

Why horticulture still needs peat

Mistruths are driving the phase-out of peat in horticulture, Jack Rieley argues

Global interest in peatlands has increased greatly. Although people have heard of peatlands, most are unlikely to know where they are, what they look like, how they function or what peat is.

Peat is approximately 50% carbon by dry weight, providing the largest terrestrial carbon store on the planet, extracted as carbon dioxide from the atmosphere in the process of plant photosynthesis and converted to carbohydrates and other biochemical products. Some of this “fixed” carbon is released back to the atmosphere as carbon dioxide in plant growth and reproduction. The rest remains locked up in plants until it is released when they decompose or adds to the peat store. Under oxygen-deficient waterlogged conditions, some plant organic matter is released as methane, a more potent greenhouse gas (GHG) than carbon dioxide.

Defra is consulting on the phase-out of peat in horticulture in England, based on the contention that peat extraction causes biodiversity loss, propels climate change and damages heritage sites containing archaeological, historical and scientific material. Much research has been commissioned to provide evidence in support of the policy, but Government reports can be difficult to obtain.

PEATLANDS CAMPAIGN

In 1990, the Peatlands Campaign was launched to publicise damage caused by peat extraction and promote the use of alternatives. This rapidly developed into a wider message to stop the use of peat, raising public awareness and creating the perception that all peat use is bad and, by stopping peat extraction, habitats and their fauna and flora would be protected and their carbon stores kept intact.

However, this did not present a balanced picture of the condition of UK peatlands to accumulate peat, their wildlife conservation status or



Results: peat replacements of similar quality and quantity are yet to be identified

the reason why more than 90% of all UK bogs are degraded already from other causes. The Government decided that a major driver of peatland degradation and major source of GHG emissions in England was peat extraction for horticulture.

In 2010, Defra launched a consultation with a view to phasing out the use of peat in the amateur market by 2020 and the commercial growing sector by 2030. According to Defra, the majority of responses supported phasing out peat use.

The only firm time-related commitment in the natural environment white paper published in 2011 was to phase out the use of peat in horticulture in England. All other objectives and commitments were aspirations and strategies. It mentioned establishing a task force to advise on how best to overcome the barriers to reducing peat use.

In 2011, the Government adopted the policy to stop the use of peat in England in the garden and hobby market by 2020 and in commercial horticulture by 2030. The Task Force on Sustainable Growing Media was established, but failed to identify suitable peat replacements of similar quality and quantity. A major

stumbling block was that alternative growing media ingredients also had carbon footprints, some of which were as high as or greater than that of peat. The sting in the tail was to carry out a progress review in 2015 to consider the potential for alternative policy measures if necessary. Limited progress was made and the industry missed the 2020 amateur sector deadline.

The UK Government has never passed legislation to ban the extraction of peat and does not plan to do so under its current policy. Instead, it proposes to “end the retail sale of peat in horticulture in England and Wales” by the end of this Parliament (2 May 2024). It does not specify whether the sale of peat will be banned or made a civil or criminal offence subject to penalties. Instead, the Government will transfer the responsibility and the blame to the retail sector that sells peat-containing products.

Why has the Government not started to implement this policy after more than 10 years of prevarication and delay? The answer is quite simple—the policy is wrong on several fronts, it is not supported by verifiable scientific evidence, it

will lead to major contraction of the UK horticulture industry and many jobs will disappear. Defra’s current consultation on its plans to phase out the use of peat in the amateur horticulture sector is not about if it should do it but on how and who will carry the can.

HABITAT EVIDENCE

The Defra consultation points out that the area of pristine (peat-forming) peatland habitat remaining in England is less than 1% of the total area of 680,000ha. This is linked to an unreferenced statement that “some 16% of raised bogs have been affected by recent peat extraction for horticulture and gardening and another 5% or more have been affected by older peat extraction”.

This is a misrepresentation of the facts because most of the lowland peatlands (raised bogs and fens) in England have been cut for domestic fuel since Roman times, drained for agriculture mostly since the 17th century and, subsequently, much peat was removed and used as bedding for domestic animals, especially horses until after World War One.

Commercial peat extraction for horticulture began in earnest only in the 1960s, by which time most English raised bogs were already degraded. Peat extraction currently takes place on less than 500ha in England (1.4% of raised bogs; 0.07% of all peatlands). It is important to recognise that all remaining pristine peatlands in England are protected as sites of special scientific interest, national nature reserves, special areas of conservation or other safeguarding designations, such as Wildlife Trust reserves.

Defra emphasises the scarcity and value of the remaining active raised bogs (1%) and says the “impact of ongoing extraction is significant. Rare insects, unusual plants and important bird species are at home on these bogs.” This is incorrect, considering peat extraction does not take place on pristine bogs and on less than 0.07% of the total area.

None of the plants and birds that Defra mentions are threatened by peat extraction, neither are they only characteristic of pristine raised bogs.

Defra confuses biodiversity with habitat when condemning peat extraction. Biodiversity refers to the total number of species in a region, country or continent, while habitat is the specific location where species live, feed and reproduce. It is misleading to claim that peat extraction destroys biodiversity, because there is no evidence that any species has become extinct in the UK as a result of peat extraction.

Of course, peatland habitats have been removed prior to peat extraction, but many of these were already degraded with low biodiversity and little potential. After extraction, followed by rewetting to reintroduce peat-forming ability, biodiversity can be restored and enhanced, providing considerable environmental gain.

CARBON STORAGE

In 2010, Natural England estimated the total carbon stored in the deep and shallow peaty soils in England to be 594.4 Mt C, or more than four times England's total CO₂ emissions. Defra goes on to stress that peat in the UK is a non-renewable resource owing to the slow rate of formation of new peat and the fact that more than 90% of the resource is degraded. This may be true, but it is unimportant when the incredibly small amount attributable to peat extraction is compared with enormous emissions from peatland drained for agriculture and forestry.

In 2012, the area allocated for peat extraction in England was estimated to be 920ha, of which 350ha was on hold pending a public inquiry. It is now less than 500ha. The annual CO₂ emissions attributable to this area extracted to a depth of 20cm is less than 200,000 tonnes. The total UK emissions for 2010 were 590.4 Mt and, if 90% of these were from England, the emissions from peat extraction in England amounted to only 0.04%.

The third pillar of the Defra policy to stop the use of peat in horticulture in England is destruction of archaeological remains and paleoenvironmental records. The 2011 consultation document points to peat extraction being responsible for severe damage to finds. Defra quotes a study conducted for English Heritage showing that over the past

UK peatland emissions						
Peatland type	Peatland area (million hectares)	Peatland area (%)	UK land area (%)	Peatland GHG emissions MtCO ₂	Peatland GHG emissions (%)	UK GHG emissions (%)
Near-natural	0.64	22%	1.81%	Neutral	0%	0%
Semi-natural	1.21	41%	5.0%	3.4	15%	0.8%
Arable crops	0.21	7%	0.9%	7.6	32%	1.7%
Grassland	0.24	8%	1.0%	6.3	27%	1.4%
Forest	0.48	16%	2.0%	4.6	20%	1.0%
Domestic cutting	0.15	5%	0.6%	1.1	5.4%	0.24%
Commercial harvesting	0.005	0.2%	0.02%	0.1	0.6%	0.03%
Total	2.93	100%	11.3%	23.1	100%	5.2%

Note: Evans, C. et al (2017) Implementation of an Emissions Inventory for UK Peatlands. Report to the Department for Business, Energy & Industrial Strategy. Numbers in this table have been rounded up or down and may vary slightly from those in the original report.

70 years peat extraction has been responsible for 230 archaeological sites being discovered. But it fails to mention the total number of identifiable archaeological, historical and scientific information sites (c. 13,400) or the number destroyed because of other impacts (urban and industrial development, conversion to agriculture; 2,880) or agents (peat erosion, wastage and drainage; 7,380).

It is not my purpose to attempt to show that peat extraction does not cause environmental damage, but to correct the unsubstantiated inferences, introduced by misrepresentation of the facts, that it is a major cause. In the case of biodiversity, which relates species to area or location, no animal or plant species has become extinct because of peat extraction in the UK.

A peat extraction location is an industrial site and, as with an opencast coal mine, greenfield construction site or gravel quarry, some or all the original "natural" habitat of animals and plants will be destroyed or displaced temporarily. This does not mean they will disappear from elsewhere in the surrounding or wider landscape, nor does it prevent their

“After extraction, and rewetting to reintroduce peat-forming ability, biodiversity can be restored and enhanced”

re-establishment if land use changes to become favourable after peat extraction ends.

The remaining actively peat-forming and carbon-storing UK peatlands with peat-forming vegetation are protected by law under a variety of official designations. Many that were cut over in the past, domestically or commercially, have been or are in the process of being rewetted to reintroduce peat-forming plants, rehabilitate bog habitats, restore peat-forming potential, store carbon and enhance biodiversity.

Climate change is a very emotive and political topic that is a matter of great concern for international conventions, national governments and individuals. However, most people do not understand it. Most developed countries have committed to making major reductions in their GHG emissions by 2050. For example, the UK Government is committed to reducing its emissions to net zero by 2050 (Climate Change Act, 2008), mostly through big reductions by the major sector emitters—energy generators, other heavy industries, transport and domestic properties.

The CO₂ emissions attributable to peat extraction in England are only some 200,000 tonnes a year compared with the 23.1 million tonnes emitted by drained peatlands as a whole (0.8%). The use of peat in horticulture contributes a mere 0.04% to England's total annual GHG emissions. No other sector of industry or society is being asked to reduce its GHG emissions by 100%

by banning use of a raw material for which so far there is no replacement of equal quality and quantity, so why is the horticulture industry being forced to do so?

Looking back over the past 25 years, it is evident that the issue of peat extraction for horticulture in the UK has become polarised between a profitable and important industry and an environmental lobby that does not agree with peat extraction under any circumstances, using arguments based on dogma and emotion that are not substantiated scientifically.

LOBBYING PRESSURE

Successive UK Governments have been caught in the middle of this often acrimonious and sometimes belligerent dispute but, on balance, they have been swayed by pressure from environmentalists. It is time to re-evaluate this one-sided confrontation with a more realistic and pragmatic approach. Phasing out the use of peat in horticulture in England will not stop the decline in UK biodiversity, reduce GHG emissions or improve protection of valuable archaeological sites. It will, however, threaten an important sector of the economy and the jobs of the people employed in it.

Throughout this saga, which spans more than 30 years, a major opportunity has been missed to combine peat extraction and peatland conservation. IUCN UK Peatland Programme has identified that 900,000ha of drained, degraded peatland are in urgent need of rewetting restoration in the UK. Most of these are blanket bogs in the uplands, north and west, and have never been subjected to commercial peat extraction for horticulture.

The guide price for rewetting these peatlands is £1,500-£2,000 or more per hectare. That equates to £1.4bn-£4bn. A surcharge on the peat used in the UK of, say, 1p per litre could generate £30m per year, more than sufficient to restore all of them in the shortest time. This would be a more sensible approach to peat extraction than crippling an important industry. What is needed is a proper conversation based on facts and evidence, not emotion and misinformation. ■

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