

# Peatlands, Wild Land Areas and carbon

Briefing for Motion S4M-13158 to be debated on 28<sup>th</sup> May



Updated May 2015

## Summary

- Covering only 3% of the world's surface, peat bogs contain 30% of the world's soil carbon
- Peatlands within Scotland are our most significant carbon store
- Soils in Scotland's Wild Land Areas (WLAs) are predominantly peatlands
- Peatlands and WLAs nurture precious specialist species which cannot survive elsewhere
- Threats to peatland include extraction for horticulture; burning; drainage; excess grazing; commercial forestry; hill-tracks and inappropriately-sited, industrial-scale wind energy development
- National Planning Framework 3 and Scottish Planning Policy recognise national importance of peatlands and Wild Land Areas and this must be fully endorsed in local planning policies

## Peat as a carbon store

**SCOTLAND'S NATIONAL PLANNING FRAMEWORK 3** notes that "Peatlands are an important habitat for wildlife and a very significant carbon store, containing 1600 million tonnes of the 3000 million tonnes in all Scottish soils" whilst **SCOTTISH PLANNING POLICY 2** gives a measure of protection for Wild Land Areas.

**The acknowledgement of the national importance of peat in NPF3 and SPP2 should be fully endorsed in planning policy to ensure protection of peatlands.**

Functioning peat bogs consist of two layers- the 'acrotelm' and the 'catotelm'. The former consists of the mosses and plants on top of a bog, and the latter is dead plant material which accumulates underneath – dead plant material breaks down very slowly in this layer, and so carbon is retained in the catotelm. The under-layer is permanently waterlogged, can be very deep and contains many tonnes of carbon.

**Despite covering only three per cent of the world's surface, peat bogs contain 30 per cent of the world's soil carbon.**

**Soils in Scotland's Wild Land Areas are predominantly peatlands. Scotland has about ten per cent of the world's blanket bog resource. Blanket bog is a type of peatland found in cool, wet climate zones.**

**The International Union for the Conservation of Nature states that loss of 5 per cent of the UK's peat bogs would be equivalent to all the other carbon dioxide emissions from the UK population's activities in one year.**

**Use of the "Carbon Calculator" should be extended to assess carbon emissions from all development on peatlands**

The Scottish Government commissioned a best-practice tool to assess the timescale over, and extent to which, wind developments on peat reduce carbon emissions. Whilst there are significant issues about the accuracy of data used by developers when making carbon calculations, the Carbon Calculator's use in the planning process should be improved and extended to other proposed developments on carbon-rich soils, such as excavation for horticulture, to show how much carbon will be emitted from the peat through the development.



*"Restoration of peatlands is a low hanging fruit, and among the most cost-effective options for mitigating climate change."*

Achim Steiner, UN Under-Secretary General and Executive Director UN Environment Programme

## Causes of damage to Peatlands

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Peatbogs tend to form a 'mound' with the water table following the surface of the bog very closely. Cutting into this 'cake' can reduce the water table across the bog, and thus the dried out peat will erode, releasing carbon stored within it into the atmosphere.

Overgrazing by deer and sheep will damage the peatbog surface by breaking up the top layer. Peat cutting will contribute to this drying out and excessive emissions of carbon. Commercial peat cutting; excavation of peat to allow development on a site or poor construction of hill roads will all cause adverse impacts. The proposed Stronelaig wind farm development (currently awaiting a Judicial Review judgement after Scottish Government consent was challenged by the John Muir Trust) would have over 40km of roads- drying out the peat along the entire length of the roadways.

Some leading academics have stated that drainage figures cited by developers in EIAs (Environmental Impact Assessments) often underestimate the area of peat which would be affected by drainage ditches cut into the peat.

Peatlands are a living system. Contrary to common claims by energy developers, peat cannot just be dug up and re-laid later, once damaged, and then be classified as "restoration of peatland". The complex local peat ecosystem has been destroyed.

The Royal Society for the Protection of Birds has previously stated: '*Costs of £13 per tonne of CO2 equivalent saved from peatland restoration are favourable when compared to other ways of saving carbon*'. This can be achieved by blocking drains on peat bogs.

## Peat and ecology:

The species most associated with peat bogs here in Scotland are *Sphagnum* mosses. These mosses have the ability to hold large amounts of water. They help to create acidic, waterlogged conditions which deter decomposition of organic material.

Peatland habitats in Scotland include some rare specialists such as the sundews, plants famous for their insectivorous habits. Rare birds also fly to our peatbogs to breed, such as the black-throated diver. Charismatic species such as this flourish in our peatland habitats, and are very sensitive to disturbance. They have little suitable habitat outside our upland and peatland areas.

## Conclusions

- **Substitution of peat use in horticulture by other products is essential**
- **Other damaging impacts on peatlands must be minimised, as identified in Scotland's National Planning Framework 3 and Scottish Planning Policy (Table 1).**
- **Peatlands need protected from damage through inappropriate development, and restored, to retain carbon stores in the ground, contributing to climate change mitigation, and to protect special ecosystems**

The John Muir Trust is the leading wild land conservation charity in the United Kingdom, seeking to ensure that wild land is protected and enhanced and that wild places are valued by and for everyone.

Contact: John Low Policy Officer [john.low@jmt.org](mailto:john.low@jmt.org) tel 01796 484931

Address: John Muir Trust, Scottish Charity No.SC002061, Company No.SC81620. Tower House, Station Rd, Pitlochry, PH16 5AN