



**Yorkshire**  
Wildlife Trust

1 St. George's Place,  
York, YO24 1GN

☎ 01904 659570

🐦 @YorksWildlife

📘 Yorkshire Wildlife Trust

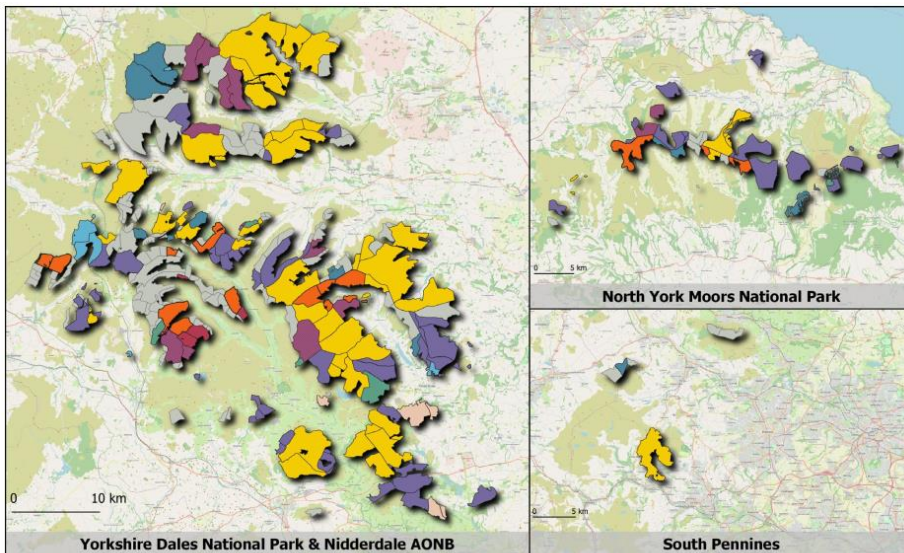
📷 yorkshirewildlifetrust\_

Yorkshire Wildlife Trust is a company limited by guarantee. Registered in England No. 409650 and is a registered charity No. 210807

## Yorkshire's precious peatlands

In 2008 we started practical restoration work on Yorkshire's heavily degraded peatlands, preventing more damaging carbon emissions from being released and recreating the valuable peatland habitats in our uplands. Through the [Yorkshire Peat Partnership](#) (YPP), c40,000 hectares or 42% of Yorkshire's blanket bog has now been restored, however there is still much more to do in the uplands. We have started working on areas of lowland peat across the Humberhead Levels, identifying areas under arable or pasture farming which could be restored or farmed more sustainably to reduce carbon emissions. We are now looking to expand this work into the Vale of Pickering.

Yorkshire Peat Partnership has always been led by data and evidence in the work it carries out, we use evidence provided by other members of the peat practitioner community but also strive to develop our own projects to answer the questions and problems we have carrying out our peatland restoration work in our Yorkshire patch. In the last few years YPP has developed its own research, evidence, data and development team whose work is to support and guide the restoration staff and develop innovative ways of carrying out our work.



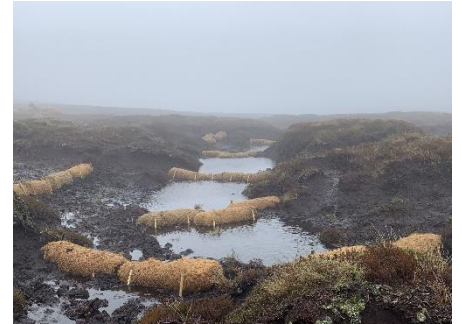
Current progress as of March 2023

- |                |                 |                       |                    |
|----------------|-----------------|-----------------------|--------------------|
| DRAFT BOUNDARY | MANAGEMENT PLAN | WORK ONGOING          | UNABLE TO PROGRESS |
| SURVEY STARTED | NO WORK PLANNED | INITIAL WORK COMPLETE |                    |
| SURVEYED       | WORK AGREED     | WORK COMPLETE         |                    |

2022/2023



Base map from OpenStreetMap and OpenStreetMap Foundation. © OpenStreetMap contributors.



[ywt.org.uk](http://ywt.org.uk)

Yorkshire Wildlife Trust is the only charity entirely dedicated to conserving, protecting and enhancing Yorkshire's wildlife and wild places

## Projects

There are several projects which we are looking to carry out next year:

### 1. Research project - Flow monitoring

Peatland restoration slows the flow of water and reduces flood peaks, however there is almost no research to prove it. Our funding relies on us showing this fact, so we need to be monitoring the flow of water as it comes off our peatlands. The Environment Agency is willing to provide what funding it has for such research, but it is a small amount, and we need to expand this project to more sites. The project involves installing little V-notch weirs or blocks in gullies and using automated loggers to monitor the water flowing through this fixed gap, so we know exactly how much is moving through the gully. The more we are monitoring flow of water off our peatlands the better we'll be able to show our restoration is good for water and people.



Figure 1: V-notch weirs

### 2. Research project - Shrinking Gas Monitoring

Measuring the fluctuations of the gases carbon dioxide and methane across peatland habitats is key for understanding the carbon emissions from these landscapes. Therefore, identifying how successful restoration and rewetting is at decreasing emissions and making bogs that absorb carbon rather than emit it. Our current gas monitoring kit weighs over 25kg and must be carried long distances in a stretcher across sites which means we do very little gas monitoring. Our colleagues at Manchester University have shrunk all but the methane sensor onto a tablet sized unit, which is cheaper to make and easy to train anyone on how to use them, allowing us to increase data obtained. But we need to finish the development, manufacture and trial using them.



Figure 2: GHG flux equipment

### 3. Species reintroduction - Missing mosses *Austinii* Powers and the fabulous *Fuscum*

There are mosses missing from our peatlands: *Sphagnum Austinii* and *Fuscum*. These *Sphagnum*s have been present for thousands of years and have disappeared recently most likely due to man's activities. Elsewhere these species are indicators of high-quality bogs and if we want fully functioning peatlands we need to bring them back. We need funding to go and collect these *Sphagnum*s from Wales or Scotland and bring them back to Yorkshire, buy kit to propagate the mosses in polytunnels before reintroducing them to trial sites and monitoring which conditions they thrive in. The aim will be to have these species planted across the peatland in the North of England, getting us a step closer to the pristine blanket bogs of the past.



Figure 3: *Sphagnum Austinii* and *Fuscum*

### 4. Species reintroduction - (White faced darter dragonfly and large heath butterfly)

We are looking to carry out scoping work to investigate if it is possible to re-introduce these two insect species, looking at where we would locate them, assessing the habitat, gaining consents, understanding the relocation process and identifying partners to work with (students and universities for instance). Once surveys are completed we can look into the possibility of releasing these species in 2025.

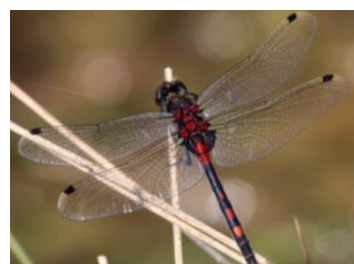


Figure 4: White faced darter

## 5. Eyes on the Bog

This is a national IUCN citizen science programme that YPP has been rolling out across our sites in Yorkshire and working with partners in the wider Great North Bog to get sites out across the operational area. It is a simple monitoring method, including looking at peat depth, water table, vegetation and taking photos, that anyone can do. Volunteers, local groups, schools, land owners or stakeholders can all monitor their own plots and we have seen an increasing interest in people wanting to take part. We need to purchase more kits for volunteers to use alongside training new volunteers on how to set up and monitor their plots.



## 6. Restoration Monitoring

In order for us to continue being industry-leaders in peatland restoration we need to conduct ongoing monitoring on sites where restoration has been undertaken. We assess the success rate of the various interventions such as different damming techniques and materials, banks stabilisation methods, re-profiling and revegetation methods. This information influences our future restoration work by allowing us to identify what works where and for how long. We need to dedicate resources into surveying and data analyses which will be written up and reported back into the peatland restoration community to guide further work.



Figure 5: Broken bale dam 8 years after installation

## Funding Request

Our peatland programme is incredibly successful and is spearheading the way peatland restoration is carried out across the uplands of the UK and further afield. Through working with various universities, we ensure that the science guides our future restoration works and we are always looking for ways to improve our efficiencies in this area. Technology provides a huge opportunity for us to increase the amount of work we can achieve.

Core activity	Details	Costs
1 – Flow Monitoring	Installation of automated loggers and staff monitoring time	£15,000
2 – Shrinking Gas Monitoring	Donation towards the development and manufacturing costs of smaller units.	£15,000
3 - Species reintroduction - Missing mosses	Collect and propagate Sphagnum mosses	£15,000
4 – Species reintroduction – dragonflies and butterflies	Surveying suitability of sites for species reintroduction	£8,000
5 – Eyes on the Bog	Citizen science kits for bog monitoring	£5,000
6 - Restoration Monitoring	Follow-up surveying and monitoring costs	£8,000