



Welcome to the
Nature North Conference 2024
Green Growth for People and Nature

#NatureNorth24



#NatureNorth24

Great Stuff's Happening

Green Growth for People and Nature



Great Stuff's Happening
Anne Reece
Chair, The Reece Foundation

#NatureNorth24



The Ouse Burn Way

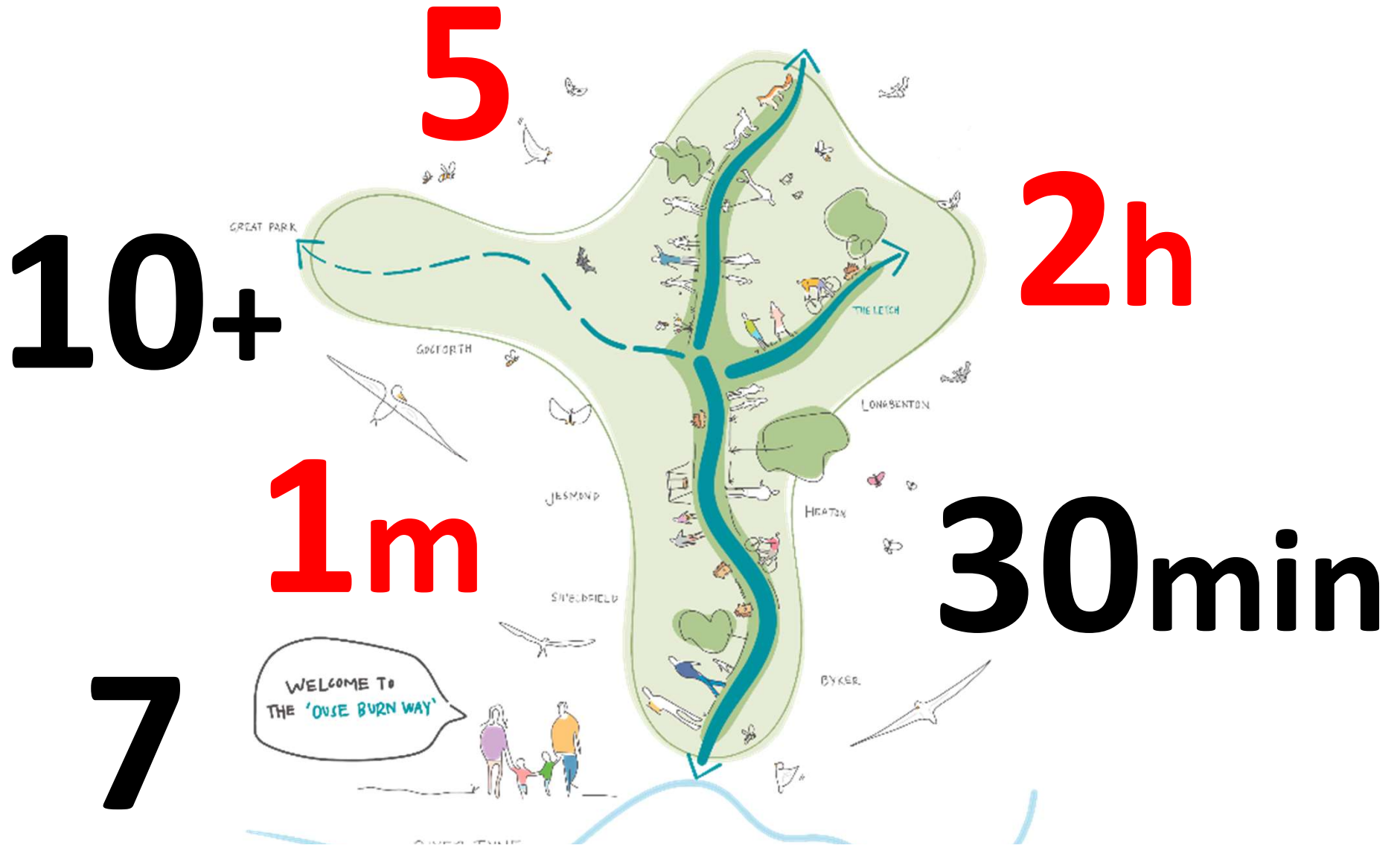
Anne Reece

REECE FOUNDATION

- Dr Alan Reece
- STEM
- Environment
- North East

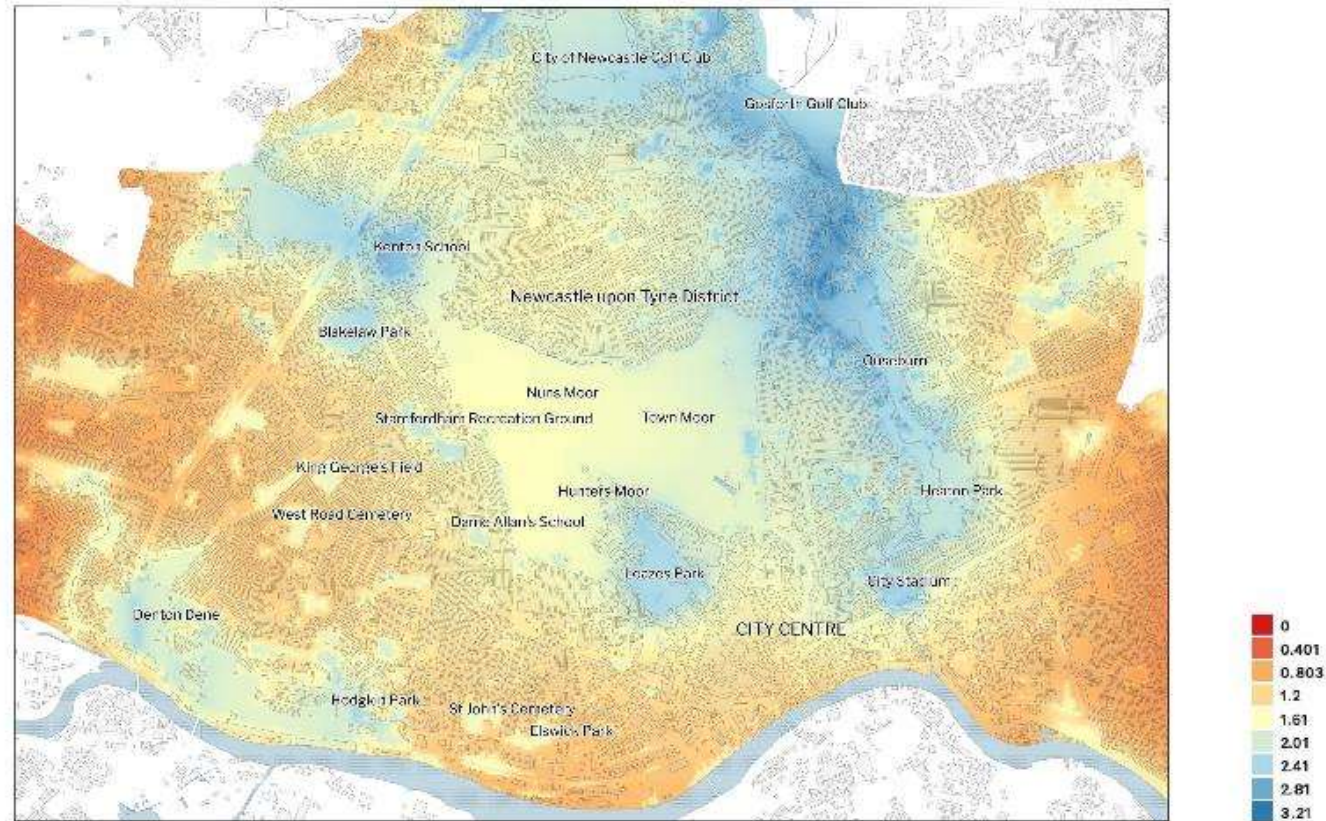
reece-foundation.org







Newcastle upon Tyne cooling offset from trees and green space



Friends of the Earth, compiled by Terra Soluta Research CIC

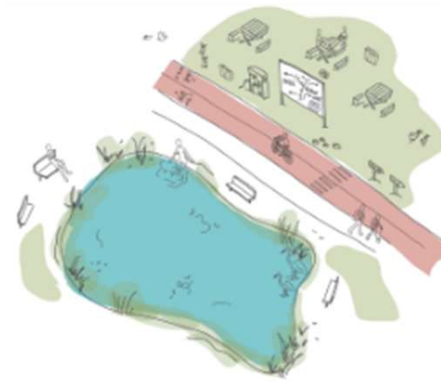
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CONNECTION



COMMUNITY



WELLBEING




EDUCATION



theouseburnway.co.uk

REECE
FOUNDATION



Tell us ...What is the best thing
that can be done to improve
the Ouse Burn Valley for you



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Dr Rachel Palfrey

Senior Advisor, Bradford & S. Pennines NRP, Natural England

Bradford & South Pennines Nature Recovery Project

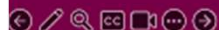


Nature North Conference
27th February 2024



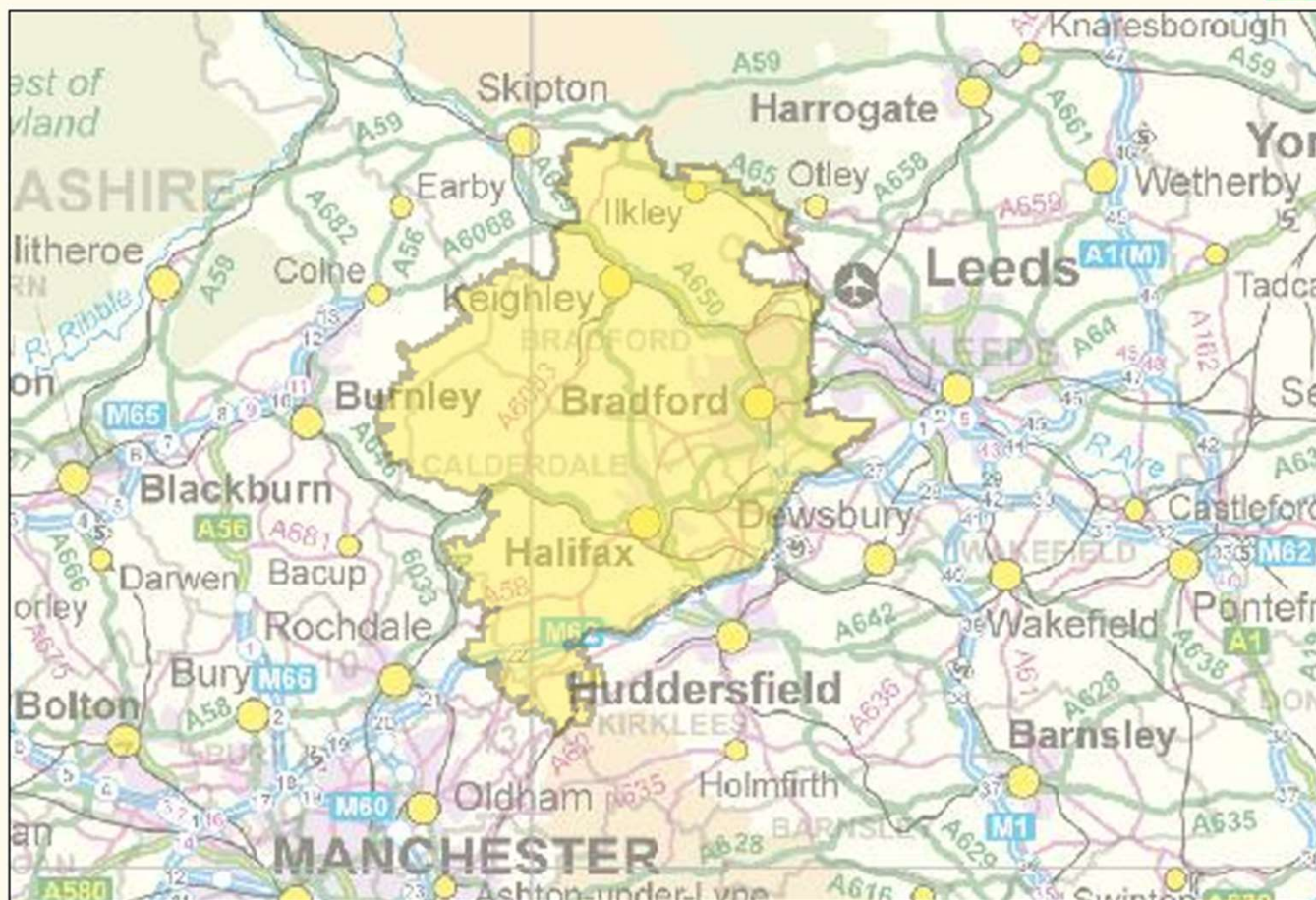
Dr Rachel Palfrey

www.gov.uk/natural-england



Location

NATURAL
ENGLAND



Bradford – A land full of untapped potential



Nature

- 2/3rds rural and only upland landscape without any landscape scale designation
- High levels of natural beauty, priority habitats and species & natural heritage



People

- Youngest city in the UK – 25% <18
- Very diverse – 36% population ethnic minority
- High levels of social and (direct & indirect) health inequalities & low access to nature



Bradford – Where we are now



“Needs to be where people live that have nothing. City centre [...]. I nearly fainted seeing a pair of wagtails last year. Wish I was joking. We stay stuck inside because there's nowhere calm to sit. Proposals for a green space are woefully inadequate for the true number of residents.”

Bradford Resident, BD1, Female, 45 – 54 years

The Vision



“To create a place which is greener, cleaner and more resilient, where nature is prioritised, our cultural heritage is celebrated, and everyone has easy and accessible ways to connect to nature for now and always....”

Our approach



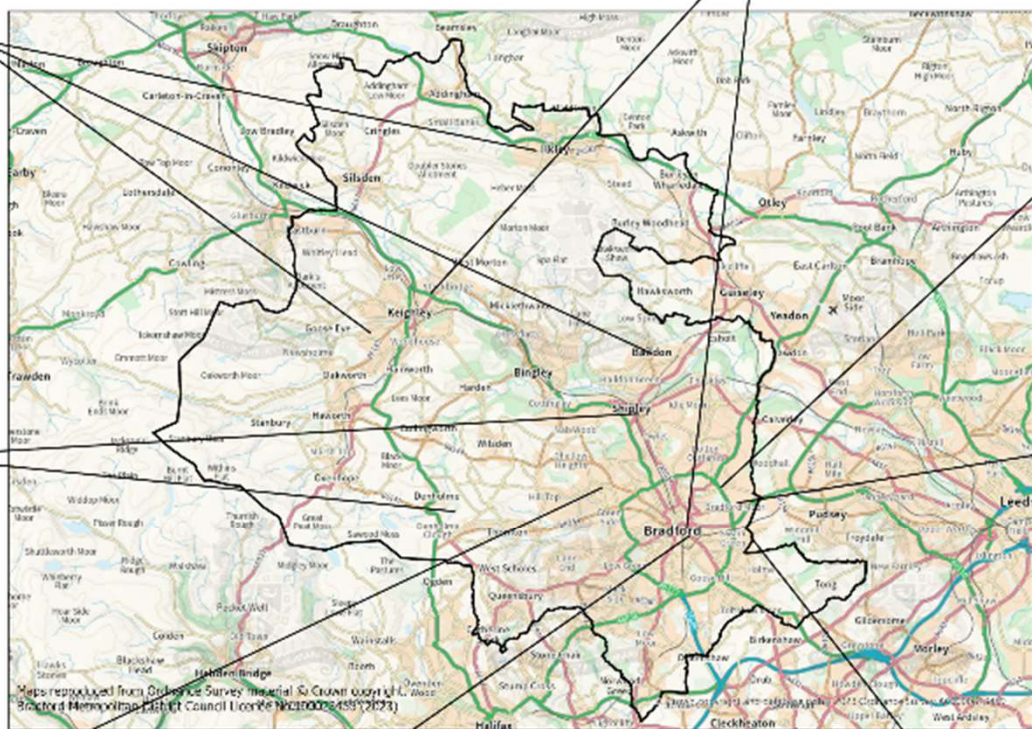
Putting nature at the centre of their programme



Installation of Peregrine nest trays on mills across Bradford



1st in West Yorkshire



Greening up snickets and nature routes



Monitoring Water Quality



Green Community Hub at Manningham Library



Embed nature in patient care



Eco-sculpture park in central Bradford



Equipment for Horton Community Farm

Outcomes



1st National Nature Reserve in West Yorkshire



Bring SSSIs into favourable condition



Increase species richness and abundance



Increase % population with accessible greenspace within 15 mins of home



Make nature central to policies and local plans



Network of nature champions across the district



Improvements to air & water quality



Embed nature into health care & increase active travel routes



Develop investible projects for green private finance

Get Involved



Scan QR code to be added to the mailing list or email:
Naturerecoveryyorksnlincs@naturalengland.org.uk



Great Stuff's Happening

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Keith Davie

Senior Advisor, Green Finance, Environment Agency

An Introduction to the Aire Resilience Company (ARC).

Keith Davie



Why We Need ARC

"Flooding and extreme weather events which damage assets and disrupt business operations pose the greatest risk now and in the future."

(UK Climate Change Risk Assessment 2017 Evidence Report; Climate Change Committee, 2017)

What is the issue?

- Floods have damaged Leeds' businesses, homes and communities.
- Climate change increases these risks.
- New approaches are needed: nature-based solutions and finance models.

Why do it?

- Keep Leeds a great place to live, work, play and invest.
- Position Leeds as a climate change leader.

We need to respond? ● At Scale ● At Pace ● Based on Evidence

The Aire Resilience Company.

- ARC will be an independent, not-for-profit, community interest company.
- Revenue to maintain the nature-based solutions.
- Complement Leeds' flood defences. ARC will give extra protection needed because of climate change.



Long term flood risk protection – The role of ARC

- By 2069 we can expect an 8% increase in peak flow reaching Leeds City Centre compared to the 2015 flood.
- Natural flood management can reduce peak flows to Leeds by **5% - 6.5% reduction**.



+



=

Long-Term Flood Risk Protection
+
Climate Change Mitigation
+
Wider Social and Environmental Benefits

Leeds FAS will protect against a 3% increase in peak flow

ARC will protect against an extra 5%+ rise in peak flow.

3%

+

5%

=

8%



ARC in the Upper Aire Catchment.

**Tree
Planting
535ha**



Hydrological modelling

- Tree planting
- Soil & land management

**Soil & land
management
1240ha**



**Additional
NFM
84ha**



ARC Finances.

Phase 1 – Delivery

CAPEX funding requirement:

£2m over 3 years (2024-2027)

To Finance:

- £1.6m of NFM interventions within the Aire catchment.
- £0.4m of delivery management costs over the 3 years.
- ARC seeks to source 100% of the capital from the public sector.

Phase 2 – Maintenance and Operations

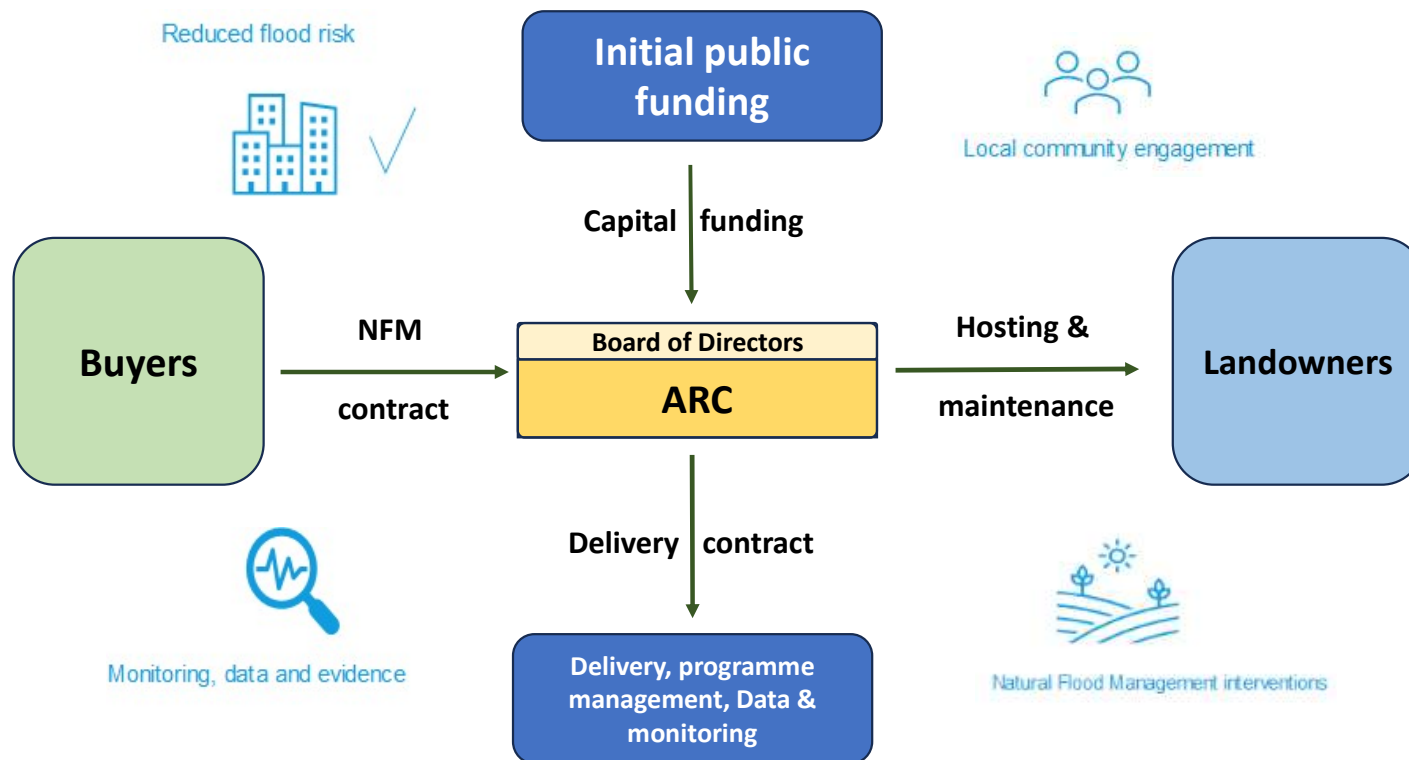
Annual revenue requirement:

£450k p.a.

Based on:

- A 5-year NFM contract with an NFM buyer consortium.
- Cyclical soil aeration, landowner maintenance payments, programme management, MRV and CiC running costs.
- Revenue will be sourced from the private sector and other organisations in Leeds.

Delivery Via Community Interest Company using a Public/Private Funded Model.



- **ARC established as CIC to be the contracting & financing vehicle.**
- **Base case is to deliver a modelled 5% peak flow reduction but target >6%.**
- 3-year capital delivery cycle.
- Initial 5-year buyer contract.
- Initial 5-year landowner hosting and maintenance contract.
- Operations delivered through sub-contracting arrangements.
- Programme manager role crucial.

ARC Proposition for Leeds Business.

By joining the ARC Buyer Consortium, businesses can share in ALL the benefits generated.

- Reducing the impact of **flood risk** to businesses.
- Meeting **ESG & CSR** objectives through local nature-based solutions and social benefits.
- Be recognised as a **leader and a team player** for climate change and protecting the Leeds City Region.
- Do something **local, tangible** and **measurable**.
- Once established ARC, will **explore opportunities for Leeds businesses** (e.g. tax benefits, further public investment, SUDs etc.).



A large, solid green shape that starts as a curved line from the top right and extends downwards and to the left, forming a large, irregular shape on the right side of the page.

Keith Davie

keith.davie@environment-agency.gov.uk



Great Stuff's Happening

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Sarah Johnson

Head of Peatland Nature Recovery, The Wildlife Trust for Lancashire, Manchester & North Merseyside



The Wildlife Trust for
**Lancashire
Manchester &
North Merseyside**

Lowland Peat: Challenges, Opportunities and Innovation





The Wildlife Trust for
**Lancashire
Manchester &
North Merseyside**



**Biodiverse
habitat**



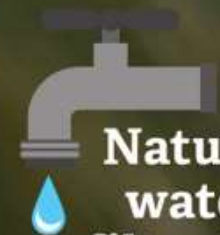
**Carbon
store**



**Flood
mitigator**



**Decreased
wildfire risk**



**Natural
water
filtration**

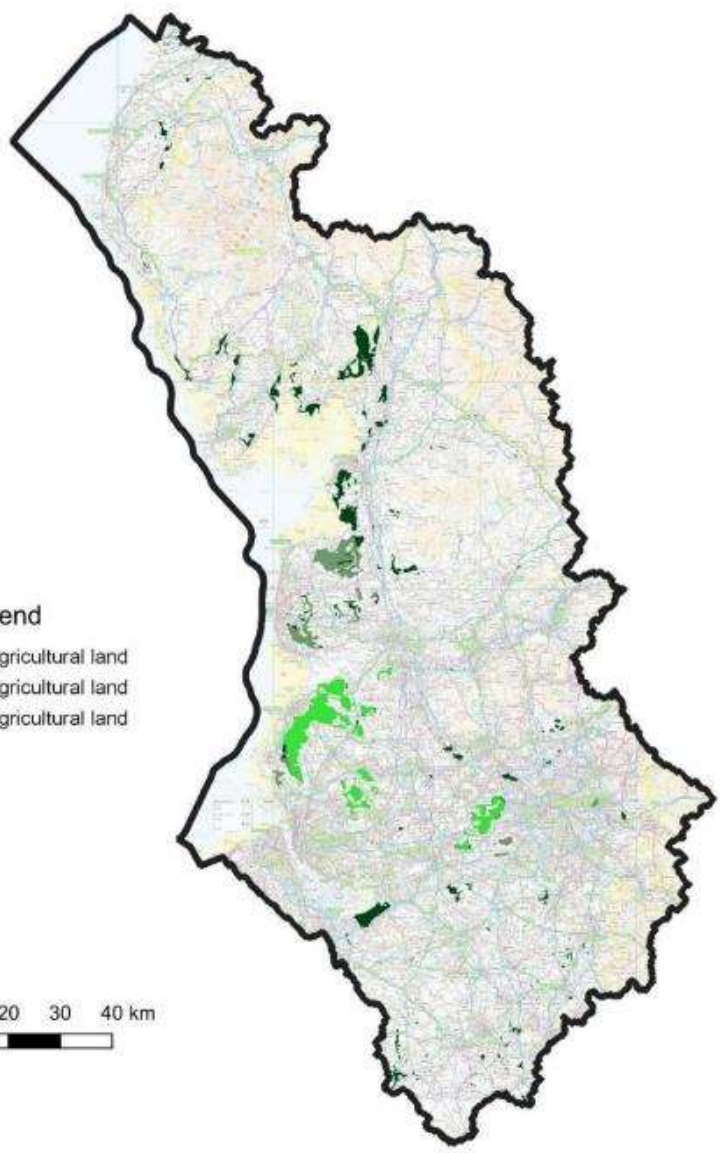
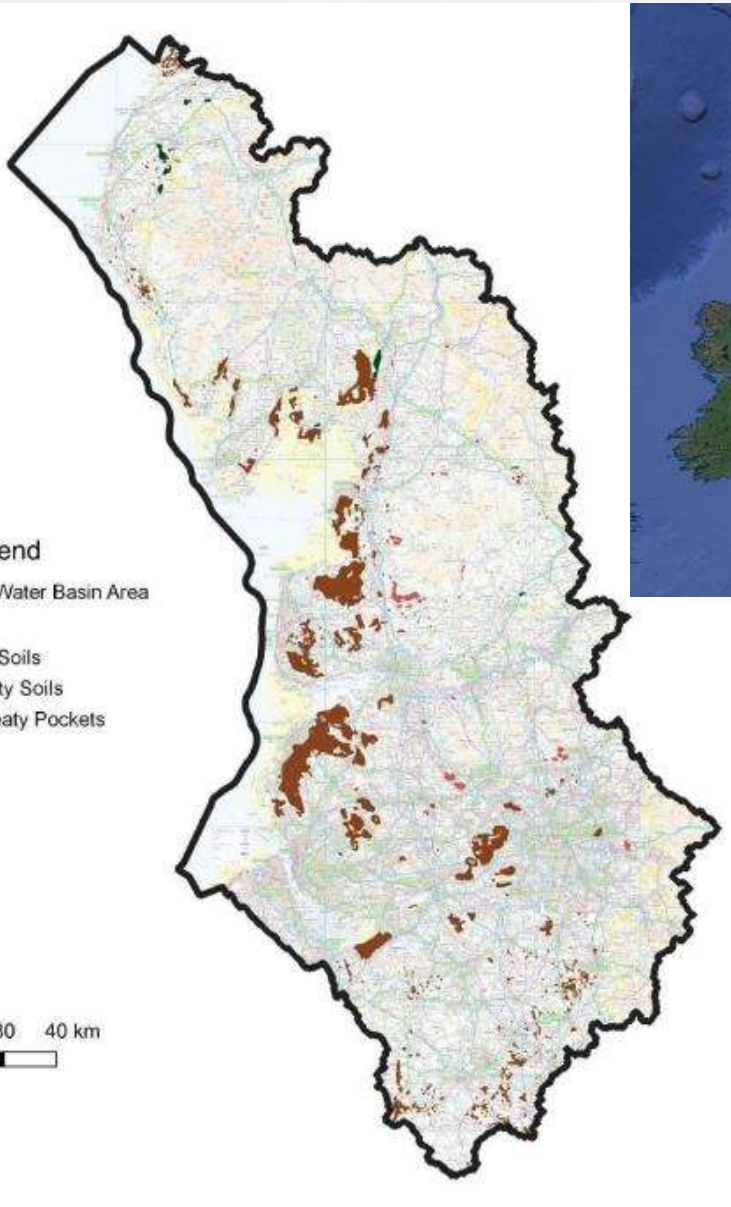


The Wildlife Trust for
Lancashire
Manchester &
North Merseyside

80% of peatlands in England are
damaged or degraded

Our region has lost 98% of its
lowland peat bogs





The Winmarleigh carbon farm

Growing a permanent non-harvested crop of sphagnum moss for the purpose of storing and protecting carbon in peat soils

January 2020



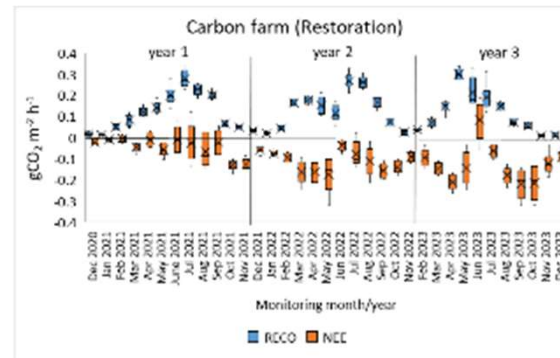
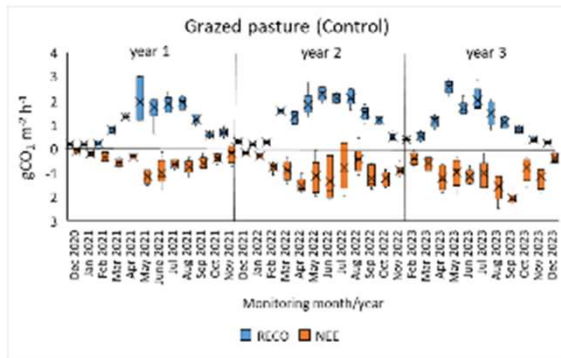
September 2020



August 2022



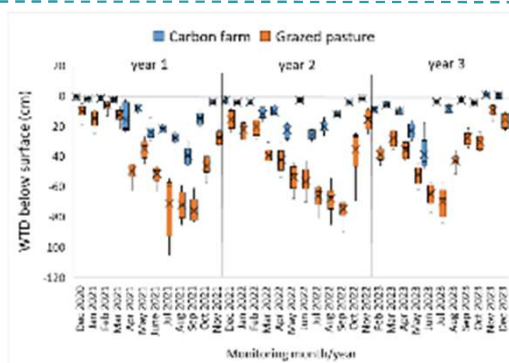
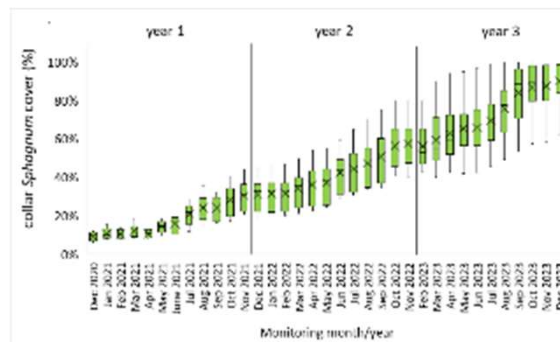
The science bit



Carbon emissions reduction
Carbon farm 3.43 t CO₂e ha⁻¹ yr⁻¹
Grazed pasture 40.17 t CO₂e ha⁻¹ yr⁻¹
Emission saving = 91.5%

Sphagnum growth

Sphagnum is resilient! There has been some good growth of sphagnum despite the prolonged dry periods esp. during establishment phase in 2021.



Hydrology/water table

Deep trench bunding techniques have been effective in separating hydrology on carbon farm from surrounding farmland; the solar power pump irrigation system is working after a few teething problems to move water throughout the site

Rindle wetter farming trial

- Trial wetter farming and paludiculture in the UK.
- To compare business as usual drainage agriculture with wetter farming practices managing hydrology at 50cm below and 30 cm below.
- To assess whether food crops can be grown in a wetter farming system whilst reducing GHG emissions.
- To trial innovative methods assessing the integrity of the peat soils across the business as usual and wetter farming sites.



Celery

Compared with business as usual sites



Blueberries

High value crop



Typha

Assess nutrient removal capacity

What are we measuring?



Greenhouse gas
emissions



Water
table



Soil physical and
nutrient
parameters



Boggy bulrushes to BioPuff®



Developing a productive, economically viable paludiculture crop for farmers on peat soils.



Field scale trial of growing a typha (bulrush) crop on a re-wetted agricultural peatland.



The fluffy seed heads will be used to create BioPuff® – a sustainable eco textile used as a filling for padded jackets.



The Wildlife Trust for
Lancashire
Manchester &
North Merseyside



Thank you

Sarah Johnson
sjohnson@lancswt.org.uk



The Wildlife Trust for
**Lancashire
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Thank you

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