

**England Peat Strategy Consultation**

**RSPB response to Defra 3 August 2020**

**Overview**

1. Peat soils support wildlife habitats for which the UK has a particular biogeographical importance and which, when in poor condition, is a significant source of greenhouse gas emissions,

2. Restoration delivers a range of benefits including contribution to Net Zero emissions, recovery of nature, sustainability of soil, meeting the requirements of the 25 Year Environment Plan

 3. Such detail as is provided in this peatland policy discussion document falls well short of what is required to meet the challenge and unlock the benefits of our peatlands. The broad requirements and aims for peatlands are clear and discussion needs to move urgently to how these can be delivered

**4. Are our targets realistic and achievable to ensure peatland is functioning healthily for the needs of wildlife, people and the planet by 2050?**

**YES/NO?**

If not, why not?

‘Our aim is that, by 2050, our peatlands will be functioning healthily for the needs of wildlife, people and the planet’

The broad aim for our peatlands to be functioning healthily for the needs of wildlife, people and the planet is the right one. The 2050 timeframe is however beyond both the widespread urgent need for remedial action and for wider Defra commitments. The headline aim should also be explicit that this encompasses all of the England’s peatlands, following previous more detailed iterations of the peat strategy and the statement below.

The peat strategy’s aims and targets should be consistent with Defra’s 25 Year Environment Plan (25 YEP) requirement for all soils to be sustainably managed by 2030. This target, which is endorsed by the Committee on Climate Change and the Natural Capital Committee, among others, and links to the United Nations’ Sustainable Development Goals, should be at the core of the peat strategy and its delivery.

‘We will bring all our peatland into **good condition, restoration management or more sustainable management** by 2040’

The RSPB welcomes the scope to include all peatland but the 2040 timeframe for achieving good condition, restoration management or more sustainable management does not reflect the 25 YEP sustainable soil target. The wording to bring ‘*more* sustainable management’ falls short of the requirement to achieve sustainable management: the word ‘more’ should be deleted. For semi-natural peatland habitats, bringing the peat soils into sustainable management is the essential precursor to subsequently achieving healthy functioning peatlands and eventually thereafter good ecological condition. The timeframes for achieving these latter milestones on the trajectory for peatland recovery is less certain. For intensive farming on lowland peatlands, achieving sustainable soil use is essential to livelihoods dependent on ongoing economic productivity. Matching the 25 YEP target for sustainable soil management by 2030 therefore is the essential underpinning for achieving all the wider aims of the peat strategy and should be included as a specific target in the peat strategy. Subsequent to the introduction of such management, the healthy functioning of all peat soils should be achievable and required by 2040[[1]](#footnote-2).

The RSPB welcomes the aim to secure our peatlands’ carbon store towards the Net Zero target. This however needs an explicit commitment to include all of England’s peatlands and to take the action required to achieve this aim, by 2030.

We welcome the aim to deliver Natural Flood Management outcomes, although this needs to be developed to become a SMART target.

 ‘Our peat habitats will support healthy **well-functioning ecosystems rich in wildlife**, to contribute to our commitments for habitats and species, which will be taken forward under the Nature Strategy’.

This outcome is critical to the success of any credible peat strategy, but the means towards achieving this set out in the discussion document are inadequate.

The discussion document simply repeats the 25 YEP commitment to “bring 75% of SSSIs into favourable condition”. However, there is no date for achieving this, unlike the 25 YEP, which commits to achieving the 75% target by 2042 – the date should be added back in.

However, to achieve the aims of the peat strategy and the 25 YEP requirement for soils sustainability, *all* peatland SSSIs should be brought into favourable condition. As our prime peatland habitat sites and with legal underpinning, appropriate management for SSSIs should be in place as a priority, with actions underway in the next five years towards achieving favourable condition.

Yet furthermore, there is no mention of the strategy’s aims for functioning ecosystems rich in wildlife across non-SSSI peatlands, including those in National Parks and AONBs, and the Public Forest Estate, even though the strategy encompasses, as it should do, all peatlands. Protecting the peat carbon store also requires well-functioning ecosystems - the RSPB’s nature and carbon mapping work[[2]](#footnote-3) in 2019 showed that 66% of the UK’s carbon in nature rich areas, of which much is in peat soils, is situated outside protected areas.

All semi natural habitat on peat soils therefore needs to be in favourable condition to simultaneously address both the climate and nature crises. The urgency of climate change mitigation and the need to restore healthy bogs to be more resilient to climate change both leave no reason to suggest that action outside SSSIs is less important than within them, and so appropriate management for bog restoration should be in place across all peatland habitat by 2025. Specific targets for peatlands in SSSIs, National Parks and AONBs, the Public Forest Estate and non-designated peatlands should be set out in the Peat Strategy to drive progress.

Over the last decade, the monitoring of SSSIs in England has been inadequate. Those peatland SSSIs that were monitored are not recovering. A programme of monitoring is urgently required to inform the necessary changes in land management required to put these designated areas on a path to recovery. We recommend the following three interim targets:

1. By 2023, Natural England should have assessed the current (baseline) condition of all peatland habitats, both within protected areas and in wider landscapes
2. By 2025, Natural England to have reviewed all peat habitat sites and secured changes to their management to enable their recovery to favourable condition, with milestones identified to track progress on their recovery.
3. By 2030, ongoing monitoring by Natural England should show evidence of active and ongoing recovery against the 2023 baseline across all areas of these habitats in both protected areas and wider landscapes.

Peatland habitats should be protected from damaging practices even before active restoration might be able to commence. Prime among these is the routine burning of heather as a management technique, which should be ended on deep peat before the 2020 burning season commences in October. Burning results in a lowering of the water table leading to a loss of carbon and rapid re-growth by dwarf shrubs, hampering the recovery of peatland function and bog flora. This cycle of inappropriate bog management needs to be halted immediately.

Whilst the 35,000ha of restoration by 2025 announced by the Chancellor is welcome, yet again the target falls well short of the what is required. Notwithstanding the areas of upland bog where restoration is progressing, this represents just 10% of Natural England’s estimation of the extent of England’s upland peatlands[[3]](#footnote-4) – and the Great North Bog has a figure almost twice as large. RSPB data shows that 95,000 ha of upland peatland in SACs is subject to burning. So the ambition for restoration that needs to get underway over the next five years needs to be dramatically increased to reflect the actual need. Urgent mapping of the peat body, habitat condition and restoration progress is required to accurately define what the restoration area target should be. Halting damaging practice to protect peat habitat can, and should, be required to be done immediately.

We note the lack of a target for action on lowland peatlands currently intensively farmed for arable, horticultural and livestock production. We repeat here our previous recommendation to the Minister that 50% of these farmed lowland peat areas should be rewetted for economic or other use by 2030, with all peatland soils rewetted by 2040. These longer timescales reflect the greater societal benefit, including maintaining livelihoods, from current uses of these areas and the greater challenge of achieving effective, sustainable change. In the immediate years ahead, improving practice for current uses will be important on the pathway to widespread rewetting of peat soils and so we also welcome the CCC’s proposal for regulating against bare peat, which should be introduced as an immediate target action.

The strategy for “Acting to increase the abundance or distribution of peatland species, and their resilience to move and adapt on climate change, through the restoration of connections and networks of peatland habitats” is welcome in intent yet difficult to understand. Much of this will be captured in getting restoration underway across the newly mapped peat resource over the next five years, although defining actions and timescales to increase the abundance *and* distribution of peatland species will be welcome. Connections will be restored through the strategy’s all-peatlands scope for restoration of sustainable soil and the hydrological implications in achieving this. Recognising adaptation to climate change is welcome and again, hydrological restoration is key to achieving this, along with other measures including appropriately wide habitat buffers to prevent the arrival of undesirable pioneer species on bogs such as commercial tree species. A key part of adaptation will depend on the mix of Sphagnum species at a site being able to respond to the ebb and flow of pools and hummocks over time.

The action to ‘consult on measures to phase out the use of peat in horticulture, prioritising measures in the amateur sector’ falls well short of the action needed after years of slow progress. Peat phase out targets were introduced in 2011 and much consultation and preparatory activities have been ongoing for many years. As with burning, it is now time to act and introduce new legislation to end the use of peat, irrespective of its origin, across the gardening industry.

A mixed approach to peatland recovery is undoubtedly required and as noted, both financial and non-financial barriers need to be addressed. Tradition and current practice feature strongly across the latter and the strategy will need to address these in the context of a modern and changing world which is subject to pressure and opportunities we have never seen before. Developing compellingly attractive ways forward that are in tune with achieving sustainable soils, addressing the climate and nature crises, and developing ongoing sustainable livelihoods along with the wider needs of society from peatlands, will be also be fundamental to the success of the strategy.

**5. One of the prime goals of the Nature for Climate Fund is greenhouse gas abatement. How could we achieve the right balance between upland and lowland restoration sites, given their relative differences in abatement potential?**

This is a complex question which does not have a straightforward answer, and for which resolution is further compounded by the lack of accurate presence, condition and use data for the peat resource and, perhaps to a lesser extent, robust data on GHG fluxes on the variety of peat types across the resource.

The main consideration is the contrast between the higher emissions per hectare and higher economic productivity of agriculture on lowland peat soils, compared to the much larger areas of upland peatlands with lower emissions per hectare. The CEH /BEIS report of Evans et al (2017) [[4]](#footnote-5)reports annual, per hectare CO2e losses of 38.98 tonnes for cropland, 29.89 tonnes for intensive grassland and 19.02 tonnes for extensive grassland on peat, compare to losses of 4.85 tonnes for eroded, modified, drained bog and 3.40 tonnes for heather on peat soils. Re-wetting bogs reduces annual GHG losses significantly to 0.81 tonnes CO2e per hectare and 6.37 tonnes on re-wetted fens. Near natural undrained bogs and fens are a stable carbon store or net sink respectively. Estimates of the extent of peat vary considerably: between approx 95,000 to 258,000 ha for lowland farmed peat, and between approx. 190,000 to 667,000 ha of upland peat. Peat mapping is urgently needed to clarify these discrepancies.

There are also decisions about how to prioritise action on peat according to its depth: for deep peat, to protect the greatest carbon store, or on shallow peat, to protect the extent of peat. There are also questions of the value to nature of changing land management; the ability to effect change in the five- year timeframe of the NFCF and the legacy of intervention; and the unit cost of GHG reduction in these very different land areas. The aim to maximise the nature and climate benefits of the Fund, helping to tackle the twin ecological and climate crises, is thus a complex matter which needs further discussion and information.

The Nature for Climate Fund needs to be used to benefit both nature and climate and this question focuses on restoration, which we understand as habitat restoration. The current direction of change for intensive agriculture and horticulture on lowland peat soils, which is gathering momentum across stakeholders in East Anglia, seeks primarily to both improve current management, and also to rewet peat soils, for economic use: both of these changes should be in harmony in with nature. The former is likely to lead to modest improvements in GHG emissions reduction and soil sustainability whilst the latter offers the potential to close down GHG emissions and enable ongoing sustainable use of the soil for future generations. A shift to new economic uses, rather than to habitat creation and restoration, may therefore be considered to be marginal for the scope of the NFCF unless the nature element of this shift is clearly identified, over and above an overarching requirement for agriculture to be in harmony with nature. Some new wetland farming uses - eg Sphagnum farming – will have obvious and well known nature benefits; for other types of paludiculture the nature benefits will be both fewer and less well known. So the scope of using the NFCF for agricultural transition needs to be explored further, to ensure real benefits for both nature and carbon: transition funding for paludiculture is certainly needed, but the NFCF may not be the appropriate source because of the marginal benefit for nature.

Alongside this broad shift to wetland economic use, there will be opportunities for habitat restoration on lowland agricultural peatlands which are clearly within the NFCF’s scope. These should be explored thoroughly as the contribution of these lowland peat areas to the Government’s 500,000 ha habitat recreation target, the needs of the Nature Recovery Network, the delivery of the 25 YEP and the Nature Strategy. The success of returning agricultural peatland to nature, for example the Great Fen project, Lakenheath and Ouse Washes habitat creation, and the Wicken 100 Year Vision in East Anglia, and the development of new wetland areas in Somerset, show that there is appetite and opportunity for nature restoration which has significant climate mitigation benefits, and such projects should be a prime focus for the NFCF. Habitat creation also offers potential for wider public benefits, including flood alleviation and water management, and recreation and tourism.

The larger area of the upland peatlands offers a slightly different, yet equally attractive prospect for the NFCF to make a step forward in peatland restoration. Across the uplands, the more straightforward aim of blanket bog restoration presents a strong case for twin carbon and nature benefits, again with added wider benefits including water management. Well established partnerships such as Moors For The Future, the North Pennines AONB and the Yorkshire Peat Partnership have well established expertise and track record of delivery. The opportunities for early delivery may therefore be greater across the uplands than the lowlands.

Re-wetting peat across the range of outcomes in both lowland and upland situations requires management intervention beyond the timeframe of the NFCF. Ongoing funding beyond the NFCF therefore should be considered as integral to NFCF project funding. Whilst ELMS is the likely option, other avenues should also be explored across the range of PES benefits that returning peat soils to healthy condition will bring.

And finally, the scope of the peat strategy and 25 YEP acknowledge and require that all peat soils need to be returned to healthy functioning condition. Further funding mechanisms will be required to bring and to maintain sustainability across England’s peat soils.

Further stakeholder discussion and development of a decision matrix needs to be developed to assess and balance the range of opportunities and benefits of the NFCF across lowland and upland peatlands. This would also help to influence the allocation of the NFCF to peatland, for which early indications of only around 10% of the overall fund is insufficient given the range of actions for carbon and nature that could get underway over its five year period.

The opportunities for early action on climate abatement across wide areas of England’s peatlands, together with the 25 YEP requirement for soils to be sustainably managed, signal a clear need for a significant portion of the NFCF funding to be directed to peatland restoration. An *in prep* RSPB analysis of the costs and benefits of options of tree planting, peat rewetting and saltmarsh creation to meet climate mitigation targets suggests that between one-third and two-thirds of the £640 million NFCF budget should be allocated to work on peatlands.

**6. How should government use the Nature for Climate Fund to help stimulate the development of a market for private sector investment in ecosystem services and nature-based solutions to climate change?**

Demonstrate leadership and show by example nature based benefits of peatland restoration for both nature and carbon benefit. It can provide experience and trials both for delivery actions and quantifying costs and benefits and bring to life the use of public money for public goods. This should include restoration form forestry, to steer private investment to the best solutions.

The NFCF can provide and demonstrate costs and benefits for capital projects that will link through to ELMs for longer term public payment for public goods. This in turn may identify different income streams for farm businesses – or even lead to new structures for farm tenancies. It may enable businesses to successfully transition from unsustainable practice to sustainable use of peat, potentially across a range of activities, including farming and sporting interests, and peat restoration from afforestation. The NFCF may also help stimulate and provide capital funding for catchment scale sustainable approaches for a variety of public goods in partnership with utility companies and other private investors.

The NFCF should be wary of seeking to set-up or provide direct carbon offsetting to private sector investment. There are difficult questions about additionality for peatlands including GHG abatement rather than sequestration and the need for regulatory action to remedy human exploitation of peatlands, particularly on SSSIs and other protected areas. Opportunities for related markets including biodiversity gains, water management and flood alleviation are more straightforward, and the RSPB has been working with the consultancy Environmental Finance on some potential options for how the NFCF could stimulate this investment.

Specifically, Defra should explore the join up between the NFCF and the Natural Environment Impact Fund as a means of maximising the leverage of this public funding in attractive private finance. Options such as enterprise funds, impact bonds and new insurance products all offer potential for drawing down private investment into peatland restoration.

**7. What other actions, if any, could help to transform the level of peatland restoration in England?**

We need a clear imperative from Government with resourcing from Treasury that peat restoration and sustainable use is essential to address both the climate and nature crises. The following specific actions will demonstrate this:

* The swift introduction of a legislative end to burning on peat soil in line with the longstanding Government commitments.
* Mapping of the extent, depth, land use, habitat and condition of England’s peat resource, based on the occurrence of peat soil. This is an urgent requirement, to provide the basis for targeting action and monitoring progress and success. There are major discrepancies across Natural England’s upland habitat data and up to date knowledge about the extent of lowland peat soils under agricultural production is poor.
* Recognition of the importance of carbon in peat soils, through introduction of a form of designation and protection for carbon in nature rich habitats.
* Recognition of the importance of shallow peat alongside deep peat. Shallow peat areas may be the places that are the most vulnerable to complete peat loss. Losing areas of shallow peat should be considered similarly as extirpation of species and irretrievably reduces the extent of peat resource. Ombrotrophic peat cannot be regained directly, requiring succession from fen habitats, if topography allows this. Shallow peat is also increasingly recognised as being an important carbon store.
* A clear policy on forestry: no planting on deep peat or where planting may cause damage to the peatland resource or its ecology. A programme of restoration from forestry and research to support restocking decision-making. The precautionary principle should operate effectively against planting in all situations where there is insufficient information to be confident that tree planting will not harm the peat body, its ecology or its hydrology.
* A strategic co-ordinated planned approach for practical delivery through a project pipeline, supported with commensurate funding. The peatlands restoration partnerships (including Moors For The Future, the North Pennines AONB and Yorkshire Peat Partnership mentioned above) and others have made important contributions to peatland restoration, yet their approach has often been hampered by access to land and the limitations of grant funding, often from the EU. Both delivery and funding should develop from one-off interventions and short term, project based funding to reflect the need for a long term approach to peatland restoration that requires periodic management intervention subsequent to initial capital works. The strategic approach should develop a hydrologically based approach to restoration and management, based on reinstating necessary hydrological integrity of the peat body across the area appropriate to each peat body, including the impact of land management adjacent to and impacting the hydrology.
* A cross-compliance type approach to a peat standard should be introduced with which all peatland land managers receiving public money must comply. All public payments through land management schemes, PES and other public sources should be dependent upon compliance with the standard (eg the absence/avoidance of detrimental management practices to peat – particularly burning and drainage) across the rest of the holding.
* Develop Payments for Ecosystem Services across the range of services peatlands provide, dependent upon a management trajectory to achieve good condition and the absence of detrimental practices on the landholding as above.

Most peatland habitats lie within SSSIs, National Parks and AONBs so transforming these areas would make a major contribution to restoration.

For SSSIs, the Strategy should include action by Natural England to:

* + Reinvigorate SSSI monitoring (most SSSIs have not been assessed in the last 6 years)
	+ Secure restoration and sustainable management through the full use of Natural England’s powers under the Wildlife and Countryside Act 1981 as recommended by the National Audit Office and Public Accounts Committee back in 2008 (this recommendation remains unimplemented). This means entering into strong, legally enforceable management agreements with SSSI landowners and, where agreement cannot be reached within a short timeframe, using NE’s powers to enter into Management Schemes and Notices or use byelaws.
	+ Set milestones for recovery, which will ensure that sites remain on a positive trajectory and provide confidence and evidence to land managers and investors that their investment in recovery is worthwhile
	+ Tackle key drivers of poor peatland condition – the IPENS report identifies drainage, inappropriate game management, moorland burning, overgrazing and air pollution as key drivers and sets out recommendations to tackle them. Progress on implementing these recommendations should be reviewed and the Peat Strategy should make sure that action is taken to fully implement them.

* + Complete and implement with urgency the SSSI review that Defra asked NE to complete by 2015. This will, for example, make sure that gaps in SSSI coverage are filled.

For National Parks and AONBs, the Strategy should commit to implementing the relevant recommendations in the Glover Report. In particular, the report recommended that “peatland restoration should be a priority for all National Parks and AONBs that contain it” (page 47 – see the percentage of peatland cover in each landscape in Annex 6). Glover concluded that a key mechanism for delivering this is “strengthened Management Plans, with clear targeted actions to recover nature, underpinned by robust assessments of the state of nature and natural capital”. This needs to be backed up by sufficient resources and Glover’s recommended changes to governance and legal duties.

**8. What are the strategic locations where partnerships can work together on large-scale peatland restoration projects, as a contribution to the Nature Recovery Network?**

* National Parks and AONBs

National Parks and AONBs can bring together large partnerships to secure funding and action to deliver landscape-scale action in areas that contain a substantial proportion of our peatland habitats.

The Lawton Report found that England’s National Parks and AONBs “provide an excellent base for delivering a more effective ecological network, not least because their legal standing, governance and management plans provide a basis for coordinated action to integrate effective ecological networks with landscape and other uses, including farming, education, recreation, tourism and the provision of other ecosystem services”. The Glover Report also recommended that peatland restoration should be a priority for all National Parks and AONBs that contain it,

However, both reports also conclude that protected landscapes were not currently delivering on their potential to restore nature. This remains the case today as SSSI condition is worse inside these landscapes than in the rest of the country. To unleash the potential of these landscapes, the findings of the Glover Report must be implemented.

* All SSSIs

Most of England’s peatlands are designated as SSSIs. There are a range of powers already available to protect and restore SSSIs but these are not being effectively used (see question 7). There is huge potential for these areas to drive the recovery of much of England’s peatlands.

* Fens / lowland peat agricultural soils

This needs to develop from the East Anglia peat pilot to the other areas of peatland agriculture in England, including Lancashire and Cheshire, South Yorkshire and Somerset. These are the areas of highest GHG emissions from peatlands in England. As such they are also attracting attention from new interests with Net Zero targets to meet, for example Cambridgeshire County Council for whom including emissions from peatland and associated activity would add up to 90% more GHG in its inventory and reporting.

The much-delayed Lowland Peat Agricultural Task Force needs to get underway as a matter of urgency, to develop and introduce economic land use in harmony with nature alongside achieving the targets for sustainable soil management, Net Zero farming, food production, habitat restoration and the Nature Strategy.

* Other major land owners

There is a range of public, corporate and charitable organisations that own or manage large areas of peatland in England, including the Forestry Commission, local and regional Councils, utility companies including United Utilities, Yorkshire Water, Severn Trent and South west Water; MOD, heritage NGOs eg the National Trust. The drive towards Net Zero is re-appraising the management of peat areas for many of these organisations, opening up new areas for peat restoration and sustainable soil management.

**9. What actions are best used in these places to recover and conserve peatland wildlife?**

Many of our previous answers give a full run through of the actions needed to recover and conserve peatlands, which remain relevant in these strategically important areas. To restate and summarise these, there needs to be a focus on:

* Raise awareness of peat (and peatland habitats), its condition and role in climate mitigation, the nature of and potential for good peatbog biodiversity, the wider benefits of healthy peatlands. Involve local land users, managers and the community to gain wide understanding of why and how land use will change, and what the benefits are.
* Adopt a hydrological approach to peatland re-wetting and restoration, which is essential for long term success and climate resilience. This is especially important for smaller areas of peatland eg in lowland areas, where hydrological integrity and buffering from adjacent management is important.
* Stop burning immediately, because of its release of GHG and its detrimental impact on soil, hydrology and peatland biodiversity.
* Take action to improve SSSI condition and restore habitats in National Parks and AONBs (see answer to question 7)
* Implement an immediate cessation of the remaining areas of peat extraction for horticulture alongside a ban on the use of peat in horticulture
* Fund a programme of ecological and peat surveying to support decision-making for afforestation proposals affecting peatland areas, including use of EIAs. A programme of afforested peatland restoration and accompanying research.

**10. How should the government determine the right balance between more sustainable management and restoration of lowland agricultural peatlands?**

The strategy is unclear at this point, suggesting reducing damage to peat where it may not be cost effective to fully restore peatland. Reducing damage falls short of the 25 YEP requirement for sustainable soil use and the strategy’s aim for peatlands to be functioning healthily for wildlife, people and the planet. Reducing damage to peat soils, through improving methods of agricultural and horticultural use, should be a short term, transitional activity to reduce soil loss and GHG emissions as a precursor to the re-wetting of peat soil that is necessary to secure the long term future of, and minimising GHG emissions from, lowland peat soils for both economic use and nature conservation.

In the Fens, ongoing soil loss, the increasing impact of climate change on water availability and other aspects, and the move to Net Zero farming point to the need for a future that is different from today’s land use. Furthermore, the mapping of peat soil across this area is outdated and a better spatial correlation of farming activity and peat soil seems likely to reveal a smaller resource – perhaps with more vulnerable areas of peat - than might be widely understood at present. The true nature and value of peat in the Fens is thus likely to need to be revised; and we may know even less about the other main areas of agricultural production on peat in England.

Deciding the balance between wetland farming and habitat creation and restoration depends on a number of factors. Both outcomes require a new approach to water management over landscape units across the Fens that makes better use of the increasing volumes of winter flood water (from climate change and up-catchment development) that is lost to the sea, and ends the need for abstraction of summer water requirements. Increasing water storage and reducing drainage requirements will also reduce the energy and GHG emissions required for pumping water.

Agricultural change will depend on the variety of opportunities from paludiculture, for which trials are underway and there is real life experience in mainland Europe. These cover a wider range of crops than just food production, including fibre, biomass and even Sphagnum harvesting for horticulture. Whole lifecycle GHG emissions of production and crop use needs to be researched. The nature benefits across this range of opportunities also needs to be researched and employed – for sphagnum farming, for example, the benefits are well known and contribute to semi natural bog biodiversity, for other crops less so.

The Fens is an important area for England’s biodiversity and habitat restoration offers an important opportunity for nature’s recovery in response to the biodiversity crisis. Natural England should assess the level of habitat restoration required for the region to meet national biodiversity targets, including 500,000 ha of habitat restoration, the Nature Recovery Network, Nature Strategy and specific targets for species for which lowland peatland has particular responsibility and opportunity.

The livelihoods of local people and communities across these areas also needs to be considered. Both paludiculture and habitat restoration will need investment from the Government to transition to new land use and ongoing income, through either market development or payment for a range of ecosystem services. The development of a carbon tax and payment will help drive land use change from GHG emissions to GHG abatement and sequestration; this will require a more robust understanding of GHG flux across land uses. Peat soil depth must also be considered in future land use: as noted elsewhere above, there needs to be further research and discussion about the deep peat areas and the maintaining of the overall extent of the peat soil resource through focus on the shallow peat soils which are most vulnerable to loss.

The Lowland Agricultural Task Force needs a stronger mandate than simply to work with farmers to reduce carbon emissions and support agricultural transition: it should aim to achieve rewetting the peat resource and identify opportunities for restoration as well as for paludiculture. Achieving sustainable peat soil function must be central to its objectives. It should aim to achieve this through developing a mix of land use appropriate to the context of climate change adaptation as well as mitigation, and not merely in harmony with nature but also with lowland peat areas playing their role in restoring nature and delivering the Nature Strategy and the 25 YEP targets, including 500,000 hectares of habitat creation. Assessing and responding to the impact on food production on re-wetting peat soil should also be included. A strong mix of expertise across these aspects will therefore be needed in the membership of the task force. The four regional groups of the task force will need to develop actions appropriate for their areas and this will decide the balance and mix of land use.

**11. What other land uses or management practices could we include in the "Reduce" category?**

Defra should develop a more robust approach to water management for peatlands that addresses the hydrological requirements of peat bodies. Wherever appropriate this should be at the landscape and catchment scale, contributing to both water quality and flood management. It needs to be climate smart, taking account of climate projections beyond the two degree Celsius world. As appropriate for rain-fed (ombrotrophic) bogs, the approach should seek to establish rain-fed water systems and avoid the need for water abstraction, even in the areas of lowland agriculture on peatlands. Where the landscape scale may not be appropriate, eg for small lowland bogs and flushes, strong protection of the bogs’ hydrology should be instated.

As suggested in answer to question 10, paludiculture should be developed as a prime agricultural economic activity in lowland agricultural areas, along with landscape scale approach to water management to rewet hydrological units at landscape scale. This requires a pathway approach to develop and deploy, covering knowledge of crops and growing requirements, sharing expertise, funding farm transition, and active development of markets. Biodiversity impacts and opportunities associated with paludiculture need to be thoroughly researched, integrated and monitored, including the potential for adverse biodiversity outcomes from the introduction of novel crops and new farming systems, and taken into full account in future land use decisions.

Commercial forestry should avoid planting on peat soils and areas of afforested peatland should be restored to peatland after harvesting. Forestry guidelines should ensure adequate buffers to peat bodies both to protect bog hydrology and from the occurrence of seedling incursion into bog areas. This must also consider the impact on peatland ecosystems and wildlife, including from the additional predation pressure which can result from adjacent forestry. Natural regeneration of native tree species can be regarded as a natural process, but should not be conflated with failure to manage non-native conifer self-seeding impacts on peatland areas.

The increasing use of vehicles and the proliferation of vehicular access tracks on peatlands is causing increasing damage to peatlands. This needs to be more tightly controlled and monitored, and the building of new vehicle tracks prohibited for all but exceptional reasons of access.

Grazing pressure is an ongoing cause of damage, particularly winter sheep grazing in the uplands; and needs to be addressed through a combination of regulatory action and payment schemes such as Countryside Stewardship and ELM.

The intensity of grouse moor management should be reduced to sustainable levels of the natural capacity of the peatland bog habitat. This will require a change in the expectation of the current artificially large grouse bags– which will also have a positive impact, with the cessation of burning and less damage from off-road vehicles and vehicular tracks.

**12. How should government ensure that a successful horticultural industry can operate without peat?**

After many years of delay and much talk, Defra should now legislate as a matter of urgency against the use (and extraction) of peat as per the 2011 Defra targets – for both domestic and imported production. Defra must build on the expertise in alternatives that currently abounds and ensure that the practices of the industry leaders are mainstreamed across both retail and professional use, to meet Defra’s own targets for ending peat use. For example B&Q is ‘fully committed to reducing/eliminating our use of peat in our products.  We are actively pursuing a programme that will enable us to do so and are constantly making changes to our range and product formulations to achieve our aim’.  Further action should be developed to influence the retailers’ decisions of product choices for multi-purpose and other composts. Defra should develop information on the carbon and GHG implications of peat and peat alternatives in commercial composts to guide manufacturer and retail choices for compost materials. The drive to Net Zero greenhouse gas emissions must increasingly influence business decisions, and encourage the development of a circular economy for UK compost production and use.

Securing the supply of the required volumes of alternative materials requires focus and concerted central action. Defra should work with compost manufacturers to ensure the ongoing supply of low carbon, recycled materials for commercial compost production, and ensure that this integrates with other areas of Defra policy.

This should be accompanied by information and awareness raising about ways to garden that are more in tune with *in situ* soil and home composting, and which don’t require such large volumes of manufactured soil products.

Annual monitoring and reporting of peat use for manufacturers is required to track progress, inform action and maintain pressure on the industry to continue efforts to switch to peat alternatives. Defra should undertake annual monitoring and extend this from growing media producers to retailers and professional growers. A requirement for carbon plans towards Net Zero for growing media manufacturers should also be considered.

Clear front of bag labelling needs to be developed from the GMA’s current system to clearly inform and guide consumers about the peat content of compost bags. This needs to be more hard hitting than the GMA system, with tougher thresholds for green RAG ratings and including measuring content against the Government targets for peat replacement. Peat content labelling should be introduced for container grown plants.

Both retail and professional sectors need full focus and attention. The professional sector uses a smaller amount of growing media and peat and appears to have made greater progress in peat reduction than the retail sector. Introducing labelling for container grown plants will both recognise good practice and help drive further peat reduction across the growers. It will also influence both retailer and consumer choice, as well as making a much greater presence about peat replacement in garden centres and other retail outlets, helping to increase awareness and inform consumers.

All the above should be wrapped into developing a strong peat-free based British horticulture industry. Our recommendation for Government to introduce legal requirements for peat replacement will put UK producers and growers in a strong position to compete successfully with imports for both composts and container grown plants and maintain high environmental standards in line with the Government’s stated aims to be the greenest government and to leave the environment in a better position at the end of its term of office.

**13. How can we ensure a better balance between tree-planting, peatland restoration and nature recovery?**

The GHG and nature benefits of not planting commercial forestry on peatlands is clear cut for deep peat (greater than 40 cm) and increasing evidence points to this also being the case for shallow peat too, with greater GHG benefit for forestry on other soils. Clear Defra guidance against forestry planting on peat should be produced and made operational across all English forestry operations. This must also apply to post harvest re-stocking of existing plantations.

In line with the dual nature and climate crises, all tree planting must make a positive contribution to biodiversity recovery. These dual needs reinforce the need for co-ordinated development and implementation of the peat strategy with the England Tree Strategy, the Nature Strategy, the Nature Recovery Network and the delivery of the 25 Year Environment Plan.

Peat mapping is urgently required as noted elsewhere, to guide forestry operations and should be supported by site level surveying. In cases where data is unclear the precautionary principle against planting should be employed. Clarification of data, including full lifecycle GHG analysis of growing and post-growth timber processing and use may make some marginal peat sites available for planting. Biodiversity impacts and potential, and other factors and benefits such as recreational use, should also be taken into account in afforestation decisions; land use is multifunctional.

As noted elsewhere, appropriately sized buffers should be required to protect the hydrology of, and to prevent seedling invasion onto, the peat body. Appropriate buffers are also required to protect other aspects of peatland wildlife, for example ground nesting birds from predation impacts.

**14. What should be included in our approach to reducing the risk of wildfire?**

There are several aspects Defra should include in its approach to reducing the incidence and severity of wildfires on peat. As a wetland habitat, fires on peatlands almost always have anthropogenic causes and as such, effective management to dramatically reduce fires should be achievable. Peatland fires are a human health hazard as well as damaging, soil, hydrology and biodiversity and so all measures to both avoid fires and reduce their severity should be included in a pro-active Defra peat fire plan.

The most effective method of resisting fire on peatlands, both initial ignition and the spread of fire, is for peat bodies to be in their natural wet boggy condition with high water table and supporting the natural, low fuel load, moss dominated vegetation prevalent across temperate bog habitats.

All burning management on peatlands should be stopped immediately. Burning encourages regrowth of dwarf shrub vegetation (a much greater fuel load than natural bog vegetation), damages the peat soil and lowers the natural high water table.

We need to invest in stopping fires starting and in the early warning (high risk periods), detection and tackling fires on open habitats. This requires investment in community education and engagement, and the establishment of early-warning (eg Met Office) and detection networks (perhaps involving voluntary networks).

It is vital to identify known fire-starting hot spot areas, and to manage vegetation in these places to reduce spread of any accidental fires onto open habitats.

No fires to be allowed on areas with higher potential for fires. Portable barbeques to be used only in designated safe areas with fire control measures at hand. Develop rapid response measures with requirements incorporated into legislation.

Address arson and accidental fires. Full set off measures to be developed, including increased monitoring at high risk times, and increased public awareness and information, including road signs across remote areas during high risk times.

**15. What other practices that would be considered damaging should be reflected under the "Protect" category?**

There is a wide range of damaging practices that are currently compromising the protection of our peatlands. All of these need to be addressed and phased out to achieve the ambition of sustainable soil management and healthy functioning peatlands. The following should be added to the ‘Protect’ category:

* High grazing pressure, especially in winter, should be reduced to sustainable levels
* Drainage affecting blanket bog and lowland raised bog should be stopped, including drainage of adjacent land that adversely affects the hydrological integrity of the peat body
* Lowered water tables should be raised, and drier areas rewetted
* The spread of tracks across peatlands should be halted and the use of off-road vehicles greatly reduced
* Tree planting, including restocking, damages peatlands, compromises their protection and as such, full environmental consideration must be given to this activity
* Commercial extraction of peat causes serious damage to peat bogs and eliminates nature and so must be addressed directly and not via the proxy of peat use in horticulture and amateur gardening

**Contact for further information**

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1. Recognising that in the case of afforested peat soils implementing sustainable management may be limited in some cases by the forestry cycle to the next harvest [↑](#footnote-ref-2)
2. <https://rspb.maps.arcgis.com/apps/Cascade/index.html?appid=2b383eee459f4de18026002ae648f7b7> [↑](#footnote-ref-3)
3. Natural England 2010. England's peatlands: carbon storage and greenhouse gases. Sheffield: Natural England. [↑](#footnote-ref-4)
4. Evans, C., Artz, R., Moxley, J., Smyth, M-A., Taylor, E., Archer, N., Burden, A., Williamson, J., Donnelly, D., Thomson, A., Buys, G., Malcolm, H., Wilson, D., Renou-Wilson, F. (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. [↑](#footnote-ref-5)