



A year at **HONEYGAR** 2023/24

somersetwildlife.org/honeygar



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Introduction

The first time I visited Honeygar I saw that this land represented an amazing opportunity to do something special.

Now, just over three years later, we are close to completing the first phase of this ambitious and important long-term project transforming a dairy farm into a haven for wildlife on the Somerset Levels and Moors.

Our vision for Honeygar is to restore the peatland ecosystem allowing the land to recover from intensive management, keeping the peat wet which locks in the carbon of thousands of years, and watch nature return. Our approach is to test and trial new methods of financing nature's recovery and share our learning with other land owners demonstrating what can be achieved for nature, for farming and for people.

We have made fantastic progress on site and are already seeing species start to return such as snipe, harvest mice and a huge range of pollinators and dragon flies. We have installed all the bunds planned to isolate Honeygar from the drainage system holding water on site to restore the peat, and we've developed exciting and innovative partnerships to monitor changes including. Importantly we are continuing to develop positive relationships with local landowners and are sharing our learning across the UK.

Seeing the changes already happening on Honeygar gives me hope that nature really can and will recover if it is given the space to do so. I'm excited to see what the next year brings, for Honeygar and for how we can share our experiences to inspire wider change. I hope you enjoy reading about the changes we've made at Honeygar over the past year.

Georgia Dent,
Chief Executive Officer
June 2024



Key achievements



Added 7 new bunds as interventions to holding water in the ditches at Honeygar, added to the existing 6, these bunds should raise the water level across the site restoring the peat, locking in carbon and reviving the peatland habitat.



Tested a new mob grazing system, partnering with a local farmer, ensuring the grassland gets the grazing needed benefiting wildlife and soils mimicking natural grazing herds.



A new partnership has been developed with Wilder Sensing, a leading bioacoustics firm, which has resulted in recording 1.3 million bird-calls at Honeygar helping us to identify and monitor species present at the site.



Widespread installation of dipwells across the site to monitor water levels by the ditches and in the middle of the fields, combining with green house gas monitoring and land surface movements, allowing us to monitor the changes to the peat following our interventions (bunds).



The Honeygar Rangers was established in 2023-24, creating a dedicated group of volunteers to help survey wildlife and champion our restoration work.



Our second annual programme of wildlife and ecological surveys was completed recording a variety of species present.



Honeygar has continued to feature as a local and national news story and we have developed dedicated Honeygar social media channels and blogs to bring people with us on this journey to transform degraded peat to a vibrant natural peatland habitat.



68 events and organised visits have been delivered, with over 50 organisations visiting Honeygar this year.

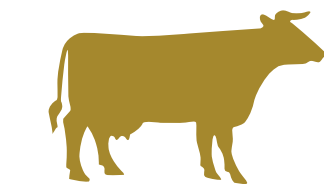


Honeygar is demonstrating new ways of financing land management as a live project with Wilder Carbon having sold carbon credits through this high integrity scheme, and sharing this learning with other landowners.



Honeygar is inspiring change in the Somerset Levels and Moors, including the launch in 2023 of an Environmental Land Management Scheme (ELMS) project. This is a pilot project called "Adapting the Levels" to test and trial how land management and farming can be adapted to enable nature recovery on the lowland peatland habitats of the Levels, based on our experiences at Honeygar.

What is rotational grazing?



Pastured animals are less susceptible to diseases like footrot, pinkeye and worms.

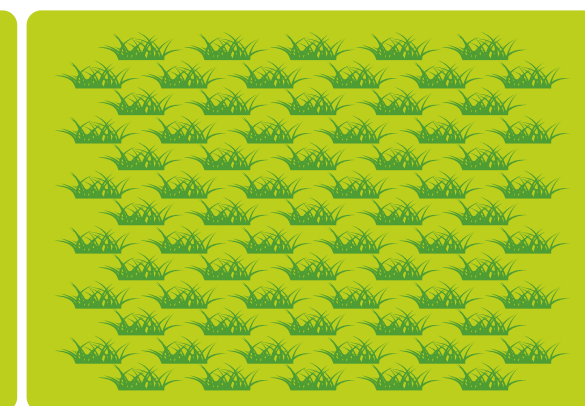


Healthier livestock means less dependence on expensive, potentially harmful antibiotics.

Large pastures are broken into sections called paddocks. Livestock are moved between paddocks when 50% to 70% of cover has been removed.



Paddocks not currently being grazed are left to rest for a period of 25-30 days. This allows plant life to come back to grazing height and develop deeper root systems.



Deeper root systems allow plants to draw more nutrients from the soil. They also help reduce field erosion which can lead to desertification.



Increasing the yield of pasture land helps reduce dependence on grains and feeds, which can be expensive and labourious to grow.



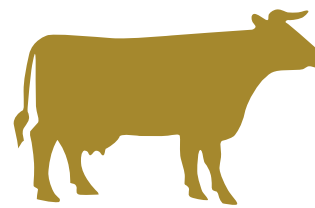
Changes in land management



A big change at Honeygar over the past year has been a trial of new grazing methods with a shift to low-density mob grazing pattern across the site.

As a dairy farm, the original 115 acres of Honeygar Farm (current site was bought in two plots of 115 acres then 84 acres) would have had 120 dairy cows on site. We have reduced this to 40 animals across the 196 acre site, and are working closely with our neighbouring farmers who are providing the livestock. Grazing is necessary for grassland habitats. Our approach is to mimic as far as possible the natural grazing systems of herds of herbivores travelling across the landscape, reducing intensity ensuring the habitat and wildlife thrives.

Honeygar has been divided into compartments of roughly 4 hectares, and the 40 cows are rotate around the compartments changing roughly every two weeks. There are lots of benefits to this more natural grazing approach with an increase in the spread of nutrients from dung, greater variety in the sward lengths of grasses which increases the number of species on site from grassland plants to insects, for example we've seen ragged robin return, a plant that requires a wet, low nutrient meadow. Mob grazing allows plants to establish deeper routes, protecting the peat and reducing the amount of water lost to evaporation.



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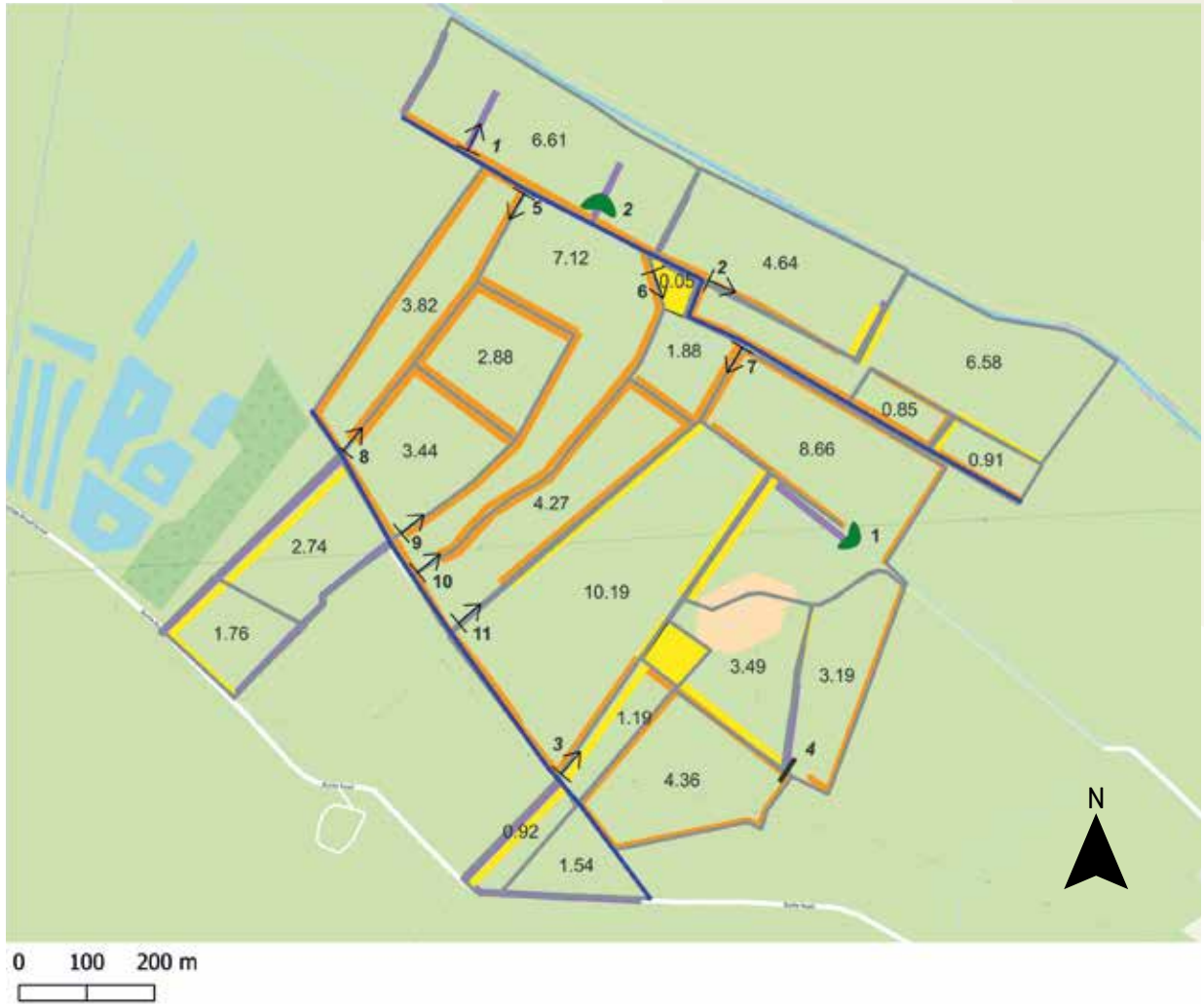


Ragged robin

© Pauline

Hydrological interventions

- Non Return Valves
- Scrub
- Bund
- Margins
- Don't clean
- Scrub blocks
- Compartments
- Honeygar field parcels EH
- OSM Standard



Latest phase of peatland restoration

At Honeygar our central aim is restoring the peatland ecosystem with species returning and protecting the carbon locked up in the peat. As peat is drained and dries out carbon is emitted, and this carbon is thousands of years old, adding to the daily emissions of human life on earth. It's vital we keep this ancient carbon locked up.

Somerset's Levels and Moors is a low-lying, flat landscape with 70% of land used for seasonal agricultural purposes, reliant entirely on managed water levels with summer grazing and wet fields for much of winter. The landscape is effectively watered and drained by a complex array of ditches (some designated as biologically significant in their own right) managed generally by the Internal Drainage Board (IDB). The IDB (made up of a mixture of landowners, local authority representatives and technical experts) set the levels for all of the hydrological blocks on the Levels. These water levels are set to achieve a number of objectives set by the IDB members, which can sometimes mean that peat soils are not maintained wet enough to be protected from turning into greenhouse gasses.

It is a lack of focus on peat specifically that results in a huge quantity of carbon being released each year – an estimated 300,000 tonnes being estimated just from the management of peat, which is equivalent to the annual emissions of town the size of Bridgwater and contributing to climate change. As peat dries out it shrinks which

leads to the shrinkage of land, making the land more prone to flooding and the Somerset Levels even more vulnerable to aspects of climate change such as sea level rise.

Through our interventions of 13 bunds we are aiming to isolate Honeygar from the drainage network, so we can hold the water on our land to keep the peat wet and healthy, avoiding carbon emissions and restoring the peatland habitat. We do this carefully, with consultation, to avoid impacting on any of our neighbours. We are able to say that our previous highest water levels are now our lowest. As the peat continues to recharge and more water is being held on site, we are testing other methods of maintaining higher water tables such as solar pumps.

Honeygar is being developed so it is managed separately to the rest of the moor. The new sluices and structures mean that water is held on Honeygar only, resulting in no Honeygar related changes in water levels for neighbouring land or communities. Keeping the water table high is a key intervention that will protect peat and enhance the site as a wetland for increased biodiversity.

Whilst it is important Honeygar itself is being managed sustainably, it is what we learn there to inform lowland peatlands across the levels and across Western Europe that will have the greatest potential impacts.



Bittern

© John Crispin

We are able to say that our previous highest water levels are now our lowest.



Survey 2023

110
species of moth
recorded
on site



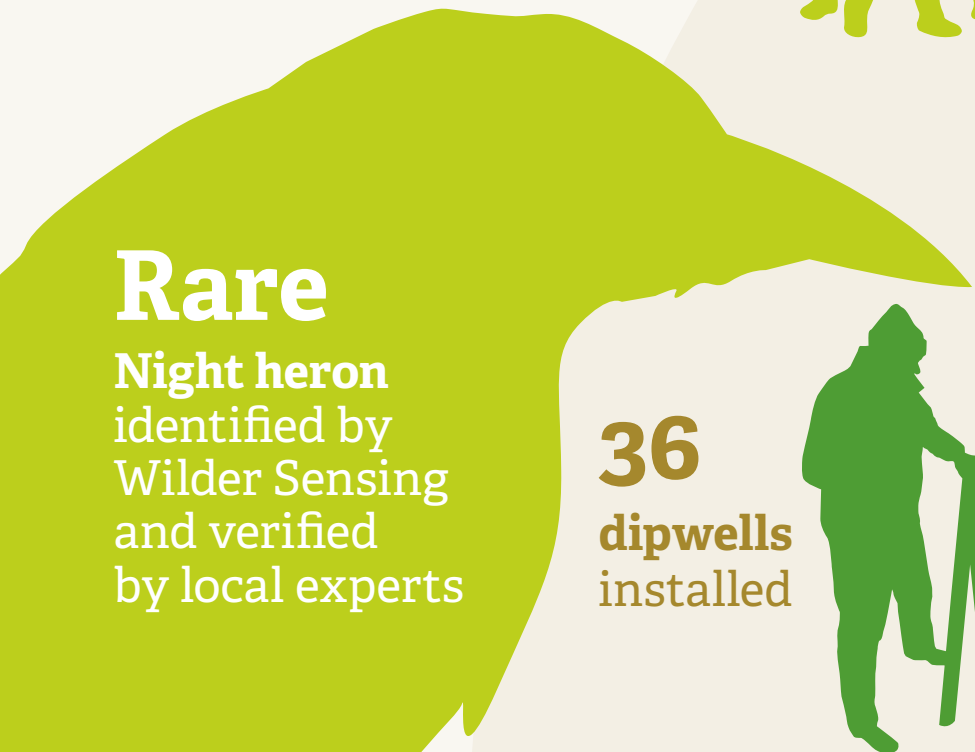
10
Honeygar
Rangers
recruited



108
harvest
mouse
nests
on site



Rare
Night heron
identified by
Wilder Sensing
and verified
by local experts



36
dipwells
installed



+PLUS A NEW RECORD!
for the Westhay area –
Constricted feather-moss
(*Hygroamblystegium humile*)
found at Honeygar

Over 30
Common snipe
recorded on a single
day during winter



Progress 2023-24

We are excited to report that this year has seen significant changes at Honeygar with the site and nature are already responding.

Honeygar is located between Westhay Moor, Tealham and Tadham, Catcott and other Avalon Marshes nature reserves. Recognising that one of the biggest threats to wildlife is habitat fragmentations, we know that restoring wetland habitats at Honeygar creates vital connectivity for species in the landscape. Our approach reduces nutrients going onto the land; nutrients (nitrates and phosphates) are used in agriculture to improve the soils for higher yields but can also be stored in soils, pollute water courses and negatively impact habitats.

Restoring our peatlands, only 3% of land surface area across the world, is central to nature restoration globally and locally. Over the past 12 months, we have completed major work to hold water on Honeygar to begin restoring the peat and allowing nature to return. We have established a naturalistic mob grazing system with our neighbouring farmers, to get a variety of sward lengths to improve biodiversity.

We have continued to develop our partnerships with the monitoring community including species specialist groups, universities and with Wilder Sensing, with bio-acoustic sensors installed across the site to monitor bird species presence. Academic interest in Honeygar is growing, our

relationships with Bristol University and University of West England continue to develop, with students from first years to PhD candidates now using the site for research, and interest from further afield including universities in the north of England.

We now have an established baseline for biodiversity, soil types, water quality and for greenhouse gas emissions for Honeygar, which is essential for us to monitor the changes as we see our interventions begin to impact the site. We are already seeing a greater abundance and diversity of species showing that our management of Honeygar is benefitting nature even after just a few years.

We have proved that Wilder Carbon works on a site like Honeygar selling our first carbon credits through this high integrity scheme that ensures the buyers are reducing their emissions before buying credits, and requires projects to deliver benefits for biodiversity as well as carbon reduction.

Honeygar's influence is expanding. We have featured on local and national TV and radio and increased support for our work at Honeygar through social media and blogs. We get frequent requests from businesses, organisations and community groups to visit Honeygar who want to understand what we are doing on the site and learn from our experiences.

Honeygar's success has encouraged neighbouring landowners to partner on a Landscape Recovery Project to trial farmland restoration at scale across the Somerset Levels and Moors, testing payments that are needed for landowners to keep their peatlands wet.





Bioacoustic monitoring

Now we have an established baseline of species and greenhouse gas emissions at Honeygar it is vital we closely monitor the changes as our interventions begin to have an impact.

One new innovative project underway at Honeygar is bioacoustics recording. This is a pioneering partnership with Wilder Sensing, trialling technological solutions to develop and grow monitoring of species on nature recovery sites.

Bioacoustic sensors across the site record 24 hours a day. The data is collected each week and fed into AI software which identifies bird species from calls that it has previously learned through training samples, with some human verification.

During 2023-24 we trialled four sensors provided by the developer Wilder Sensing. Over the year these have recorded a staggering 1.3 million bird-call records. As the habitats at Honeygar change as a result of our interventions and restoration works we will be able to track changes in species composition and behaviour. The data has already helped us identify the presence of night heron on site, and recognise a change in the habits of sparrows and dunnocks that are having their chicks earlier in the year likely due to climate change.

Due to the success of this partnership, we are planning to expand across other reserves in the Avalon Marshes, enabling us to track species presence on a landscape scale. In this way we can produce large datasets to complement those at Honeygar, demonstrating the value of restoring peat habitats for nature's recovery.

As a result of our interventions and restoration works we will be able to track changes in species composition and behaviour

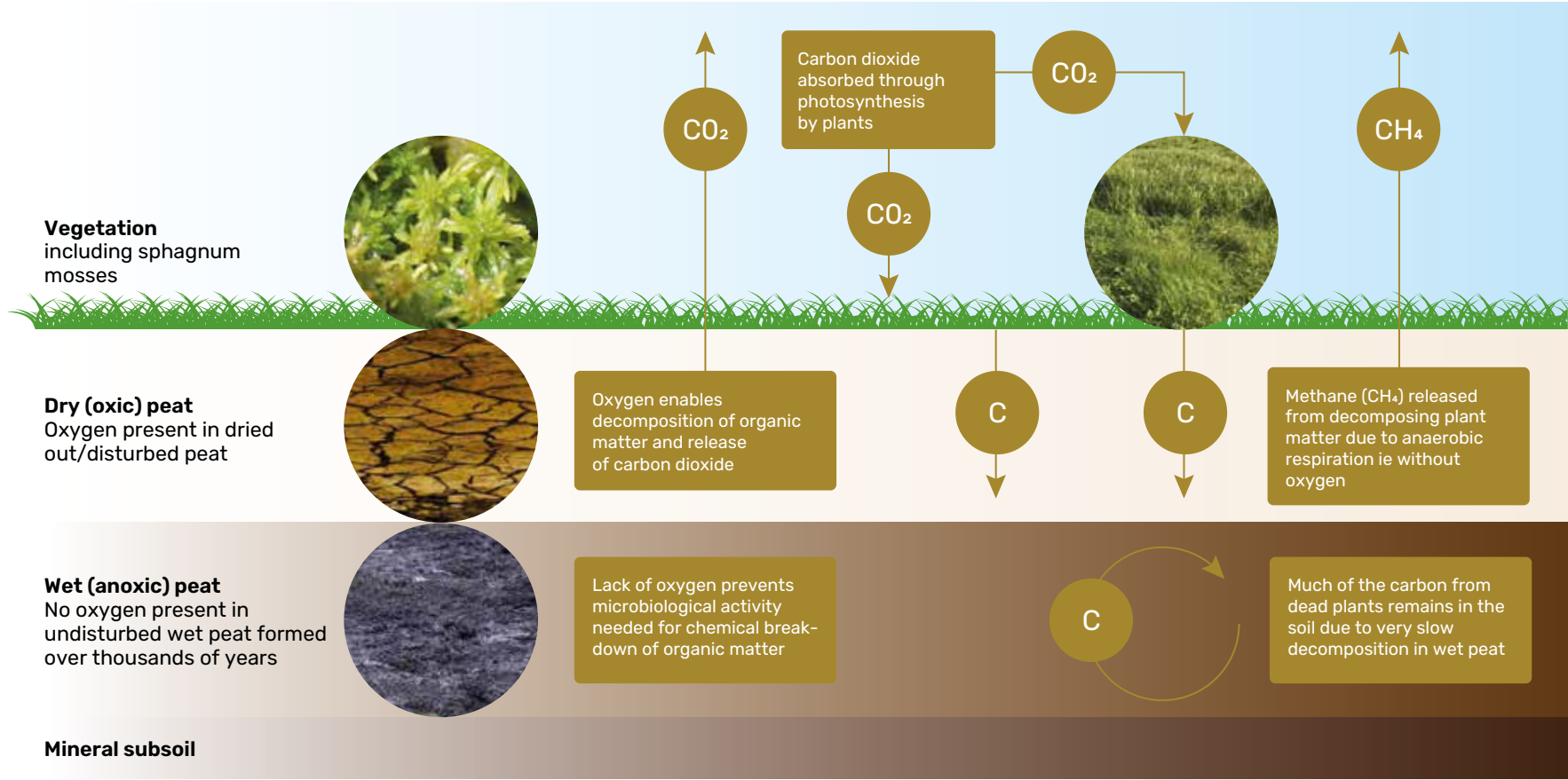
Joe Hampson, Honeygar's Wilding Officer, installing a bioacoustic sensor.



Dunnock

Peat cycle

Peatlands are important ecosystems and carbon stores



Honeygar and Wilder Carbon

Our approach at Honeygar is to test new methods of financing nature restoration so we can share our experiences, success and failures, with other landowners helping them to make decisions on their land.

Restoring peatlands locks in carbon reducing emissions, so offers potential for the sale of carbon credits. This is a challenging area due to the potential for green wash with buyers of credits continuing to emit elsewhere and offset with low quality carbon credit projects.

We have partnered with Wilder Carbon, developed by Kent Wildlife Trust as a pioneering high-integrity carbon credit scheme requiring buyers of credits to demonstrate progress to scientifically measurable carbon reduction targets before purchasing credits. All Wilder Carbon projects must demonstrate they benefit biodiversity as well as carbon reduction.

One of the first sites to join the scheme, Honeygar is providing proof of concept for other landowners wanting to manage land more for nature but needing to generate income from their land. Based on current estimates over a 10-year period, we expect to reduce emissions at Honeygar by 8,000 tonnes.

Any funds we generate will be used for the ongoing management of Honeygar over the next 50 years.

Due to our experience with Wilder Carbon at Honeygar we are now working with 15 landowners in the landscape through our Adapting the Levels Environmental Land Management Landscape Recovery pilot to discover how they can restore their peatlands and generate income for their farm business.



Wilder Carbon
Native habitats. Natural solutions.

Covering around 10% of the UK's surface and containing an estimated 3.2 billion tonnes of carbon in the UK alone, peat is a carbon rich soil consisting of the partially decomposed remains of plants and animals. Peatland stores vast amounts of carbon, this makes them an ideal tool for peat rich areas to tackle climate change. They store approximately double the amount of carbon that is stored in all the world's forests, making them a vital tool in helping to regulate the climate.



We need to prevent dried out peat from releasing carbon and greenhouse gases into the atmosphere by rewetting peat on the Somerset Levels and Moors. We want to demonstrate how nature-based solutions and finance can sustain both wildlife and livelihoods in the county.

Engagement and publicity

The work we are doing at Honeygar has interested a wide range of organisations, businesses and people locally and nationally. Perhaps because there is an opportunity to follow a long-term nature restoration project from the beginning, perhaps because there is a global lack of evidence and data regarding lowland peatland. Or maybe because of the influence the site is already having.

Honeygar has been featured on national BBC news and BBC Radio Somerset, with presentations given to environmental organisations locally. With more than 300 visitors to the site ranging from local farmers to major international corporates.



With support from Natural England

In July 2023, as part of our Environmental Land Management Scheme project (ELMS), we hosted a landowner engagement event, to talk about what work has been carried out so far on site and the opportunities under the project. We were able to hear first-hand from farmers and landowners about the challenges they have and their concerns around difficulty of securing Green Finance such as carbon credits for those already farming for nature.

This engagement by local farmers and landowners indicates there is a willingness to view land management differently in light of changes happening today from climate change and ecological collapse, and the emergence of economic opportunities through green financing. We were encouraged to see that members of the local community have joined as Honeygar Rangers, showing support from local communities for our work at Honeygar.

There is a willingness to view land management differently in light of changes happening today from climate change and ecological collapse



Our CEO, Georgia Dent, talking about Honeygar on national TV

Inspiring change

An important outcome from our work at Honeygar is that it inspires and supports landowners to manage land in a more nature- and climate-friendly way. This is already happening.

In July 2023, DEFRA Environment Partnerships Strategy and Engagement Team working on the 25-year Environmental Improvement Plan visited the site. The visit included RSPB representatives, Wildfowl and Wetlands Trust, Farming and Wildlife Advisory Group, Natural England, DEFRA and National Trust to understand the work we are doing and the changes we are already seeing on site.

We are currently trialling a ELMS Landscape Recovery Project 'Adapting the Levels' which is exploring the mechanisms to restore nature through identifying new economic models for landowners. This has been DEFRA funded as part of establishing the wider support schemes replacing European agricultural subsidies.

There is now a plan for the installation of new non-invasive monitors to survey small mammal populations on site

We welcomed a site visit from a team from Bristol University. Staff led a tour of Honeygar for researchers at the University to talk about the work we've done so far on site, including land management and monitoring. There was a focus on exploring new opportunities for partnership work and identified potential gaps within the monitoring on site. There is now a plan for the installation of new non-invasive monitors to survey small mammal populations on site. We have had visits from partners at University of the West of England (UWE) to the site who continue to use it to support their study. Honeygar has also hosted a National Landscapes conference on site, Wildlife Trusts from across the UK, the Conservative Environment Network and Rewilding Britain.



Egret

© AdobeStock

Large emerald moth



Stage 2

This is only the start of our journey to transform Honeygar from an intensively managed dairy farm to a restored peatland habitat rich in wildlife and financially viable. We have completed our initial interventions on the land and have a clear management and monitoring plan with a wide range of partners involved, and a fantastic group of volunteers. We have proven the potential for carbon credits to provide some income for nature’s recovery and are working with farmers to explore how they too could restore their peatlands as part of their farm business.

But we are only just beginning to unlock the site’s potential. We have now turned our attention to the buildings on site, which must reflect our overall vision for Honeygar as a test and learning site for lowland peatland restoration.

Our aim for the buildings is for Honeygar to become an internationally recognised hub for research, innovation, and collaboration in lowland peatland restoration. We will drive scientific understanding of the management of lowland peatlands on a local, national and international scale.

The emerging masterplan for Honeygar, underpinned by the business plan, will meet the needs of professionals, academics and students to increase our collective knowledge, skills and experience. It will meet a need in Somerset, and the wider UK, for in situ scientific study, allowing groups to learn and influence change in the management and restoration of lowland peatland landscapes. The Honeygar buildings will showcase best practise in green infrastructure; informing the approach for homes, learning and workspaces, for wildlife and for the creation of more flood resilient communities.

Working with architects who specialise in eco developments, our plan to remodel the buildings on the site to be a carbon negative, exemplar development that delivers on our needs and provides a vital resource for local communities. This is an exciting next phase of this enduring project. All buildings will integrate habitat for wildlife and will reflect the landscape, and rural heritage of the Somerset Levels and Moors.

We have now turned our attention to the buildings on site, which must reflect our overall vision for Honeygar as a test and learning site for lowland peatland restoration



Original buildings on site

Thank you for your support

Donations of many sizes have been gratefully received and we thank all of our donors for supporting this project, including those who wish to remain anonymous.

Trusts and grants

- Banister Charitable Trust
- Garfield Weston Foundation
- Department for Environment, Food & Rural Affairs
- National Lottery Heritage Fund
- Golden Bottle Trust
- Green Recovery Challenge Fund
- John Swire 1989 Charitable Trust
- Nature for Climate Peatland Grant Scheme – Discovery Grant
- People’s Postcode Lottery
- Steel Charitable Trust
- Natural England
- Royal Society of Wildlife Trusts
- Wilder Sensing

Honeygar Pioneers

- Barbara Cheney
- Dame Margaret Drabble
- Mark and Marnie Franklin
- Patrick Thomson
- Professor Michael Sleigh
- Those Pioneers who wish to remain anonymous

In memory of Heather Corrie

The estate of the late David Wishart

Members of the public who have donated to the Honeygar appeals



Barn owl

A year at HONEYGAR

2023/24

somersetwildlife.org/honeygar



To discuss progress to date, please contact:

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