



NATURAL
ENGLAND

White Peak: Nature Recovery Networks & Land Management Trials

Dan Abrahams & Rebekah Newman

25 Year Environment Plan

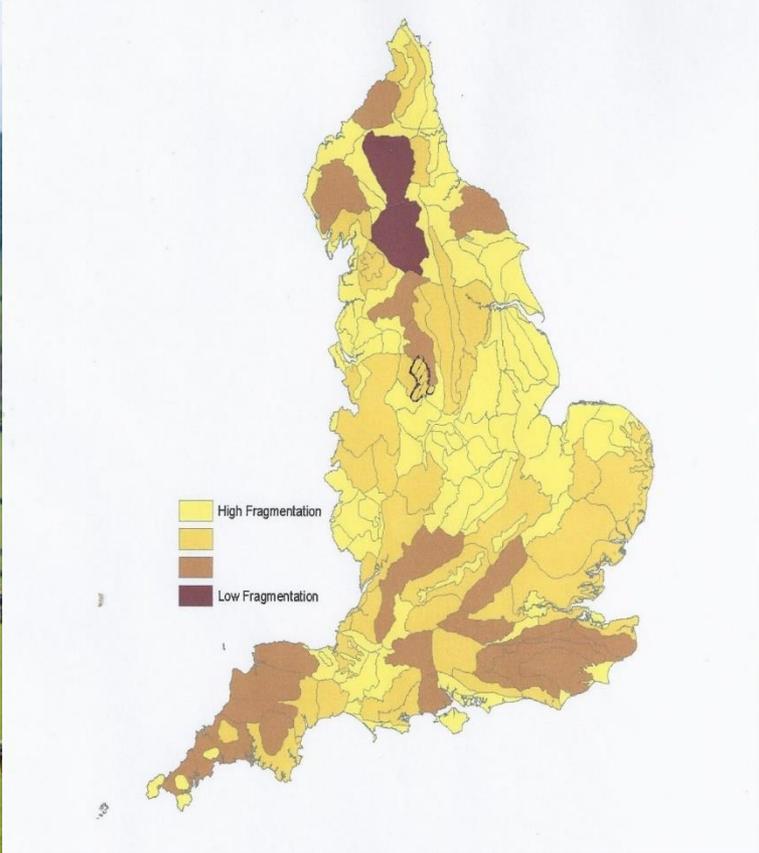
- Restoring **75% of SSSIs to favourable condition**, securing their wildlife value for the long term.
- **Develop a Nature Recovery Network to protect and restore wildlife, and provide opportunities to re-introduce species that we have lost from our countryside.**
- Creating or restoring **500,000 hectares** of wildlife-rich habitat outside the protected site network, focusing on priority habitats as part of a wider set of land management changes providing extensive benefits.

Nature Recovery Networks – spatial planning & prioritisation framework

- NRN will be a national network built from the bottom up i.e local delivery/opportunity maps by local partnerships.
- Natural England lead on delivery of the NRN, and has consulted 110 partners and individuals on how it will be developed. Founding document under production at the moment.
- NRN based on Lawton principles of Better, Bigger, More and Joined to deliver 500,000ha of new/restored habitat and 180,000 ha of new woodland (targets in the DEFRA 25yr Env Plan) but will also aim to mitigate the biodiversity and climate crises, and deliver ecosystem services.
- White Peak ahead of the game - local opportunity mapping approach completely consistent with what is happening nationally and will not be superseded.

Nature Recovery Networks – spatial planning & prioritisation framework

- NRN will include a number (currently 25 but might be more) of Nature Recovery Areas (NRAs) - more focused areas of activity for establishing natural processes and restoration at scale.
- National Parks and Areas of Outstanding Natural Beauty are well-placed to support Landscape-scale Nature Recovery Areas identified within or overlapping their boundaries. Protected landscapes cover 24% of England and hold important areas of surviving semi-natural habitat.
- National Parks contain almost 40% of the land in England that is of international importance for wildlife. The national project is also keen to explore the potential for Landscape-scale Nature Recovery Areas to demonstrate extensive land management approaches to nature recovery and the restoration of natural ecosystem function through the creation of wilder areas e.g. Knepp / Ennerdale type approach.
- One of DEFRA's principles is that NELMS will be designed to deliver the NRN



White Peak mapped in Lawton report, as having highest levels of fragmentation within any English National Park.

Role of wilder areas

National Park and AONB Management Plans should support and encourage efforts to create wilder areas in some places.

They should do so while also ensuring the continuation of the cultural traditions which gave our landscapes their natural beauty in the first place.

The diversity and distinctiveness of our national landscapes means we can trial different approaches in different places, from 'letting nature take its course', to active interventions.

In the 1990s the Campaign for national parks published a report, *Wild By Design*, which said that 'creative conservation and wilder area creation have a role to play in National Parks'.

It noted that wild areas need not be large, but could be: 'a wilderness experience has very special qualities that can be encountered in a range of different scenarios from a small pocket of dense woodland to vast open landscapes of heather moorland. The elements that make an area evoke this experience are diverse but principally include a sense of closeness to nature, freedom, solitude and even a sense of danger and challenge'.

On a visit to Shenandoah National Park in the United States one member of our panel saw how what was once a farmed landscape has become almost entirely wild, with thick forest and a wide range of species.

Wilder areas do not necessarily mean standing back from these areas completely – it is not a choice for example between farming and wilding, or landscape and biodiversity, but a continuum where there is space for all.

This could include supporting less grazing or different kinds of grazing, with cattle or ponies in places.

In the Lake District, Upper Ennerdale which was largely taken over by the Forestry Commission in the 1930s, and Mardale, which was flooded by the Manchester Corporation at the same time, are unusual in that they are unpopulated – and it is no coincidence that they are now seen as leading examples of wilder areas.

Other places may take a similar path. Some Ministry of Defence land is particularly suitable. So are some areas of the Forest England Estate.

This can only succeed if it is recognised that our landscapes are lived in, with strong cultural traditions including farming which needs to be sustained. The aim should be a balance – not conflict.

National Parks should include measurable steps towards nature-friendly farming, the potential of natural capital, tree planting, peatland restoration, connections beyond their boundaries and **areas where the hand of management should be very light indeed and where more intensive farming and landscape management could give way to wilder approaches.**

What does this mean on the ground?



Hay meadows – our “weapon of choice” as regards habitat creation/restoration

Fine but benefitting only a narrow spectrum of biodiversity. We need a wider diversity of approaches to habitat creation

Only suitable for certain sites (low fertility etc) and limited compatibility with more intensive agriculture



Structurally rich AND species-rich habitats – “The holy grail” of habitat creation? BUT how much of this do we actually do?

NRN Land Management Trials

Partnership Project PDNPA, NE and 6 farmers.

1. Creation of structurally diverse grasslands on high productivity soils
 - a) Targeted locations at whole field scale e.g. adjacent to daletops
 - b) Along silage margins

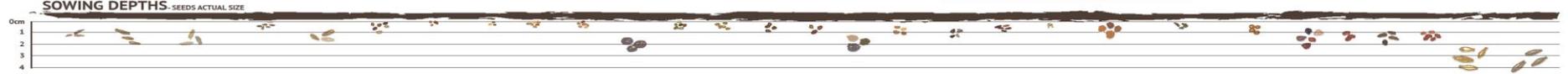
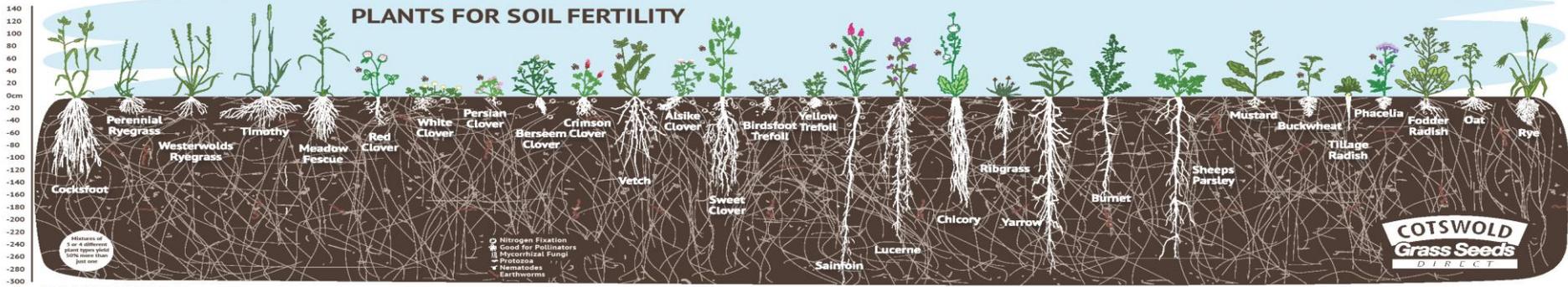
Connective corridors with value for wildflowers, invertebrates, small mammals, birds, carbon, soils and water

Conservation orientated approach

2. Creation of herbal leys scattered across the plateau

Wildlife “stepping stones” with value for the farm business, carbon, soils, water, invertebrates

Farming orientated approach

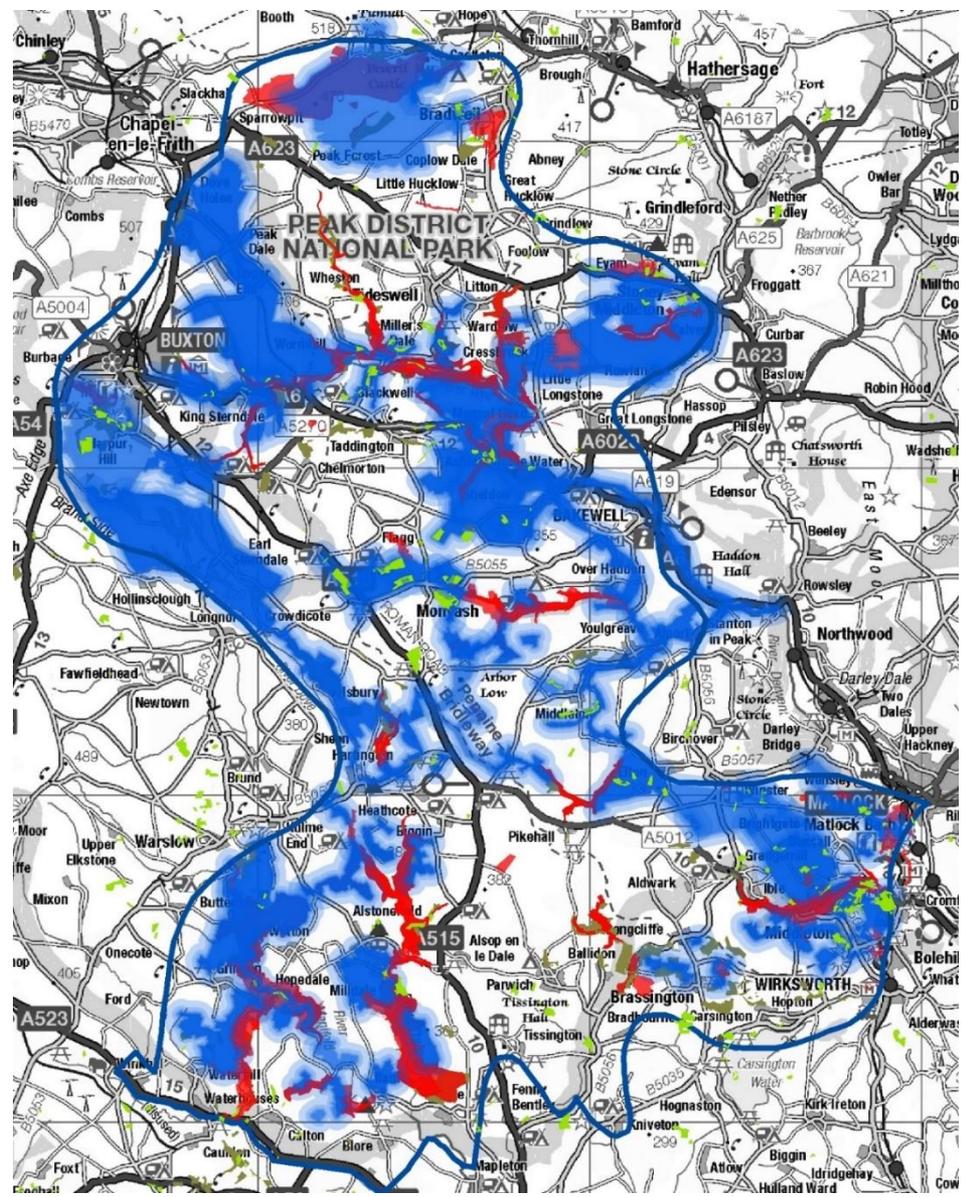
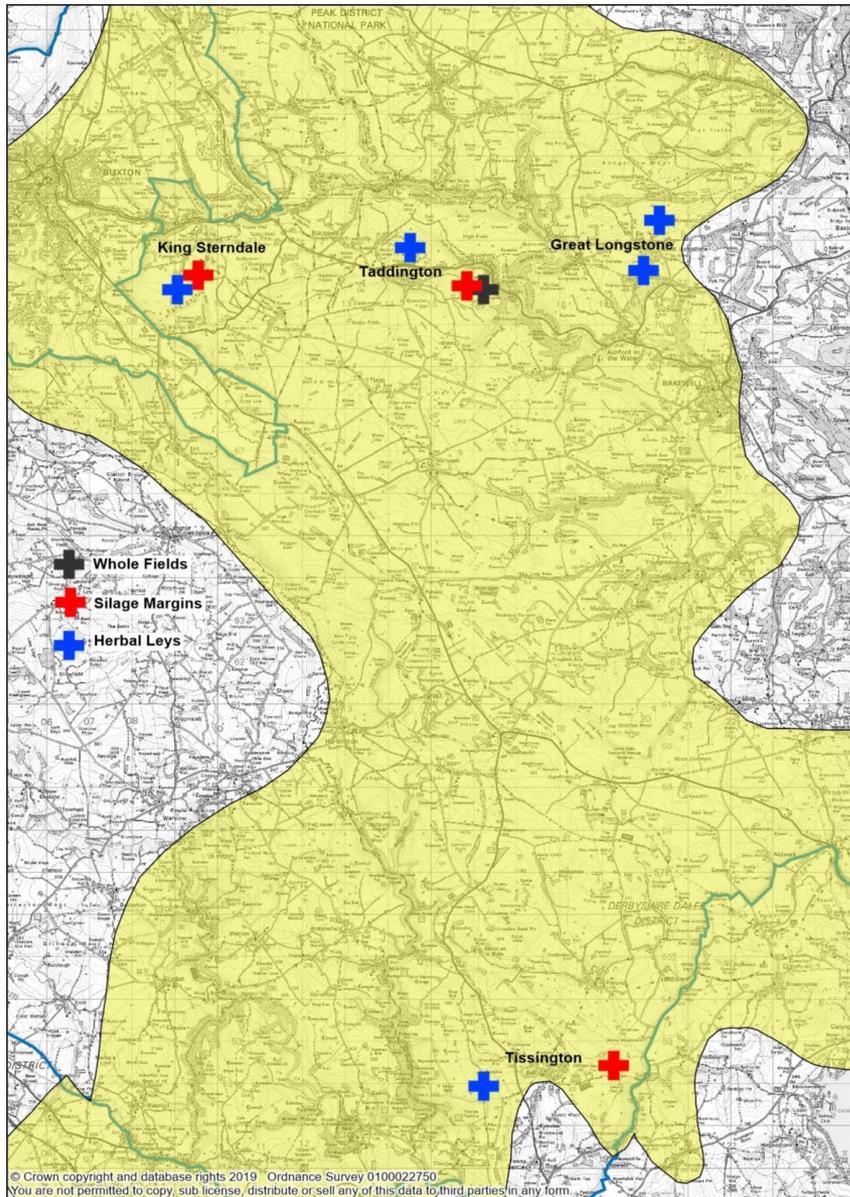


Trials are designed to test:

- Whether it is possible to create permanent grasslands of conservation value on high fertility sites
- Costs and benefits of glyphosate, conventional seed-beds, minimum till and no till in establishing permanent grasslands and herbal leys
- Methods for introducing structural diversity in the form of small trees and shrubs into permanent grasslands where there is very little natural seed source
- The benefits in terms of longevity and flowering period of incorporating native type red clover and a range of commercial clovers into a herbal ley seed mix
- How to incorporate a herbal ley into a modern farming system whilst still allowing it to flower

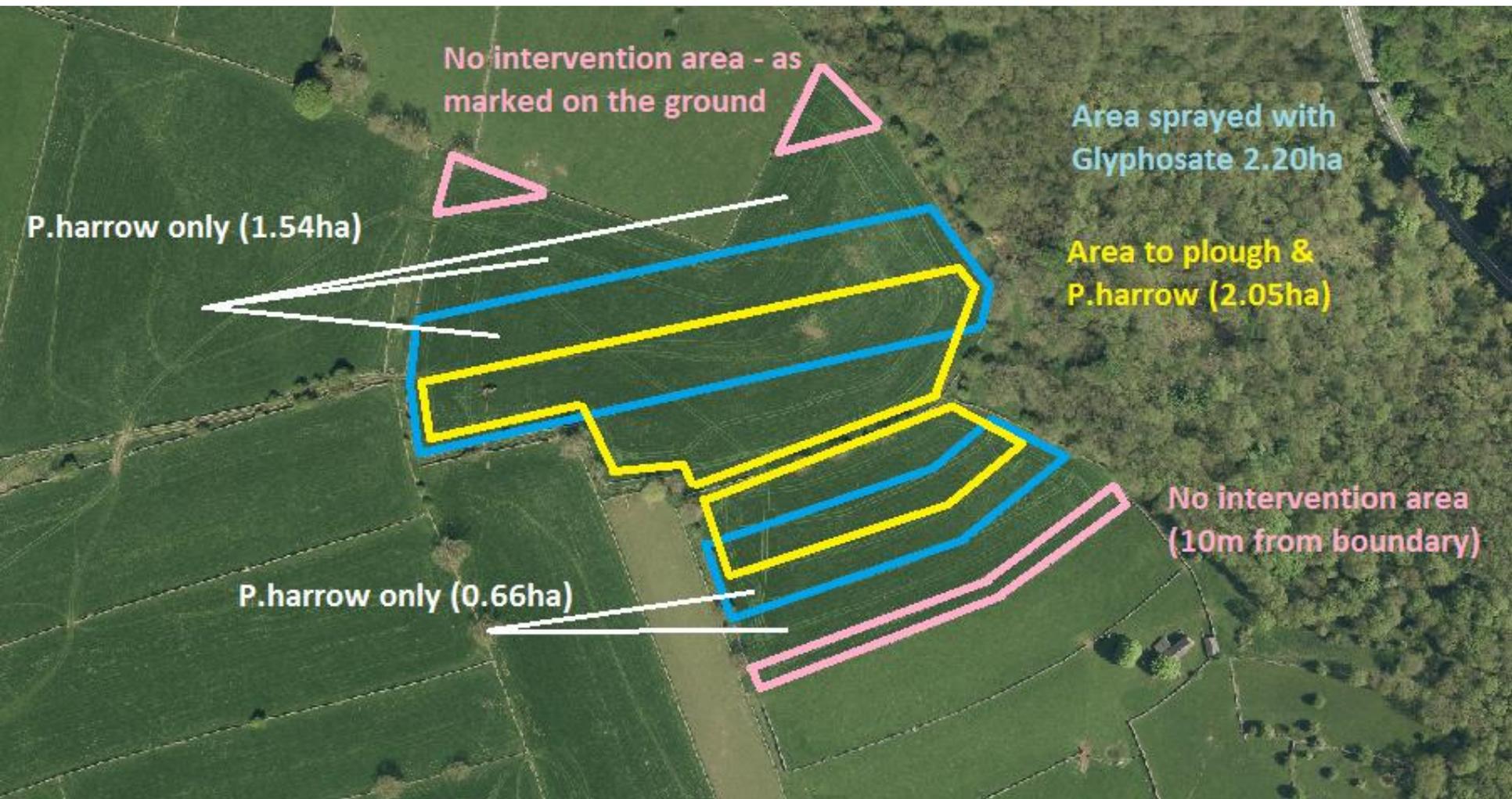
Practicalities

- Trials are for 5 years – Aim to move to ELMS
- Funded in whole by the National Park Authority
- Silage margins and whole fields: Income foregone payment
- Herbal leys: CS payment
- Capital Works: 100% Funding
- Expectation that ELMS will be funded based on delivery of public goods
- Monitoring includes soils, invertebrates, floristic diversity and farm productivity measures





- 4.5ha site
- Ryegrass dominated productive silage leys (P&K index 2)
- Two silage cuts and aftermath grazed
- Immediately adjacent to Wye Valley SSSI



No intervention area - as marked on the ground

Area sprayed with Glyphosate 2.20ha

P.harrow only (1.54ha)

Area to plough & P.harrow (2.05ha)

P.harrow only (0.66ha)

No intervention area (10m from boundary)

Scrub treatments

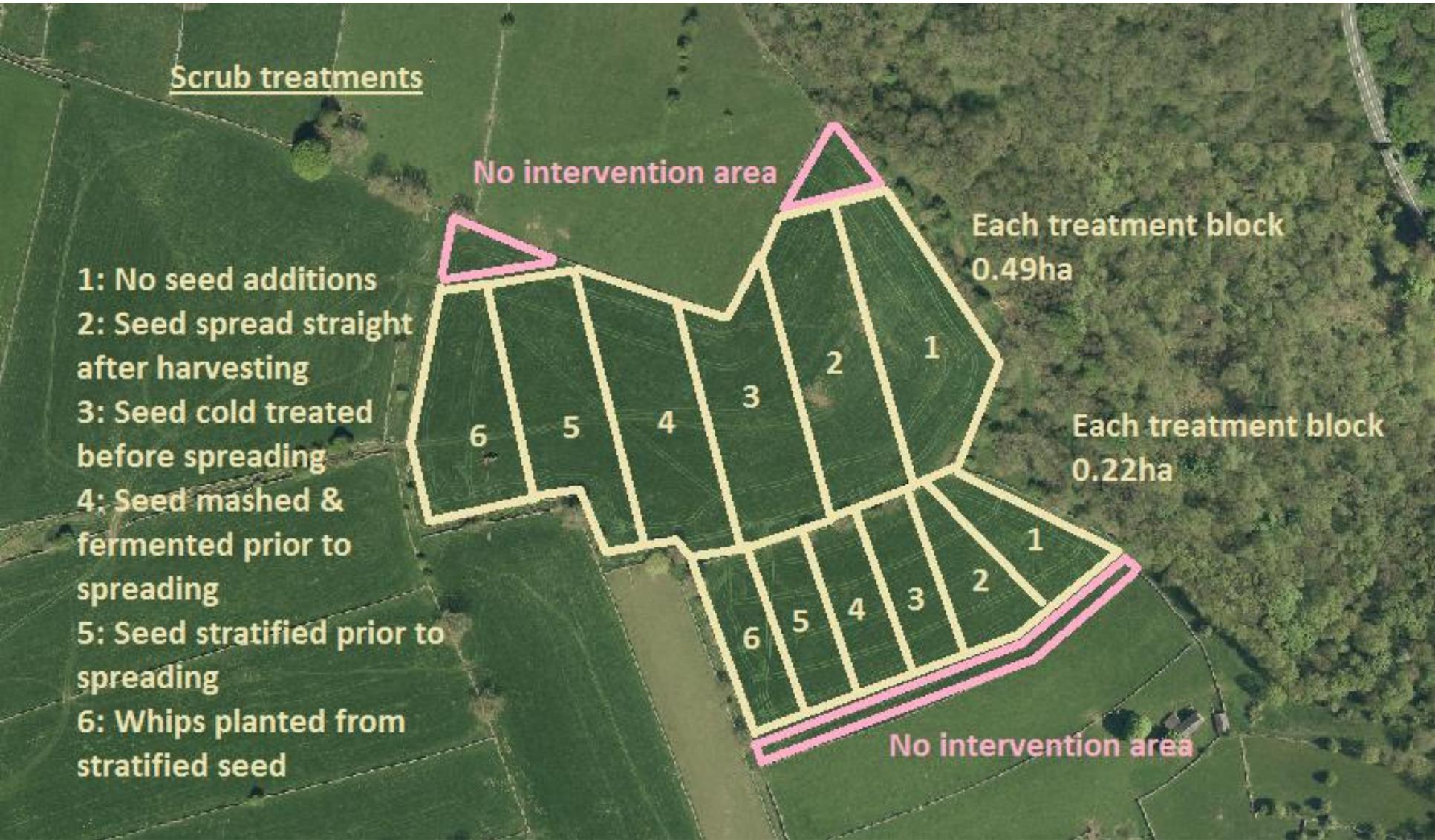
- 1: No seed additions
- 2: Seed spread straight after harvesting
- 3: Seed cold treated before spreading
- 4: Seed mashed & fermented prior to spreading
- 5: Seed stratified prior to spreading
- 6: Whips planted from stratified seed

No intervention area

Each treatment block
0.49ha

Each treatment block
0.22ha

No intervention area



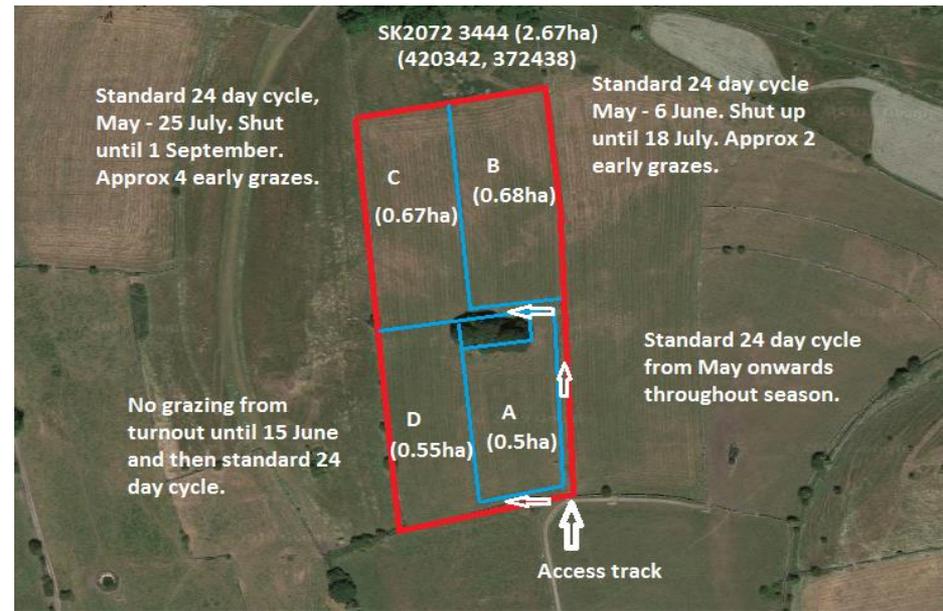


3m silage margins adjacent to walls in silage fields

3m silage margins adjacent to hedgerows in arable and silage fields



3m and 6m margins adjacent to SSSI Dale tops in silage fields



- Range of management regimes across typical plateau farming systems
- Range of establishment methods & timings
- Tailored seed mix; silage / grazing
- Monitoring & farmer buy-in

Multiple benefits

The trials have the potential to deliver for multiple 'public goods' including:

- Water quality directly through a reduction in fertiliser and pesticide use
- Carbon sequestration directly through reduction in management activities and through enhanced vegetation types
- Soil health with associated benefits for water quality, carbon sequestration and agricultural productivity

MONITORING

		Frequency (at least)
Biodiversity	Sward structure	Seasonally
	Plant diversity	Annually
	Flowering	Regularly through growing season
	Pollinators	Regularly through growing season
	Other invertebrates	Year 5
Soils	Structure	Annually
	Carbon (or a proxy)	Year 5
	Microbial biomass	Year 5
	N., P and K	Year 5
	Trace elements	Year 5
Herbal Leys	Productivity and Feed quality	Throughout the growing season (year 1)



Opportunities for wilder areas?

- Holding / landscape-scale
- Longstone Edge
- Ambitious CS Agreement; 1 January 2020
- Large scale restoration of species rich grassland & structurally diverse grasslands
- Extensive light cattle grazing



Principle	Question – how to?	Trial	Location & funding
Better	Enhance the structure and the longevity of flowering within existing flower-rich grasslands	Holding scale: <ul style="list-style-type: none"> Dwarf shrub and scrub seed. V light year round management of species rich grasslands 	<ol style="list-style-type: none"> Highfields Farm Hassop Common Monks Dale (NNR) HLS and CS funding
More & Bigger	Enhance structure and diversity of improved grasslands in targeted locations adjacent to existing species rich grassland	Field scale on the Dalebrow: <ul style="list-style-type: none"> Wildflower and scrub seed Light late summer/autumn grazing 	Taddington NPA funding
More & Joined	Enhance structure and diversity of improved grasslands in targeted locations to join up existing species rich grassland sites	Silage margins <ul style="list-style-type: none"> Wildflower and scrub seed Light late summer/autumn grazing 	Taddington, Tissington, King Sterndale NPA funding
Better & Joined	Provide stepping stones for invertebrates across the White peak plateau and bolster populations of invertebrates within existing sites	Field scale Herbal Leys <ul style="list-style-type: none"> Different management regimes Different seed mixes Different establishment Landscape mosaic 	<ol style="list-style-type: none"> Dairy, grazed. Great Longstone Dairy, silage / heifer grazed. Tissington Dairy, silage / heifer grazed. Spring sowing, Taddington. Beef, silage. King Sterndale. Beef, haylage / grazing. Great Longstone



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A Nature Recovery Network for the White Peak

