



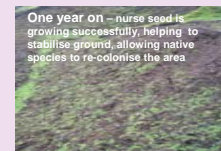
MOORS FOR THE FUTURE RESTORATION

RESTORATION - FIRE DAMAGED SITES AND UPLAND PATH WORKS

FIRE-SITE RESTORATION



Before – large areas of bare peat, badly damaged in the Easter fires, 2003



One year on – nurse seed is growing successfully, helping to stabilise ground, allowing native species to re-colonise the area

Vast areas of **degraded and damaged** moorland habitats of bare, eroding peat are being restored to stabilise and restore the landscape, protecting this valuable habitat into the future. **Wild fires**, combined with heavy grazing regimes and atmospheric pollution, have led to the loss of vegetation on large areas of Bleaklow and other moors in the Peak District. This in turn has led to extensive gullying and active erosion of the peat body by wind, frost and rain.

Moors for the Future are currently restoring 3 km² of badly damaged eroding peat, worsened by a long history of moorland wild fires.

Active re-vegetation of bare peat is encouraged by a series of mitigating restoration techniques;

1. application of lime and fertiliser
2. re-seeding areas with grass nurse crop
3. spreading of heather brash, heather bales or geo-textiles creating a protective cover for the new vegetation

The aim is to provide suitable habitat conditions for a natural re-colonisation by native blanket bog species, such as cotton grass and sphagnum species.

These re-vegetation techniques are applied in conjunction with stock removal to help the moorland to recover.



Heather brash, cut from local heather moorland, is used like garden mulch to protect the bare peat. It keeps the peat moist, provides diverse microclimates close to the peat surface and acts as a seed source for heather. These aid the germination and growth of heather, as shown by this *Calluna vulgaris* seedling.

Due to the remote location of the moorland restoration sites seed, lime & fertilizer are applied aerially using a helicopter. A hopper attached to the bottom of the helicopter is used to regulate the application rate of treatments, ensuring they are spread evenly across the sites.



The nurse crop contains a mixture of *Lolium*, *Agrostis*, *Festuca*, *Deschampsia* and heather species. The grass species will not persist in the harsh conditions on Bleaklow for more than a few years, but will help stabilise the peat, creating conditions suitable for native moorland species to colonise.

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UPLAND PATH WORKS

Moors for the Future are undertaking large scale restoration of popular **recreation routes**. The aim being to reduce the visual impact of eroded paths, create a better environment for path users, help prevent future damage, and to reduce disturbance on ecologically sensitive sites.

Trampling from walkers can lead to bare ground and boggy terrain – people then walk around the trampled area encroaching onto neighbouring vegetation and disturbing wildlife.

Moors for the Future paths are split into 2 types:

1. Trampling sites, where paths have degraded due to recreational use
2. Wildlife disturbance sites, where disturbance to wildlife on permissive paths on eroding peat may be detrimental to the local fauna, flora and landscape

Before work commences, full consideration is taken of a site's wider issues such as remoteness, sensitivity of wildlife or archaeology, aesthetics and wider recreation management issues



RESTORATION FACTS

Almost 1,000 tonnes of heather brash and heather bales will be spread on the restoration sites, covering an area of 120 football pitches

120,000² metres of geo-textiles will be placed over eroding peat, enough to cover 24 football pitches.

Moors for the Future have seeded an area of bare, eroding peat equivalent to 320 football pitches

Technical approaches to upland path management are:

- **Stone Pitching**. Used on eroding sections of steep path
- **Causey Paths**. Laying of stone flags on flat, peaty surfaces
- **Landscaping**. Using machinery to re-profile and level the ground, improve **drainage** and block multiple walklines. Other landscaping techniques are done by hand on more remote sites, e.g. 'cut and fill' where a ditch is created to control water flow and the spoil from the new ditch used to create a new, sustainable path surface
- **Re-seeding** of eroded path sides.

Using small machines and hand tools on Back Tor. Laying of a causey path (top) and 'cut and fill' (bottom)



Geojute is used to stabilise the peat on steep slope sides. It is made from natural fibres woven into a loose mesh pattern and is secured to the mobile peat surface using pegs. Geojute is manufactured from natural fibres and will break down into harmless by-products after 1-3 years,

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THE PARTNERS ARE: ENGLISH NATURE, NATIONAL TRUST, PEAK DISTRICT NATIONAL PARK AUTHORITY, UNITED UTILITIES, SEVERN TRENT WATER, YORKSHIRE WATER, SHEFFIELD CITY COUNCIL, PEAK PARK MOORLAND OWNERS & TENANTS ASSOCIATION, DEFRA, COUNTRY LAND AND BUSINESS ASSOCIATION, NATIONAL FARMERS UNION