

Position Statement



Upland management : *Making space for water*

- *The uplands of our catchment have a significant role to play in slowing the flow of floodwater.*
- *Where practicable restoration of blanket bog is believed to be the best possible outcome.*
- *Slow The Flow joins other conservation organisations in demanding the cessation of burning on blanket bog. We consider that mechanical cutting is a viable alternative, where heather regeneration is considered necessary.*
- *Slow The Flow will object to the creation of new tracks on blanket bog.*
- *The adverse effects of existing tracks could be mitigated through use of berms, increasing permeability and/or using offline attenuation basins*
- *Woodland creation has to be carefully considered in our upper catchment, due to its unique ecology.*

The management of the uplands has never been more in the spotlight; here in the Calder Valley, moorland management is at the centre of national headlines regarding the management of moorlands for driven grouse shooting. As a charity dedicated to natural flood management in the Calder Valley it would be amiss not to consider what is a predominant land use in the valley, with a focus on what the uplands can help to deliver in terms of reducing flooding downstream.

Land use is a major determinant of the amount of water generated in a flood event; in the 59 km² of the Hebden Water catchment, nearly 20% is upland plateau, predominantly blanket bog. Sphagnum moss is the building block of blanket bog that holds up to three times its own weight in water. Over decades there have been changes to how uplands have been managed.

Burning

From the 1950s to the 1980s, there were many government initiatives to drain the uplands, mostly to improve grazing for sheep, but also management for shooting grouse. The reversion from blanket bog, with its mosaic of vegetation including dwarf shrubs, heather and sphagnum has in some areas been replaced by a monoculture of heather and drier upland heath. In seeking to promote the young heather that is favoured by grouse; heather has been burnt rotationally, sometimes much more intensively, to increase grouse numbers.

In terms of retaining surface water flow there are certainly worse land uses than heather moorland; intensive pasture, or indeed plantation forestry, can both create significant run-off through drainage



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(see below) . However, the optimum environmental outcome would be a return to blanket bog, which has been described as this country's 'tropical rainforest' equivalent, and is able to store significantly more water when it is in favorable condition. There are also areas of concern where we believe enlightened management could help to reduce surface water run-off.

There are widely reported separate arguments for and against grouse shooting as a land use, but in terms of slowing the flow, the use of the land for raising grouse does not have to mean that burning is a necessity. Studies have shown that for grouse management, mechanical cutting of heather is equally effective.

The recognition of the value of uplands for biodiversity, as an existing store of carbon and to reduce surface water has been part of the [Making Space for water Project](#) developed by Moors for the Future.

Research by the University of Leeds identifies that burning undermines the development of active blanket bog; more intense burn cycles increases the potential of bare earth and significant loss of water and peat downstream during extreme weather events. The rate of run off from a bare peat site is roughly three times as fast as from the equivalent area covered in sphagnum or a third that of cotton grass ([See the EMBER report produced by the University of Leeds](#)).

Tracks

Tracks are the source of significant run-off as well as having significant impact upon the structure of blanket bog. ([See Natural England's Upland Evidence Review](#), 2013). The argument used that these are acting as fire breaks or to increase access for emergency services should be treated with healthy scepticism.

Drains

Drainage of blanket bog hastens run-off from moorland. Blocking up these drains (or grips) is important – it reduces the speed of flow and also the loss of peat (sediment).

Woodland

Woodland has often been mentioned in the context of uplands, both for its ability to sequester carbon, and its ability to reduce run off through its physical 'roughness'. Roughness may suit more 'scrub' or 'dwarf shrubs' that are native to the South Pennines. Indeed, research by the University of Leeds on the Colden Catchment identified that by creating riparian strips of sphagnum adjacent to existing water courses (10 % of the land cover in the catchment) could achieve a 7.4 % reduction in peak flow (Holden et al. 2008).

We recognise the international importance of the South Pennines for ground nesting birds and their protection as a Special Protection Area. Woodland (especially next to watercourses in cloughs) can have a desirable effect in reducing flow but we also recognise that there are other ways of creating the same physical ability to slow the flow. For example, any rough vegetation might include scrub or

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indeed sphagnum or bog. Indeed fencing off watercourses from grazing sheep and cattle can increase the amount of vegetation and reduce the sediment in water through natural regeneration. Woodland has to be carefully considered in our local upland landscape.

Slow The Flow is a charity working to advance the education of the public in Natural Flood Management, Sustainable Drainage Systems and other renewable methods of managing the environment, including the exploration of alternative practices which safeguard the natural environment and its resources in a manner which best fits the specifics of a local geography.

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