New tools for new times -
delivering a Nature Recovery Network in the White Peak

Defra's Environmental Land Management scheme (ELMs) White Peak Test

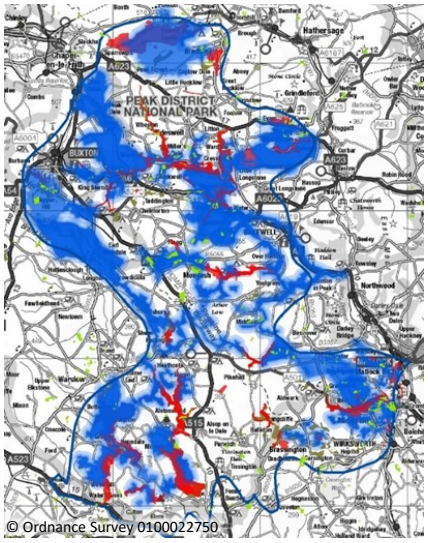
The Peak District National Park Authority (PDNPA) and Natural England worked with a wide range of partners, farmers and land managers through the Peak District Land Managers' Forum and the White Peak Partnership to develop ideas for ELMs. In 2019, the White Peak Test was successful in becoming one of Defra's Phase 1 ELMs Tests & Trials. The test will focus on the White Peak for one year, and then extend into two other NCAs for a further year, running until October 2021.

Defra is funding one-to-one and workshop engagement with farmers and land managers to explore how a NCA framework could be used to prioritise delivery of public goods and design and deliver land management plans. In addition, the PDNPA is funding a simple carbon ready reckoner using White Peak habitats, a budget ready reckoner to explore budget implications of delivering more public goods vs becoming more intensive; and a series of small-scale practical field trials which are also being used to inform the budget ready reckoner.

The White Peak challenge

The Lawton Report 'Making Space for Nature' concluded the White Peak National Character Area (NCA) has the highest levels of habitat fragmentation within any of England's National Parks. In 2017, Natural England and local partners used over 100 years of collective knowledge of the area to produce an 'opportunity map', which could be used as the basis of a Nature Recovery Network for the NCA. This laid bare the practical challenges to nature's recovery presented by the disparate protected sites of the Dales separated by high agricultural intensity on the plateau.

Wherever the soil is suitable and the landowner willing, Natural England and the PDNPA have been working with partners for almost 20 years to restore hay meadows in the White Peak, alongside creating species-rich grasslands on disused quarry sites. We plan to continue with this successful programme of works, but recognise that this won't be sufficient to create a full Nature Recovery Network whilst the challenges of the high-fertility plateau remain. Here, we are researching new ways of delivering the **better**, **bigger** and **joined** ambitions of the Lawton Report.



White Peak 'opportunity map'

- Sites of Special Scientific Interest (SSSI)
- Habitat creation opportunities
- Peak District National Park boundary

White Peak Land Management Trials

The White Peak plateau

If Defra's 25 Year Plan and the challenges set out in the Glover Review are to be met in the White Peak, the future ELMs will require new tools to link and extend habitats across the plateau, something which previous schemes were not designed nor funded to do.

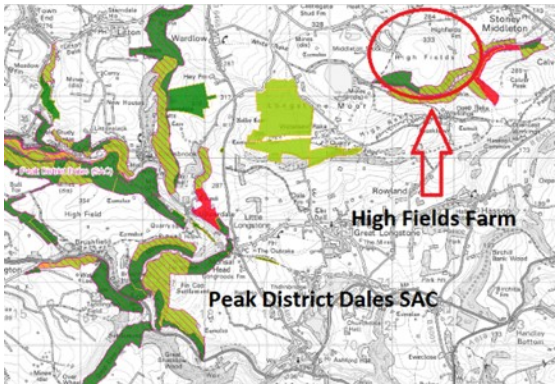
Natural England and the PDNPA, working in partnership with National Trust and six White Peak farmers, has established a small-scale practical field trial to investigate a range of potential management interventions and techniques across a suite of typical White Peak farms. The trial is funded by PDNPA for a period of five years, commencing in 2019. Advisory input is provided by Natural England Area 5 team.

Where might the trials lead? A vision for the future…

The ambition of the trials is for learning to be fed into the design of the new ELMs, with the aim of securing the tools necessary for landscape scale delivery within the White Peak and throughout England. Simple, practical management interventions coupled with informed targeting, empowered farmers and land managers, collaboration, technological innovation, accessible advice and appropriate incentivised payment rates are likely to be key ingredients to success.

Hay meadow seeded in 2011

Better - structural diversity within Priority Habitat



Location of land at High Fields and the Peak District Dales Special Area of Conservation (SAC)

In 2018, National Trust purchased 80ha at High Fields Farm on the White Peak plateau. The land is important both for its existing special interest and potential to fulfil a key role in the future delivery of a Nature Recovery Network.

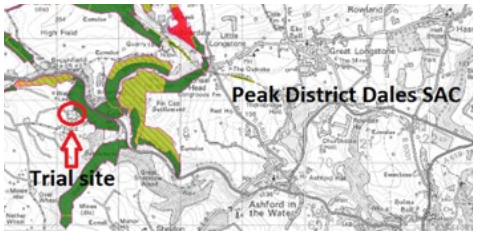
In partnership with Natural England and PDNPA, a Higher Tier Countryside Stewardship agreement was developed, with the aim of pioneering management techniques to enhance the structural diversity of existing Priority Habitats without detracting from their quality or extent. A range of methods are being explored to introduce scrub and dwarf shrub species, together with extensive year-round grazing of native breed cattle.

Bigger - scrub pasture

The vision - to expand high value sites onto adjacent productive soils.

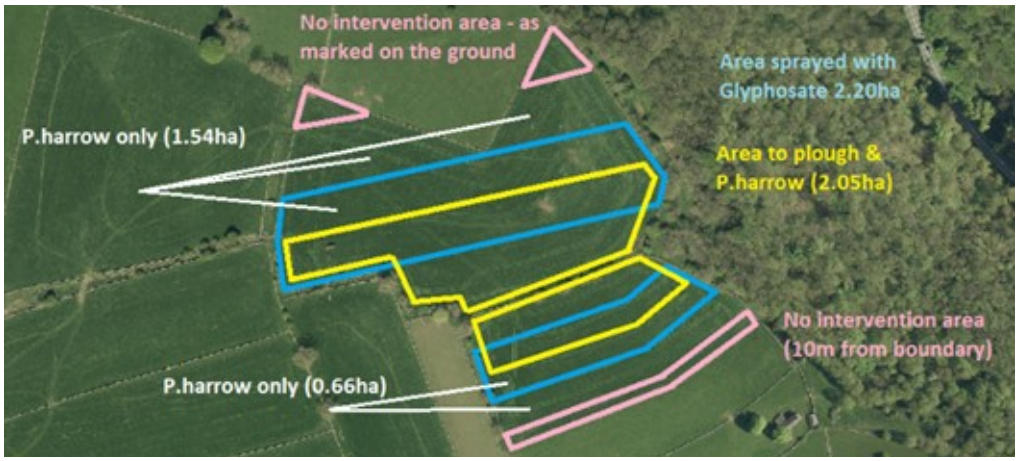
The creation of structurally diverse grassland, or 'scrub pasture' with a scatter of wildflowers is being trialled. Two fields of productive perennial ryegrass sward used for silage production immediately adjacent to the Wye Valley SSSI offered the opportunity to buffer and extend the SSSI.

In August 2019, a diverse seed mix was sown, including a range of robust herb species which have a strong chance of persisting within a fertile soil (Phosphate index 2) and sward. A variety of seedbed preparation techniques will assess the relative costs and benefits of species establishment and soil carbon release. Finally, both fields were sown with seed of locally collected native scrub and tree species; pre-treated in different ways to determine the most cost-effective methods of establishment. They will be grazed at different stocking densities and times to trial the most successful approach to controlling coarse grasses whilst allowing wildflowers and scrub to thrive.



Location of scrub pasture trial site and the Peak District Dales SAC

Perennial ryegrass sward before intervention



Cost - £612/ha/year

Compensatory payment agreed with the landowner, calculated from real life income foregone.

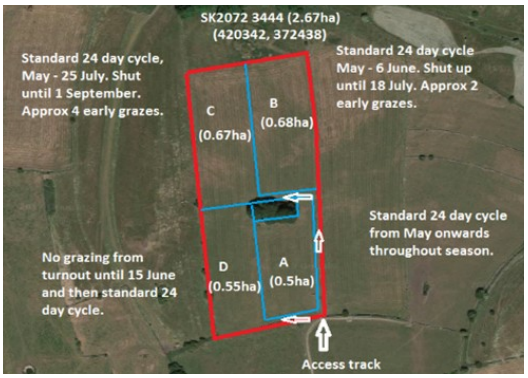
This demonstrates the value to the farmer of the ryegrass sward and the scale of payment necessary to deliver the vision. It probably means this method of habitat creation will need to be spatially targeted.

Joined - herbal leys as stepping stones

The vision - a scatter of herbal leys across the plateau, with some being allowed to flower at any given time.

Herbal leys through current schemes have failed to gain much interest in the Peak District, most likely due to eligibility criteria being unfavourable to all-grass systems and the general intensity of grassland management.

A suite of herbal leys have been sown across five different farms. Their potential contribution to conservation, carbon storage and farm productivity will be monitored. To address the implications of soil cultivation on soil carbon release, a variety of establishment techniques are being trialled:- conventional ploughing and cultivation, minimum- tillage and over-seeding only. Other variations include the time of sowing and inclusion of native species to extend the useful life of the ley. A number of different grazing and cutting regimes across the different sites will assess the possibility of delivering simultaneous benefits for farm productivity and continuous summer flowering on a landscape scale.



Joined - silage margins as wildlife corridors

Newly established 3m silage margin

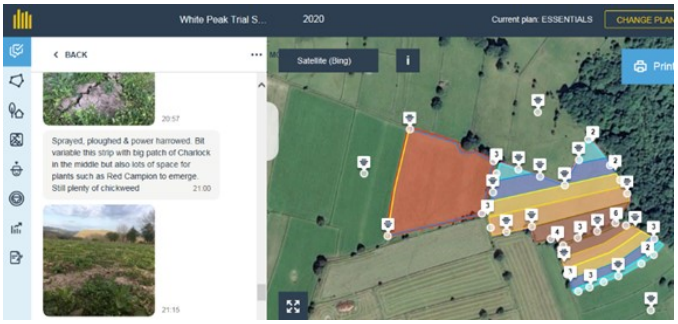
The vision - a network of structurally and species diverse silage margins.

In August 2019, diverse seed mixes were sown within 3m margins around silage fields on three separate dairy, beef and sheep farms to create tussocky grassland. Once established, the margins will be managed without inputs, remain uncut but aftermath-grazed with the rest of the field. This approach to silage margins has the potential to be rolled out on a large scale across the wider plateau, delivering valuable corridors for wildlife across a grassland plateau largely devoid of trees and hedges.

These silage margins can minimise cost whilst maximising the benefits of wildlife-friendly habitat creation.

Farmer focus, collaborative learning and shared outcomes

Farmer and land manager buy-in would be essential to the success of a Nature Recovery Network, particularly if seeking to influence the management of productive farmland. Whilst representation of typical farm types required some initial canvassing, the design, location, establishment, management and monitoring elements of the trials were all co-designed with the participating farmers.



Trial site within Field Margin app © Field Margin Ltd

All sites have been enrolled in the app 'Field Margin', with farmers encouraged to track their own progress and that of other sites, uploading photographs and insights into management. The ambition is for this to serve as a platform for knowledge sharing, collaboration and development of shared outcomes essential to delivering change at the landscape scale.

In addition to nature recovery, the various management interventions could also deliver against other targets within the 25 Year Plan, including water quality, soil health and carbon sequestration and storage. A comprehensive monitoring programme has been put in place to assess progress against a wide range of objectives including invertebrate monitoring, % flowering plants, sward structure, soil condition and carbon release, together with farm productivity measures such as forage yield, palatability, nutritional value and mineral profile. Much of this work will be undertaken by the participating farmers themselves, where possible using the Field Margin app to evidence progress against objectives.