



South  
Cumbria  
Rivers  
Trust

# The restoration of common reed on Windermere and Esthwaite's shores

## 'Linking Lakes' - UKILN Conference

21<sup>st</sup> April 2016

Dr Mike Sturt, Technical Officer, SCRT






South  
Cumbria  
Rivers  
Trust

# Project partners



# Who are we?

 Charitable organisation  
and limited company  
founded in 2006

 Eight employees

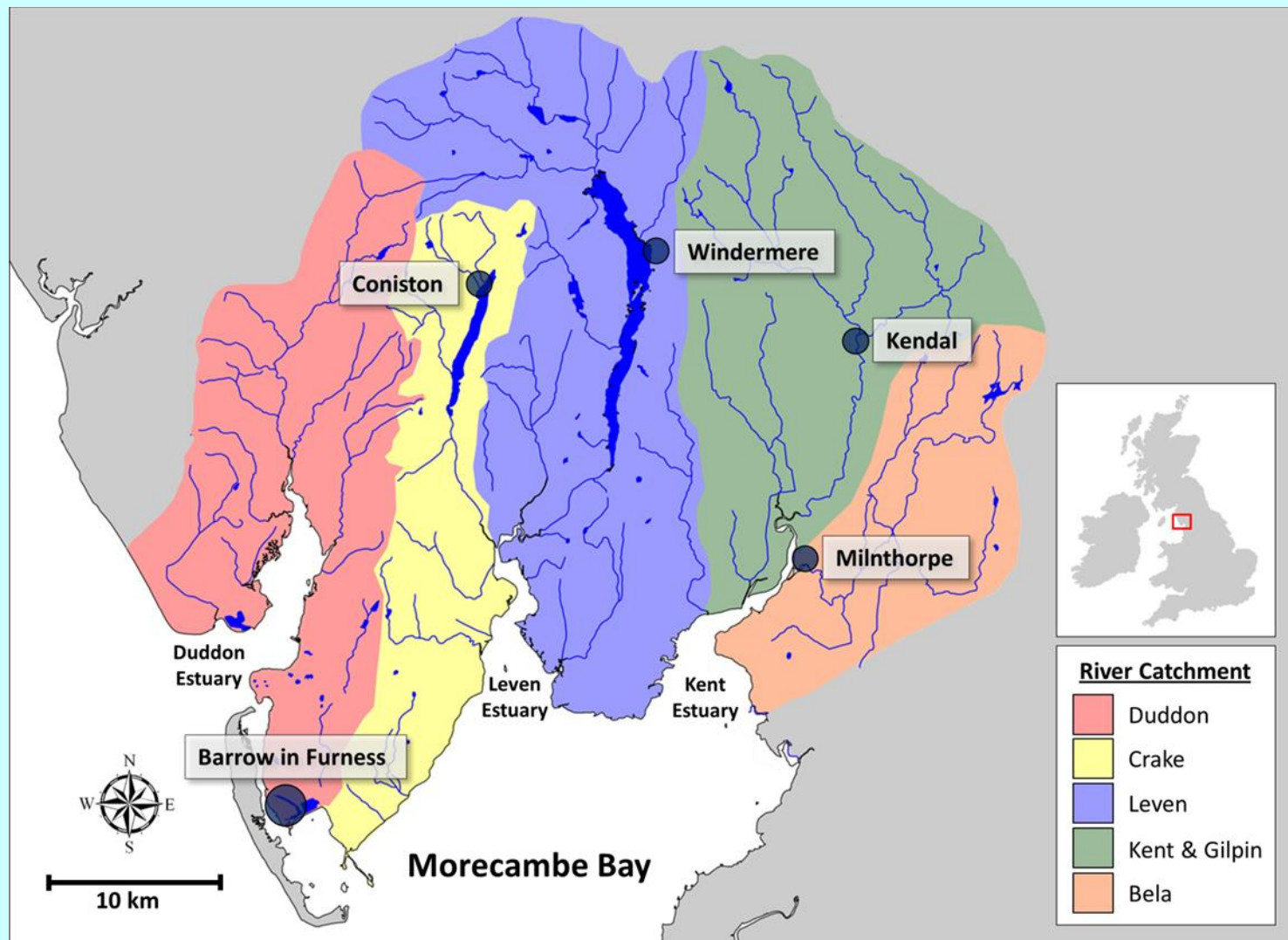
 Funded through  
environmental grants  
and donations



**'MONITOR, PROTECT AND CONSERVE  
WATERBODIES IN SOUTH CUMBRIA'**



# What area do we cover?





# Benefits of reedbeds

Important  
habitat for birds,  
invertebrates  
and fish



Rove Beetle



Reed Warbler



Zircon reed beetle



Reed leopard Moth



Nesting birds



Bittern



Juvenile fish



Eels / Elvers

Five British Red Data Book invertebrates are closely associated with reedbeds

# Benefits of reedbeds



Control of invasive plants



Prevent shoreline erosion



Intercept / sequester nutrients



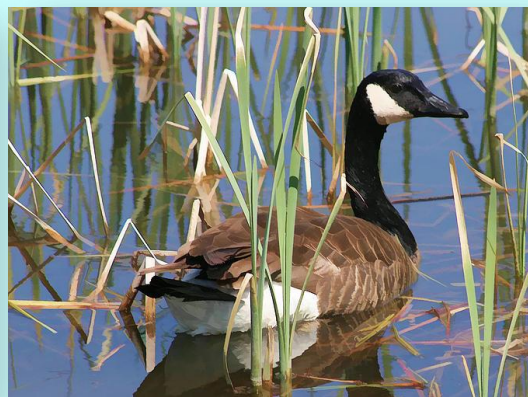
Reduce siltation of  
spawning gravels



# What is the problem?



Boat wave wash



Grazing geese



Livestock grazing



Trees shading the lake shore



Nutrient enrichment



Raised lake levels



# Phase 1

## Literature review

- Published and unpublished scientific articles
- Photographs from libraries and general public

## Boat survey using *d*GPS

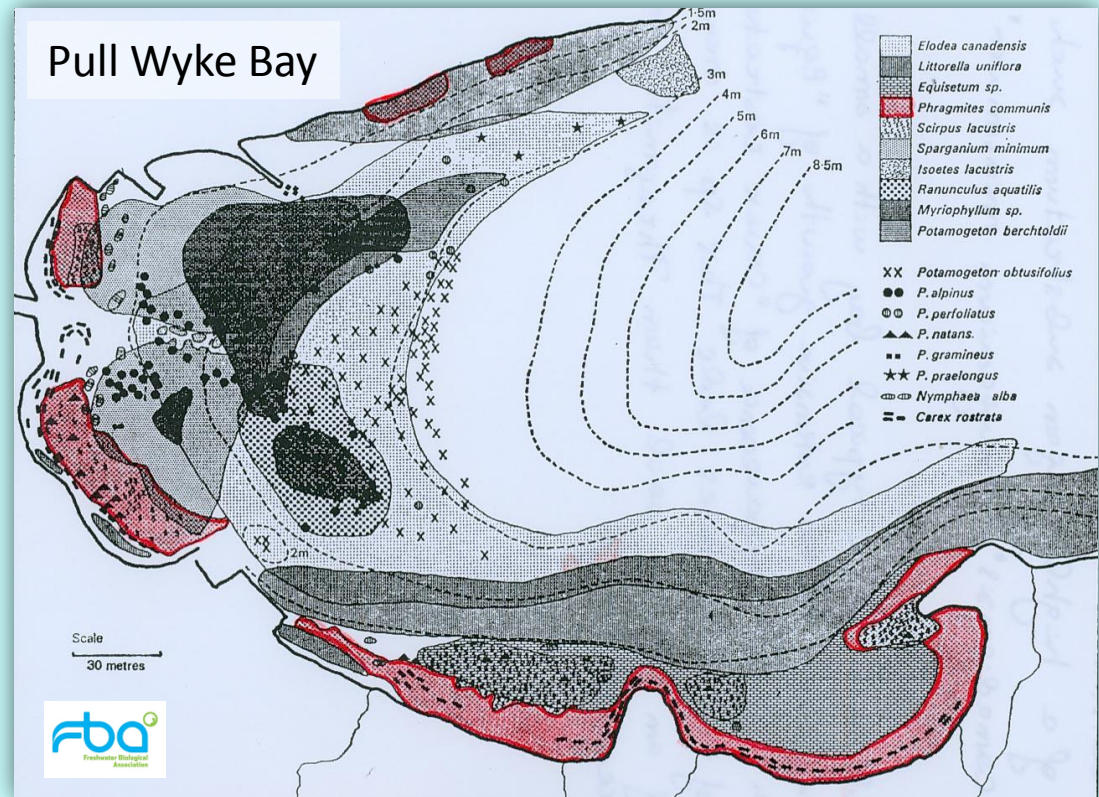
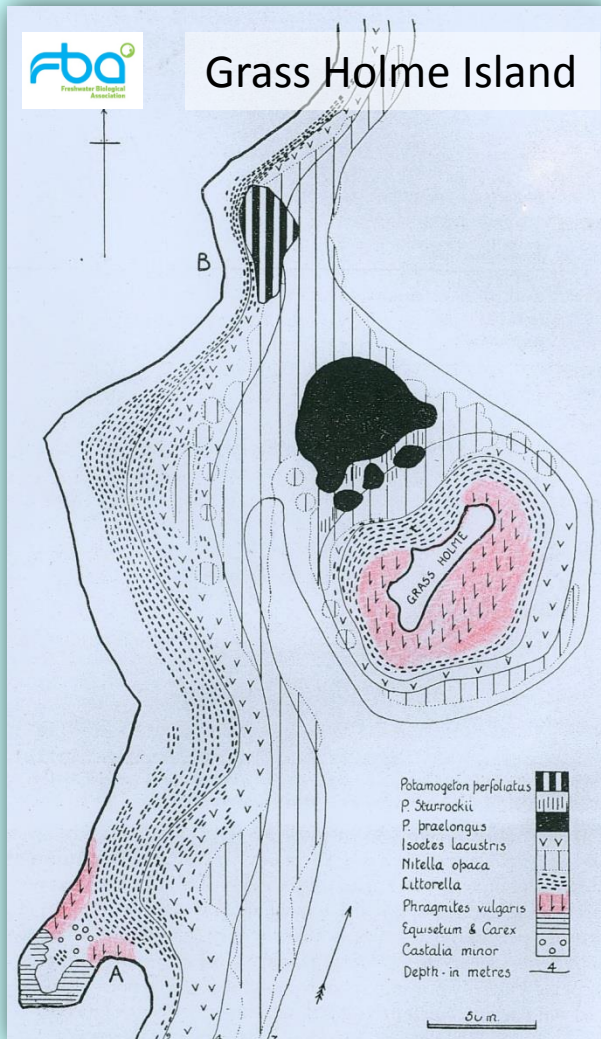
- Up-to-date assessment

## Geographical Information System

- Data records displayed on a map



# Literature review





# Historical photographs



Approx. 4000m<sup>2</sup> lost



Grass Holme Island  
South Basin of Windermere



# Reedbed boat surveys

## Methodology

### Shoreline survey

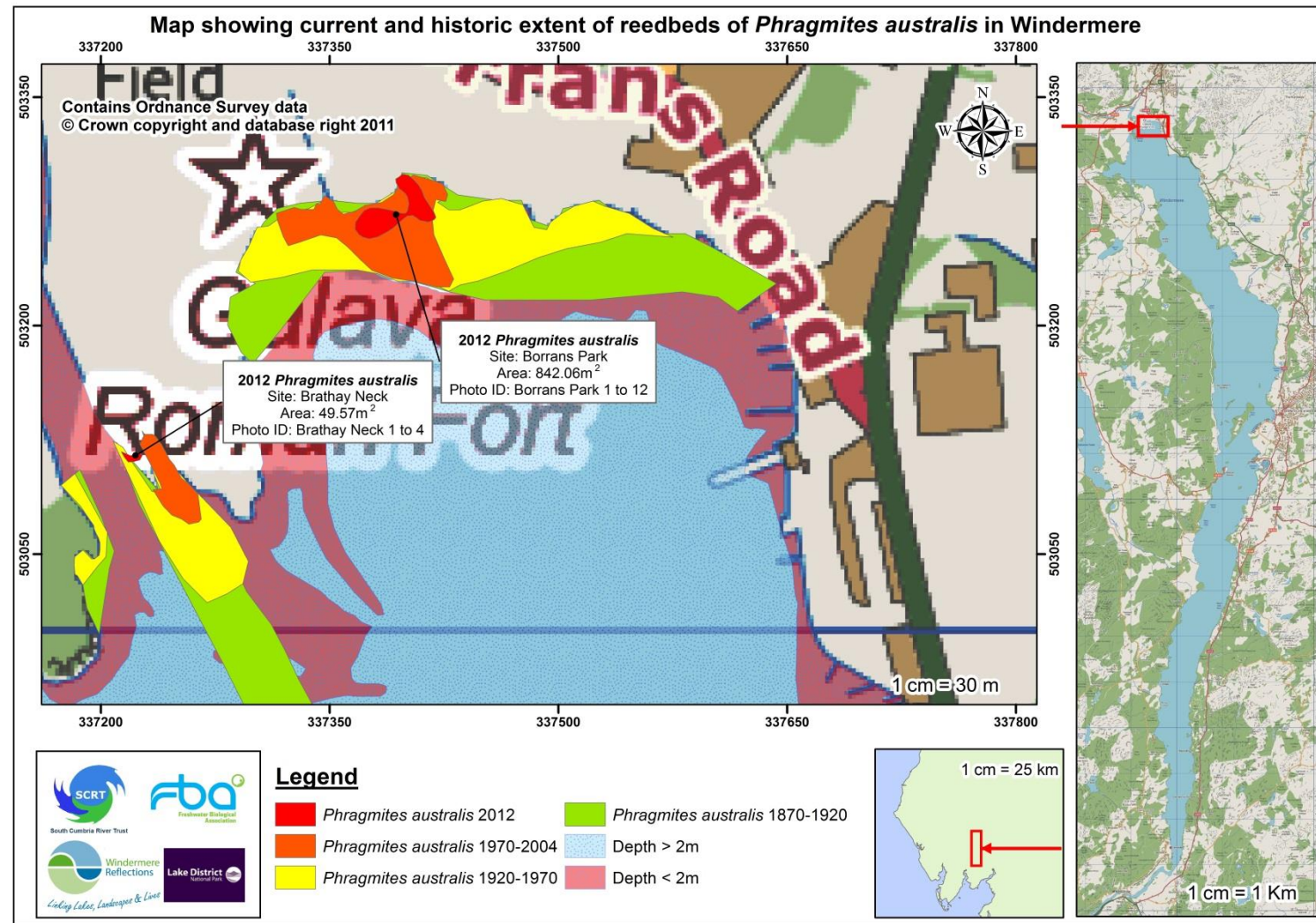
- Windermere
- Esthwaite Water
- Coniston Water

### Reedbed mapping

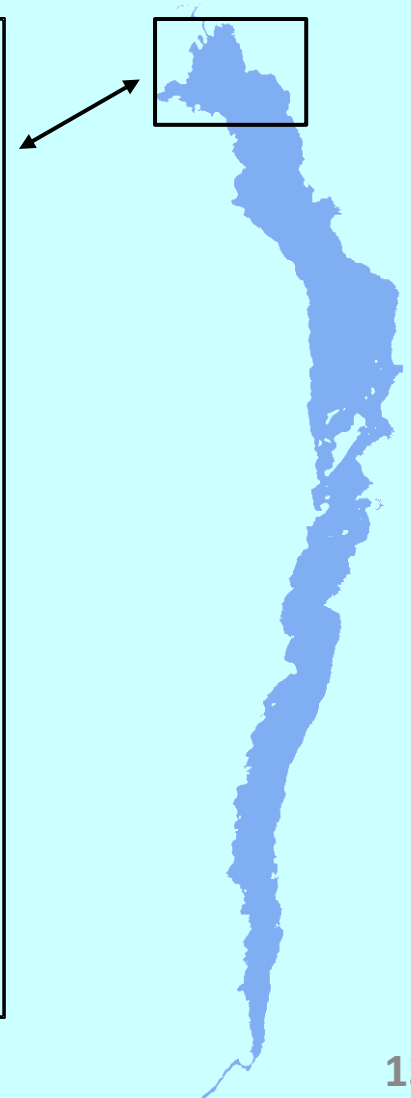
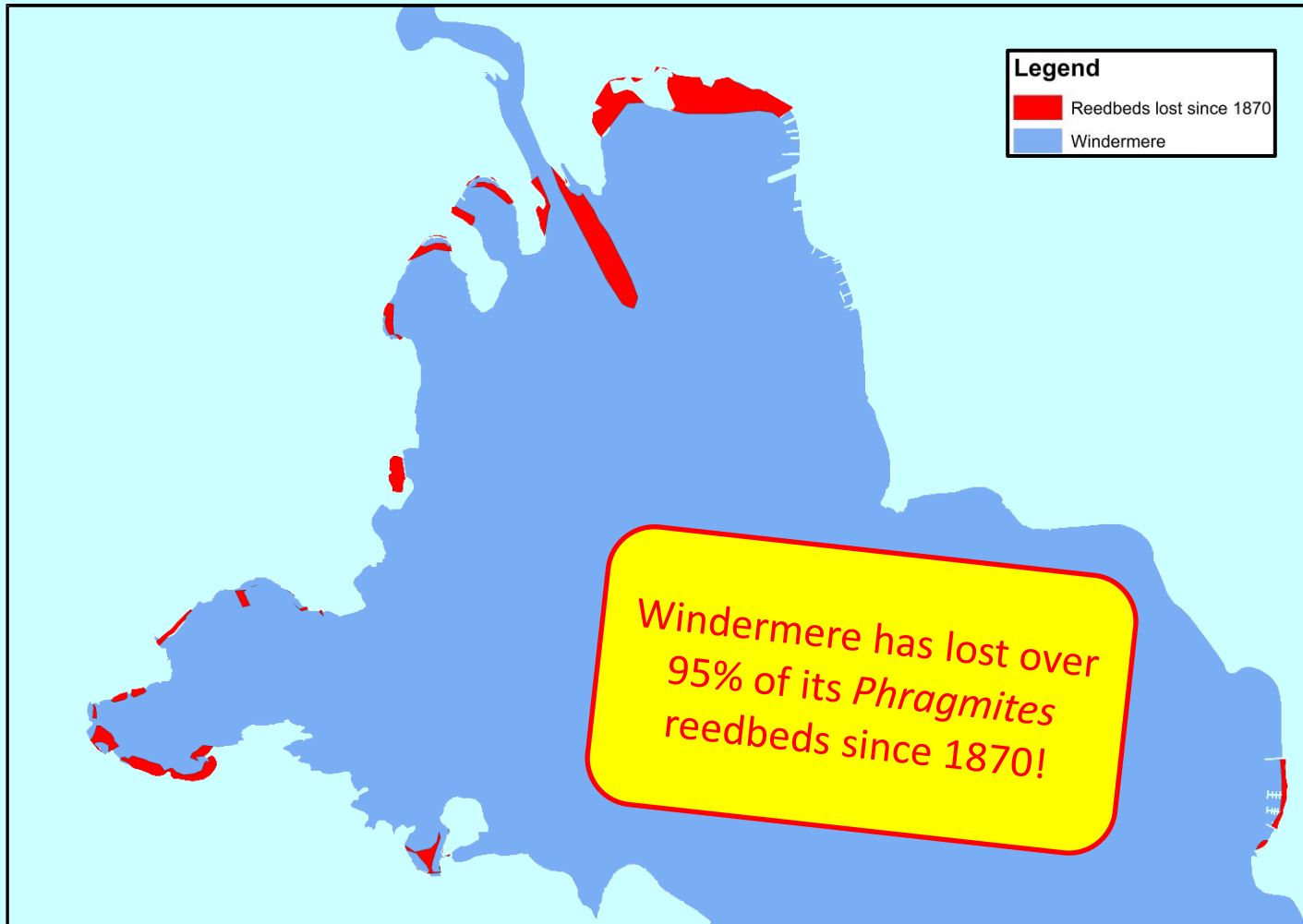
- Area: Laser range-finder
- Location: *d*GPS & maps
- Records of damage by geese
- Photographs
- Canopy cover



# Mapping

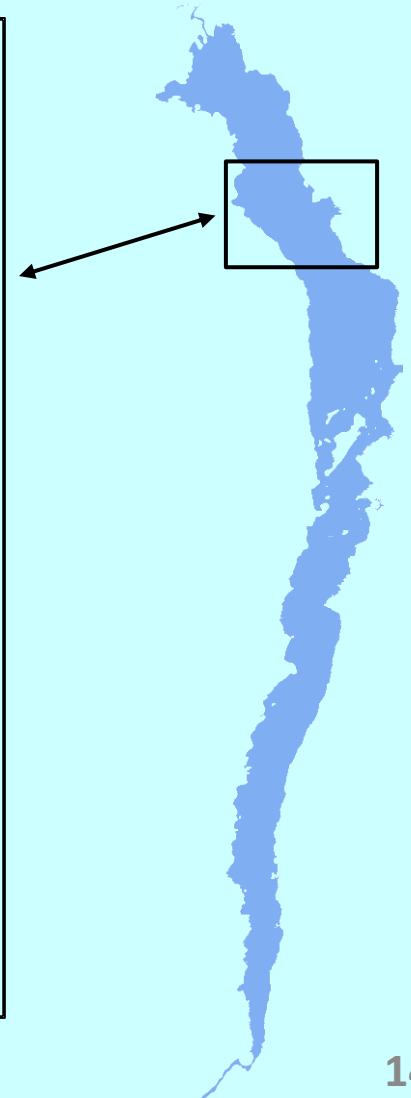
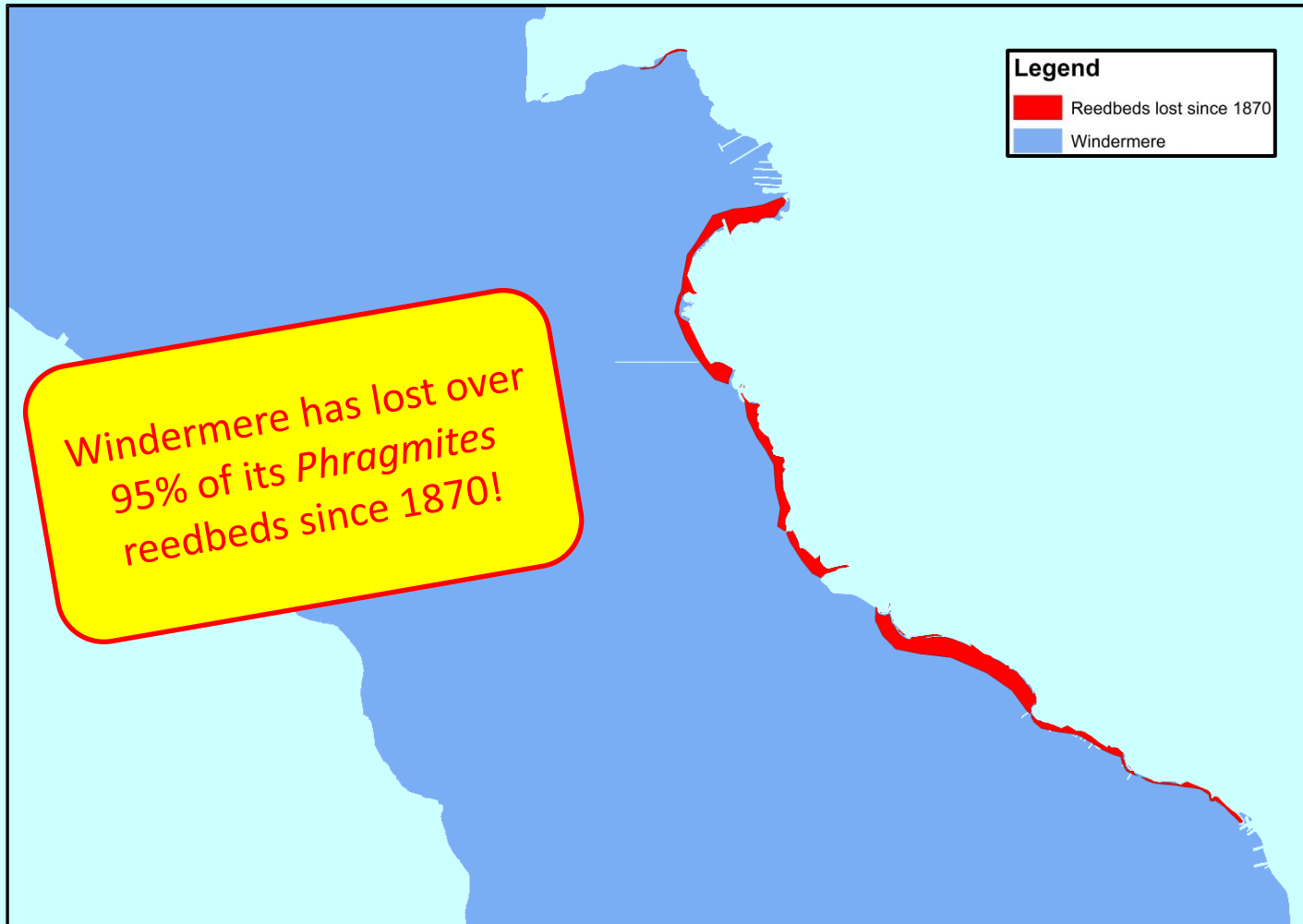


# Mapping



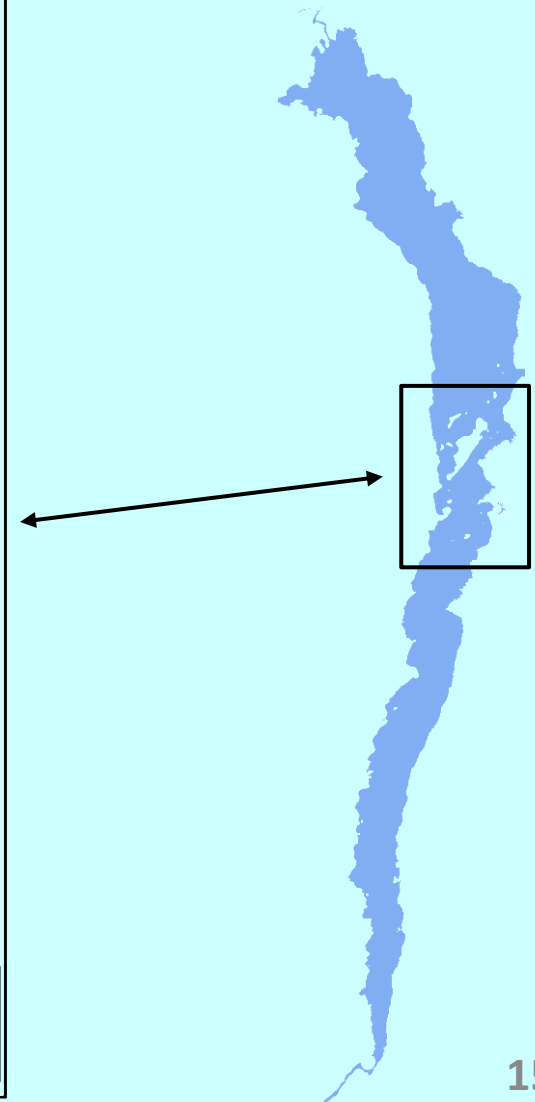
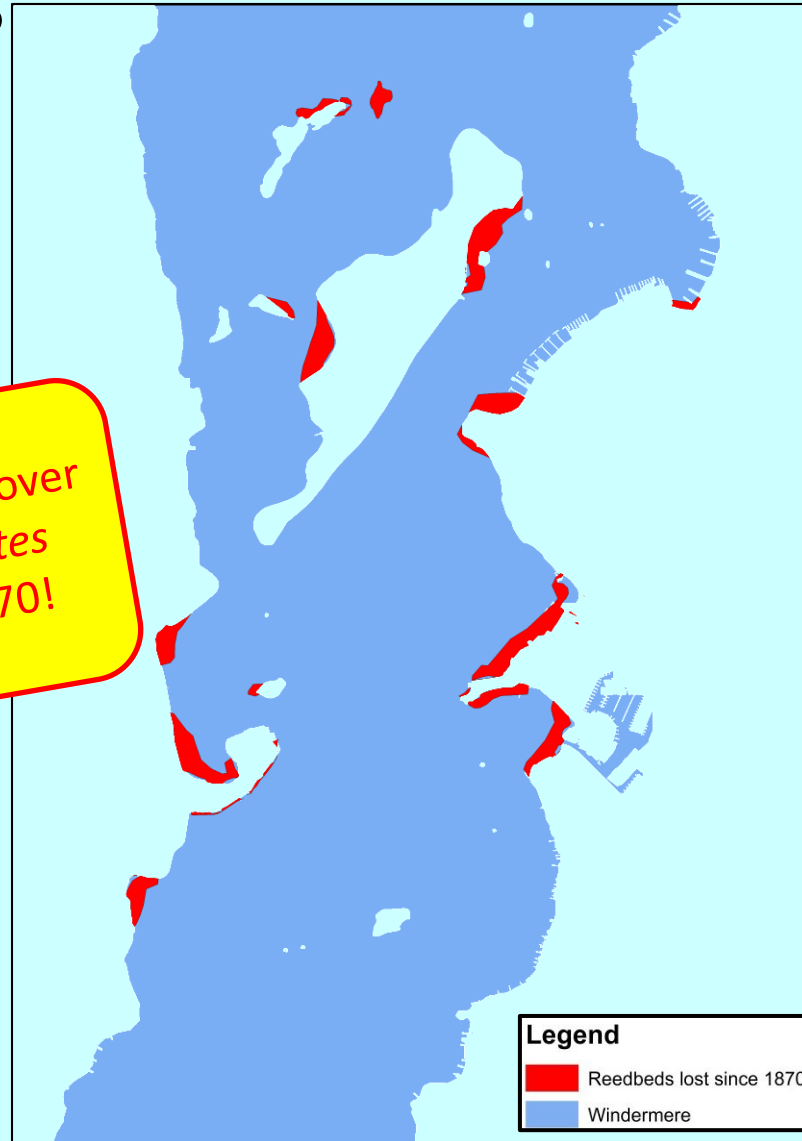


# Mapping



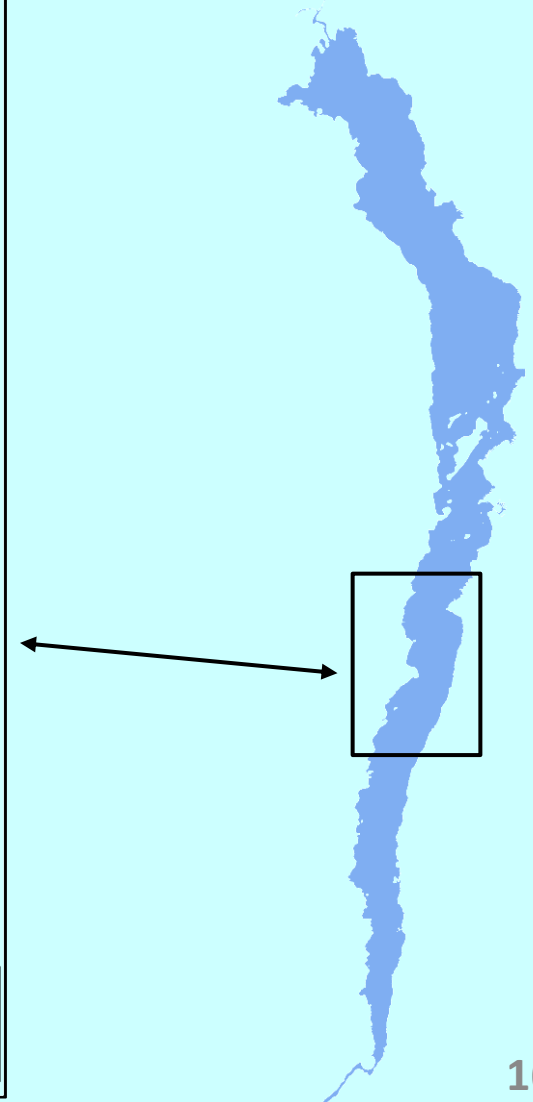
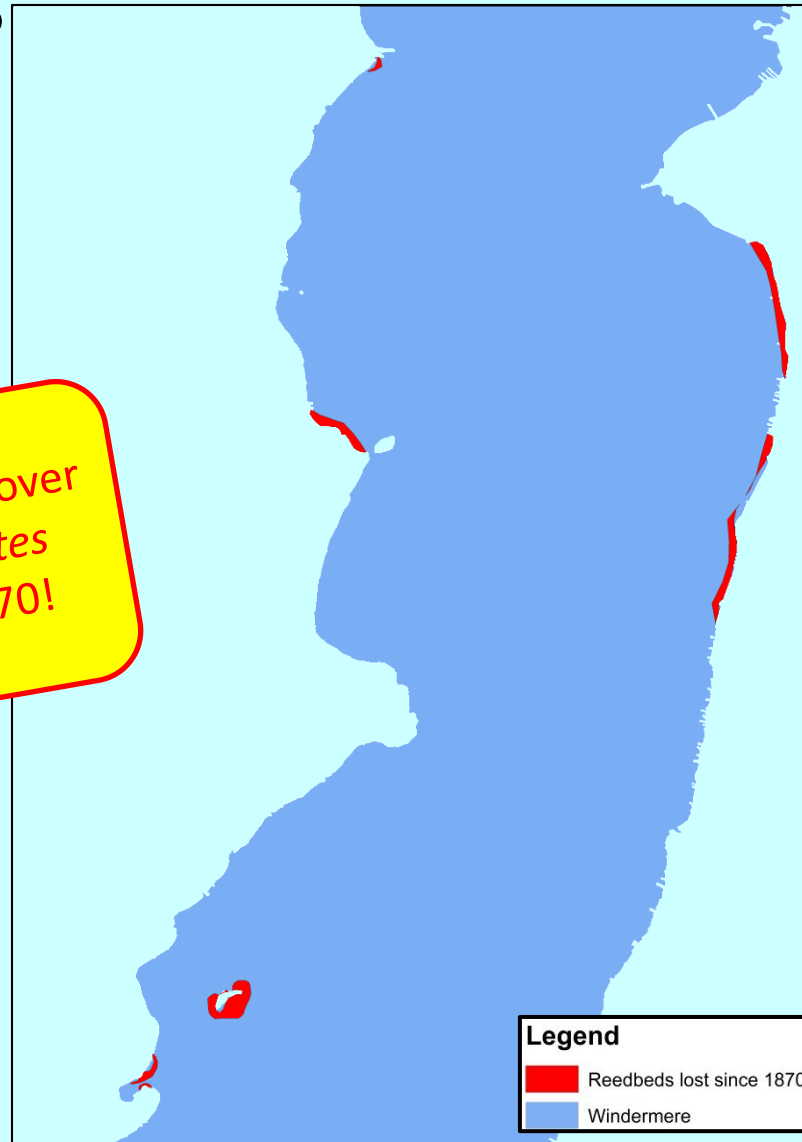
# Mapping

Windermere has lost over 95% of its *Phragmites* reedbeds since 1870!



# Mapping

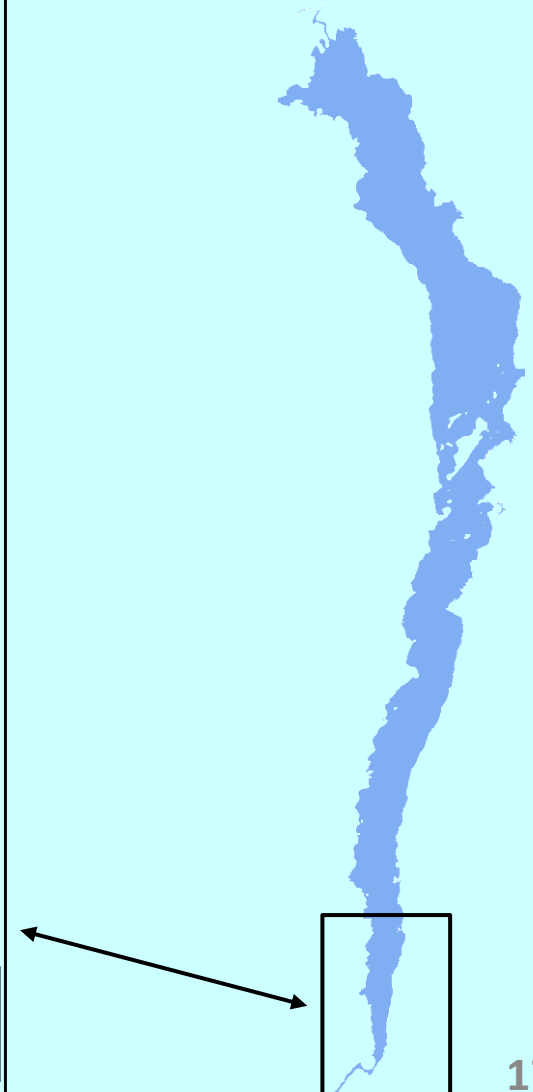
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reedbeds since 1870!





# Mapping

Windermere has lost over  
95% of its *Phragmites*  
reedbeds since 1870!



# Phase 2

- Propagate reed cuttings & seeds
- Recreate new reedbed habitat
- Protect remnant reedbeds
- Transplant reed rhizomes

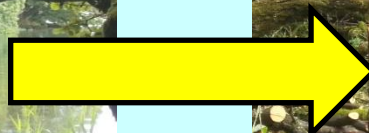


# Reed propagation





# Tree felling / coppicing





# Digging reed rhizomes





# Planting reed rhizomes





# Planting of reed 'mats'





# Planting of reed 'mats'





# Fences & wave barriers





# Finished sites....





# Controlling geese numbers





# Thank you!

Find out more...  
[www.scrt.co.uk](http://www.scrt.co.uk)

