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Restoring the carbon storage capacity of peatlands: Demonstrating innovative techniques for carbon reduction

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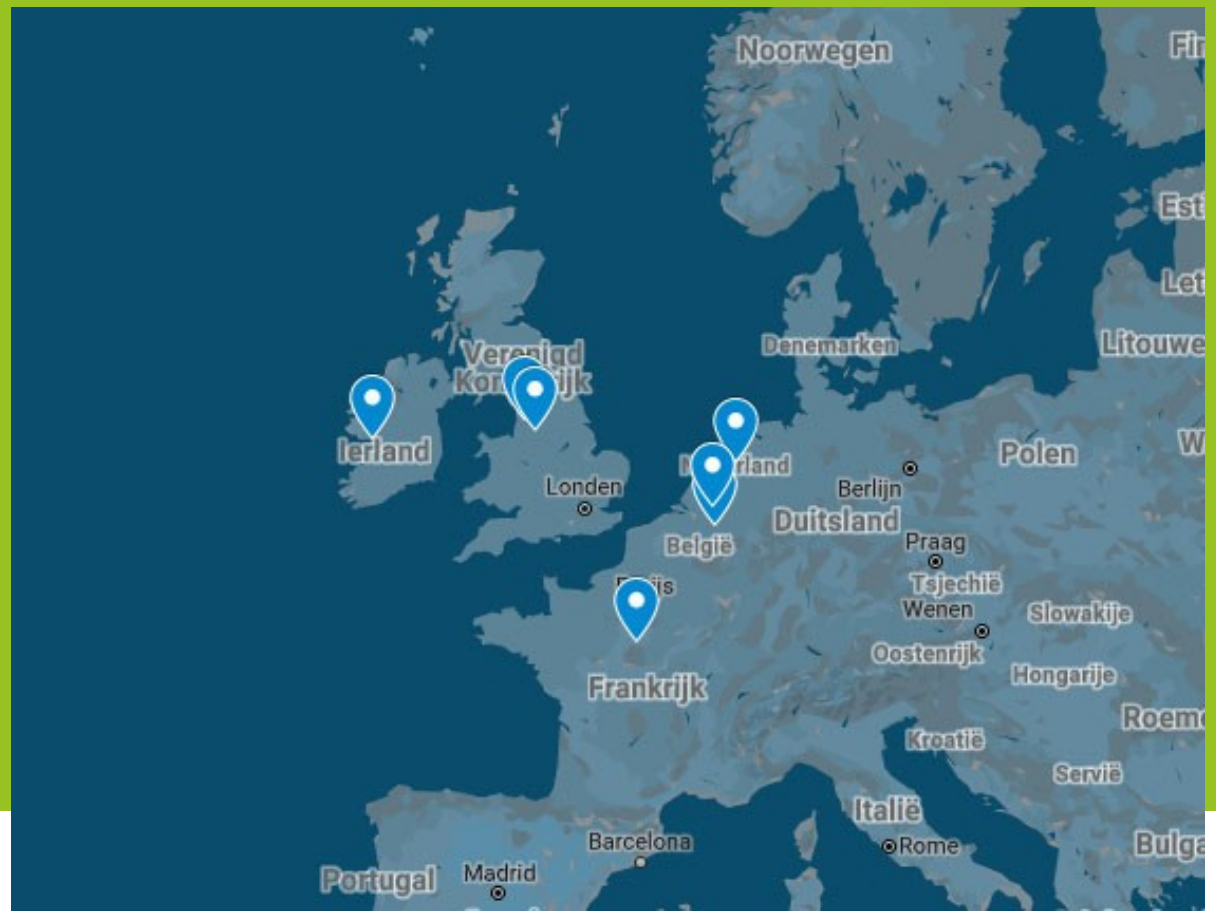
7 pilot sites across 5 countries

In Belgium, The Netherlands, France, Ireland and United Kingdom



To reduce C-emissions and restore C-storage capacity of different types of peatland

1. Development of reliable measuring methods and predictive models of C-fluxes in peatlands as base for a decision making tool
2. Identify sustainable socio-economic models… and policies to promote peatland restoration
3. Demonstrating new techniques and methods to restore and improve C-sequestration in peatlands

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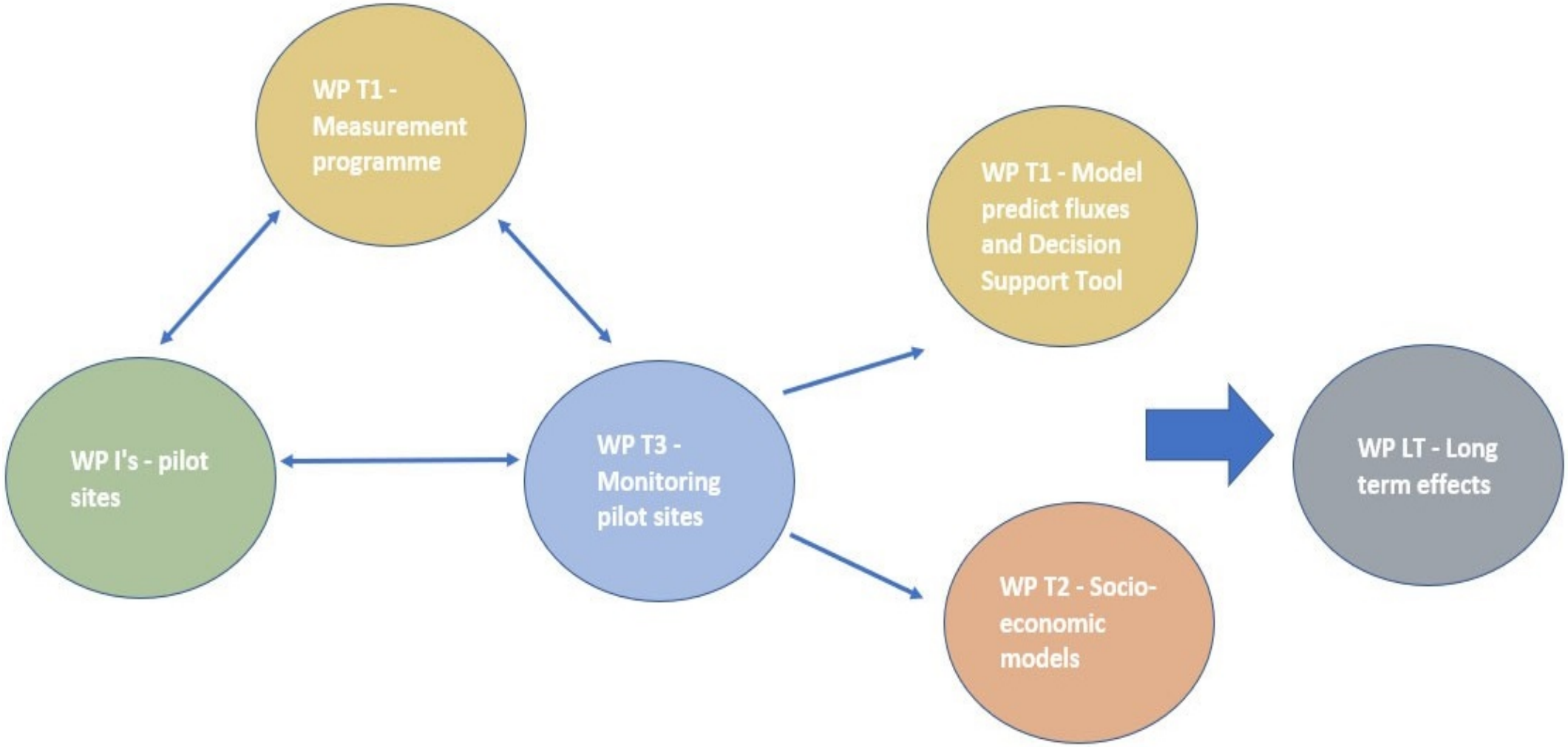
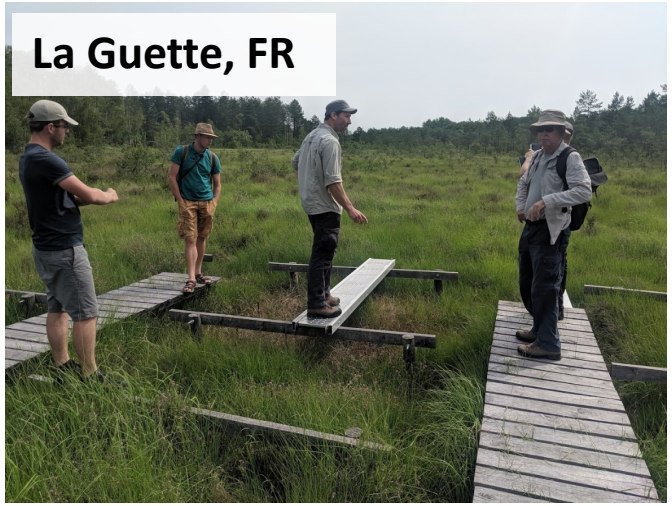
one project, different Work Packages's



Care-Peat pilot sites – at each there is a ‘control’ and a restoration pilot



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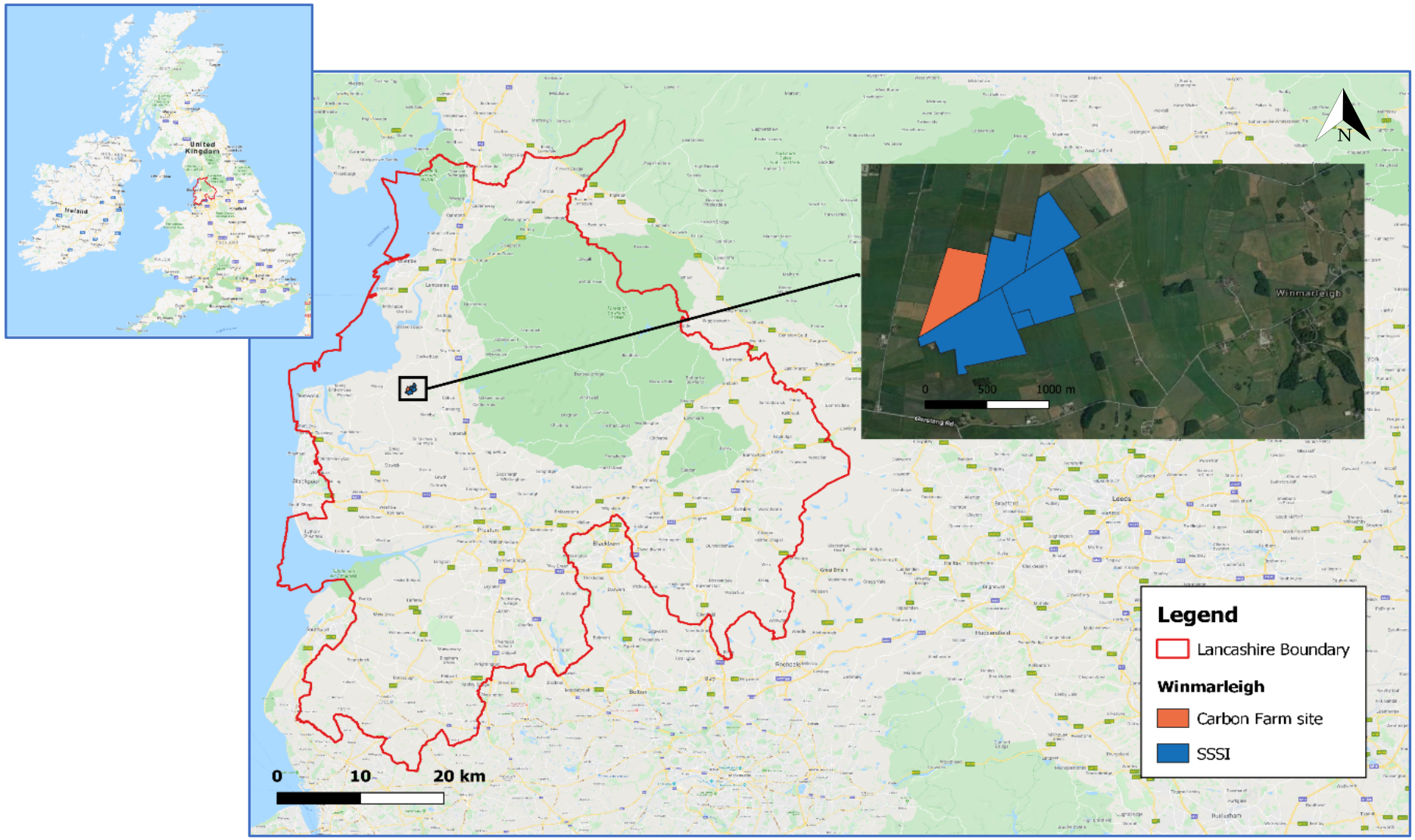
Winmarleigh Carbon Farm

Winmarleigh pilot site



Carbon Farm objective:

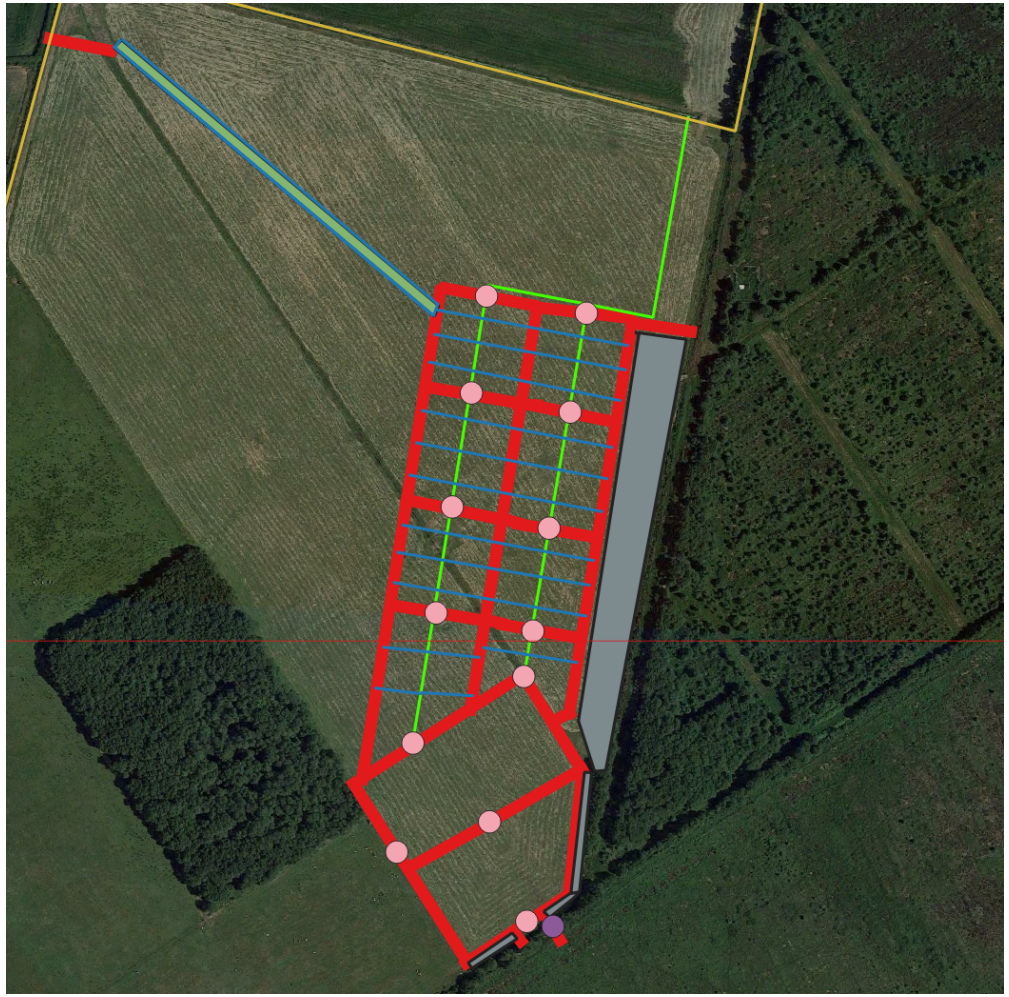
Grow a permanent non-harvested crop of Sphagnum moss for the purpose of storing and protecting carbon in peat soils

Investigating:

- Carbon emission reduction and carbon storage through farmland re-wetting and intensive planting of sphagnum
- Effect on the SSSI nature reserve through re-wetting of this buffer land
- Economic viability of alternative land management techniques for peat-based soils.

Overall design & restoration plan

- Strip top soil (to remove weed seed and added nutrients)
- Re-wet farmland by ditch-blocking and bund creation
- Create water storage areas and irrigation means
- Plant appropriate *Sphagnum moss* species
- Monitor CO_2, C-storage & other GHG emissions on pilot site and control site
- Monitor effect of re-wetting buffer zone area on the adjoining SSSI



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Groundworks started in May 2020

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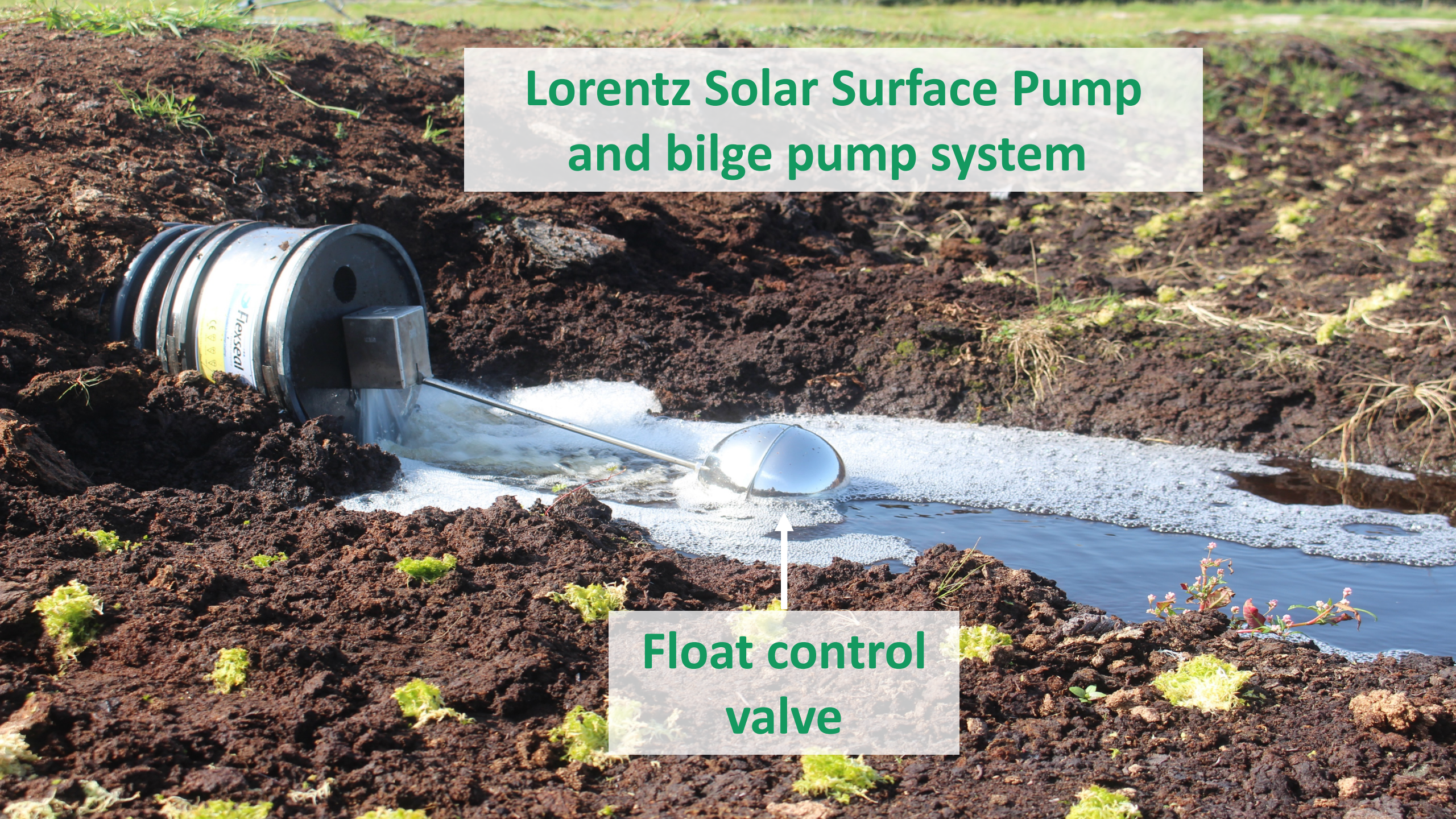
Cells and irrigation ditches


Solar panels


Sump area


Lorentz Solar Surface Pump
and bilge pump system
Float control
valve

Over 150,000 *Sphagnum* plugs planted

150,000 of these 'plugs' are being planted

Greenhouse gas monitoring

Carbon farming – opportunities

- Provide more sustainable systems for farmers that maintain wet conditions, protecting peat soils, reducing CO2 emissions, cleaning water, benefiting wildlife
- Demonstrate to farmers what they can do with poor quality marginal land that could bring them greater revenue in the future
- Contribute to the data UK government needs to develop new funding schemes
- Help to bring in carbon-related revenue for land

360° video with Dr Chris Field, Manchester Metropolitan University:
https://www.youtube.com/watch?v=zc1NXmUrXaQ&feature=youtu.be

Carbon Farm video on YouTube:
https://youtu.be/qSPwQKwh-W4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Questions?