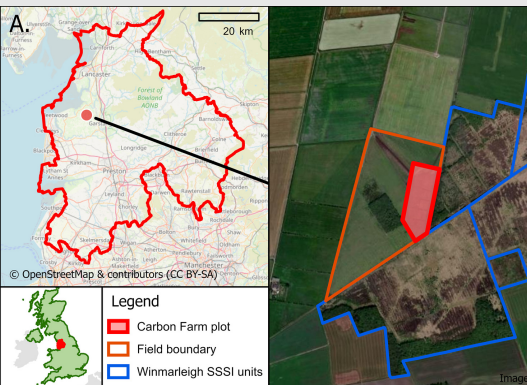


# PEATLANDS FOR CLIMATE AND BIODIVERSITY

## INTERREG NWE CARE-PEAT



United Kingdom



## Habitats and Species

The carbon farm is not being managed specifically for biodiversity, but to reduce greenhouse gas emissions, protect existing soil carbon and sequester further atmospheric carbon.

Species found on the carbon farm include:

- *Sphagnum* moss

Other species found in the area and supported by the carbon farm re-wetting works (which have helped to stabilize hydrology on the adjacent SSSI) include:

- Large heath butterfly
- Dragonfly and damselfly species
- Water vole
- Various bird species including: snipe, short-eared owl, avocet, kestrel, pink footed geese, meadow pippit
- Sundews
- Cotton grass
- Bog cranberry
- Bog myrtle

## Management

Lancashire Wildlife Trust



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

## Winmarleigh carbon farm

### Introduction

The Winmarleigh carbon farm is a pioneering project that is working to restore the carbon storage capacity of lowland agricultural peatlands.

Located in North-West England, the area was originally lowland raised peat bog that was drained for conversion to agriculture in the 1970's. It was mainly used as grazed pasture for sheep.

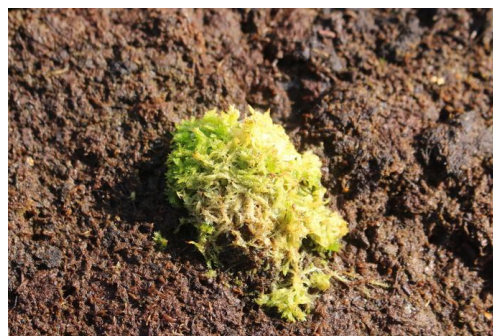
The carbon farm was created as part of the Care-Peat project, by re-wetting the peat through the installation of bunds and blocking field drains. The top 10 cm of nutrient enriched topsoil was removed to reveal the peat below the surface. The area was divided into eight cells which were sub-divided by irrigation channels. These are fed from a water storage reservoir to ensure a stable hydrology across the site. 150,000 plugs of *Sphagnum* mosses were then planted to start re-vegetating the carbon farm site.

The aim of the carbon farm is to protect the remaining carbon in the peat, and to demonstrate alternative land management methods for drained agricultural peatlands. The idea is that the carbon farm model could be used by farmers on peat soils as a way of reducing greenhouse gas emissions whilst keeping the land financially viable. It is envisaged that carbon farming could be funded through a mixture of public and private finance, such as government subsidies and private carbon offsetting schemes.

Through the Care-Peat project we have run a number of tours and workshops with local farmers, landowners, nature conservation groups, UK peatland policy makers, and other stakeholders.

### Lessons learnt and the future

- Replicate the carbon farm on a larger scale to ratify carbon saving data required for carbon credit schemes etc.
- Experiment with the use of nurse crops such as *Phragmites* (common reed) to remove nutrients from ground without the need for topsoil stripping.
- Ideally carbon farm construction would take place over winter, allowing the water retention reservoir to fill up and hydrology to stabilize before sphagnum is planted to help mitigate any effects of drought.



One of the thousands of plugs of sphagnum moss that have been planted at the Winmarleigh carbon farm

### Issues & key challenges

Policy issues:

- Lack of government subsidy clarity – there has been significant interest from landowners in the carbon farm model, but they understandably need confirmation of which government subsidies will be available to support the uptake of this.
- Lack of carbon offsetting schemes and prices – the UK carbon offsetting market is currently not entirely suitable for carbon farming. There is also a variation in potential carbon credit prices which makes it difficult to confirm the financial viability of carbon farming for landowners.

Management issues:

- A period of drought in the first summer after the carbon farm was established, caused some of the sphagnum to have slowed growth. However, since then the hydrology on the carbon farm has regulated and growth has been strong, with full sphagnum coverage expected within the next few years.
- High set up costs – as this is a pilot scheme, the set up costs were higher than would be expected for private landowners or farmers. It would be useful to repeat the carbon farm on a larger scale to see if there are any economies of scale in the set-up costs.
- Weeds – there has been higher weed growth than was expected due to a deeper seedbank than was predicted and wind blown seeds from adjacent farmland. However, as the site re-wets and the sphagnum further acidifies the peat then these should naturally die out.

### Outcomes & benefits

- The effect of re-wetting the peat saw a 86 per cent reduction in greenhouse gas emissions from the site, in just one year. Further reductions and eventual carbon sequestration is expected as the sphagnum mosses grow to cover the entire site.
- Species that have benefitted from the restoration of the site:
  - Sphagnum moss – this keystone species of peatlands had been completely lost from the carbon farm site due to the drainage and conversion to agriculture.
  - Dragonfly and damselfly species (black darter) now use the water retention reservoir and irrigation ditches

Interreg  
North-West Europe  
Care-Peat  
European Regional Development Fund



Care-Peat project

<https://nweurope.eu/care-peat>

Information sources

<https://www.lancswt.org.uk/our-work/projects/peatland-restoration/winmarleigh-carbon-farm>  
<https://www.mmu.ac.uk/science-engineering/about-us/news/story/index.php?id=14617>



Eurosites

Eurosites Factsheet

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[info@eurosites.org](mailto:info@eurosites.org)