



Lake District
National Park

Revere Windermere Water Quality Finance Platform

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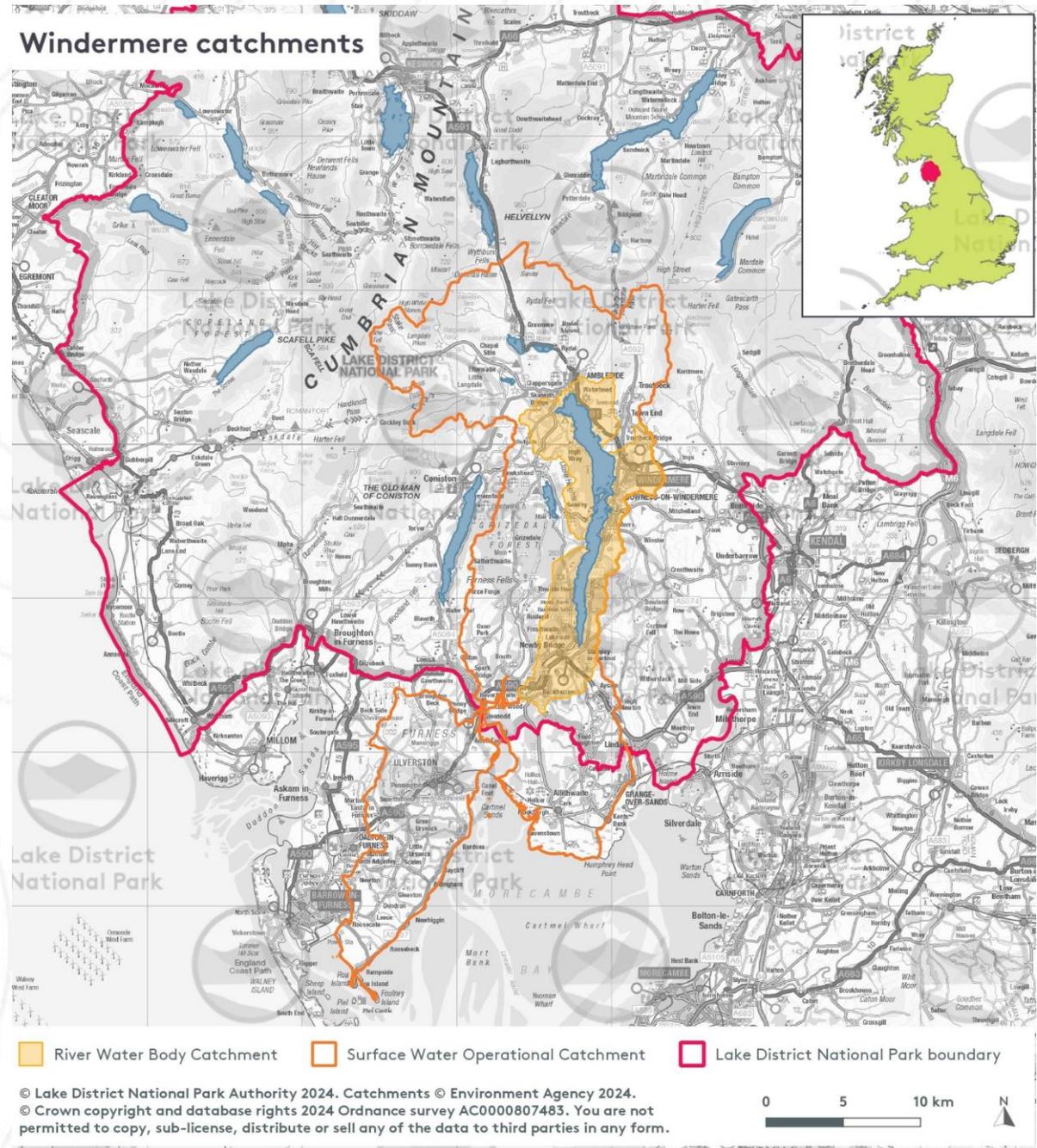
Introduction

- Lake Windermere
- Lake District National Park
Partnership Plan 2020 – 2025
- Love Windermere
- Revere – our partnership working
- Windermere Water Quality Finance
Platform



Lake Windermere

- Largest natural lake in England, 18 kilometres long in a north-south glacial trough formed after the retreat of the ice some 12,000 years ago
- History of development and persistence of agro-pastoral farming
- The catchment is particularly important for aesthetic inspiration
- Key significance for the development of the early conservation movement



Lake Windermere

- Best-studied lake in the world
- Nutrient enrichment began around 1850 and accelerated after 1970
- Dissolved phosphorus and total phosphorus concentrations increased substantially between 1945 and 1991, from:
 - sewage inputs
 - phosphate-based detergents
 - higher visitor numbers
- Main sources of phosphorus to Windermere are sewage from wastewater treatment works, storm overflows, septic tanks, and private package treatment plants (52% in the North Basin, 59% in the South Basin), and rural and urban land use (48% in the North Basin, 41% in the South Basin).
- From 1945 to 2003, spring surface water temperature increased by 0.02°C each year in Windermere. The overall mean temperature for 1961-1990 was 10.4°C which increased by 1.1°C to 11.5°C for 1991–2005.





Lake District National Park Partnership Plan 2020 – 2025

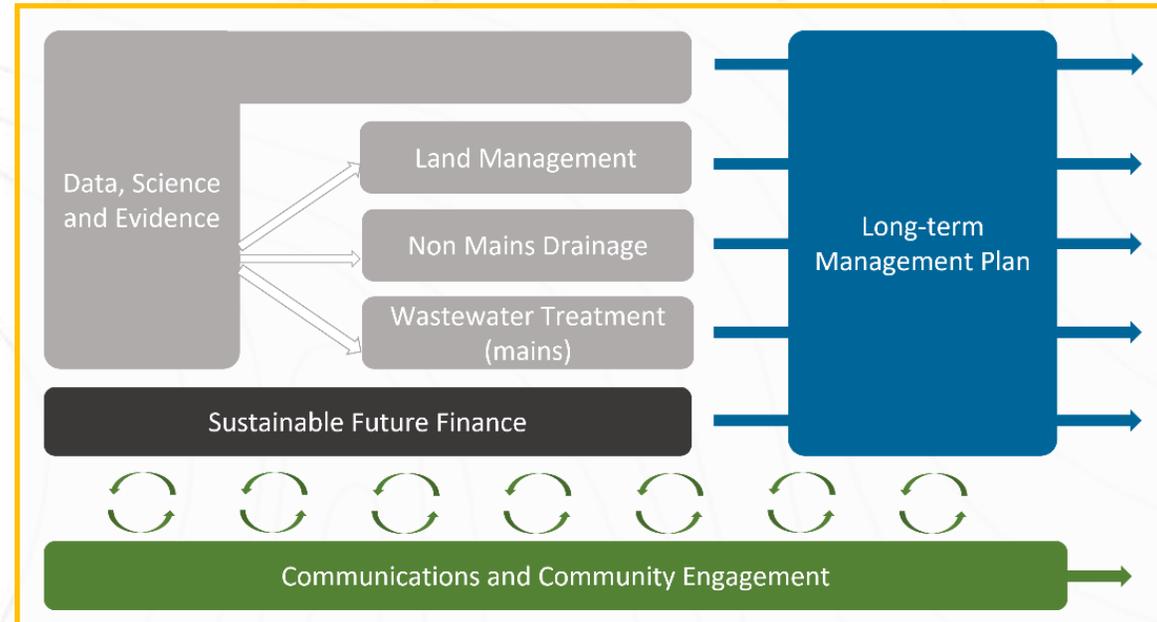
- Strategy #4 Improved water quality and resources in lakes, tarns, rivers, ground waters, and sea
- Deliver actions to improve the water environment of Lake Windermere. Resources and projects are being coordinated through the Love Windermere Partnership.

Love Windermere

Ensuring Lake Windermere, and its catchment, is healthy, more resilient to climate change and nutrient levels are reduced; where the community are its custodians and contribute to a healthy lake and local economy

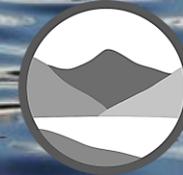
By developing evidence-based, long-term plans to maintain and improve water quality in the lake while balancing the needs of nature, the community and the local economy.

It continues to collate more scientific evidence to understand which solutions will be most effective and to help prioritise activity



Our partnership

- Revere combines the expertise of Palladium and UK National Parks Partnerships with National Park's ecological expertise with resources and financial acumen to develop innovative nature restoration projects across the UK that work for nature, investors and communities
- To address the current state of the lake we have delivered two project phases
 1. Feasibility
 2. Design
- We are now ready for delivery



Lake District
National Park



Revere has an opportunity to improve water quality in the Windermere catchment



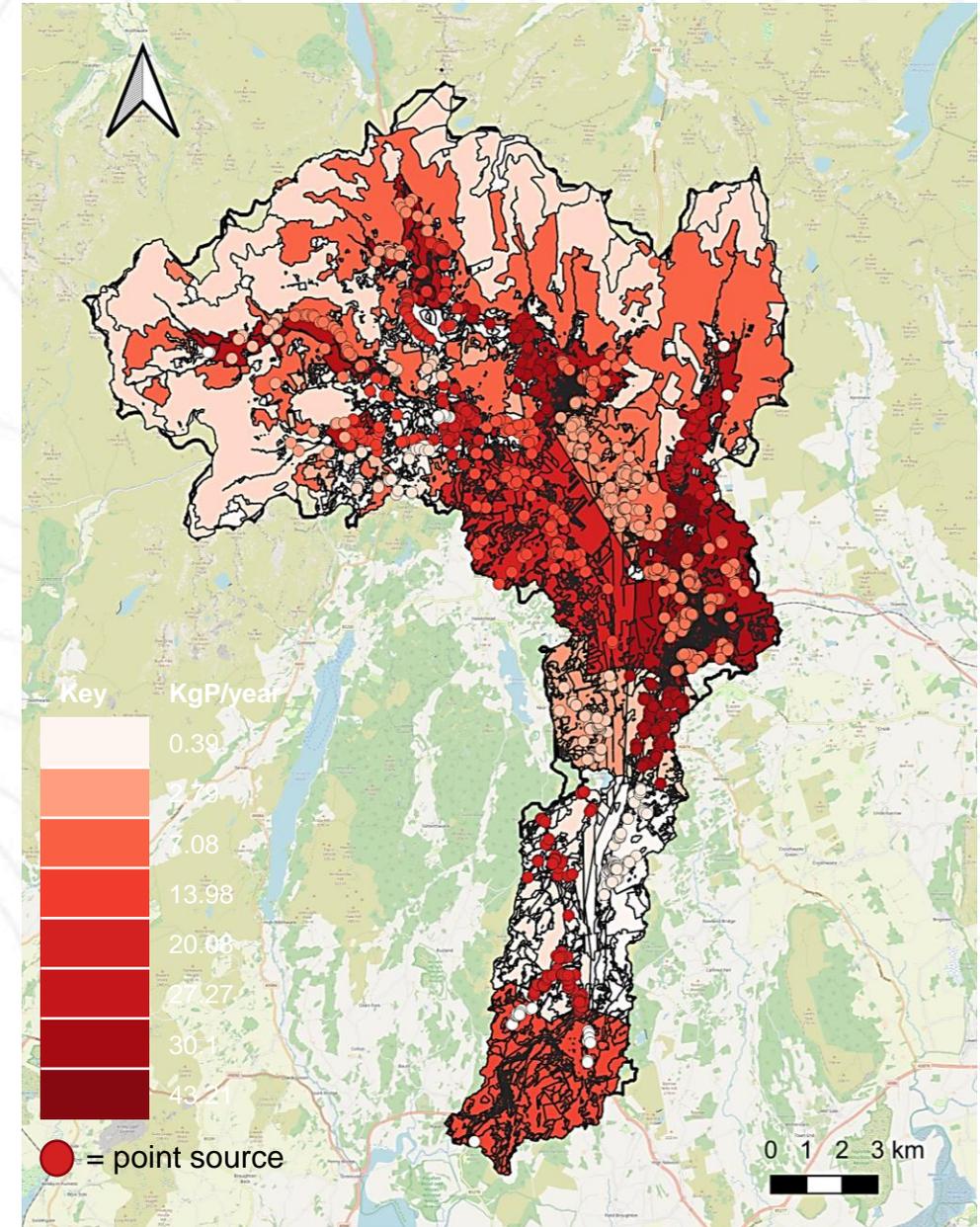
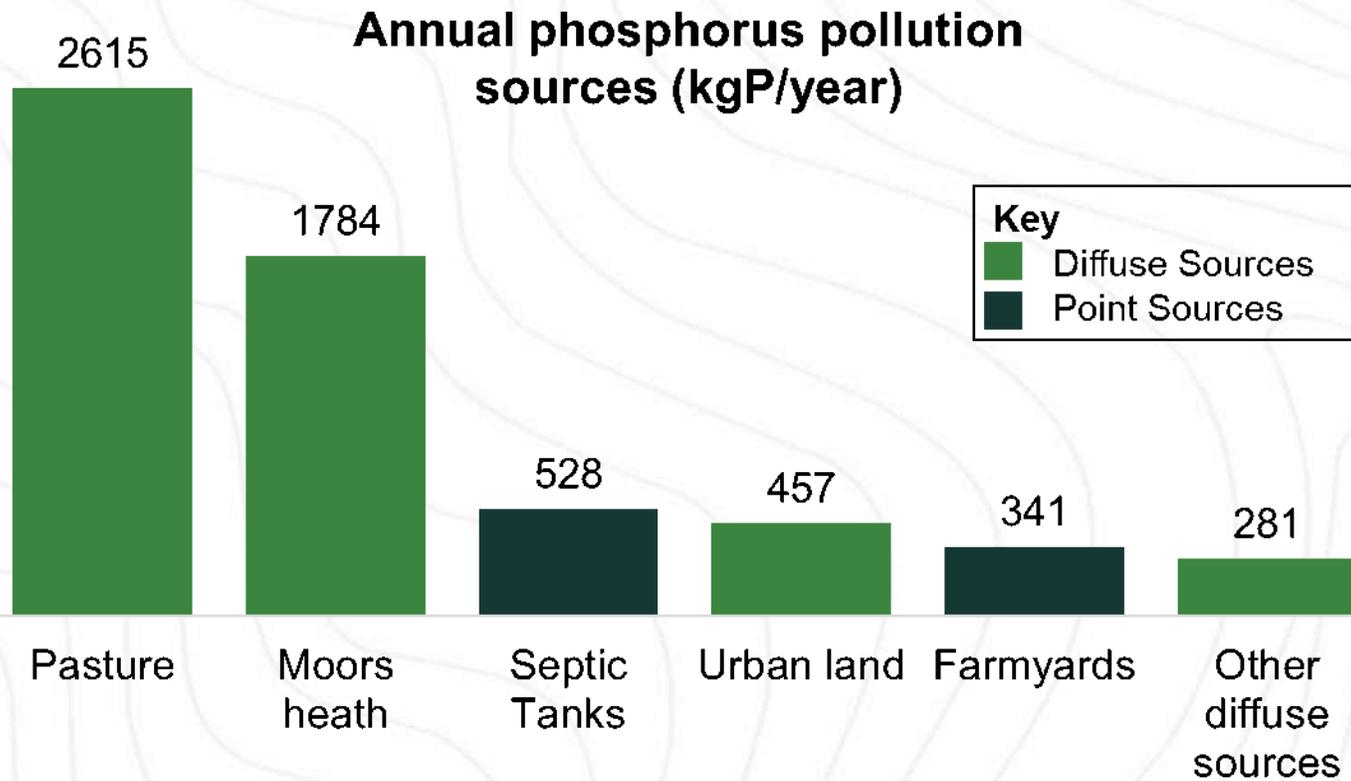
The state of Windermere

- Since the 18th century, human activity has polluted Lake Windermere
- High levels of nutrients such as phosphorus can lead to a process called eutrophication
- While the Lake slowly increases in temperature due to climate change, the impact of high nutrient pollution increases
- Today, the lake is at a critical stage where biodiversity is suffering and it isn't always safe for people to swim in

We identified the main non-utilities sources of pollution in the Windermere catchment

Overview of phosphate pollution sources

- **Diffuse sources** represent **90%** of phosphorus export
- **Point sources** represent **10%** of phosphorus export



Creating new riparian woodland and wetlands can help address the phosphorus challenge

Overview of interventions

Creating **168 hectares** of new **wetland**

Potential impact:



688

Biodiversity units
Over project lifetime



208kg

Annual phosphorus reduction

Planting **265 hectares** of new **riparian woodland**

Potential impact:



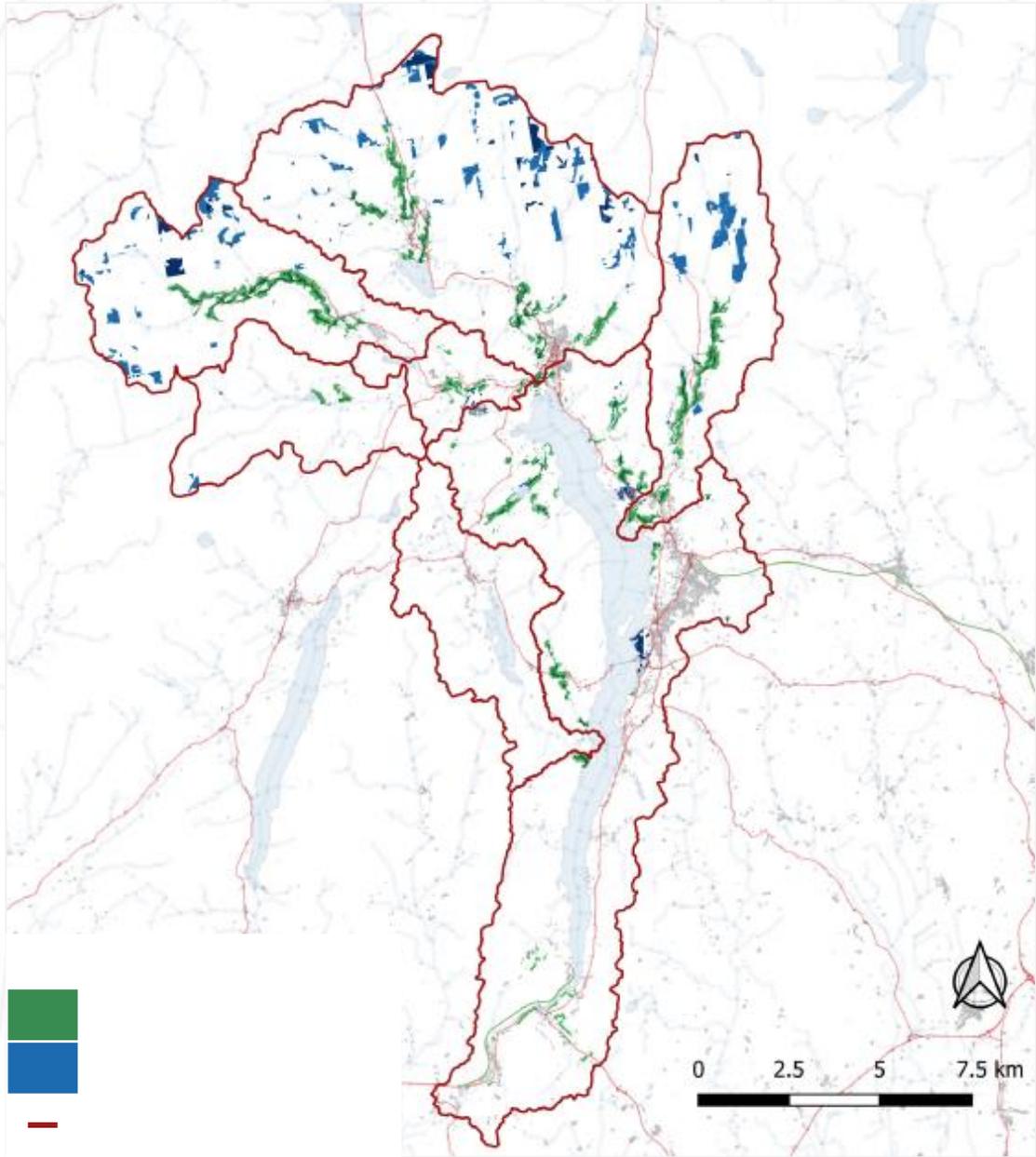
104,216 tCO2e

Carbon sequestered
Over project lifetime



485kg

Annual phosphorus reduction



While water quality is the priority for this project, we have defined a set of additional criteria and considerations



The interventions we develop must meet the following **criteria**:

World Heritage Site



Local Economy



Farming



Permanence



This project would have multiple economic and environmental benefits in addition to the phosphorus reduction



We will design our interventions to have a positive impact on the local economy and environment beyond water quality improvements

Natural Flood Management



Climate Adaptation



Biodiversity



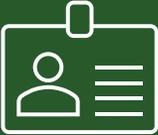
Tourism in Windermere



Income Diversification



Job Creation



The project's next steps are split into three stages, across 35 - 40 years





Lake District National Park



REVERE
INVESTING IN NATURAL CAPITAL



Palladium
MAKE IT POSSIBLE



**National
Parks**