

Outline assessment of the environmental impact of moving peat removal forward from 2030 to 2026

In summary, we assess that the environmental benefit that might be delivered by bringing a ban on peat removal forward from 2030 to 2026 would be much lower than the environmental harm that would result from the likely reduced output of plants and trees and the resulting loss of the ecosystem services they provide.

Based on updated volumes of peat use in professional horticulture and known areas for extraction, we are able to assess the likely environmental benefit of moving peat removal from professional horticulture. In its impact assessment for peat removal Defra uses established emissions factors for CO₂e for 'off site' and 'on site' carbon emissions related to peat in horticulture. 'Off site' refers to the CO₂e emissions associated with peat in growing media (0.235 tCO₂e/m³), and 'On site' refers to emissions associated with peat extraction sites (13.28 tCO₂e ha⁻¹ yr⁻¹).

Currently there are around 1,200 hectares under extraction for peat in horticulture. As of 2022 professional horticulture used 456k cubic metres of peat. Our baseline scenario of a 2030 removal of peat would assume that the hectareage remains constant until 2030, and that the 456k cubic metres falls on a straight-line basis to 2030. Our comparator scenario for removing peat at the end of 2026 assumes that hectareage remains constant until the end of 2026, and that the 456k cubic metres of peat falls on a straight-line basis to 2026. The total difference from 2023 to 2030 in CO₂e emissions between these two scenarios is 278k tonnes of CO₂e. The monetised value of this CO₂e savings is £74.6m using the multipliers published by Defra for the monetised value of CO₂e¹ The approximate saving as a proportion of the UK's projected territorial CO₂e emissions from 2027 to 2030 is 0.02%

Based on our surveys among our members, we assess that this relatively modest environmental gain is likely to result in a reduction in output of UK-grown plants and trees of up to 100 million in 2027 compared with current output levels should an end date of 2026 be put into effect. This would severely curtail the UK's ability to grow and supply for the UK's gardeners, public planting, green spaces, and tree planting ambitions. The shortfall is highly unlikely to be met by imports given that growers on the continent are less operationally ready to move away from peat than their UK counterparts.

To contextualise the 100 million short fall in plants and trees, we assess that the 278k tCO₂e saving that might be achieved from bringing forward the removal of peat from professional horticulture forward from 2030 to 2026 is roughly equivalent to the CO₂ absorbed by around half a million trees over their lifetime, or eleven million small shrubs². In short, the environmental gain delivered in CO₂e savings from moving peat removal forward to 2026 is in roughly the same order of the CO₂ that would be absorbed over their lifetimes by the trees or shrubs supplied in a single year by one or two larger tree or shrub producers.

¹ <https://www.gov.uk/government/publications/valuing-greenhouse-gas-emissions-in-policy-appraisal/valuation-of-greenhouse-gas-emissions-for-policy-appraisal-and-evaluation>

² There are several different methods and data points available for modelling the environmental benefits of plants and trees. For the purpose of these estimates, we have used the most cautious assumptions available to us, and would be prepared to work through the different assumptions and modelling we have used to arrive at these estimates.



Scenario one - CO2 emissions from professional horticulture attributable to peat based on total removal at the end of 2026

| | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|----------------|----------------|---------------|---------------|---------------|----------|----------|----------|----------------|
| 'Off site' emissions associated with peat use | | | | | | | | | |
| Cubic metres of peat used in professional horticulture | 455,847 | 364,678 | 273,508 | 182,339 | 91,169 | 0 | 0 | 0 | 0 |
| CO2 emissions (off site) | 107,124 | 85,699 | 64,274 | 42,850 | 21,425 | 0 | 0 | 0 | 0 |
| 'On site' emissions associated with peat use | | | | | | | | | |
| Hectares for extraction | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 0 | 0 | 0 | 0 |
| CO2 emissions (on site) | 15,936 | 15,936 | 15,936 | 15,936 | 15,936 | 0 | 0 | 0 | 0 |
| Total CO2 emissions associated with peat use | 123,060 | 101,635 | 80,210 | 58,786 | 37,361 | 0 | 0 | 0 | 0 |
| Total CO2 emissions if peat is removed from professional horticulture at the end of 2026 | | | | | | | | | 401,052 |

Scenario two - CO2 emissions from professional horticulture attributable to peat based on total removal at the end of 2030

| | 2022 | 2023 | 2024 | 2025 | 2026 | 2027 | 2028 | 2029 | 2030 |
|---|---------|---------|---------|---------|---------|---------|---------|---------|----------------|
| 'Off site' emissions associated with peat use | | | | | | | | | |
| Cubic metres of peat used in professional horticulture | 455,847 | 405,197 | 354,548 | 303,898 | 253,248 | 202,599 | 151,949 | 101,299 | 50,650 |
| CO2 emissions (off site) | 107,124 | 95,221 | 83,319 | 71,416 | 59,513 | 47,611 | 35,708 | 23,805 | 11,903 |
| 'On site' emissions associated with peat use | | | | | | | | | |
| Hectares in use for extraction | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 | 1,200 |
| CO2 emissions (on site) | 15,936 | 15,936 | 15,936 | 15,936 | 15,936 | 15,936 | 15,936 | 15,936 | 15,936 |
| Total CO2 emissions if peat is removed from professional horticulture at the end of 2030 | | | | | | | | | 679,044 |

401,052 Total CO2 emissions associated with peat use if peat is removed at the end of 2026

679,044 Total CO2 emissions associated with peat use if peat is removed at the end of 2030

277,992 Carbon savings by bringing peat removal in professional horticulture forward from 2030 to 2026

Notes and commentary:

This analysis relies on carbon conversion factors used in Defra's original impact assessment. 'On site' emissions refer to emissions associated with a peat bog used for peat extraction. 'Off site' emissions refer to emissions associated with the peat supplied in growing media product supplied to the commercial grower. Data for volumes of peat used and extractive area are based on the co-funded Growing Media Monitor reports (HTA, Defra, & AHDB 2023). We assume linear reduction of peat to a defined removal date, but that extractive area remains constant until extraction ceases.