now to ensure we are in a more resilient position in the future?



"I REMEMBER WHEN THIS WAS ALL FIELDS"



"I REMEMBER WHEN THIS WAS ALL A WILDLIFE RICH, DYNAMIC ECOSYSTEM"

@CARTOONRALPH



Nomination dossier Volume 4

Adopted December 2015

# THE PARTNERSHIP'S PLAN

THE MANAGEMENT PLAN FOR  
THE ENGLISH LAKE DISTRICT  
2015–2020

A National Park and  
proposed World Heritage Site



Lake District  
National Park  
Partnership



# Questions

