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A year of revegetation on a drained pool, Thorne Moors

# Welcome to Issue 18 of Moor Space

This year we have experienced another very dry summer. Dry conditions bring a range of challenges to the moors, including an increased risk of wildfire. To help reduce this risk, we took the unusual step of temporarily closing the National Nature Reserve (NNR) to visitors. This was the first time we have done so without an active fire on site, and it may be something we need to consider again in future years due to the shift in climate to hotter, dryer summers.

The dry weather also affects the peat itself. When bare peat dries out, it can oxidise and release stored carbon dioxide ($CO_2$) into the atmosphere. Dry conditions also slow the growth of beneficial vegetation, particularly the young sphagnum moss and cotton grass plugs planted as part of the LIFE Moor Space project.

Alongside planting young vegetation, we have been trialling the translocation of mature bog plants. This involves carefully moving established plants from other parts of the site into the project area, where these species are currently less common. Although we would expect these plants to spread naturally over time, the process could take decades.

So far, we have translocated cross-leaved heath and sundew. The sundew adapted well to its new locations and appears to be thriving. Cross-leaved heath, however, has proved much more challenging. The mature plants were difficult to extract because they have grown in long, straggly stems through hummocks of sphagnum and cotton grass. Unfortunately, the survival rate for cross-leaved heath has been low.

We are currently working on translocating additional species and have identified donor sites for bog rosemary and bog cranberry. While these are small-scale trials, they will help us understand which species are most suitable for translocation and allow us to share our findings with others undertaking similar restoration work.

Looking ahead, we will be planting a further 6,000 sphagnum plugs this autumn, with the help of volunteers. This will be the final phase of our plug planting programme.

I often highlight our YouTube channel **(@lifemoorspace)** in these articles, but in this issue I would also like to draw attention to our website: **www.humberheadpeatlads.org.uk**. There you can find previous editions of this newsletter, a variety of short articles, and, in the future, additional reports and data collected through both the project and other work that takes place on site.



**Paul Schofield**
***LIFE Moor Space Project Manager***

## Restoring our peatlands

We've been carrying out our usual water level monitoring on Crowle Moors, and visiting the site year-round has shown us our usual bog-specific species; fluffy cottongrass, sphagnum mosses, sundew, bog cranberry, bog rosemary and many more. We are, however, seeing the increasing effects of the climate crisis; weather extremes are drying out the land, degrading our peat and making us more susceptible to flooding. Our collective efforts are essential in restoring our peatlands to become resilient against this; holding water to mitigate against both flood and fire risks whilst protecting our precious species.

Over the coming months, we will be holding a series of on-farm and conference style events for farmers, landowners and land managers in the area. If you are interested, please contact Megan Hall with ideas for what you would like to learn more about, and who you would like to hear it from. Working together with everyone's priorities in mind is the key to us protecting a landscape that will, in turn, protect us.

We are always on the lookout for dedicated volunteers to be a part of our team, so please do get in contact if you'd like to take ownership and help out on Crowle Moors, or if you have any questions about this.



***Megan Hall***
***Project Officer***



# MOOR SPACE

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## Contacts


**Moor Space is produced and edited by Natural England as part of the LIFE Moor Space project.**

**Restoring the Humberhead Peatlands –**
LIFE Moor Space LIFE/20/NAT/UK 000697. Funding from the European Union's LIFE Nature and Biodiversity Programme to restore degraded raised bog within the Thorne Moors SAC. Natural England are working in partnership with Lincolnshire Wildlife Trust to deliver this project.
**Contact: humberhead.peatlands@naturalengland.org.uk**

**Lincolnshire Wildlife Trust** – Owns land on Crowle Moor and manages it as a Nature Reserve.
**Contact: 01507 526667 ✻ info@lincstrust.co.uk**

**Natural England** – Natural England owns land on Thorne Moors, Goole Moors and Hatfield Moors. It is all part of the Humberhead Peatlands National Nature Reserve.
**Contact Senior Reserve Manager: 07770 408259.**
**www.gov.uk/natural-england**

### Other organisations

**North Lincolnshire Council** – Own and manage land on Crowle Moor and maintain access to this and other land nearby.
**Contact: 01724 729000 ✻ environmenteam@northlincs.gov.uk**

**Doncaster Metropolitan Borough Council** – Publicises access to and around the Moors.
**Contact: 01302 736000 ✻ publicrightsofway@doncaster.gov.uk**

NNR Emergency contact number **07516 150432.**

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**http://www.facebook.com/humberheadpeatlands**
**humberhead_peatlands**
www.humberheadpeatlands.org.uk

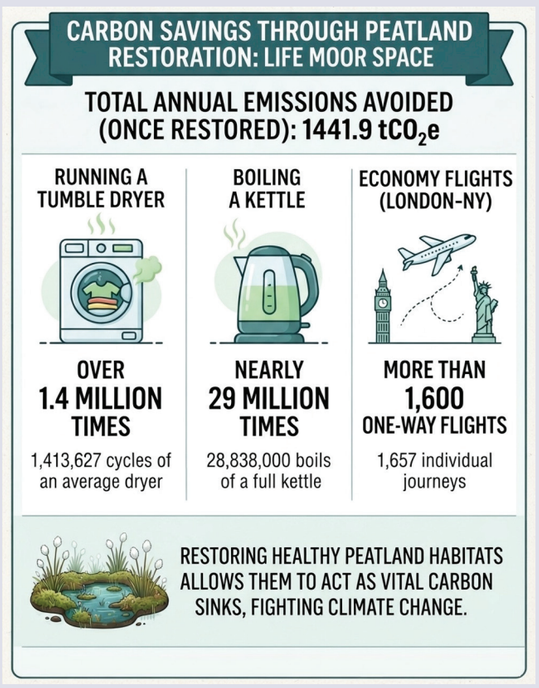

**FRONT COVER IMAGES:** Viewing tower and cotton grass on Hatfield Moors © Paul Schofield
Left: Male Scare Vapourer moth © Paul Schofield
Right: View over pool on Thorne Moors © Paul Schofield

## Carbon Calculations Thorne Moors

Using the Peatland Code Carbon Calculator, a carbon assessment was undertaken for Thorne Moors to quantify greenhouse gas emissions associated with different habitat conditions across the site. The analysis used high-resolution drone surveys and GIS mapping to classify land cover into categories including bare peat, modified bog and non-peatland features. By accurately mapping the extent of each habitat type, emissions factors from the Peatland Code framework were applied to calculate the site's annual carbon balance. This evidence-based approach provides a robust assessment of how habitat condition influences greenhouse gas emissions and highlights where restoration activity could deliver the greatest climate benefits.

Different peatland conditions emit and store carbon at different rates. Areas of exposed bare peat are associated with the highest emissions due to oxidation and erosion, while modified bog habitats continue to release carbon where hydrological function has been altered. Within the 428 hectare LIFE Moor Space project area, 34.54 hectares of bare peat emit approximately 612 $tCO_2e$ each year. A further 319.79 hectares of modified bog contribute around 802.68 $tCO_2e$ annually, while drained artificial features account for an additional 27.19 $tCO_2e$. Together, these habitats generate an estimated 1441.9 $tCO_2e$ per year, providing an important baseline against which restoration success and future carbon savings can be measured.

Although 1441.9 $tCO_2e$ per year may appear relatively small in isolation, it is equivalent to running a tumble dryer over 1.4 million times, boiling a kettle nearly




29 million times, or taking more than 1,600 one way economy flights between London and New York. When multiplied across the UK's degraded peatlands, however, the scale becomes far more significant. UK peatlands are estimated to emit more than 15 million tonnes of $CO_2e$ annually, making them one of the country's largest land-use sources of greenhouse gases. Peatland restoration helps to halt these emissions and, over time, enables healthy peat-forming habitats to once again function as carbon sinks, removing and storing carbon from the atmosphere.



**Lewys Wheeler**
***LIFE Moor Space Technical Officer***

## Take Care

- There are many old peat workings, drains and water courses. You are strongly advised to keep to way marked walks and existing tracks.
- Please take responsibility for your own safety. In hot weather you will need a sunhat, drinking water and insect repellent.
- Dogs must be kept under effective control at all times. You must keep your dog on a short lead between 1 March and 31 July and all year round near farm animals.
- Camping, fishing, barbeques, motorcycles, horses and cycles are not allowed. Cycles are permitted on the designated route only at Hatfield and horses by permit only at Hatfield.
- Do not leave valuables in your car.
- Danger deep water. No swimming.
- Snakes live here. Do not touch them.
- Prepare for your visit by wearing suitable outdoor clothing – you will need to wear stout shoes or wellingtons.

### Please follow the Countryside Code

- Be safe, plan ahead and follow any signs.
- Leave gates and property as you find them.
- Protect plants and animals and take your litter home.
- Keep dogs under effective control.
- Consider other people.

### Facilities

- There are toilets on Hatfield Moors at the Boston Park car park but none at Thorne Moors – the nearest being in the town.



## Nature for Climate

It's with a sorry smile we see Sarah Pullien, Yorkshire Wildlife Trust's lead on the Nature for Climate project delivering peatland restoration on Hatfield and Thorne Moors, move onto pastures new at Yorkshire Water after 5 years of tireless work on the moors. She has been invaluable, not just for the work she has put in moving huge areas of the moors towards restoration with the implementation of large infrastructure projects, but also for building relationships with the people that make the moor extra special. Her influence will be missed!

Back in March, we paired up with the wonderful volunteers at the Lindholme Old Moor Management Group, planting out the sphagnum plugs grown in their 'Mossery' with additional volunteers from Gomde UK, the National Trust and Yorkshire Wildlife Trust. We planted out in areas surveyed to be suitable for increasing the variety of sphagnum species on a windy, cold Wednesday. The culmination of different people coming together to help restore Hatfield Moor felt special; not just for the ecological impact of the day, but because it was a reminder of that community feel that is often rare to find.

We branched out further into the winder peatland community as well this year. Sticking with the sphagnum-theme, we started 2026 by exchanging visits with BeadaMoss Micropropagation, one of the largest sphagnum growers and distributers in the UK. We gave them the grand tour of Hatfield Moors, helping them understand the challenges facing the restoration of lowland sites. In return we got the grand tour their base of operations just outside of Loughborough. Huge polytunnels filled with carpets of green moss, with NDA protected watering systems and humidity controls, they seem to have cracked the code on successful mass-growing of these precious plants.

Closer to home, we are planning another year of works to further tackle the bare peat expanses on Hatfield Moors – last winter we began installing sluices on an area colloquially known as 'Water World", and shipped over some bespoke Dutch sluices to tackle a series of lakes on the west of Thorne Moors. Continuations of both these works are planned for 2026, to reduce one of the moors' largest emitters of GHGs.

Efforts to both quantify and control the extent of invasive rhododendron continues to be a priority of our project. A survey is underway to map a baseline of the rhododendron on the sites, and a continuation of control on areas of Thorne Moors to create an 'terra nullius' for the plant for future works to continue to build from.

This year has been a fantastic legacy for all of Sarah's hard work, and we and everyone else wish her all the best in the future.



**Joe Carter**
***Project Assistant on the Nature for Climate Restoration Grant at Yorkshire Wildlife Trust.***



Sphagnum planting partnership working



Sphagnum planting

## Walks and Events Coming Up

**Ramblers Wellbeing Guided Walks**

Wednesdays – of varying lengths meeting at the Boston Park car park, Hatfield Moors. First & third Weds of the month 9.30am. Second and fourth Weds of the month at 2pm. **No need to book.**






Sundew Plume Moth


Sundews


Bog rosemary


Nightjar

## Click-happy

The Humberhead Peatlands are famous for lots of different kinds of wildlife: birds such as cranes and nightjars; bog plants such as sundews and bog rosemary; and our fabulous snakes and lizards. However, it is our insects that really stand out as being superbly special. With rare beetles such as the Thorne Pin-palp and the Mire Pill-beetle, moths such as the Sundew Plume Moth, and the Large Heath butterfly, Thorne and Hatfield Moors are home to an incredibly diverse and special assemblage of invertebrates.

In 2021, we discovered another very special species: a click beetle with bright red elytra (wing cases) called Ampedus pomonae. At about 15 mm long, it is a little bigger than some of our other special beetles and is easy to spot if you are in the right place at the right time. It does not have a common name, perhaps we should call it the Hatfield Redcoat. As well as being very pretty, it is incredibly rare. It has been found on two bogs in the south of Ireland and can also be found in a few places in continental Europe.



Ampedus pomonae

Lots of people have been looking for beetles on the Moors over the last 50 years, so why did we only find it five years ago? The location where we found it gives us a clue. The first specimen was spotted sunbathing on a birch leaf close to our reconstruction of the Neolithic trackway, next to the metal viewing platform at the end of the easy-access trail on Hatfield Moors. Subsequently, we found it in the timbers of the reconstructed trackway and nearby.

Click beetles have grubs that feed in dead wood. Perhaps some beetles were moved to this easily accessible location when the wood used to construct the trackway was brought from less accessible areas of Hatfield Moors. If so, the species may have survived on the Moor in an out-of-the-way location for centuries, only recently reaching an area where we are more likely to find it.

We have a lot of birch trees on Thorne and Hatfield Moors. They are relatively short-lived trees, especially where we have restored the peatland hydrology, so there is a considerable amount of dead wood on the nature reserve. This supports a rich diversity of beetles and other insects. However, we have also found some "Hatfield Redcoats" running across bare peat on Hatfield Moor, away from dead trees. We think the grubs may actually be feeding in damp, fossilised wood beneath the peat, left over from the ancient forest that grew here 4,000 years ago before it was swamped by the growing bog.

We hope one day to find this rare click beetle on Thorne Moors too. If we do, perhaps we will have to rename it the Humberhead Redcoat.



**Julian Small**
***Senior Reserve Manager***






## How do I get to Humberhead Peatlands NNR?

The closest towns to the NNR are Goole, Thorne, Doncaster, Scunthorpe, Crowle and Hatfield.

**By public transport**

Rail stations – Thorne North and South. Contact South Yorkshire Transport on **01709 515151**.

Moorends is served by bus from Thorne. Contact Doncaster Tourist Information on **01302 734309**.

Crowle is served by rail and bus. Contact Brigg Tourist Information on **01652 657053.**

Hatfield Woodhouse and Wroot villages are served by a limited bus service.

**To receive future issues of Moor Space**
**contact us at humberhead.peatlands@naturalengland.org.uk**

**How do I contribute to Moor Space?**
**We'd like you to tell us what you think – your concerns and also what you enjoy about the Moors so we can focus on the right subjects in each issue and seek out the most useful information for you the reader. We welcome other points of view, providing they are constructive and supported by facts. Contact as above marking for the attention of the Moor Space Editor.**