IUCN National Committee United Kingdom

Peatland Programme

POSITION STATEMENT: Peatlands and Trees

SUMMARY OF IUCN UK PP POSITION

- Native woodlands and peatlands are two of our largest natural climate regulating ecosystems. They are both of high biodiversity importance and are a priority for conservation and restoration in the UK. Both have been subject to centuries of loss and damage, with the result that their characteristic wildlife is much depleted and that their climate regulating function is compromised. In order to meet the urgency and scale of climate change and biodiversity obligations we need sustainable management and enhancement of both peatlands and woodlands in the UK, without compromising one for the other.
- New forest planting on peatland is not supported and this is echoed by the position set out in the current UK Forestry Standard (2017). Devolved country-level forest policies recognise that existing forestry plantations on peatlands, which no longer meet sustainable forestry principles, *can* be removed to enable peatland restoration for biodiversity and climate benefits. Restocking on peatland and other land vital to the function of peatland is determined by country level policies: the normal restocking requirements for former plantations *can* be waived where this benefits peatland conservation and restoration, including adjacent vulnerable areas of peatland and peatland biodiversity. The policies largely relate to deep peat (defined in forestry terms as >50cm) but also include shallower peat in certain situations. These policies should be reviewed to determine whether they are effective in securing peatland restoration and avoiding restocking on peat and to consider stronger policy to actively encourage land managers towards peatland restoration. The distinction between deep and shallow peat in forestry policy should also be assessed in light of recent evidence on the significance of shallow peats for carbon storage.
- The best available estimates indicate that 18% of UK peatlands have been converted to forestry and that afforested peatlands are estimated to have undergone a net increase of 24,000ha between 1990 and 2013. [1]
- There are opportunities for expansion and management of woodlands within peatland landscapes on non-peat soils to support biodiversity and climate change objectives. There are also limited opportunities for woodland regeneration on peatland soils in some specific situations, such as fen carr woodland adjacent to lowland raised bogs or the natural regeneration of native woodland expanse on shallow peat in both upland and lowland settings. Care is required to ensure that any woodland expansion does not compromise the restoration of adjacent degraded peatland habitat or conflict with other protected attributes such as important peatland bird species or historic features.
- The positive effects of the removal of commercial plantations along with hydrological restoration on peatland function are widely understood and acknowledged; the ecological implications of forestry on peatlands are discussed in IUCN UK PP Briefing Note 4. However, there is some scientific uncertainty around the relative climate impacts of plantation restocking, removal and peatland restoration.
- Forest planting and restocking on peat translocates carbon from a large soil carbon reservoir that is secure over millennia under natural conditions (i.e. peat soils) to a more reactive store (i.e. wood) which,

[1] Artz et al., (2019) State of UK Peatlands: An update to the Commission of Inquiry on Peatlands

regardless of its end use, is more likely to be converted back to carbon dioxide within years to decades. Healthy, natural peatland ecosystems continue sequestering carbon indefinitely. Moreover, when other benefits of peatland restoration (e.g. biodiversity, water quality) are considered there is a clear case for forest-to-bog restoration.

- Growing trees on peatland is not the most sustainable or cost-effective option for tackling climate change. The carbon benefits of trees on peatlands are compromised compared to trees grown on non-peat soils and planting trees on peat imposes additional land management costs. The cost effectiveness of these reduced carbon benefits arising from trees on peat need to be considered against the alternative of simply restoring the peatland to secure immediate significant emissions reductions and long term sequestration. .
- The optimum solution for carbon and biodiversity is to maintain non-afforested peatlands, restore forested peatland to open habitat and secure new tree cover on non-peat soils or areas of benefit to peatlands.

IUCN UK PEATLAND PROGRAMME RECOMMENDATIONS

- Continue an ambitious programme of peatland restoration on afforested areas.
- Undertake applied research and monitoring to address uncertainties around the relative climate impacts of land use decisions regarding trees on peatlands.
- Continue to apply the precautionary principle rigorously until scientific discrepancies are resolved. This principle is internationally required under the Ramsar Convention and its application in this context would be to protect peatland carbon stocks and not to use the limited science on the carbon impact of tree restocking as a justification for 'business as usual'.
- The Peatland Code and Woodland Carbon Code should continue to be developed in tandem to harness both public and private funding for bundled landscape restoration packages which support restoration of both peatland restoration and new woodland planting. Links to landscape scale funding mechanisms, such as Landscape Enterprise Networks, should be developed to enable the integration of existing natural capital schemes.
- Forestry policy/guidance and implementation in relation to peatlands in the devolved administrations should be checked for consistency with the goals of the UK Peatland Strategy. Land-use policies and fiscal mechanisms for forestry and agriculture should be better coordinated to ensure national forest expansion and peatland restoration targets can both be achieved without compromising one for the other.
- The UK government and devolved administrations should monitor the effect of these policies at the regional and national levels through reporting on:
    - The extent of tree planting/regeneration, including restocking on peat soils across both public and private land
    - The extent of forest removal on peat soils and whether the subsequent land use involves peatland restoration and optimal management.
- UK and devolved government climate targets should set out the need for both trees and peat in line with IUCN Resolution 43 – Securing the future for global peatlands and the UNEA4 Resolution on the Conservation and Sustainable Management of Peatlands- requiring appropriate consideration to the importance of the preservation of peatlands when implementing forestry policy. Mapping and spatial analysis of future land use policies would ensure that both of these climate mitigation tools are not compromised.

IUCN National Committee United Kingdom

Peatland Programme

BRIEFING: Peatlands and Trees

TREES ON PEATLAND IN THE UK

There is evidence of some historic tree cover beneath UK blanket bogs but these were usually small diameter trees and generally on lower lying ground or where peat was marginal to other soil types. These tree remains typically represent woodland before human tree removal and climate change allowed expansion of peat some 4-5 thousand years ago. In the present climate era, woodland cover should naturally occur on hillslopes and stream cloughs associated with thinner peat and mineral soils on the bog margins. Indeed, there is some evidence that these naturally wooded slopes helped to support the mass of blanket peat in the uplands (Tallis, 1985 & 1987[2]). The UK's relatively recent glacial past has left a mosaic of different soil types in close proximity which means woodlands could grow naturally on non-peat soils within peatland landscapes.

The consistently high and stable water tables of intact bog peatland hinder the establishment and growth of woodland on peatland. There are situations across the UK where stunted trees grow on wet peat soils to form bog woodland. Bog woodland (Habitat 91DO, JNCC) has a clear definition under EU Habitats Directive in terms of the tree species and structure: these are generally small non-intrusive groups of trees and shrubs that occur in a relatively stable ecological relationship as open woodland without the loss of bog species or disruption to the normal peatland hydrology.

Trees will grow on peat where peatland water tables are naturally fluctuating (e.g. floodplain/wet woodland such as alder carr) and native woodland can also occur naturally within peatland landscapes on areas of shallow non-peaty soils and steep slopes. In an undamaged state, raised bogs can have fen carr woodland around the edge on thinner peat or areas flushed with groundwater. This habitat is now lacking from many of our raised bogs due to past agricultural and peat extraction activity and there is an opportunity for carr woodland to re-establish to benefit the remaining peatland. Trees also grow on peat where water tables have been compromised by drainage and other impacts such as burning and grazing. Once established, the growth of the trees on a damaged peatland increases water removal from the system and leads to further drying, shrinkage and degradation of the peat[3]. With increased drainage and drying comes the risk of catastrophic events such as wildfire which can negate any woodland carbon gains and release large amounts

[2] Tallis, JH (1985) Mass movement and erosion of a southern Pennine blanket peat. Journal of Ecology, Vol 73 (1) pp283-315.
Tallis, JH (1987) Fire and flood at Holme Moss: Erosion processed in an upland blanket mire, Vol 75 (4) pp1099-1129.
[3] Lindsay (2010) Peatbogs and Carbon: Discussion Section 3a and b

of carbon from the peatland carbon store. Care is needed to get the timing of any peatland-fringe woodland creation right; introducing trees before a stable water table is secured within the peat soils can risk the damaged peatland being invaded by trees.

AFFORESTATION OF UK PEATLANDS

Some of the UK's finest peatland ecosystems have been severely damaged by the expansion of commercial plantation forestry throughout the 20th century, including the Flow Country of Caithness and Sutherland, the Border Mires of Cumbria and Northumberland[4], and the mires of the Scottish Southern Uplands[5]. Approximately 18% (439,410ha) of the UK's peatlands are currently under forestry[6]. There have been small net reductions in the extent of forestry on peat in England and Wales from 1990 to 2013, but in Scotland and Northern Ireland (and despite recent large forest-to-bog restoration projects) there were net increases, leading to an overall increase in UK peat under forestry of 24,000 ha during this period[7].

Forestry planting operations and associated drainage, fertiliser application and tree growth has been shown to have a severe adverse impact on peatland biodiversity and peatland function including loss of or changes in bog vegetation under plantations, as well as long-term hydrological impacts on adjacent and associated peat bodies, and other water-dependent habitats[8]. The effects on birds are well documented with forest plantations on peat displacing peatland bird species directly through habitat loss and through 'edge effect' where birds are essentially displaced from adjacent peatland areas[9].

The arbitrary figures used for peat depth classification across the UK are unhelpful when considering climate based land use decisions. Under current policy, thin peat soils below the 50cm/40cm threshold are deemed suitable for tree planting. A thin peat layer of 30cm has a carbon store equivalent to tropical rainforests[10] (hectare for hectare). To effectively meet Net Zero targets we need to carefully consider the potential impact of future restocking on deep peat and afforestation of thin peat soils. We also need to consider the biodiversity implications of planting on other habitats supported by thin peat soils (e.g. wet heath) which are often also important EU Annex 1 habitats and the species that these habitats support e.g. curlew and snipe. More complete environmental impact assessment is needed to balance the needs of habitat protection, biodiversity and the climate mitigation potential of a change in land use. National land use planning should be developed and used as a tool to guide decisions so that benefits can be achieved in the most sustainable way rather than simply addressing conflicts at the single site scale.

[4] Ratcliffe, D.A. (2002) Lakeland. Collins, London

[5] Ratclifffe, D.A. (2007) Galloway and the Borders. Collins, London.

[6] Evans *et al*. (2017) Implementation of an emission inventory for UK peatlands.

[7] Artz *et al.,* (2019) The State of UK Peatlands Update

[8] Stroud, D.A., Reed, T. M., Pienkowski, M. W. & Lindsay, R. A. (1987) Birds, Bogs and Forestry. The Peatlands of Caithness and Sutherland. Nature Conservancy Council.

[9] Wilson *et al*., (2014) Modelling edge effects of mature forest plantations on peatland waders informs landscape-scale conservation Journal of Applied Ecology (51 (p204-213)

10 Lindsay et al. (2019) Peatlands: the challenge of mapping the world's invisible stores of carbon and water. Unasylva, 70 (2019/1), 46-57.

FOREST-TO-BOG RESTORATION

There are numerous examples of forest-to-bog restoration underway across the UK and reported successes with recovering peatland function and diversity: The Commission of Inquiry Update for 'Peatlands and Forestry' addressed the most recent evidence from the restoration of afforested peatlands and presented the range of current good practice techniques currently in use (Box 1). However, the extent of afforested peatland restoration to date is limited and there is much is still to do to restore these globally important natural habitats. It is vital that this restoration activity is not derailed by the drive for tree planting, and equally importantly, that the lessons of the past are learned and that the great push for tree planting is not again going to cause serious damage to what remains of our native peatland wildlife[11]. The Committee on Climate Change (CCC) recommended that to meet Net Zero 25% of the peatland area with low productivity trees is removed by 2050[12].

BOX 1. FOREST TO BOG RESTORATION

There are a number of good practice examples of landscape scale, forest-to-bog restoration across the UK. A large amount of restoration work has been carried out on the national forest estate, as well as restoration by renewable energy companies, peatland partnerships and conservation charities. A variety of methods have developed to block the forestry furrows and drains and to encourage the regeneration of peatland vegetation. Forest to bog restoration has been shown to be successful in recovering biodiversity and recovering the climate benefit of healthy peatlands within 15 years [15].

Afforested peatland restoration at Forsinard
© Neil Cowie/RSPB

CURRENT EVIDENCE AROUND CARBON IMPACTS OF PLANTING, RETENTION OR RE-STOCKING OF FORESTRY ON PEATLANDS

An IUCN UK PP workshop on forestry and peatlands explored the scientific basis behind current estimates of carbon balance on afforested and restored peatlands. The workshop concluded that there is some deficiency in the assumptions and parameters used in current UK models for assessing greenhouse gas emissions on afforested peatland. The Commission of Inquiry Update for 'Peatlands and Forestry' has explored some of the latest research in this field and presents a general summary of the different greenhouse gas pathways (Fig 1).

[11] Natural Capital Committee (2020) Advice on using nature based interventions to reach net zero greenhouse gas emissions by 2050
[12] CCC (January 2020) Land use: Policies for a Net Zero UK

The evidence available indicates that following afforestation of peat soils, there is a loss of carbon from the peatland carbon reservoir and a gain in tree carbon sequestered from the atmosphere. Recent studies have suggested that for *organo-mineral soils* this balance may be positive in the short term – the carbon gain in the trees outweighs any peaty soil losses, even longer term, into a second rotation[13]. Whilst there is evidence that on some shallow peats that there is a net carbon gain from trees on the peat during the aforrested stage the overall carbon balances are unclear taking into account the effect of initial soil preparation, planting, harvesting restocking and final clearfelling. With suggestions that the first rotation of trees on *peat soils* may not outweigh the loss of carbon from the peat[14], it is clear that overall carbon balance of trees on peat will be substantially less than that of a scenario where the bog was left un-planted and trees were on mineral soils. The situation for a peat soil (more than 50 cm peat as defined by forestry policy) is unclear due to a lack of empirical evidence and opinion is divided as whether forest growth is likely to compensate for losses of carbon from peat, and if so at what point tree carbon is likely to exceed peat carbon losses.

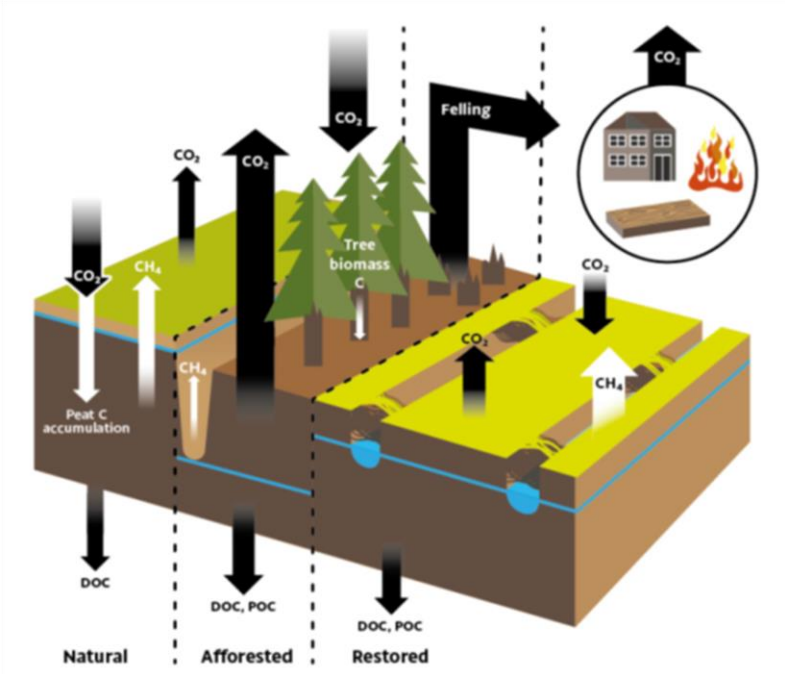


FIGURE 1 Conceptual diagram of key carbon cycle pathways and changes with peatland afforestation and restoration © Richard Payne, University of York

Peatland restoration in general has been shown to bring almost immediate significant emissions reduction[15] through rewetting followed by later additional benefits of sequestration from the growing peatland habitat. Recent evidence has demonstrated that for deep peat, forest-to-bog restoration can re-instate a net GHG sink function within 15 years [16,17] but evidence is sparse due to few replicated studies across upland and

[13] Vanguelova et al., 2019, Impact of Sitka spruce (Picea sitchensis) afforestation on the carbon stocks of peaty gley soils – a chronosequence study in the north of England

[14] Sloan et al, (2018) Peatland afforestation in the UK and consequences for carbon storage

[15] Evans, et al., (2017). Implementation of an emission inventory for UK peatlands. Report to the Department for Business, Energy and Industrial Strategy, Centre for Ecology and Hydrology, Bangor.88pp.

[16] Creevy, Payne, Andersen and Rowson (2020) Annual gaseous carbon budgets of forest-to-bog restoration sites are strongly determined by vegetation composition. Science of the Total Environment 705

[17] Hermans et al., 2019 Climate benefits of forest-to-bog restoration on deep peat – Policy briefing. ClimateXChange

lowland bogs and for the range of felling and restoration techniques currently employed. Given this uncertainty, it can be difficult to determine whether forest-to-bog restoration can bring similar climate benefits (through emissions reduction) to other types of peatland restoration. However, we do know that over long time horizons, afforestation and reforestation translocates carbon from a reservoir that is secure over millennia under natural conditions (peat) to a more reactive store (wood), which is more likely to be mineralised to carbon dioxide within years to decades. Moreover, when other drivers for restoration (e.g. biodiversity, water quality) are also considered, there is a strong case for restoring such sites

Whatever the balance of carbon benefits from peatland or trees, it is clear that growing trees on peat risks lower net carbon gains than could be achieved on non-peat soils where trees are not compromised by wet, low nutrient peat soils and where there is no loss of carbon from the peat. Planting trees on peat brings additional land management costs, including draining the peatland, management to protect adjacent open habitat and restoring the land back to peatland after afforestation. The cost effectiveness of these reduced carbon benefits arising from trees on peat need to be considered against the alternative of simply restoring the peatland to secure immediate emissions reductions and longer term sequestration.

From a holistic land use and climate perspective the best overall scenario would be to encourage new afforestation on mineral soils whilst urgently restoring afforested peatlands through tree removal to fully functional carbon sinks (see Box 2, p8). Delaying peatland restoration until trees reach maturity or until after subsequent rotations risks greater damage to the peatland and less certainty of successful restoration and greater cost in securing peatland carbon benefits from restoration.

NATURAL SELF-SEEDING/REGENERATION ON PEATLANDS: THE RIGHT TREE IN THE RIGHT PLACE

Woodland expansion adjacent to healthy peatlands can be beneficial to peatland ecosystems and biodiversity. Trees can provide habitat features of benefit to some peatland species that depend on the transition between woodland and peatland. Trees can also provide physical support to adjacent peatlands, particularly on steep slopes, for example wooded slopes provide support for a mass of blanket peat on a hill top.

Natural seeding and regeneration without soil disruption on the peatland edge and potential damage to adjacent peatland hydrology is a more sympathetic method than tree planting. However, with the scale of the degradation of our peatlands (80% damaged, mostly due to drying influences/drainage) close proximity to woodland and trees puts them at risk of becoming scrubbed/wooded over and suffering further drying influence from the growth of trees.

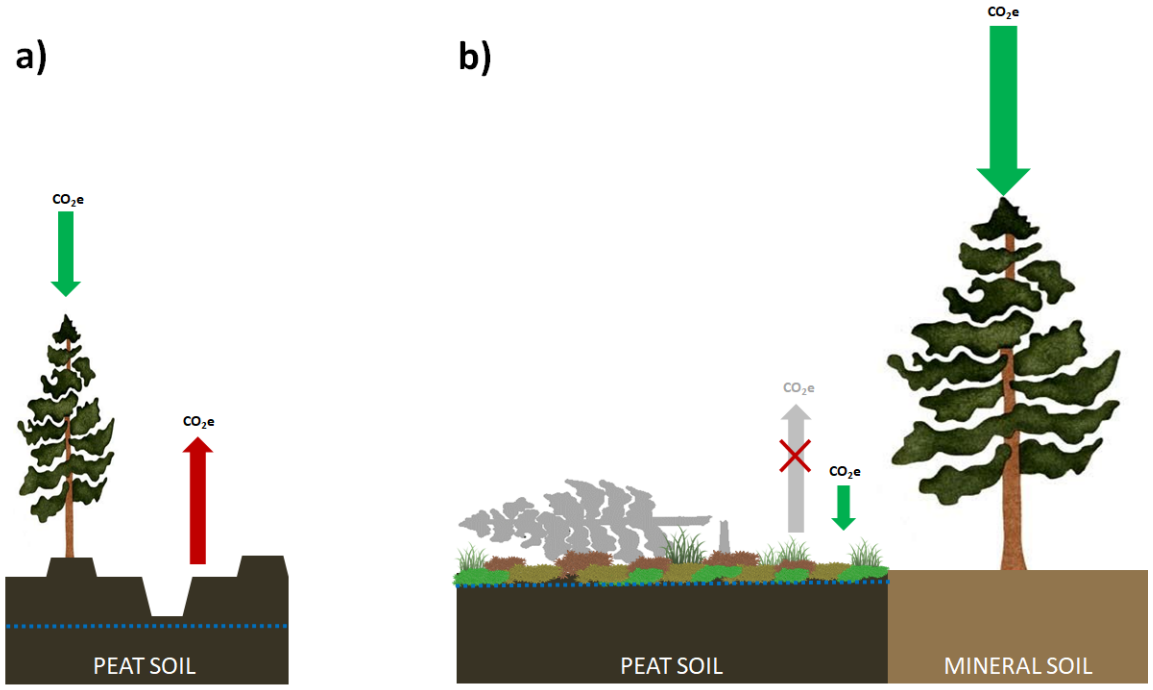
The UK will need a managed transition that supports woodland regeneration where the peatlands have been rewetted and are resilient to tree inundation. Rapid re-wetting and creating a stable water table as rapidly as possible will be key to avoiding tree seedlings from taking hold within the recovering peat. In some situations, it may be appropriate simply to restore natural hydrological processes and leave the trees to die from waterlogging, but very often, particularly on bogs, restoration will normally require removal of trees. This has the added benefit of providing early open ground habitat for birds and other important peatland species.

BOX 2. LAND USE SCENARIOS FOR AFFORESTATION

Planting trees on peat compromises both the growth of the tree crop and the carbon store of the peat soil (see diagram below). The yield class of trees on peat soils is often compromised through ineffective drainage and the prevailing hydrology of areas which have naturally formed peat[1]. The end use of the timber resulting from these low value trees is restricted to short-term carbon store products such as paper[1]. Drainage, growth of the trees and associated changes to soils structure and hydrology (interception and evapotranspiration leads to C loss from the peat.

The optimised solution for maximising protection of the soil C store and potential growth and sequestration of C by trees is to:

- Plant trees on mineral soils so that available nutrients and hydrology do not hinder forest productivity.
- Retain areas of open peatland and restore peatland affected by forestry to protect the existing soil carbon store and recover the potential for future carbon sequestration by the peatland.



Scenario a) Peat soils are drained and both the carbon sequestration capacity of the tree and the carbon sink capacity of the peatland are compromised.

Scenario b) The optimal land use scenario for carbon and peatland biodiversity would be to conserve open peatland habitat and restore afforested peatlands to health whilst maintaining and afforesting mineral soils where tree growth is not limited by hydrology or nutrient availability.

Note: Afforestation of mineral soils need not be in close proximity to peat soils and if this was the case, care would be needed to ensure the high water table in the peat had been stabilised before adjacent tree cover was put in place to avoid seeding into the drained peat.

FORESTRY POLICY RELATING TO PEATLANDS IN THE UK

UK Forestry operates within the general principles of sustainable forestry that recognises the need to support biodiversity objectives for open ground habitats including peatlands. The importance of peatlands as carbon stores and the need to help tackle climate change is also recognised. Forestry policy is a devolved matter and detailed policies have been set at the individual country level (e.g. Scotland [18] and Wales[19]). These policies set out how peatlands can be conserved and restored. Key points raised in UK and devolved forestry policies include:

1) NEW PLANTING

The UK Forestry Standard (UKFS[20]) and the FC Forests and Peatland Habitats Guidance[21] requires that new planting does not take place on priority peatland habitats (e.g. active raised bogs, degraded raised bogs capable of restoration, blanket bogs, fens and wet heaths) and deep peat soils or adjacent sites (of any soil depth and type) that would compromise the hydrology of peatland habitats. The policy is not therefore restricted to deep peat, recognising that important peatland habitats can occur on shallower peat soils. The UKFS states:

> *"There is a specific presumption against the conversion of some priority habitats, such as deep peat or active raised bogs. This is for reasons of climate change in addition to biodiversity"*
>
> and
>
> *"Avoid establishing new forests on soils with peat exceeding 50 cm in depth and on sites that would compromise the hydrology of adjacent bog or wetland habitats. Note: Woodland creation on certain sites where deep peat soils have historically been highly modified may be considered, provided that it complies with the relevant country policy."*

2) CONSERVING AND RESTORING PEATLANDS IN EXISTING FORESTS:

Regarding peat under and within existing forests, UKFS states that:

> *"Some forests have been established on what are now recognised as priority open-ground habitats, such as bogs and heaths. Although there is a general presumption against deforestation, some of these sites may have potential for restoration where this offers significant and demonstrable benefits for biodiversity. Where deforestation is proposed, an Environmental Impact Assessment is likely to be required, and each case will have to be determined individually. All the various implications, including the practicality of habitat restoration, will need to be considered in the context of policies at country level on woodland removal."*

The Forestry Commission Peatland and Habitat Guidance encourages the conservation of peatland habitats (including fens and bogs) within forests as part of the normal design and management of open ground (around 10–20% of the total area of woodland). The guidance allows for restoration of former

[18] Forestry Commission Scotland (2016) Supplementary guidance to support the FC Forests and Peatland Habitats Guideline Note (2000)
[19] Forestry Commission Wales, Forestry and deep peat
[20] Forestry Commission (2017) The UK Forestry Standard: the government's approach to sustainable forestry page 44
[21] FC Forest and Peatland Habitats Guideline Note (2000) https://www.forestresearch.gov.uk/research/forests-and-peatland-habitats/

peatland habitats within some of the larger openings in extensive forests and for the creation of transition zones at planted forest edges adjacent to open blanket bog.
Larger peatland restoration projects on a scale which exceeds the normal open ground provision within woodlands are allowed but have to demonstrate a high net environmental benefit from permanent tree removal. Grant aid for such work has been made available for private forests and the public forest estate has also delivered restoration work (Box 1).

The UKFS presumes that sites will be restocked with trees following clear-felling, however the policy guidance confirms that on deep peatlands accepted as priorities for restoration, conventional restocking requirements need not apply.[22] The UKFS guidance states that decisions should be made on a site by site basis through consulting devolved policy on restocking but also notes to:

> *"Consider the balance of benefits for carbon and other ecosystem services before making the decision to restock on soils with peat exceeding 50 cm in depth."*

In Scotland, the supplementary guidance and associated practice guidance[23] provides further information on the circumstances where restocking the whole or part of a site on deep peat may not be allowed under felling licence condition:

> *"This applies to sites designated for their peatland interest, sites containing rare or high ecological quality peatland types, and sites that can be restored to improve the condition or functional connectivity of associated priority habitats (including bog woodlands and other forms of native woodland or scrub such as fen peats and bogs). This can apply to adjacent sites if there is evidence that key biodiversity interests would otherwise be compromised".*

"Priority habitats" includes habitats designated as qualifying features in the UK Biodiversity Action Plans[24, 25] or on EU Natura sites, Ramsar sites, SSSIs or NNRs.

In Wales[26] restocking on deep peat is only an option after an assessment of the potential for peatland restoration and should be considered when:

i. *"maintaining woodland habitat is required to support a protected or priority species"*
ii. *"restocking can contribute to the expansion of, or restoration to, a woodland HAP type"*
iii. *"the integrity of the peat, the hydrology of the site and its biodiversity value has been degraded to the extent that restoration is not viable (economically or technically feasible); e.g. where there is serious cracking of the peat, loss of the peat forming layers and oxidation is highly advanced; where there is substantial evidence of natural tree regeneration, native or coniferous, little evidence of remnant bog features or re-establishing flora."*

22 Hermans *et al.*, 2019, Climate benefits of forest-to-bog restoration on deep peat – ClimateXChange Policy briefing
23 Forestry Commission Scotland (2015) Practice Guide for future management options for afforested deep peatland
24 JNCC UK Post-2010 Biodiversity Framework
25 2020 Challenge for Scotland's Biodiversity
26 Forestry Commission Wales: Guidance on deep peat

Current forestry policy gives support for the felling of trees without restocking where this can benefit peatland restoration but there is no clear compulsion for the removal of trees either within the normal forest cycle or at the end of a rotation. It remains largely at the land managers discretion whether to retain trees or restock rather than restore peatland habitat. The policies primarily apply to deep peat (defined in forestry policy as greater than 50cm) but do also consider areas of shallow peat under certain conditions. It is recommended that the policies are reviewed in terms of the uptake of peatland restoration options by land managers and also that further consideration is given to the protection and restoration of shallower peats.

3) RESTORING APPROPRIATE TREE COVER

Whilst most restoration work will be to open habitat, the Scottish guidance[27] in particular acknowledges there may be instances where it is ecologically appropriate and achievable to restore to native woodland or bog woodland/scrub.

For deep peatland sites that are **not** a priority for open habitat restoration or native woodland, the guidance directs restocking decisions either towards conventional tree planting, or to allow for a 'peatland edge' woodland, a form of low density woodland with minimum cultivation and usually of native trees. Determining which woodland applies depends on achieving the best carbon benefits based on the expected yield class following restocking.

Wet woodland as included in 'peatland edge woodland' discussed above, is now a localised priority habitat and fen-carr woodland around the margins of raised bogs can be a natural feature often lacking from sites due to past land use and therefore can be an important part of peatland restoration. IUCN Briefing Note 4 makes it clear that woodland on peat is typically restricted to marginal peat or particular landscape features within a peatland (e.g. flushes, cloughs). Woodland cover on areas of bog peat generally indicates that the peatland is compromised in some way.

4) FORESTRY REMOVALS

Forestry removal from peatlands is not technically 'deforestation' under proposed LULUCF greenhouse gas accounting changes[28] and the adoption of the "no-debit" rule[29]. Deforestation aims to secure and protect native semi-natural woodlands where they occur naturally, whereas most UK plantations on peatland are of non-native species.

5) COMPENSATORY PLANTING

In both situations of felling to support peatland restoration/conservation objectives and not requiring restocking – there is **no** obligation for compensatory planting anywhere. This means peatland restoration projects are **not** obliged to provide for replacement tree planting. For example, in Scotland[30], compensatory planting is not required where there is strong evidence that the woodland is having a

[27] Forestry Commission Scotland (2015) Practice Guide for future management options for afforested deep peatland

[28] Matthews, R., Mackie E., & Thompson, A. (2012). Advice on LULUCF accounting policy changes for forestry. Response to question from ClimateXChange, Oct 2012.

[29] Land use and forestry regulation for 2021-2030

[30] Scottish Government's Policy on Control of Woodland Removal: Implementation Guidance

significant detrimental effect on priority habitats and their connectivity and where the desired open habitat is restorable within a reasonable timescale of 15-20 years.

CONCLUSION

In conclusion, it is apparent that current forestry policy does make provision for the conservation and restoration of peatlands but needs to be implemented robustly and uniformly across all regions. Problems remain of:

- Current policy wording and guidance do not compel land managers to restore peatland and are open to interpretation and variable application in practice. The precautionary principle is not widely included as a key decision tool to allow for the conservation and restoration of peatlands where there is uncertainty in the impact of trees on peat and the importance of shallow peat is not fully addressed.
- A net increase of the area of peatland under forestry, despite some extensive forest-to-bog restoration projects
- Cases of new forestry planting taking place on peatland and peat soils <50cm.
- Forest management plans under review where re-stocking on deep peat is being recommended for further rotations, despite the peatland meeting the criteria for open habitat restoration.

We recommend that the UK government and devolved administrations should assess the effectiveness of these policies at the regional and national levels in meeting peatland objectives through monitoring and reporting on:

- The extent of tree planting/regeneration, including restocking on shallow and deep peat soils across both public and private land
- The extent of forest removal on shallow and deep peat soils and whether the subsequent land use involves peatland restoration management.

IUCN UK Peatland Programme
v.1 April 2020
Any comments or queries relating to this position statement should be directed to info@iucn.org.uk