Pennine PeatLIFE objectives

1. Restoring 1,353ha of severely damaged blanket bog over 16 sites in northern England.
2. The trialling of a financial payment for ecosystem services mechanism called the UK Peatland Code.
3. Demonstrating the viability and affordability of unmanned aerial vehicles (UAVs) to monitor vegetation change post restoration.
4. Disseminating the results of the project at the local, national and international level.
What is peat...

Peat is an accumulation of partially decayed organic material that forms in waterlogged, acidic, oxygen-poor conditions. As plants die, they slowly decompose and over time the organic matter accumulates as peat.

A peatland is an area with a naturally accumulated peat layer at the surface that is at least 30 cm thick. In the UK the formation of peat is a very slow process with average peat layer growth being 1 mm per year. There are six different kinds of peatlands but the one of main interest to Pennine PeatLIFE is blanket bog.

The UK has 13% of the world’s blanket bog despite having only 0.16% of the total land area of the earth.

...and why is it so important?

**Biodiversity**

Despite their importance peatlands are still undervalued as an ecosystem. Blanket bog is an internationally important and protected habitat, however it is still under threat from unsustainable management practices. Blanket bogs are as important as tropical rainforests and the species that rely on healthy peat ecosystems include the curlew, sundew, yellow marsh saxifrage, red grouse and common lizard.

**Carbon**

As peat forms it locks in carbon contained in the plant matter and prevents it from being released into the atmosphere. Because of this, peatlands are described as a ‘sink’ for carbon dioxide rather than a source of it. Just as glaciers lock water in a frozen state for many centuries, healthy wet peatlands store carbon in a similar way. It is estimated that there is twice as much carbon stored in peatlands globally than there is contained in all the forests on earth.

**Economy and culture**

Peatlands are important to local communities. They have long been used for farming, shooting and recreation and have inspired artists and writers for centuries.

**Historic environment**

Peat is a living history book which can show us what past environments were like, how people lived and even what they ate thousands of years ago. Since peat is a waterlogged acidic environment it acts as a storage medium for ancient pollen, animals, plants and even cultural artefacts.

**Water**

Blanket bog is a type of peatland that is dependent on rainfall to form. When healthy and vegetated it provides a filtering function for water, making it cleaner and more usable. Peatlands also reduce the likelihood of flooding as they buffer the effects of heavy rainfall and slow its release into watercourses. At a time when climate change is leading to water shortages, more extreme weather events and more frequent flooding, healthy peatlands can provide a host of ecosystem services to society.