

PILOT SITE DESIGN

VALANCE LODGE

WEARDALE AND TEESDALE, THE UNITED KINGDOM



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The pilot site in this area is Valance Lodge, located on the Weardale and Teesdale watershed where blanket bog forms the headwaters. These sites are degraded due to historic overgrazing, burning and drainage, which accelerate the cycle of degradation and lead to the elimination of Sphagnum cover.

Sphagnum is a key component of fully functioning blanket bogs, stabilising the bog surface, increasing surface wetness and contributing to peat formation. DCC have carried out restoration works on the most degraded areas of Valance Lodge to block erosion gullies and stabilise bare and eroding peat, but the vegetation community in the surrounding areas is deteriorating.

By inoculating these areas with Sphagnum clumps and plugs, we will reverse the process of degradation in the vegetation community and provide a buffer zone around the restoration works, restoring the blanket bog to a peat-forming state and preventing further erosion.

Size of pilot site: <10 Ha

Peatland type: blanket bog

Land use: Sheep grazing and grouse shooting

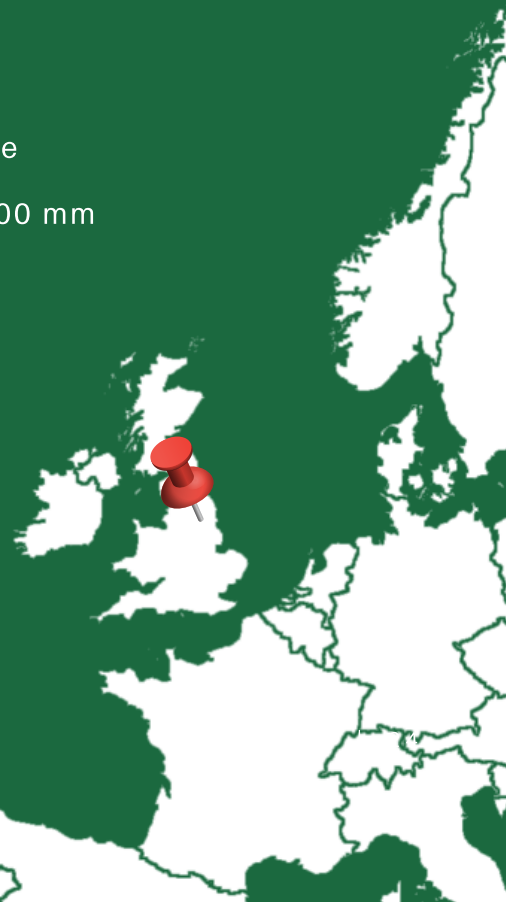
Crop type: Sphagnum

Water level: 2cm

Climate type: Temperate

Total annual rainfall: 900 mm

Target CO2 reduction:



CHALLENGES

Current peatland restoration activity over the North of England is constrained by the limited supply and high costs of plug plants required for the re-vegetation of bare peat.

GOALS

- Monitor vegetation abundance and changes in composition;
- Use vegetation composition as a proxy to evaluate greenhouse gas flux;
- Analyse dipwells and groundwater chemistry to monitor ground water levels;
- Install crest tubes to assess water quality and subsurface and overland flow rates;
- Facilitate the development of 25 Countryside Stewardship agreements with landowners in the North Pennines to ensure they include the restoration plans and capital funds for peatland restoration.

POSSIBLE BUSINESS MODEL

Improve the current limited supply chain of moorland plug plants through the establishment of new specialist nursery capacity which would foster sustainable farm diversification and local employment.



PILOT SITE TIMELINE

Autumn/winter 2019: Engage with landowners and determine inoculation areas

Spring/summer 2020: Establish monitoring quadrats and carry out baseline survey. Source plug plants.

Autumn/winter 2020: Carry out inoculation works

Spring/Summer 2021: Carry out monitoring