



MoorLIFE 2020

This world-leading conservation project will protect 9,500 hectares of Active Blanket Bog within the South Pennine Moors SAC, a Natura 2000 site.

The MoorLIFE 2020 to help protect internationally important priority habitats in the Peak District and South Pennines has received a massive €11.9 million of support from the European Union toward the overall project value of €15,996,416.

It is also within the Surface Water Safeguard Zones (WSZ), which are areas of land which supply drinking water to reservoirs. WSZ have been designated under the EU Water Framework Directive (WFD).

MoorLIFE 2020 follows the previous LIFE funded MoorLIFE Project. After five years, this has revegetated nearly 900 hectares of bare peat to protect about 2,500 hectares of Active Blanket Bog (roughly the size of 3,500 football pitches).



Vast areas of bare peat will be revegetated

The most severely damaged blanket bog in this area had been caused by a combination of pollution from previous heavy industry and wild fires.

Work was carried out to stop areas of bare peat from getting any bigger and damaging the adjacent intact blanket bog, improving the landscape, water quality and diversity of upland plants, birds, mammals and insects under immediate threat.

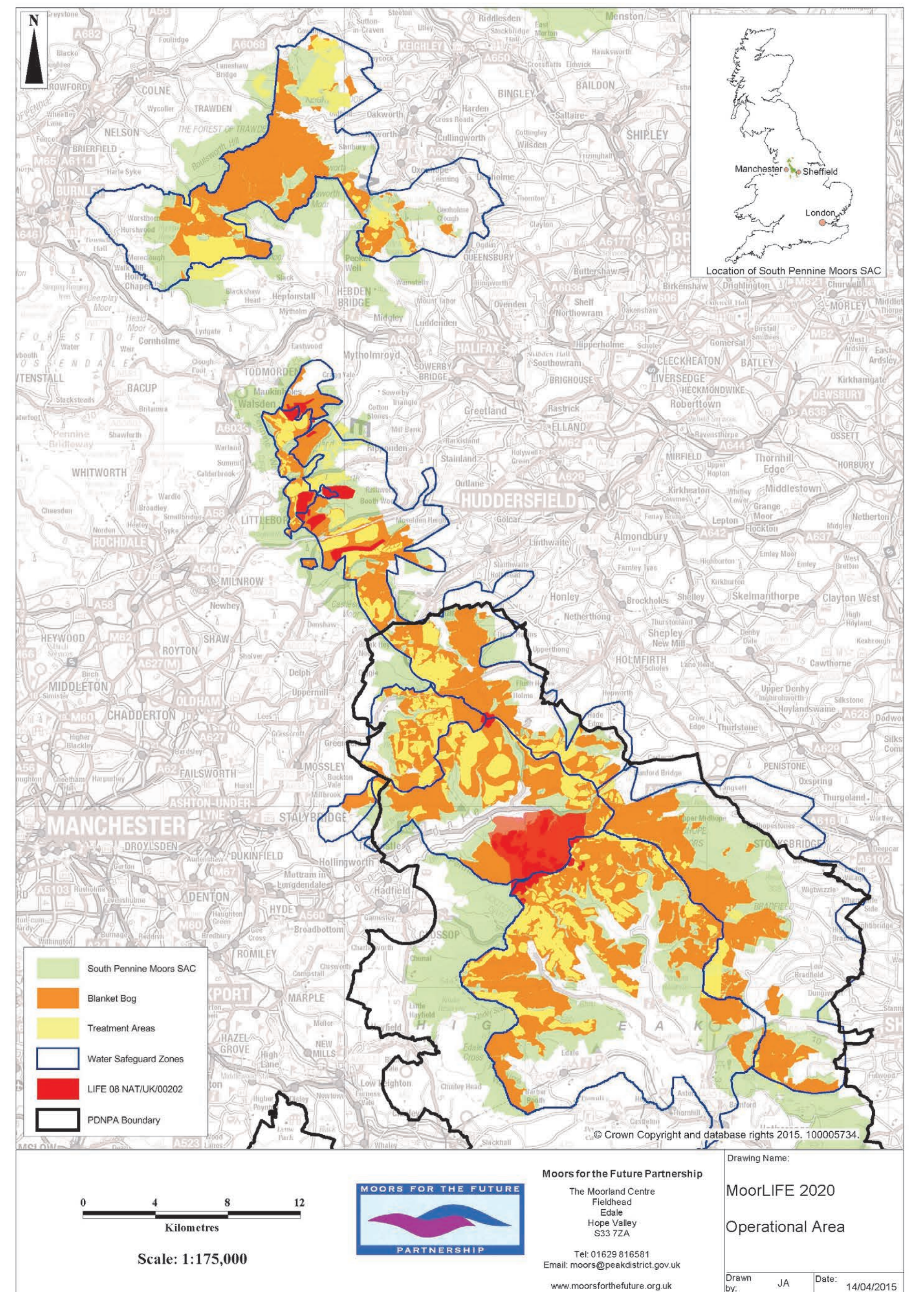
The South Pennine Moors SAC is critically important as one of the most significant areas of blanket bog in Europe protected by both European (SAC) and UK Site of Special Scientific Interest (SSSI) legislation.

Its position makes it one of the blanket bog habitats most susceptible to climate change in Europe. A previous legacy of atmospheric pollution from coal fired industries has further weakened its resilience and this coupled with its situation (close proximity to large urban populations) has produced a high incidence of summer wildfires.

The water bodies these catchments serve are failing to meet WFD requirements and the quality of raw drinking water provision to water treatment works is also deteriorating.

Reducing the amount of peat that is eroded ensures that less peat makes its way into the water that flows from these important catchment areas. There is a pressing need for this significant capital project to increase the resilience of these Active Blanket Bogs.

Conserving the habitat and improving all the factors above will create synergies between the benefits of the Habitats Directive and the Water Framework Directive - together they will mediate climate change, a suggested priority under the EU LIFE Regulation.



Conservation

Expansion of areas of bare and eroding peat is one of the biggest threats to the priority habitat of Active Blanket Bog.

Well-established techniques to improve the polluted soil chemistry, through the addition of lime and fertiliser treatments, application of nurse species (such as amenity grasses and heather) and stabilising the surface of the bare peat with heather brush will be used to stabilise areas of bare peat and protect the remaining Active Blanket Bog from encroaching erosion.

It allows native plants to develop and become established and is the first step on the long road to re-activating degraded blanket bog. Improving the hydrological status of areas of blanket bog is critically important for a variety of reasons.

Raising water tables reduces the loss of dissolved carbon, permeable dams trap sediment which can enter watercourses and reservoirs and increasing the amount of surface water allows more sphagnum mosses to develop.

Increasing surface wetness will reduce the risks to Active Blanket Bog of wildfires and further erosion. To allow these benefits, work will be carried out to block gullies and grips.

Extensive areas of single age, single species have developed predominantly by historic wildfires. To prevent this from happening again, and to protect adjacent areas of Active Blanket Bog, we will be breaking up these areas by cutting and increasing the diversity.

The blanket bogs of the SPM SAC were predominantly formed by compaction of Sphagnum mosses over the last 8000 years. During the last 200 years, these mosses have been killed across large areas of the SAC predominantly by sulphur oxides (SO₂ and SO₃).

We are adding sphagnum mosses, using micro-propagated or harvested materials, to sites across the SAC; following bare peat stabilisation, cutting of homogenous vegetation, gully or grip blocking. Increasing the amount of sphagnum moss will help increase the surface wetness of blanket bogs which should reduce the risk and severity of wildfire.



Monitoring

An up-to-date baseline land cover map of the South Pennine Moors using Earth Observation (EO) data (remote sensing data collected from sources such as satellites, planes and Unmanned Aerial Vehicles (UAVs)) and state of the art image classification software has been produced.

This tool will enable high resolution identification of land management issues addressed in the project and a baseline against which we can use EO data to monitor the impact of the project at the required landscape scale.

The EO Data will help monitor the impact of the project conservation and land management activities on protecting Active Blanket Bog, biodiversity and ecosystem services and how we can use these findings to develop trajectories of recovery, or change in habitat conditions over time. Essential information for informing future projects.

At four sites across the SPM SAC the impact on biodiversity and ecosystem services will be monitored focusing on vegetation, water quality, water storage and carbon.

Wider landscape-scale changes in vegetation cover will be monitored using images captured from a UAV and image classification software.

The socio-economic impacts of MoorLIFE 2020 are being monitored so the benefits of the delivery of the project to the local economy and people employed by the project will be monitored through project administration.

Structured interviews and questionnaires will assess the benefits to visitors, tourists, local businesses and agricultural and land management interests.

The greenhouse gas emissions of the project have been assessed through a carbon audit and the report will be published soon.

The impact of the works on reducing the threat of wildfire to Active Blanket Bog through engagement with land owners/managers will be supported by the development of an 'app' for land owner/managers and rangers to collect and share intelligence and information on wildfire events and collect data on wildfire incidents.

Experts from the local Fire Operations Groups will assess the impact of these actions and help build our evidence base and support the long-term work of our science team.



Engagement

Engagement with stakeholders is crucial for the long term health of the Active Blanket Bog.

We have developed a programme of events to engage with the land manager community. These include site visits to demonstrate the effects of different land management and conservation techniques.

We will also set up a series of field labs representing different land cover types to collect evidence of the benefit of the work carried out.

A series of factsheets for land managers have been produced with more information and case studies on conservation and monitoring techniques.

A programme of public engagement for urban and rural communities is being developed using the Bogtastic theme to allow us to contribute to this existing initiative.

The Bogtastic Van will bring the bog to people who would not otherwise have the opportunity of experiencing an Active Blanket Bog habitat.

The van will be used at urban and rural events and will encourage visitors to moorlands to "Be Fire Aware" in order to reduce the risk of wildfires.

We will support 12 partnership youth groups to inspire future generations and deliver positive volunteer action such as planting plug plants, digging up invasive species or carrying out scientific monitoring.

This will foster an early interest in potential career paths for young people – future specialists and 'champions' in Active Blanket Bog conservation.

To increase international exchange of knowledge members of these junior ranger groups will attend Europarc Congress.

Project partners Pennine Prospects are providing Be Fire Aware support in the South Pennines with fire watches and are delivering mapping and data gathering, as well as awareness-raising and engagement.

Web and social media development is being used to inspire and connect with people. There will also be information boards at key gateways in the SAC.

A national conference- BogFest - will bring together practitioners and share expertise and final project outcomes will be disseminated in a layman's report in tablet format.

Networking and knowledge exchange with other UK and international projects is an important part of the project.



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A Moors for the Future Partnership project in the EU designated South Pennine Moors Special Area of Conservation. Delivered by the Peak District National Park Authority as the lead and accountable body (the Coordinating Beneficiary). On the ground delivery is being undertaken largely by the Moors for the Future staff team with works also undertaken by the National Trust High Peak and Marsden Moor Estate, the RSPB Dove Stone team and Pennine Prospects (the Associated Beneficiaries). Funded by the EU LIFE programme and co-financed by Severn Trent Water, Yorkshire Water and United Utilities. With advice and regulation from Natural England and the Environment Agency, and local advice from landowners.

