

The Growing Media Taskforce

Response to the Defra Consultation “Ending the retail sale of peat in horticulture in England and Wales”

March 2022

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Headline Summary

1. The Growing Media Taskforce has developed a challenging, yet achievable [programme of activity](#) to attain peat free status for horticulture, without the need for regulatory action. Some areas are focussed on industry actions, others on Government actions.
2. A buoyant horticulture sector contributes positively to society, to the economy and fulfils many of the Government's own ambitions around climate change mitigation and a healthy environment. This sector is at risk if the transition away from peat is not managed correctly.
3. To remove peat from horticulture is not a question of *if*, it is entirely a question of *when*. The taskforce in 2021 committed to end the sector's use of peat, pledging to remove it from the retail market as early as 2025 and no later than the end 2028. For professional horticulture, the range is between 2028 and 2030.
4. Of paramount importance is the urgent implementation of a manageable transition from peat to peat free growing media. For that, Government assistance is essential, without the need for legislative action. That Government assistance needs to be in the form of access to peat alternatives, research and development, the principle of exemptions and understanding fully the unintended consequences of introducing primary legislation. A ban is unnecessary, and the measures Government have proposed in this consultation will not achieve a healthy, productive, peat-free UK horticulture sector.
5. Government actions should not harm an industry that at its very core contributes to excellent mental health and wellbeing, adds positively to the healthy eating agenda, enhances the environment, and supports green jobs and the green economy. Food security, green cities, plant-based nutrition, afforestation are examples of areas that must all be considered when proposing to remove peat from horticulture. The full set of Taskforce recommended Government actions can be viewed here in [ANNEX C](#)
6. The Taskforce is disappointed with Defra's economic impact assessment, and its use in justifying its preferred policy proposals. The Impact Assessment is not reflective of the true costs to the sector and is based upon flawed assumptions, not least the assertion that peat is extracted for horticulture from over 5,000 hectares of land. Such inaccuracies create serious flaws in Defra's assessment of the environmental and economic consequences of the policy options. Without positive government action the horticulture sector – both ornamental and edible - will be harmed. On the other hand, positive government action to aid peat removal, for example on enabling greater access to peat alternatives, co-ordinating the required research and development and ensuring businesses can access capital investment has been omitted from consideration.
7. The unintended consequences of introducing legislation must be considered and evaluated before introduction. Pulling one policy lever – e.g., the removal of peat in horticulture without a commercially viable alternative material, may have unintended consequences e.g., food security and access to affordable food.

Growing Media Taskforce

The Growing Media Taskforce (“the Taskforce”) is made up of the Horticultural Trades Association (HTA), the Garden Centre Association (GCA), the National Farmers Union (NFU), the Growing Media Association (GMA) and the Responsible Sourcing Scheme for Growing Media (RSSGM/RSS). We also regularly engage with the Royal Horticultural Society (RHS) and share information and co-ordinate with other organisations to provide a consistent and constructive approach from the sector to this debate. Together we have developed a challenging, yet achievable programme of activity to attain peat free status for horticulture.

The industry, working through the Taskforce, has already come together, and committed to removing peat from the supply chain in a managed manner. This is different to previous industry commitments because it marries up all the sections of the supply chain, all users of growing media and sets out industry & Government actions that work as one in a co-ordinated approach never seen before.

The purpose of the taskforce is multi-fold.

- To better inform consumers, industry, and Government
- To identify & co-ordinate positive action
- To facilitate knowledge exchange
- To achieve a positive outcome for all parties

The taskforce does not agree that any of the proposed legislative measures, in particular “bans”, are needed. They cannot be as effective in achieving the policy goal of peat removal as implementing actions on access to alternatives. The proposals are counterproductive, unnecessary, and divisive.

The taskforce has committed to end the sector’s use of peat, pledging to remove it from the retail market as early as 2025 and no later than the end 2028. For professional horticulture, the range is between 2028 and 2030. Inside the existing target date, both are dependent on government support, as set out in this document.

Taskforce Workplan

The taskforce has worked together on the detail of a plan and is already implementing and integrating several workstreams covering eight focus areas:

1. Identifying and addressing technical barriers to peat removal through research and development and knowledge transfer
2. Working with government to accelerate changes in facilities and infrastructure to enable peat removal
3. Working with government to secure access to supplies of established peat alternatives
4. Working with government to support innovation in the development of novel peat alternatives - this includes the need for government to tackle the barriers to change; including equal access to suitable wood based material, or the issues surrounding the definition of by-products, phytosanitary barriers and unhelpful waste regulations.
5. Providing consumer education and information on responsibly sourced growing media

6. Ensuring there is support, knowledge exchange mechanisms and a level playing field for UK growers through the transition away from peat
7. Measuring the environmental impact of all growing media substrate currently available and novel materials
8. Providing evidence and data to track progress on peat removal, uptake of peat alternatives and to inform policy

This will be done in conjunction, and caveated upon, the full set of actions the Taskforce has set Government – which can be viewed in full set in [ANNEX C](#)

Government Policy and Impacts

The Government’s recently published ‘*The Benefits of Brexit: how to take advantage of leaving the EU*’¹ paper, clearly outlines key principles that Government will undertake in relation to regulation and legislation.

Stating: “Proportionality - new regulations must be proportionate to the outcome they are trying to achieve. Our approach to regulation will seek to achieve this in the following ways:

- Regulation to support businesses, not burden them. We will keep the administrative costs of complying with regulation as low as possible. We recognise the particular importance of this for the small and innovative businesses that underpin our economy.
- Regulation only where absolutely necessary. We will also improve our regulatory framework so that we are only pursuing regulation where absolutely necessary and where it is likely to be the most impactful intervention. This means making the best use of alternatives to regulation and pursuing these as far as possible. Under these plans we will introduce independent scrutiny earlier in the process of developing new regulation, asking government departments to provide a clear justification of their decision to pursue regulatory options. To help departments to fully consider alternatives to regulation they will be required to engage with the alternatives team in the Better Regulation Executive, who will offer support ranging from sign-posting to examples of best practice to bespoke support as needed.
- Regulators will work collaboratively with industry to identify issues and target measures to address them. Compliance and enforcement approaches must be similarly proportionate, with open communication channels to support a culture of information sharing between industry and regulator. We want to drive a culture of constant improvement, through collaboration between regulators, regulated businesses, and other stakeholders. Trust between the regulator and business will be underpinned by data and information sharing.”

A legislative ban imposed on industry would therefore directly contradict the Government’s own stated principles. We have outlined in this document that a ban is not necessary as industry is voluntarily transitioning away from the use of peat. The Government investing in and supporting with this endeavour would be the “best use of alternatives to regulation” ambition, set out by the Government itself.

1

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1054643/benefits-of-brexit.pdf January 2022

Furthermore the ‘collaborative approach’ is a direct ask by the industry in relation to Government improving access to alternatives to peat.

The horticulture industry is already experiencing high levels of bureaucracy and legislation, which is impacting on business growth. Once that burden is reduced, businesses can put extra focus into economic growth and reinvest more time and money in environmental progression. The Governments own manifesto in 2019 stated “Through our Red Tape Challenge, we will ensure that regulation is sensible and proportionate, and that we will always consider the needs of small businesses when devising new rules, using our new freedom after Brexit to ensure that British rules work for British companies”

Economic growth is also being compounded further by other factors, such as the energy crisis, which both industry and society has never seen such extremes before.

Government therefore needs to act to remove the barriers, as detailed in this document, and ensure there is no added regulatory burden for businesses. The Taskforce embarked on its action plan as soon as it was released, and this is already delivering results. The Government now needs to get behind that plan, collaborate with industry on realistic timelines and demonstrate its commitment by supporting the actions that have already been set out. The full set can be seen in [ANNEX C](#)

The Consultation Process

The Taskforce has already set out its timelines, which articulates that the 2024 and proposed 2028 dates are not feasible without unnecessary risk to the industry and the 30 million gardeners the industry services. Also at risk is the extent to which the UK is self-sufficient in supplying the green infrastructure it needs to achieve environmental goals. The reasons why are set out in this document.

Both the 2024 and 2028 dates stated by Government are arbitrary, as this was stated as a government goal before the signing off of its own Impact Assessment. Indeed, the current Defra Secretary of State has already appeared to pre-empt the consultation process by stating at an online event in January that there will be a ban². This occurred before the end of the consultation period with no analysis of responses or consultation-sourced evidence having been made by Government.

The consultation as presented, creates a disjointed feel to the approach of removing peat from horticulture. The way each proposal interacts and influences with another is not fully explained. Definitions are not as clear as they should be, for example what is being talked about when there is a proposal to ban the retail sale of peat and peat containing products.

It is recognised by the Taskforce that Defra have since taken steps to clarify the grey areas within the consultation by way of live roundtables for industry, but the clarification is taking place towards the end of the consultative period. This gives little time for businesses and organisations responding to the consultation to evaluate their meaning and effect – after all the policy proposals fundamentally change the nature of the sector

² “Unlocking Green Growth”, live panel event, Conservative Home, January 2022. <https://www.conservativehome.com/thetorydiary/2022/01/new-conservativehome-live-event-green-growth-unlocked-with-george-eustice.html>

and have the potential to seriously affect businesses, people, jobs, the environment, and approximately 30 million gardeners.

What is needed is a sensible conversation, with a clearly defined plan based on facts and evidence, not legislation based on emotion, mis-information, and a carbon tunnel view by current politicians.

The Government's Impact Assessment

The Government Impact Assessment was released on 14th February 2022 (week 9 of the consultation response window) which was too late to enable industry to appraise its contents properly. It is evident that the data and assumptions it is based on are not fully scoped out. There is little account taken of the impacts of the proposals on key areas of business, people, jobs, the environment, and the consumer.

The Assessment also does not address the dependency that in all the modelled scenarios there was assumed to be enough quantity of alternative materials available from Day 1 – something that Taskforce has fully researched and found that is not the case. Nor does it consider the costs of implementing potentially modest capital investment incentives – on a par with the Farm Investment Funds – that would enable transition.

The Impact Assessment also grossly under-estimates the costs involved. It includes some costs, such as a proposal for regional mixing hubs for growers to manufacture their own growing media, which have been erroneously assumed as definitely going ahead, while some simple fiscal incentives for machinery that had the potential to be more effective, while costing less have been missed out.

The Impact Assessment shows several scenarios that have negative effects on a key industry, and often omits the wider ranging effects. One such effect that has not been addressed in the Impact Assessment is the potential for the use of water and fertilisers to increase (by both consumers and professional growers) if the right ingredients are not brought forward, the right quantities made available, and the relevant research and development is not made.

The Impact Assessment also does not address option 3 – which is a ban on the sale of retail peat – it only assesses a total ban on peat for all uses and all users. This is entirely unsatisfactory and has resulted in an Impact Assessment that is not fit for purpose and sheds no light on potential expected impacts for those affected.

The Impact Assessment does acknowledge that there is significant cost to industry and individual businesses, however in the consultation document there is no statement or provision made for positive policy action supporting businesses in the transition to peat free.

The Taskforce does acknowledge the difficulties the Government has had in establishing the impacts on the sector; however, this should have been taken into consideration when proposing legislative action.

Consideration hasn't been given to the impacts of these proposals on the Governments own policy driven targets – for example, around its ambitions for tree planting. It is currently the case that much forestry material is grown in peat-based modules.

This is particularly poignant when the sector – ornamental horticulture - can help the Government achieve 50% of its stated environmental ambitions, has well documented

positive effects on society – in particular people’s mental health and wellbeing – and is positioned to be one of the UK’s success stories with high levels of growth forecast for the next 10 years.

Benefit to Collaboration

The taskforce believes that the goal of removing peat from horticultural use is best served through a programme of industry and Government collaboration. The primary goal is to support a healthy and expanding UK horticultural sector which is naturally geared towards delivering a positive impact in climate change mitigation, urban greening, healthy eating policy and tree planting targets.

Primary legislation has little benefit in this area, and the Government’s commitment to support and action the Taskforce’s plan is needed rapidly to achieve change within the timeframe the industry has already challenged itself with. Government is better served addressing the overall ambition in moving to peat free, by working in a more collaborative way with industry to unlock policy barriers, currently preventing the sector to progress to peat free alternatives. This is particularly applicable considering recent data indicating the industry has already moved to a reduced position of peat use in 2021 that the Government in their impact assessment didn’t expect the industry to reach voluntarily until 2025.³

The Internal Market

The Taskforce has concerns over the ability of the Government to ensure that the internal market of Great Britain is not compromised. Any action must ensure there is a level playing field in the affected sectors between nations. For example, there cannot be an imbalance in trade where one nation bans a product which is allowed to be sold in another nation. Due recourse must be made to the UK Internal Market Act of 2020, which states that businesses must be assured to be able to sell their goods and services across the UK and that “you can do business with the certainty that regulatory requirements cannot discriminate against your goods and services based on where you choose to locate in the UK”

Engagement outside of England & Wales

The Taskforce is interested in what Government is doing to engage with other countries on how and when to move away from use of peat. The UK has set itself up as leaders in environmental action and stewardship – this is its opportunity to be Global Britain and show it takes its environmental policies seriously. However, it cannot lead just within its own jurisdiction, it has to recognise there are global integrated supply chains and take action to help other nations achieve environmental excellence too.

The Taskforce acknowledges that Europe is starting to look at peat reduction, and that some countries are making headway in this area and reducing their reliance on peat within their own horticultural sectors. The horticulture industry has already initiated discussions representing the industry’s requirements for those supplying it from outside the UK to transition to peat-free.

³ Consultation Impact Assessment 2022, Defra, <https://consult.defra.gov.uk/soils-and-peatlands/endingtheretailsaleofpeatinhorticulture/>

We ask that Government become part of these conversations, and that they undertake to specify that public procurement of finished plants and trees should be in peat-free as per their 2015 commitment. We would encourage Government to ensure close engagement, effective knowledge sharing, and clear policy communication with our closest horticultural trading partners on transitioning to peat-free. In this way actions are encouraged throughout the supply chain, and it is clearer to overseas suppliers what UK retailers and consumers expect when it comes to what growing media plants are supplied in, as well as signposting potential policy to other Governments.

Government Commitment

The main point that Government needs to commit to is the Taskforce collaborative action plan *before* any bans are in place. The plan is based on the taskforce’s alternatives analysis, stated timelines and relevant workstreams. The action plan states how the action of replacement takes place – for retail & professional use – and includes realistic milestones.

We put forward a list of Government actions below (The full set can be viewed in [ANNEX C](#))

Government Broad Actions List

1. Government needs to consider the potential for disruption and fluctuations to already fragile ingredient supply chains because of regulatory action. Those supply chains need to maintain a steady volume flow of consistent materials which result in consistency in growing mixes.
2. Urgently make available / develop support grants for businesses to make the transition. For example - manufacturing businesses to move to producing alternative ingredients; for plant producers to change from current growing media handling machinery and equipment; for plant producers to have access to support grants that were not historically available to them.
3. Enable support grants available and investment in comprehensive and co-ordinated research and development with immediate effect.
4. Ensure that there is a principle for exemption included for any products that currently have no suitable alternative available, for example but not limited to plug plants, mushroom production, and some species of acid-loving plants. The exemptions must be in place while ongoing research and development is undertaken.
5. All of the above must be done in in the timeframe set out by the Taskforce action plan, and before proposing any legislative action.

These should be taken in conjunction with the Government Actions specifically aimed at unlocking access to alternatives, which are located in the section “[Enabling Access to Alternatives](#)”

The Horticulture Sector – Background and Impacts

The horticulture sector is a green industry at its core and fully supports government ambitions to improve the environment and improve sustainability. The industry is working hard to mitigate any adverse effects of any of its actions on the environment.

For example, the HTA launched its Sustainability Roadmap⁴ in 2020, which is a comprehensive framework for helping its member businesses increase their delivery of commercial, environmental, and social values building on the good practice already evident amongst its members. The roadmap aims to put the UK horticulture and landscaping industry at the leading edge of sustainable business through a comprehensive programme of data and information provision, specific advice, knowledge exchange forums and targeted training so members build sustainability into their business plans. HTA also champion the industry to government and other allies for the support needed to increase the sectors positive contribution to our environment and society.

The NFU set the ambitious goal of reaching net zero greenhouse gas (GHG) emissions across the whole of agriculture in England and Wales by 2040, contributing significantly to the UK's ambition of achieving net zero by 2050. The NFU believes that agriculture and horticulture is part of the solution to decarbonising the UK economy and achieving net zero. They are working on proposals for pilot schemes to introduce policy incentives to bring to life net zero for farmers and growers. But they will only be able to achieve their carbon neutral goal with concerted support from government, industry and other key groups to help deliver this challenging but achievable ambition.

- The total ornamental horticulture industry for the UK accounted for over 674,000 jobs in 2019 and is projected to reach 763,000 in 2030⁵.
- £29bn of total GDP for the industry in 2019, potentially rising to £42bn in 2030.
- Over £6.3bn in tax revenues per year are generated.
- During lockdowns, 3 million new people took up gardening.
- Gardening improves both physical and mental health and is cross-generational.
- Growers, garden centres and manufacturers are represented in every constituency

The industry is at a crossroads regarding growth in the next decade. Should key drivers of market growth tend towards favourable outcomes, then the industry could deliver major economic growth in the coming decade and help to underwrite the societal and environmental goals facing the UK in the coming decade and beyond. However, there are barriers to that growth, which need to be addressed. A sister document to the “Growing a Green Economy” report – “Unlocking Green Growth⁶”- identified growing media and the removal of peat from horticulture as a potential barrier to that growth if not carefully managed and recommends that industry and Government work together on a realistic and sustainable strategy.

The UK has some of the highest environmental standards of production in the world, with many edible horticultural growers investing in environmental standards such as LEAF Certification Scheme⁷, which enable more circulate approaches to farming and food systems through integrated, regenerative, and vibrant nature-based solutions that deliver

⁴ <https://hta.org.uk/news-events-current-issues/sustainability>

⁵ “Growing a Green Economy”, Oxford Economics, for Ornamental Horticulture Roundtable Group, 2020 <https://hta.org.uk/media/t1hhw0en/industry-growth-report-ohrg-1.pdf>

⁶ “Unlocking Green Growth”, OHRG, 2020 <https://hta.org.uk/media/kajhqfq/ohrg-unlocking-green-1.pdf>

⁷ https://issuu.com/linking-environment-and-farming/docs/strategy_summary_2021-31?fr=sY2E5NzlwOTQwMDA

productivity, enriches the environment, and positively engages young people and wider society.

Many land-based horticultural crops are grown on highly productive land, providing a valuable supply of UK-grown produce; the UK grower share of the UK market for fresh produce is circa 50%. Securing a reliable and growing domestic supply of nutritious fresh produce, grown to the highest standards is imperative to realising government's ambitions to improve the health and well-being of the nation, through encouraging increased fruit and vegetable consumption and promoting the health benefits of the ornamentals sector, reducing air pollution, and improving mental well-being.

The UK retail fresh produce category is worth £12.5bn, up 7% on the last year (2020). It is also a category which is seeing value growth in the last 12 months according to the Fresh Produce Journal BIG 50 report⁸, with key peat using crops such as mushrooms, herbs, some soft fruit crops like blueberries and salads returning market growth.

There are opportunities for new markets in alternative materials and real chances for a high tech, high skill, new green industry to develop around the provision of those materials, if properly backed by Government. This will contribute to the much bigger picture of a truly green economy and a better society, but legislative action does not address those wider opportunities which would be brought about by a collaborative approach.

It is not a question of *if* peat is removed, it is a question of *when* it can be achieved. Of paramount importance is that all organisations and bodies ensure there is a manageable transition from peat to peat free growing media. For that Government assistance is essential but does not require legislative action.

The potential for social division if these Government policy proposals were implemented, is particularly evident. Price rises could easily discourage less well-off gardeners from gardening and measures like levies on peat allowing more well-off people to continue gardening with peat.

There is also a danger that for crops with no viable alternative solution, production may be shifted abroad if a ban were to be enforced. Many rise the challenge of food security in this instance. Food security is a complex area. It is about more than keeping food on shelves today and how much it costs. Inequality, at home and abroad, is likely to be a significant influence on affordability of food. Government work around food security must also encompass food supplies for the future, including key aspects of sustainability. The NFU report "British food leading the way"⁹ highlighted this in more depth. Within the report, there are domestic potential opportunities for British growers but there are barriers stopping increases in production. These include mushrooms, and some salad and brassica crops; crops which currently have no viable commercial peat alternative material. Without government working with industry to unlock barriers, the government risks threatening our food security through exporting production, and allowing imports grown to standards not allowed in the UK.

⁸ https://issuu.com/fruitnetmedia/docs/fpj_issue_6_big_50_products

⁹ <https://www.nfuonline.com/media/s4xluxgg/british-food-leading-the-way.pdf>

Much of the previously industry-led action now relies on Government action. Putting a ban in will serve to inflict damage on the industry if Government fails to facilitate unlocking policy barriers for accessing alternatives. See the [“Enabling Access to Alternatives”](#) Section for further information on potential sources and timelines for access to alternatives, plus the required [Government Actions](#) to unlock them.

Current extraction

The total area of peatland used for horticultural extraction totals 0.04% of the total peatland area of the UK, which amounts to approximately 1000 hectares¹⁰. UK horticulture imports roughly two thirds of the peat it uses, and it should also be noted that peat extraction only takes place on lowland peatland, and that extraction is in decline. The IUCN UK Peatland Programme has identified that 900,000ha of drained, degraded peatland are in urgent need of re-wetting restoration in the UK. The bulk of that peatland is upland, which has never been subject to extraction for horticultural purposes. Therefore, this type of peatland is not part of the discussion on horticultural peat. This in no way detracts from the recognition of the importance of lowland peat areas in terms of their contribution to biodiversity and services. It should also be noted that these policy proposals do not propose a ban on extraction, therefore there is potential for extraction to continue on in England or within the UK, in order to service markets that still exist – whether that be in the UK or further afield for export.

Change is already happening

Recent statistics¹¹ show that there has been a downward trend in the use of peat as part of growing media as a percentage and as a volume in both amateur and professional.

New data collected during 2021 indicates that; -

- In retail the volume of peat used was approximately 1 million cubic metres in 2021, down from 1.5 million cubic metres in 2020.
- The use of peat by professionals is now 630,000 cubic metres in 2021, down from 720,000 in 2020
- Peat is no longer the main component of growing media in the amateur market – wood-based materials now account for the largest volume in amateur mixes¹²

The industry is already moving away from peat. The taskforce has already set out an ambitious set of target date, while the dates given in the consultation are not realistic and are based on parliamentary process rather than detailed planning. The Taskforce has committed the sector to.

- Removing peat from bagged growing media sold at retail by 2025-2028
- Removing peat from professional sector between 2028 and 2030

Through a combination of detailed research and intimate knowledge of a complex sector, the taskforce arrived at that set of dates, ensuring they would obtain maximum gain for the industry with the least impact on a key UK sector. That commitment was then made to

¹⁰ “Growing Media Monitor 2020”, Appendix 2 - Peat Extraction, 2020, HTA et al, <https://hta.org.uk/news-events-current-issues/sustainability/growing-media>

¹¹, ⁵ “Growing Media Monitor data for 2021, March 2022, HTA et al.

those dates. They were not arrived at lightly and do not require legislative action against the sector.

The taskforce finds that the market, across both the consumer retail and professional growing sectors, is already moving rapidly towards achieving peat free status itself. This is driven by a responsible sector responding to changing consumer attitudes, and heightened awareness and ambition than ever from within the supply chain on attaining this goal. See the Section on [Evidence](#)

Latest peat-use statistics

Initial findings from the 2021 data collection exercise that feeds into the annual Growing Media Monitor (*to be released March 2022*) (*Table 1*) show that the industry is already on a trajectory that will surpass the Government’s estimates in their own Impact Assessment, which shows a rather pessimistic view from Government. The Impact Assessment shows a 4% annual decrease until 2025 and no further reduction thereafter.

Sector	‘000s cubic metres sold (% peat content)	
	2020 Cohort	2021 Cohort
Retail (UK)	4,280 (35.5%)	3,428 (29.8%)
Professional (UK)	1,158 (62.3%)	1,215 (51.7%)
TOTAL UK SALES	5,438 (41.2%)	4,642 (35.5%)
Export	155 (32.6%)	123 (34.4%)
TOTAL SALES UK AND EXPORT	5,594 (41.0%)	4,766 (35.5%)
TOTAL VOLUME OF PEAT USED	2,292	1,691

Table 1: 2021 peat use data; Source: HTA/DEFRA/AHDB/GMA

The data for 2021 (Table 1) shows that the industry is already where the Government expects the industry to be by 2025, as per their Impact Assessment. If we compare the volume of peat alternatives from 2019 to 2021¹³, then this shows the industry is already seeking and finding a certain volume of alternatives itself. Between these dates the industry found around a million cubic meters of alternatives itself, in spite of government regulatory barriers.

What this means is that the industry is still looking for 1.7 million cubic metres of quality materials to plug the gap that will be left by peat and is rapidly approaching the point

¹³ <https://hta.org.uk/news-events-current-issues/sustainability/growing-media> “Growing Media Monitor”

where further progress cannot be achieved without regulatory barriers to using peat alternatives being addressed. The sources for that volume and the specific regulatory changes required are further detailed in the section looking at [ensuring access to peat alternatives](#).

Industry Led Initiatives

Some of the Government policy proposals centre around consumer and industry education and awareness. The sector has already identified these as areas for action and has already launched several initiatives to address these issues.

The Consumer Agenda

The Taskforce believes that driving consumer behaviour change through legislation is counter-productive to the collaborative approach. It is highly likely that by the time legislation has gone through the picture will have changed quite dramatically because of industry actions, so may well not be fit for purpose by the time legislation comes into force. This is particularly evident in the retail sector. Consumers are already driving change to more sustainable products through their purchasing habits. 53% of British adults say they would welcome more information on environmentally friendly compost. This is exactly the consumer need the Responsible Sourcing Scheme is designed to meet¹⁴. Retailers also pass consumer requirements through their suppliers and back up the supply chain. Government's part in this is working with industry to ensure the right amount of quality affordable alternative ingredients are available, supporting the research into those ingredients (current & new) and supporting the practical transition for users (amateur and professional).

E-learning Modules

It was established that many consumers were not using soil conditioners as a way of improving soil, but instead spreading multipurpose or crop-specific compost onto their gardens when these formulations should be used for growing containerised plants, striking cuttings, or sowing seedlings.

Industry recently responded to this by designing and releasing e-learning¹⁵ on a number of platforms, which is aimed at retail staff. The free-of-charge training enables retail staff to confidently guide customers to understand growing media, move to peat free, purchase the right product for the right application and use growing media in an environmentally responsible way. The e-learning is made up of 5 modules that cover the following subject areas: -

- The Importance of Peatlands
- The Responsible Sourcing Scheme
- Right Product, Right Purpose
- Converting Peat Users
- Peat Alternatives

In its first month of operation (Launched January 2022), the e-learning modules have already seen significant take up from the retail industry. As of 10th March, on the GCA Grow

¹⁴ YouGov survey for HTA, August 2021

¹⁵ <https://gca.org.uk/gca-grow-information/>

website there have been 1,100 completions, where users have completed between 1 and 4 modules and 201 users who have completed all 5 modules. On the HTA Hub platform 186 users completing the assessment module and completing all 5 modules.

The training is hosted on multiple platforms and is free of charge to anyone who wishes to take it. It also comes with a suite of information and briefings aimed at educating people on growing media in the round, rather than just selling the right products.

Responsible Sourcing Scheme.

Growing Media manufacturers have also voluntarily devised and signed up to the [Responsible Sourcing Scheme](#) (RSS). This scheme has been developed in collaboration with the GMA, leading retailers, Defra, NGOs and the HTA and assesses the impact of each raw material against seven criteria.

- Energy use
- Water use
- Social compliance
- Habitat and biodiversity
- Pollution
- Renewability
- Resource use efficiency

The figures for each criteria are fed into a specially designed RSS Calculator which then scores each manufacturers product.

That score is then reflected in a rating graphic, which is printed (with a QR code) on each growing media bag. In this way consumers can see at a glance, how responsibly sourced the growing media is that they are buying, they can see its environmental impact and can get more information on the product by following the QR code.

This scheme has already been implemented by manufacturers who account for over 80% of the supply of growing media industry in order to give consumers a more informed choice about the products they purchase. Bags of growing media showing the graphic are already appearing at retailers with more on their way.

The supply chain

Imports

Imports must be considered when talking about banning peat, or any type of peat-free action. The UK grower cannot be disadvantaged by not being allowed to use peat and yet be open to being undercut by imports containing peat. While peat removal might be the ambition of the industry, the issue of imports is incredibly important. Imported plant material underpins the UK horticulture industry, particularly in the field of young plant material.

Young plants are newly germinated or propagated plant material, grown in trays containing a multiple number of very small cells, each with their own small, young plant in. Young plant material has already been identified as incredibly difficult to produce without peat binding the growing medium together (See the Exemptions [Evidence](#) section), but also the fact that UK based growers rely on young plant material from the EU (where peat free growing is far behind the UK) means this key source of plant material is in real jeopardy.

Much of the trade in young plant material relies on international trade, so therefore banning imports containing peat would mean that much of the UK based supply chain collapses. In data HTA gathered for EU Exit impact assessment, 93% of UK based growers relied on at least a proportion of imported plant material¹⁶ while 100% of larger growers (with a turnover of over £1million) imported plant material.

EU Exit-based regulation has changed the nature of trade between the EU and the UK. This has potential that EU suppliers simply move out of the UK market once too many barriers go up, to the point where it means the unrecoverable contraction of the UK horticulture sector. The work the HTA has done points to the potential for more expensive plants and products at retail, which hits those on low incomes the most. This has a knock on effect of a decrease in gardeners per se, meaning a poorer society and more issues with mental health etc. Also, the availability & expense of plants destined for the wider landscape should be considered.

The NFU highlighted in the recent House of Commons inquiry on Trade and Environment that it believes the UK government's ambitions when it comes to trade and environmental policies are misaligned. There exists little confidence or evidence in the one trade deal already agreed i.e., Australia that the government will prevent an increase in imports of food produced below the production standards required of UK farmers and growers or in line with expectations of the British public. The sector therefore has little confidence that any legislation to ban peat growing media in the UK by 2028 in the professional sector would be implemented for imports.

Finely Balanced Supply Chain

Understanding how the flow of plants into retail and amenity sectors works is important when talking about industry impacts. The trade is a finely balanced supply chain mix of UK produced and grown, imported finished plants (both for retail and amenity sales) and imported young plant material which forms the basis of the bulk of UK produced retail and amenity ready plants for planting.

The infographics below (*Figure 1* and *Figure 2*) give a sense of the complexity of the supply chain. They show how multiple sources exist of plants and plant material - how many sectors are interdependent, are related and are reliant on the supply of plants. They show where Government policy impacts or is impacted if that supply of plants is changed in any way. *Figure 1* also shows why consumers would be impacted if the supply of plants were compromised - as it shows that linked products would also be affected negatively.

This complex and finely balanced supply chain means that there must be a clear principle of exemptions for products essential to the ongoing health of the sector in order to remain able to use peat until such time as it can safely be removed, and also there must be a clear plan of monitoring and enforcement.

¹⁶ "Let Britain Grow" campaign - Data and Evidence document, HTA Survey of Members 2021, <https://hta.org.uk/policy/let-britain-grow>

Supply of plants to consumers (Garden Retail) in the UK

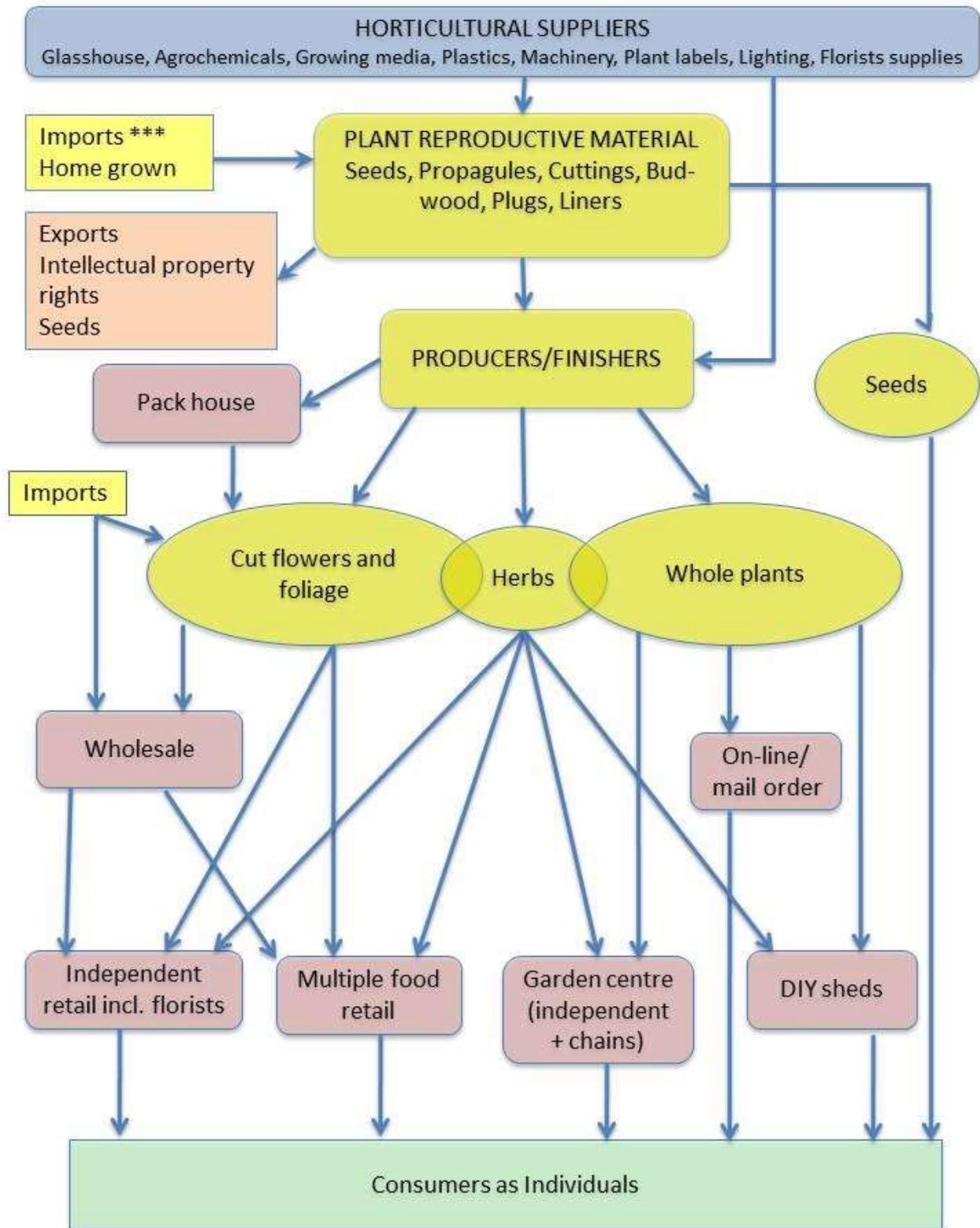


Figure 1: Source Horticulture Innovation Partnership (HiP) R&D Strategy 2015-2020 (2015)

Supply of whole plants to consumers and amenity industries

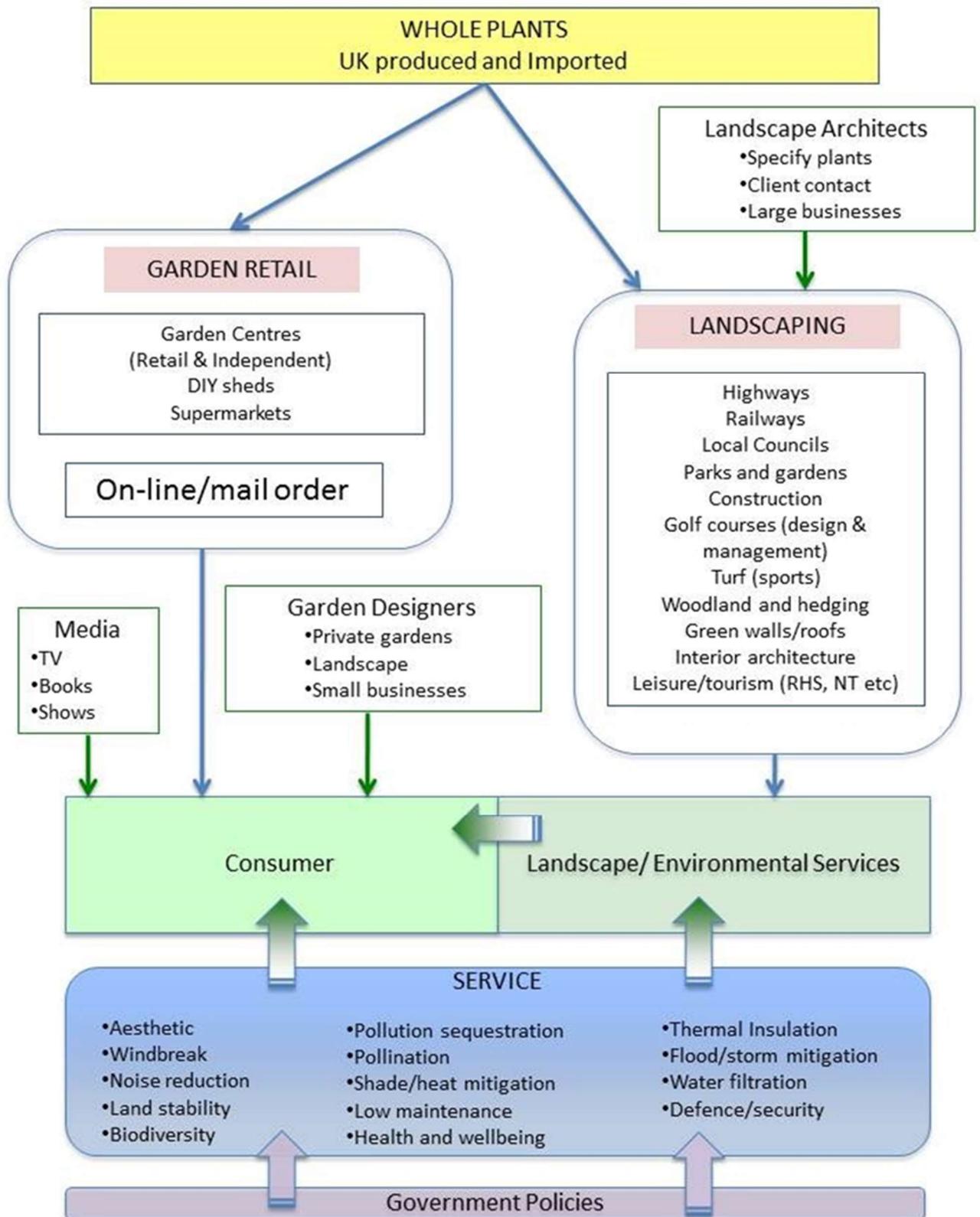


Figure 2: : Source Horticulture Innovation Partnership (HiP) R&D Strategy 2015-2020 (2015)

Impacts of the Proposals

Wider Impact

The proposal to ban peat does have the potential to mean less plants being planted in the UK's private or public landscape, which in itself has an environmental impact. It's not actually about the removal of peat, it's about the disruption to the supply chain and the potential imbalance of trade that a particular regulation will bring.

The essential part of this is that the true impacts on society, the environment and the economy need to be understood and evaluated before launching into harmful knee-jerk style legislation that has the potential for long term damage.

The evidence shows that there is simply not enough alternative material to satisfy the market demand at this current point.

Impacts on the Supply Chain

Growing media shortages could constrain the extent to which consumers can garden, as growing media is intrinsic to planting and seed sowing. Gardeners are at the frontline of climate change. The more people that garden the more are in touch with environmental issues and solutions – and therefore want to do something about it. Shortages of growing media may have a knock-on effect that fewer plants will be bought, there will be less gardening done, potential declining levels of mental health and wellbeing, plus a contraction of the industry and a loss of jobs.

Supply Chain Pressures

With the Republic of Ireland ceasing peat production, and a myriad of global supply issues – both sector specific and wider international trade issues – for many materials the pressures on supply of ingredients for growing media have been immense in recent times.

Any of the measures set out in this consultation would only service to increase those pressures. For example, the cost of shipping containers¹⁷ has risen by 83% over the course of a year, therefore meaning the cost of importing coir has also risen. These cost rises will only serve to increase the cost of all materials used in growing media.

The taskforce would like to understand what Government is doing to raise these issues with other Governments in order to assist with replacing peat, as UK businesses cannot be placed at a competitive disadvantage to European or global competitors

¹⁷ As of 10th March 2022, the average cost of a shipping container is \$9,179.98 per 40ft container which is 83% higher than the same week a year ago on the Shanghai-Rotterdam route. The average cost per 40ft container year-to-date is \$9,412 per 40ft container – this is \$6,312 higher than the 5-year average of \$3,101 per 40ft container. Source: Drewry Shipping container index - <https://www.drewry.co.uk/supply-chain-advisors/supply-chain-expertise/world-container-index-assessed-by-drewry>

Evidence

Enabling Access to Peat Alternatives

After looking at existing ingredients and evaluating known new and novel ones with potential, the Taskforce has identified a core set of alternative ingredients with the greatest potential to ‘plug the peat gap’ of 1.7 million cubic metres of material.

The materials are wood based product (such as wood chips and fines), coir, anaerobic digestate fibre, green compost, farmed sphagnum and bracken. Below, (Figure 3) we set out a model which shows existing or potential ingredients and looks at how much of the required volume of peat they have the potential to replace and gives an estimated timeline to reach commercial volumes.

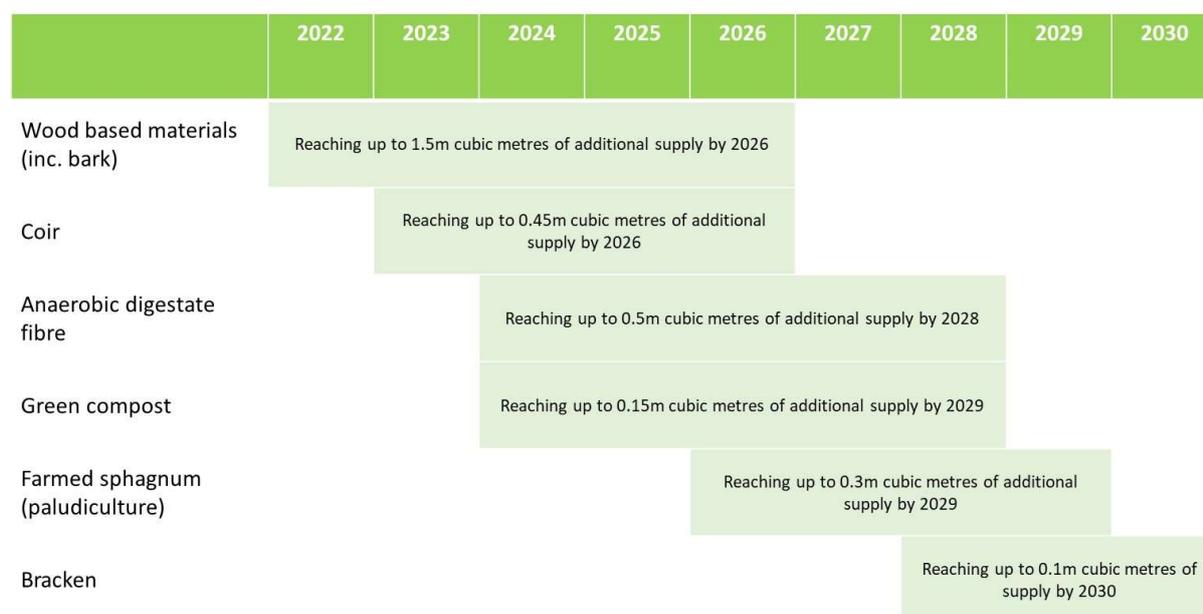


Figure 3: Chart to summarise the potential additional supplies of different peat alternatives that could be made available dependent on government and industry collaboration to remove barriers to access

Our analysis shows that in a best case scenario sufficient volumes of materials are unlikely to be accessible to the industry until 2025 at the earliest; if barriers to access are not addressed, such as the availability of enough materials to meet demand, this will remain a challenge beyond this date. These dates are notwithstanding and separate from technical barriers to producing in peat for certain crops which we detail in the [Exemptions](#) section.

We have also looked at the relevant dependencies for each ingredient which in turn generates a set of actions for industry and asks of Government, which are set out in [ANNEX A: Research into accelerating access to peat alternatives.](#)

Taskforce Proposals for Government actions – Ingredient specific

This research has generated a list of proposals for Government to action, which if taken, will work to unlock the barriers that exist to access materials. The proposals are set out in summary below: -

1. Ensure financial relief is available for wood chipping machinery and related capital expenditure (as per the equipment currently listed on Defra’s farming Transformation fund) to be used at growing media manufacturers

2. Produce a consistent phytosanitary protocol for importing de-barked wood chip that is economical for exporters to apply and for importers to specify while ensuring biosecurity is maintained while reducing complexity and overall cost.
3. Ensure Environment Agency regulations for the processing of UK waste wood destined for growing media manufacturers do not create barriers to accessing the material
4. That Government develop a business case, in collaboration with all stakeholders, to increase access to and awareness of UK horticulture as an end-market for coir.
5. To change the Quality Protocol for anaerobic digestate fibre to allow the fibre to be used in growing media
6. For Government to work with stakeholders to conduct research and produce an economic impact study into anaerobic digestate as a growing media fibre and to enable production of those fibres for growing media use.
7. Revise the PAS100 standard for green waste into a more rigorous standard to ensure it is as contaminant-free as possible
8. To mandate free of charge garden waste collections from all households, with effective householder advice on garden waste being contaminant free
9. Business holding peat extraction licences become eligible for funding to transition to sphagnum moss farming
10. Defra to accelerate its sphagnum moss farming programme and commit to establishing 12,000 hectares of sphagnum farming by 2025
11. Government to scope out and fund joint work into an economic feasibility study into commercial bracken production as a growing media ingredient.
12. We expect the market for peat alternatives to be vibrant and dynamic in coming years with novel materials becoming available from sources such as utility companies and agricultural wastes. We will monitor this and look to maintain dialogue with Government to ensure access to these potential sources.

The full set of recommended Government actions can be viewed in [ANNEX C](#)

Research & Development

There has already been significant private and public investment in this area. Some individual businesses have invested millions of pounds seeking solutions, adapting machinery and trialling mixes. The industry has not been idle and has been acting as a responsible industry to find solutions. The fact that the whole industry is not yet 100% peat free indicates how complex and difficult it is to attain 100% peat free status.

Some growers have been able to go peat free, and have worked hard to achieve it, often taking cuts in margins and accepting crop failures and loss of quality. This is where their crop mix allows, and their investment ability is high. Others have found it harder.

Growers' voluntary activity in the area of trialling alternatives has already been going on for some years – in the case for mushroom research can stretch back to the 1970's, with still no viable solution found. There is a wealth of information already collected and is still on going. Most growers now have at least some peat-free trialling work on going. In some sectors commercial scale trials have yet to be established, simply due to technical barriers. The issues are incredibly complex, as each grower grows a different mix of crops each requiring potentially a slightly different potting or cropping mix.

There are many different peat-free mixes already available, but one from one supplier might not suit a particular grower's crop regime. And if that mix is even slightly changed – or there is volatility in the supply chain – then there is a period of adjustment time necessary, while in the meantime that grower might lose that crop or not be able to market it. Crop production is a finely tuned activity, and crops are scheduled far in advance of the growing period, customers make specifications for delivery weeks months and years before requirement. Joined up activity is therefore critical across the supply chain from customer to grower in order to transition smoothly.

R&D Actions

The research and development requirements to attain peat free status therefore must be addressed accordingly. From the work of the Taskforce and the discussions with the industry at large the following are the areas which will need additional or new R&D to allow for the adoption of peat-free mixes:

1. Growing media selection specifically to use for replacement of Mushroom Casing peat, blocking mixes for salad crops, module filling mixes for brassica and similar transplant crops, mixes for ericaceous crops, pharmaceutical crops and forestry nurseries.
2. Machinery development for the handling of alternative mixes at both the level of GM manufacturers and also at the nursery level of handling and potting on of crops,
3. Growing system investment in irrigation and fertigation to meet the needs of the alternative mixes whilst making the best use of resources, water and fertiliser,
4. Identification of the specific microbiological interactions of the range of peat alternative materials and how this affects the use of fertilisers and crop performance.

Professional Sector

The horticulture sector is the most diverse of any of the agricultural sectors, covering a range of plants, vegetables, fruits, and ornamental plants and flowers. For the purposes of this report and acknowledging the scope of the Taskforce members, we have kept within the ornamental, vegetable and fruit production areas.

The Taskforce's timeline for removal of peat for professional growers is 2028 to 2030. This has already been set out to Government in 2021 by the Taskforce, with initial evidence to support it. This ambitious timeline is dependent on urgent and decisive action - the right Government support is key. There is no need to introduce a ban on peat, the Taskforce actions will help to deliver change in realistic and achievable way.

Many of the points made throughout this response are related and linked to the barriers for removing peat for the professional grower. Each is intrinsically linked to the action taken to remove it for amateurs. There is a long list of pressures facing the horticulture sector when such a huge and rapid change is considered – but which can be managed by the industry if doing it without regulation. With regulation and a timeframe that isn't feasible, the impacts could be so damaging that they are irreversible.

- Availability of ingredients
- Peat-free mixes matched to individual crops
- Which crops cannot grow without peat
- Competition from overseas

- An integrated cross-border supply chain
- Imported plant material – finished and for growing on
- Use of water resources and fertilisers and the availability of them
- The energy crisis and the impact of international events
- Crop performance & quality
- Cultural requirements
- Manual intervention in crops
- Access to funds for transitioning equipment and crop management
- Knowledge exchange mechanisms and networks
- Fluctuations in materials prices
- Pricing for the end of market
- Global supply chain & other external pressures

All the above, and more, need to be considered when undertaking to remove peat from horticultural products (whether retailed or otherwise). This means that with such a large range of factors that need to be taken into consideration, the way forward is complex and needs careful consideration.

Professional growers operate in a highly competitive marketplace. Growing media cost can represent a significant proportion of the input cost to a plant propagator. As peat-free mixes are likely to be more expensive - certainly in the short to medium term - recognition must be given to a rapid change in the marketplace and the potential for price rises.

The cost of production is likely to impact margins and market returns, in an incredibly price sensitive grocery market. With inflation currently at its highest, the increasingly concerning energy crisis and the onset impacts of the Ukraine/Russian conflict affecting availability of inputs like fertiliser, growers are already feeling the squeeze on margins, with limited ability to recover cost price increases from the market.

The potential additional costs come at a time of high inflation for the horticulture sector. In December 2021, the Anglia Farmer's Co-operative estimated agricultural farm input costs soared almost 22% in the year to 30 September. Most agricultural inputs are seeing double, if not triple digit inflation with unprecedented increases in the cost of fuel and fertiliser – with predictions inflation will continue well into 2023. Energy is a key input for the horticultural sector and onward food supply chain and will impact businesses margins and profitability.

For example, natural gas, a key energy source for the agri-food sector, has seen significant inflation through 2021. The price of gas has a profound effect on the price of fertiliser. AF Group AgInflation report shows the increasing cost of natural gas is at a point where it has made fertiliser factories economically unviable to run. The energy crisis in 2021/22 will have an effect on businesses profitability. We predict that we will see impacts well into 2023, as growers are already looking at production costs for next year. Government must take the energy crisis into consideration when developing policy around peat removal. The industry cannot withstand the highest inflation it has ever seen and invest in R&D to find alternatives at the same time. Sufficient time and financial support in R&D is required from government.

The Government's Impact Assessment does not take any of these recent developments into consideration.

Exemptions

The acceptance of the principle of exemptions while R&D is conducted to enable those exempted products and species to move out of peat is key. If regulatory action were taken, then exemptions must be part of the plan. The categories and species set out below must be part of these exemptions and must be for extensions out beyond the Taskforce's stated date of 2030.

The actual timelines for these would be entirely dependent on the necessary Research and Development being conducted to introduce peat-free growing media, however the understanding is that peat would be removed as soon as possible.

Plug production and propagation is a particularly concerning area. As detailed in the section on the Supply Chain, the UK horticulture sector is reliant upon producers and suppliers of young plant material. Plugs, as they contain such a small amount of growing media material, need a material that binds the structure together well enough to produce a well-established young plant within it. This is particularly true for the many crops that need a specific amount of moisture content within the plug to hold it together, such as in brassica and leafy salad production. Peat is a key material that gives that consistent result across crops. While there have been successes with peat-free in some young plant production, this is most definitely not the case in the bulk of production.

Professional Sectors

The Taskforce set up a group of growers who identified the crops and products that had technical barriers to being produced in peat-free growing media. The Taskforce's Research team in March 2022 completed analysing the results of a Grower Survey¹⁸ which was in the field late 2021 to early 2022. The results indicated that there were several crop sectors and production sectors that will experience technical difficulties relating to the removal of access to peat.

Those sectors identified were

- Plugs, seed sowing, propagation and blocking
- Specific finished ornamental crops
- Mushroom production
- Blueberry production

For each of those sectors the survey sought to establish exactly how much peat they used, in order to a) identify research and development and knowledge exchange opportunities and b) in the event of a ban on professional use of peat, establish these sectors as requiring a longer term exemption for peat use.

The 4 sector's peat use has been estimated at is: -

Sector	Peat use in cubic metres per annum
Plugs, seed sowing, propagation, blocking	124,000m
Growing of specific finished ornamental crops	41,000m

¹⁸ HTA Research, conducted on behalf of the Growing Media Taskforce, 2021 (available on request by email policy@hta.org.uk)

Mushroom production	143,000m ¹⁹
Blueberry production	4,000m
TOTAL	312, 000m

The Taskforce estimates this total to equate to approximately 30-40% of peat use in ornamental and edible horticulture. Most of the volume is focussed on mushroom production and plug production (across both ornamentals and edibles).

In the production of finished crops, 41,000 cubic metres of peat use which may need exemptions would account for approximately 10% of production of finished ornamental plants. These estimates assume a constant level of output except as noted for Blueberry production.

Mushroom production is also a particularly concerning area. The taskforce would like to draw Defra's attention to the Mushroom Association response to this consultation which highlights the significant technical barriers in relacing peat. A viable alternative is not available in commercial mushroom production, despite significant research spanning nearly 40 years. As exemption for mushroom production needs to be in place whilst further R&D continues.

These results should not be taken as a comprehensive view of the volume of peat that may need to be allowed for in exemptions. For instance, expanded production of pharmaceutical crops such as hemp is not covered in this survey, and production may require volumes of peat not captured in this study

Specific crops

So far, the crops below have been identified as having significant technical barriers to overcome before moving to entirely peat free. This is list is-non exhaustive and is based on ongoing research.

Ornamentals

- Acid loving shrubs
- Acid loving trees
- Ericaceous grasses & sedges
- Heathers
- Carnivorous plants
- 'Special' groundcover

Edibles

- Mushrooms
- Blueberries
- Potted edibles such as herbs

General (edibles & ornamentals)

- Propagation

¹⁹ These figures differ from those given in the Mushroom Growers Associations response to the consultation but are within a 10% tolerance.

- Commercially produced plugs (for selling to growers – e.g., seed raised, cuttings, blocks, modules, propagules, slabs, transplants)
- On-nursery production of seedlings, cuttings, and other young plant material (for growing on on-site)

The detail of peat use by the specific crop sectors listed above is contained within the survey results²⁰. See [Annex B](#) for non-exhaustive list of species.

Time frames

Time frames to move these broad categories into peat-free mixes are entirely dependent on three factors that must run concurrently alongside each other

1. Comprehensive research and development – both sufficient funding and a clear plan
2. A knowledge exchange plan and subsequent uptake by growers
3. Availability of the right ingredients for peat-free professional mixes

The mechanism to administer exemption authorisations in the event of legislation aimed at removing peat is not for discussion in this consultation response, but one that should be addressed in collaboration with the Taskforce and wider industry in the longer term, and most certainly before policy is set.

Knowledge Exchange Mechanisms

- Knowledge exchange – industry led initiatives, potential for Government assistance to facilitate knowledge exchange
- E.g., for differences in how to grow crops, use of fertilisers and crop protection products, watering regimes and equipment.

Level Playing Field

We talked about imports and supply chain pressures in a previous section of this document. The Taskforce has already started work with UK ornamentals retailers and growers to work together to represent to the EU supply chain the need to go peat free in order to supply the UK market. However, it is also worth exploring what removing the current level playing field might mean for a particular sector. In this case, mushrooms.

Case Study 1: Mushroom Sector

In mushroom production there is no available alternative to peat, which is currently used as a casing. Production from UK holdings in 2021 was 58,450 kgs with imports in 2021 accounting for a further 227,750 kgs. Mushrooms are the seventh most valuable fresh produce category in the UK with a retail value of £528m²¹.

Trials on the use of alternative media have resulted in reductions in output of circa 20% which, due to the very small margins involved in producing mushrooms using state of the art technology, growing mushrooms in a non-peat casing would not be economically viable in the UK.

The UK relies heavily on imports of mushrooms predominantly from Poland, The Republic of Ireland and the Netherlands. So, the industry is very concerned that if the use of peat is

²⁰ HTA Research, conducted on behalf of the Growing Media Taskforce, 2021 (available on request)

²¹ Source: Fresh Produce Journal: Big 50 products

https://issuu.com/fruitnetmedia/docs/fpj_issue_6_big_50_products

phased out in England and Wales, the UK will increase its imports from those countries where the use of peat is still permitted. And while the UK may have the satisfaction of thinking it has eliminated the use of peat, the stark reality is it has just offshored peat extraction and use, possibly to parts of the world where the controls over the extraction and use are less rigorous than here in the UK.

Further information can be read in the Mushroom Growers Association's response.

Case Study 2: Ornamentals Grower

Below is a representative anonymised Case Study where an individual grower has set out their specific difficulties they have already experienced in their own trials – what it is they are looking for in order to move away from peat, and what Government should do to help that. We have also requested individual businesses to send in their own experiences as part of their own consultation response.

Case Study : Representative tree and hardy nursery stock grower.

“We accept/embrace the need to change and are willing to do so but have severe misgivings about the availability, reliability and technical performance of available alternatives.

The development of peat-based media was supported over many years by extensive R&D looking at CRF and appropriate grades to achieve the correct physical characteristics for specific growing systems and crops. This was necessary even with such an inert base media.

Over the years we have carried out contract grow projects on a wide range of genera and have seen crop failures but more frequently sub optimal growth in terms of size and quality, albeit these were often accepted by the client taking a share in the risk to be peat free.

Like many Hardy Nursery Stock growers, we have been changing our core mix over several years gradually reducing peat percentage and in the last 2 years have undertaken more extensive trials on a range of crops going 100 % peat free.

In these trials we have seen general effects that mirror past experiences. The crops behaved differently often showing reduced extension growth and periods of disrupted nutrition.

These 2 factors alone would represent reduced value – either missing a size grade or increasing the non-marketable percentage.

In addition, we have seen an increase in unpredictable responses such as:

- Failure in crop establishment (often traced back to pH and conductivity) which is often too late to rectify once identified
- Poor response to normal cultural operations such as pruning. This would seem to link to changes to root/ shoot balance and a very different response to normal irrigation practice.

The combined effect of this is a huge increase in requirement for crop monitoring by skilled staff and more manual intervention at a time when we are being implored to mechanise and automate to save the need for labour.

With over 1000 product lines – all with potentially changed and unpredictable responses we are bound to see an increase in labour costs, yield reduction and increased waste.

We have seen different responses with the same crop / media combinations in different growing seasons and differences in the same crop/ season with different media.

What we need is a consistent set of different products that we can match with each crop – a gradual drift in mixes depending on product availability will be an unmitigated disaster!

I would therefore strongly assert that the deadline for elimination of peat in the professional market is very dependent on action to secure reliable supplies of consistent materials and an ongoing need for some crop-based exemptions. We would also need to see effective measures to ensure a level playing field on plant imports otherwise the UK industry will not have the resources to work through these technical challenges.

Taskforce Response to the Individual Proposals from Government

Business as usual / retain voluntary targets

The taskforce is committed to the following dates

- Removing peat from bagged growing media sold at retail by 2025-2028
- Removing peat from professional sector between 2028 and 2030

These dates are dependent on Government help stated in this document (See [Full List of actions here](#)) and caveated on the principle of exemptions and regular review. Regular review should be done to ensure alternative ingredient provision is on track, that there are no new barriers to alternative supply and that R&D has progressed significantly in those areas required.

In addition, as stated [in the introduction](#), recent statistics show that the industry is already at a peat-reduction level that the Government stated in its Impact Assessment of January 2022 would not be achieved under this policy option until 2025.

Mandatory Reporting

As the Government has given the reason for suggesting this option is to raise awareness within the supply chain of the need to move away from peat, we strongly suggest that there are already high levels of awareness throughout the whole of the supply chain.

Removal of peat from horticulture is already a priority in the sector, as well as foremost in the mind of many consumers, and this proposed action to raise awareness would have little effect. The act of issuing this consultation alone, awareness has been raised to its top level, there is little need to increase it even more.

The Taskforce would rather government worked with us on better measures and tools, such as life cycle assessments to ensure the overall environmental impacts are reduced for all growing media, for all existing and new ingredients.

As part of the OHRG Industry growth strategy²² we are already looking across horticulture at better Life Cycle Assessment and carbon assessments, so Government should take an holistic approach when it comes to evaluating the effects of any horticultural product.

In practical terms, any reporting mechanism will mean more administration for businesses for little potential gain. Volumes of peat sold / used in horticulture is already gathered for Defra by an independent consultant via manufacturers reporting.

²² “Unlocking Green Growth”, Ornamental Horticulture Roundtable Group, 2020 <https://hta.org.uk/media/kajhqqfq/ohrg-unlocking-green-1.pdf>

On the actual mechanism if retailers are asked to provide this information the manufacturer would need to append the stock codes they already supply to retailers with the percentage of peat within each product – that is assuming the retailer has a system already in place for this. The issue is accuracy, as amateur formulations change yearly depending on availability of materials, so you would never be able to get to consistent percentage of peat being used in bagged media for any particular retail business. The best source of this information is the manufacturers as they know already how much peat they use, and this is already collected.

The main point is that without enough alternatives then there's nothing that retailers would be able to do about going peat free – and the raising awareness goal is a moot point. Therefore, this proposal would simply be a big IT project that was unlikely to achieve the stated policy aim and cost industry and government a large amount of money, effort and time for no return.

- Although some retailers already ask for this information, manufacturers would need to append the percentage of peat to the stock codes they supply to customers for use in EPOS systems, if the retailer has them.
- Not every business has EPOS.
- this would be reliant on growers and manufacturers providing the information
- the peat percentages within an individual mix might change throughout the year to allow for availability issues and changes to formulations
- there is no mechanism currently in place to record this, so a system would have to be put in place from scratch, although it would be technically do-able
- the negatives from such a system would outweigh the positives
- The costs involved in setting up the system – who would bear these and who would manage it
- There is no stated timeline for devising and implementing the system
- The Responsible Sourcing Scheme already provides this

Answers to specific questions (Questions 8 through 14)

Q8 – Should retailers have access to the information from manufacturers about the amount of peat in bags that that sell?

Many retailers already have access to this information. This is a commercial question between supplier and customer and should not be subject to Government regulatory requirements.

Q9 Assessing the amount of peat in bagged(?) products.

The incredibly complex variety of products being sold through garden retailers would negate the validity of this proposal. This information would be available from manufacturers rather than through individual businesses assessing and reporting these statistics. The Taskforce does not think this would be a practically effective step to take. Also, even if you assume that this theory is correct, without sufficient access to alternative materials, the theory is a moot point anyway.

Q10 – Small and medium enterprises exemptions.

The horticultural sector is made up of 95-99% SMEs, so you would be exempting the bulk of the sector if this route was taken.

Q12 – Accurate information on peat in potted plants

The incredibly complex variety of products being sold through garden retailers would negate the validity of this proposal. There are thousands and thousands of lines of plants sold that may or may not contain peat, which may vary from season to season sourced from hundreds (possibly thousands) of retail suppliers.

Consumers and retailers will increasingly demand peat-free plants, and for plants to be promoted as peat-free the new CMA guidelines on making environmental claims will create pressure on growers to remove peat.

The Taskforce does not think this would be a practically effective step to take.

Q12 – Exemptions from Reporting

This would not be helpful, and inadvertently miss volumes of peat use that should be captured in manufacturers statistic.

Q13 & Q14 – Does this measure raise awareness with consumers and encourage action within industry?

Retailers are already raising the issue to consumers through signage and point of sale material – this captures industry & consumer awareness. There is already significant information being put out by environmental groups – of which gardeners are often in membership. This measure is not an effective way of changing industry awareness or consumer behaviour.

Ban on the Retail Sale of Peat

A ban is entirely counter-productive, socially divisive, and unnecessary. The key elements to consider were set out earlier in the [introductory section](#) of this document.

Government needs to get behind the clear plan of action as stated by the Growing Media Taskforce and put in place real action in order to help deliver peat-free status for the horticulture industry. The actions must centre around ensuring the required quantity and consistency of existing and new ingredients, that they are available and thoroughly researched and understood.

If a ban is in place for bagged growing media, this could mean consequences for the professional sector – e.g., that this will use up the available alternative ingredients meaning a shortage of quality and quantity for professional sector and might mean the whole of horticulture takes longer to move away from peat into responsibly sourced growing media.

Even the Governments Impact Assessment shows that a negative net benefit of -£32 million is expected and does not consider key negative effects that would be felt by society, the environment, and the economy.

The potential for increased water uses and increase use of fertilisers necessary for both amateurs and professionals without the necessary appropriate materials being thoroughly researched and available has not been taken into account in the Impact Assessment, as set out [earlier in this document](#).

The potential damage of a ban on the horticulture industry as a whole is not acknowledged, nor the economic effects of a ban not drawn onto a timeline. It would be expected that any costs would be frontloaded in the period 2024-2042, as all sectors grapple with a rapid move to peat free. This would put even more pressure on supply

chains. The pandemic put huge pressure on the supply of many ingredients for growing media, an outright ban on peat in the suggested time frame would not only repeat that pressure but increase it significantly

Specific answers to questions

Q15 – Should there be a retail ban on peat in England & Wales

No, no ban should be implemented at all.

Q16 – Is it feasible to implement such a ban by end of 2024.

No. The reasoning is given above.

Q17 – Are there other industries affected by this proposal?

The Taskforce is not responsible for scoping this out, however there may be requirements for pharmaceutical crops, for instance, and the potential requirements for cannabinoids for medicinal use, if there was a relaxation of regulation.

Q18 – Should there be exemptions

Yes, there should be exemptions at retail – plants, trees and produce grown in growing media containing peat should be exempted until such time as they are able to be grown well enough in peat free media. This will vary according to sector and species (See Annex A for detailed information)

It should be noted that this is an ambiguous question. The original scope stated in the introduction implies that a ban would not affect plants. The Taskforce had assumed the question related only to growing media sold to consumers for them to grow their own plants and seed in - i.e., bagged growing media sold at retail.

If this is the case, perhaps consideration could be given to amateur growers of crops that the taskforce has identified that need to be exempted for professional production– e.g., carnivorous plant hobbyists, for example. However, the mechanism for allowing this is difficult to determine without understanding the scope of the question.

Q19 What is the max quantity of peat in a pot plant that should be exempt

This question has created confusion and consternation amongst the industry. It may be the questions on what quantity of peat should be exempt in potted plants and shrubs is outside the scope of this proposal? On page 10 “*What Are We Proposing*” there is a statement that already says that the professional sectors use of peat will be considered as part of the call for evidence in Annex A, rather than held within the proposals for a ban.

If the intention is only to ban bagged growing media containing peat, (i.e., growing media used by consumers to grow their own plants and seeds at home) then any container or pot sold at retail containing growing media that maintains the vitality of the plant should not be part of that. The container or pot used for maintaining the vitality of plant material within must be in proportion to the planting material and not have excessive growing media.

Some of the items Government would need to have in place before writing legislation might be – a detailed, fully fleshed out exemption system for plants and food grown in peat; a way of policing that system, if deemed necessary; an application and approvals system; costs for such a system and who would pay.

Although the Taskforce understands the legislative method that the Government is proposing – introduce the full legislation but with exemptions and then remove those exemptions to a pre-determined timescale - we disagree with the principle of legislative action in this way. There will be unintended consequences and difficulty in correctly wording and scoping out exemptions. This should not be done by a principle of peat content within a specified pot size, this is far too complex.

Point of Sale bag charge

The proposal states that a charge be made at the till for any bagged product containing peat. The comparison is made to the plastic bag charge.

As a policy intervention the plastics bag tax was effective in changing consumer behaviour when the product originally on offer was free of charge and the policy goal was to reduce use of plastic bags. However, a similar intervention on growing media containing peat presents a serious risk of encouraging people to stop people gardening or planting plants and seeds as they see gardening as environmentally bad.

A levy has the potential to give the impression to consumers that gardening is bad for the environment per se and therefore not a hobby they would wish to take up / continue. 12 million people (a quarter of the UK population) would view a £1 levy as saying that gardening is bad for the environment²³. For gardening, a well-documented healthy hobby, this is significantly detrimental.

Consumers can be informed and educated in other ways. The growing media taskforce has already made significant progress by launching e-learning for garden retailers to ensure garden centre staff are well informed about peat free mixes and the correct use of soil improvers and growing media. In this way consumers who are visiting garden retailers get the best possible advice and the correct product is used thereby freeing up materials for use as growing media which may otherwise have been put onto the soil by ill-informed consumers.

The [Responsible Sourcing Scheme](#) has also been launched in the Spring of 2022. This labelling scheme gives consumers the right information on a pack of growing media to base their purchase on through a simple grading scheme. There is significant take up of this scheme by manufacturers and retailers.

A point of sale charge has several potential negative effects -

1. The public's perception of the industry becomes tarnished
2. It would mean those on lower incomes would be most impacted
3. Raises a question that would it actually drive change?
4. It is expected that by the time any such scheme is rolled out, the industry will have moved significantly anyway, negating the desired effect
5. The actual mechanism of charging is not clear at all
6. This is extra unnecessary administration for businesses
7. It is difficult to ensure the money is used for 'good causes'
8. Any recipients of the 'good cause' money may become reliant on it, subsequently they are disadvantaged once the money ceases to come in.

²³ HTA YouGov survey, August 2021, sample size 2,121 adults

A levy also legitimises peat use for those who can afford it. E.g., “well, it's only a £1 more, so I'll buy it anyway” and penalises the gardening public, potentially pricing out of the market those gardeners on a lower income. There are very few hobbies that are undertaken by the full range of society, and a ‘tax’ on growing media does not sit well with the Governments levelling up agenda.

Peat free mixes have been historically more expensive, however recent events (particularly the cessation of extraction in the Republic of Ireland, pressures on the global supply chain and rapidly rising transport costs) have meant peat-based products have risen in price. For example, 2021 data shows that the volume of peat sourced from the EU, other than the Republic of Ireland, has increased by 45%. This has served to increase the cost of peat as a raw material.

An unintended consequence of a levy might be that retail-ready bags of peat-reduced formulations could see their peat content rise, in favour of using the non-peat ingredients in peat-free mixes. This also has the potential to actually increase the use of peat overall.

If a sliding scale levy is proposed (i.e., the amount you pay depends on the peat content) this would be extremely difficult to ascertain. Peat content changes by formulation, and is often in a wide bracket (e.g., this product contains 20-35% peat). The whole process of establishing information flow, correct pricing of and policing such a scheme would be very difficult. It actually might even take longer to bring in than achieving the removal of peat from the supply chain.

Answers to specific questions (Q20 to Q25)

Q20 Do you think increasing the price of peat-containing growing media would influence consumer behaviour

Possibly, but the detrimental effect outweighs the positives. (See text above) there is also the fact that if there is not enough material available to produce the peat-free growing media required by the market, then the desired change won't take place anyway.

Q21 Would it encourage more peat-free to be sold

Probably not. Although this might drive retailer specifications; (and we do see this already happening in retail) not being able to source enough supplies is the real barrier to selling more peat-free.

Q22 What would be an appropriate levy

Firstly, very difficult to determine what would actually drive behaviour change and secondly difficult to establish how much increase gardeners would stomach before stepping away from gardening. If a consumer decides to buy something more expensive, they often want to get more out of it, or know why they are paying it. The main point is that a levy isn't appropriate anyway, due to the potential damage it would cause to gardening.

Q23 what to do with the money.

Although many would say that this could fund restoration of upland and lowland peatland areas, restoration of degraded or excavated peatland should not be funded from a levy that will diminish to zero in short order once the policy goal is achieved.

Q24 Should there be exemptions

No, but then the Taskforce doesn't agree that a levy is the right action to take.

Q25 Mandatory Labelling

The industry has already introduced the [Responsible Sourcing Scheme](#), which has been taken up widely within industry. This is a far more effective way for consumers to evaluate the true environmental impact of their growing media than a simple statement on peat content.

Conclusion

The Taskforce firmly believes that with the impetus of the Taskforce and action from Government, a continuation of the voluntary approach to transition away from peat is the way forward.

A partnership between industry and Government based on supportive action will achieve the result we are all looking for. There are negative and disruptive consequences to an outright legislative ban, and industry needs supporting now more than ever.

The horticulture and gardening industry is economically, environmentally, and socially vital to the country's wellbeing. We urge the Government to show faith and respect UK Horticulture - an industry that can deliver so much in support of Government ambitions.

The Taskforce asks a straightforward question: What is the Government going to commit to in order to support this important industry to achieve a transition away from peat?

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ANNEXES

ANNEX A: accelerating access to peat alternatives.

1. Background to the evaluation of peat alternatives

In order to replace the 1.7m cubic metres of peat used in UK growing media in 2021, our consultation response highlights the urgent need for industry and government to collaborate on enabling greater access to materials. To unlock materials to make a difference in the next two years, action needs to be taken on proven peat alternatives. We identify these as coir, wood-chip for producing wood fibre, and bark. However, further reduction in peat and a transition to more sustainable materials relies on, government and industry collaboration on materials with the potential to replace significant peat volumes in the medium term (two to five years). We identify these materials as green compost and anaerobic digestate fibre. All of these materials carry their own risks in terms of continuity of supply which we summarise in this appendix. For these reasons, the industry is likely to need access to novel materials that are currently in either the early stages of research and development, or at an early concept stage. We assess these as being farmed sphagnum and bracken.

This appendix details work that the industry has done to evaluate the potential peat alternatives in growing media, to identify priority ingredients with the greatest potential to displace peat volumes, and to propose solutions on which industry and government can collaborate to enable a move away from peat.

2. Method for prioritising peat alternatives

The method and process to provide this analysis followed 4 stages:

1. Identification and long-listing of alternatives

Desk research and Interviews with growing media manufacturers were conducted in autumn 2021. These aimed to identify all potential materials that are either used or being researched for use in growing media globally. Twelve broad alternatives to peat were identified through this process.

2. Ranking of alternatives and assessment of availability

We adopted a ‘Dephi’ method for ranking different peat alternatives. Each of the alternatives were ranked by a panel of five industry experts. The materials were ranked by the panel on seven criteria to help assess how attractive the materials are as peat replacements. The criteria related to the readiness of supply and production infrastructure to furnish the material, the material’s efficacy, its environmental and social impact, and the level of knowledge on how to use the material in growing media. Views were also taken on how many years it would be before the material is likely to be available at commercial scale. A focus group was then convened to review and moderate the scores, with particular focus given to areas where there were material discrepancies in answers.

Different components tend to have ‘technical ceilings’ on the maximum proportion of a growing media they could feasibly account for. For instance, green compost could only ever account for 15% to 20% of the volume of a growing media product due to its nutrient density. In the context of approximately 5 million cubic metres of supply to UK horticulture, this means that the industry could only ever technically use around 600,000 cubic metres of green compost – not enough to replace the current 1.7 m cubic metres of peat in use in 2021. By subtracting current volumes in use from this maximum useful volume of material, an assessment was made of how much more of a given material would be useful to the horticulture industry.

Desk research was then conducted on the potential availability of materials in the context of replacing 1.7m cubic metres of peat, and relative costs. This enabled materials to be screened out where either costs were likely to be prohibitive (e.g. biochar) or insufficient in volume to have a material impact in replacing peat volumes (e.g. UK sheep wool).

3. Shortlisting of the most viable peat alternatives

Based on this analysis of the twelve materials ranked seven were prioritised on the basis of having the greatest potential to replace peat at volume. Three materials (wood-based, bark, and coir) were identified as having significant potential to displace material volumes of peat in the short term (2023 to 2025). Two more (anaerobic digestate fibre and green compost) were identified as having potential to displace material volumes of peat in the medium term (2024 to 2028). Two more (farmed sphagnum moss and bracken) were identified as having potential in the long term (2028 and beyond). The other five (sheep wool, biochar, coffee grounds, rice hulls, water sludge) were deprioritised either because of volume, quality, cost, or technical barriers.

4. Action planning to accelerate access to peat alternatives

For each of the seven prioritised materials, experts from the growing media manufacturing industry were asked about the specific barriers to accessing more of the specific materials, and the measures that the industry and/or government could take to achieve this. The ability to source materials cost effectively is a significant source of competitive advantage for manufacturers. For this reason in most cases actions from the industry are likely to need to be ‘owned’ at an individual business level; indeed all businesses we have spoken to are devoting significant effort to source enough volume of peat alternatives to meet demand. However, it became apparent that several common barriers to accessing materials inhibit all manufacturers from sourcing the materials they need. Most of these barriers are regulatory and would require support from government to unlock these barriers to moving away from peat.

These barriers and specific proposals for removing them were identified by growing media manufacturers. This enables an assessment to be made of how much volume of different materials the industry might realistically be able to

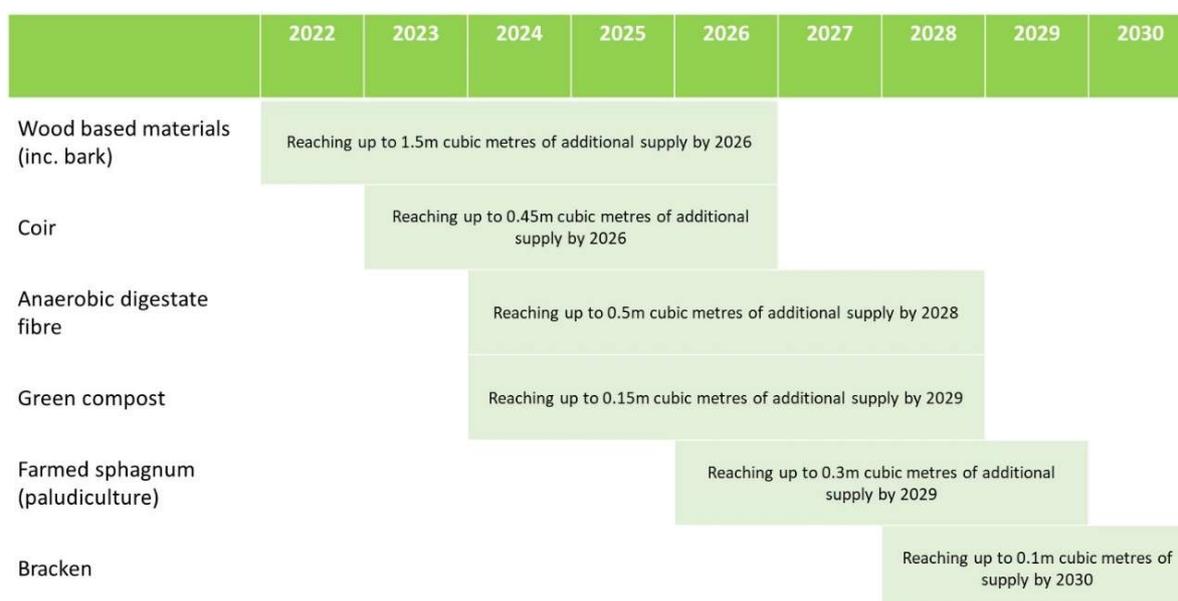
access in given time frames, and the actions that government and the industry need to collaborate on in order to achieve this.

The remainder of this document summarises the findings of this analysis and presents estimates of the volumes that could be achieved dependent on the extent to which government and industry can collaborate on removing barriers to accessing peat alternatives.

3. Overview of findings on availability of peat alternatives

Our analysis shows that in a best-case scenario sufficient volumes of materials are unlikely to be accessible to the industry until 2025 at the earliest; if barriers to access are not addressed availability of enough materials to meet demand will remain a challenge beyond this date. These dates are notwithstanding and separate from technical barriers to producing in peat for certain crops which we detail elsewhere in our consultation response. The following table summarises what volumes of different materials we estimate could be brought on stream at different time scales. The remainder of this appendix details the potential of the different alternatives and our proposals for accelerating access to the specific material.

Chart to summarise the potential additional supplies of different peat alternatives that could be made available dependent on government and industry collaboration to remove barriers to access



4. Accelerating access to near term peat alternatives (2022 to 2026): Wood-based materials, bark and coir

We estimate that up to two million cubic metres of peat alternatives could be accessible by 2026, but that this depends on specific joint actions between government and industry

to remove barriers to accessing these materials. This section describes the materials, how they could be sourced, and the barriers to accessing materials. Proposals are presented that would remove these barriers.

4.1 Wood based & bark (Up to 1,500,000 cubic metres of wood-based and bark materials to be enabled by 2026)

Wood fibre has the potential to replace peat in bulk. In brief, wood fibre can be produced for growing media by processing wood chip into fibres. This is most frequently performed at the point of growing media manufacture by processing wood chips into wood fibres using through dedicated machinery and manufacturing facilities and premises.

This machinery ranges in price from between £250k to £1m of capital outlay. The machinery is of a scale to require buildings and facilities to house it to be build, which would typically be the same cost as the machinery itself, so an outlay per facility of £500k to £2m depending on output capacity. A machine typically has the capacity to produce between 150,000 and 400,000 cubic metres per year at full capacity. Across the industry, the additional processing capacity to produce 1.5 million cubic metres per year would require an additional five to ten of these facilities to be brought on stream in the next three years at a cost of £5m to £20m. There are similar capital outlays that have to be made by manufacturers for the processing of other peat alternatives such as coir.

Proposal 1: we propose that wood chipping machines and related capital items manufacturers need to invest in quickly in order to move to peat alternatives receive the same financial reliefs (e.g. up to 40% of the costs) as technologies listed in Defra's Farming Transformation Fund, and that these reliefs be available to growing media manufacturers from the current financial year through to the 2027/28 financial year to enable a transition away from peat in amateur and professional growing media.

Being able to process wood chip into wood fibre depends on access to supplies of wood chip. Within the UK demand for wood chip is high, driven by processing of wood chip into fibre board for construction, and wood pellets for use in biomass power generation. Indeed, in the latter case the Renewables Obligation Scheme incentivises energy generators to buy wood pellets. An unintended consequence of this is that the price of and demand for wood chip is kept higher than it might otherwise be, which increases the difficulty growing media manufacturers have in accessing wood chip.

Based on timber industry estimates, UK sawmills produce around 850,000 tonnes of wood chips per year, most of which is processed into fibreboard or wood pellets. Businesses in the industry with whom we have spoken report potentially being able to release volumes of wood chip from this source in the high tens to low hundred thousand tonnes per year. Using this as a basis for up to 100,000 tonnes of wood chip being potentially available to the industry, and using a conversion factor of one tonne to six cubic metres of fibre, this would potentially provide 600,000 cubic metres of fibre in addition to volumes currently used.

There is limited potential to import wood chip from Europe due to similar pressures in demand in the European Union, for instance in a transition away from gas and coal to biomass for energy generation. As growing media in Europe follows a transition away

from peat (European horticulture currently trails UK horticulture in this respect), we expect demand on European supplies of wood fibre to increase.

Forest derived wood chip from North America and Canada is, according to industry sources, more readily available in volumes that would make a material difference to peat replacement. Figures in the low millions of tonnes have been quoted to us on a confidential basis as being potentially accessible. However, there are barriers relating to phytosanitary regulations that create difficulty in importing wood chip from the USA and Canada; some of these barriers also relate to being able to import bark and wood fibre from Europe.

Since the removal of methyl bromide from the market as a sterilising agent, different phytosanitary regulations are in place for different types of wood chip from different countries. Many of these require wood chip to be heated²⁴ to 56 celcius for 30 minutes, and not to have been moved in peak periods for manifestation of different pests and diseases; there is considerable variation in requirements for different type of wood chip from different sources. In addition to this complexity, in practical terms, steam heating containers of wood chip prior to export to the UK and the complexity of specifying different requirements for different wood chips from different countries creates significant barriers to accessing these materials.

Assuming these barriers could be overcome and 100,000 tonnes of imported wood chip could be obtained, and again using a conversion factor of tonnes to cubic metres of 1:6, this would generate 600,000 cubic metres of additional wood fibres. We note too that the volume of bark used in growing media fell between 2020 and 2021 by around 70,000 cubic metres. We therefore conservatively assume that a further 100,000 cubic metres of bark could be accessed by the industry, and that review of phytosanitary barriers to sourcing bark from overseas would help to expedite this. Another potential source of wood-based materials is forest residues and wood fines. Very little data exists on the volumes of these materials that are available, and so we assume that the potential volumes of these materials would be included in the totals listed in this section.

Proposal 2: we propose that by March 2023 Defra, the industry and the Forestry Commission develop a single consistent phytosanitary protocol for importing debarked wood chip and (separately) for bark that is economical for exporters to apply, for importers to specify, and that provides robust phytosanitary controls from high-risk pests and diseases whilst reducing complexity and cost to importers and exporters.

Another potential source for wood chip is UK waste wood. At present waste wood is graded from class A to class D. Industry estimates are for around 4 million tonnes of UK waste wood processed per year. Around 10% (400,000 tonnes) is class A, and assuming this could all be chipped and using a conversion factor of tonnes to cubic metres of fibre of 1:6 this would generate 2.4m cubic metres of fibre. Realistically there would be competition for supply of this material, but were horticulture able to access 10% of this then additional volumes of 240,000 cubic metres of wood fibre per year. At present Environment Agency regulations create difficulties in being able to re-

²⁴ <https://www.forestresearch.gov.uk/documents/1970/FCPH006.pdf>

process this material into wood chip that can then be used to produce wood fibre for growing media.

Proposal 3: we propose that Defra, industry and the Environment Agency remove or ease the need for growing media manufacturers to gain exemptions to use this material in horticulture; the material has been safely used under exemption as part of growing media for more than 20 years.

4.2 Coir (Up to 450,000 additional cubic metres of supply to be enabled by 2026)

Coir is a by-product of coconut production, and is the pith left over from coconut husk. We estimate that in terms of its physical and chemical properties it has the potential to be used as up to 100% of the volume of a growing media for use in ornamental horticulture. At present around 550,00 cubic metres of coir is used in growing media, meaning that (theoretically) up to a further 4.4m cubic metres of coir could be used by the industry to replace peat.

However, as of 2019, available global coir was around 9.6m cubic metres, of which around 8.6m cubic metres was produced in India and Sri Lanka; it is unlikely that UK horticulture could realistically secure around a half of total output in the next four years, even allowing for expanding global output. Confidential discussions with companies involved in the supply of coir suggest tangible plans to increase supplies to UK horticulture in the order of the low-to-mid hundreds of thousands of cubic metres in the coming years. Assuming the industry could secure 5% of the globally available supply of coir, this would equate to 480,000 cubic metres per year, which seems to align well with intelligence from suppliers.

However, in order for coir to be usable in horticulture, the coir needs to be washed at source to remove contaminants such as salts or other impurities before it is dried and compressed for shipment to the UK. In order to increase the supply of horticulture grade coir without adversely impacting local eco-systems and the availability of potable water, infrastructure in coir production operations needs to be developed to ensure that water for washing is not used inefficiently or unsustainably. The ability of local coir producing enterprise to invest in these facilities and measures in order to supply a by-product for use in UK growing media is uncertain, and without support is likely to constrain supply and reduce the sustainability of the material.

Proposal 4: That Defra, the Department for International Trade, and the Foreign and Commonwealth Office engage with the growing media industry and the relevant government departments in India and Sri Lanka to develop a business case for the use of overseas development aid to pump prime and accelerate production of horticulture grade coir, with a view to rolling out such investment support from FY2023/24. This work would include work to raise awareness among producers of UK horticulture as an end-market for coir.

5. Accelerating access to mid-term peat alternatives (2024 to 2028): anaerobic digestate fibre and green compost

We estimate that up to 500,000 cubic metres of peat alternatives could be accessible from these sources by 2028. As with the near-term materials these volumes depend on specific joint actions between government and industry to remove barriers to accessing these materials. The proposals in this section show what would be required to remove these barriers to better enable access to these volumes.

5.1 Anaerobic digestate fibre (up to 500,000 cubic metres additional supply to be enabled by 2029)

Anaerobic digestate fibre is a by-product of production of biogas from food and agricultural waste used as a feed stock. Where certain types of feed stock are used (for instance vegetable matter such as maize and brassica waste) the resulting fibre could be suitable for use in amateur and professional growing media. We estimate that based on its biological and chemical properties, digestate fibre could account for up to 10% of the volume of a growing media product due to its high PH and nutrient density, meaning there would be potential for the industry to use up to 500,000 cubic metres of fibre to replace peat.

Data on the current availability of digestate fibre is currently very sparse. However, in *Digestate and compost as fertilisers: Risk assessment and risk management options* a figure of 18m tonnes of digestate fibre produced in the UK is provided based on biogas generation in 2018. Wrap however cite a figure of 4.5m tonnes in 2015. Given the wide variation in estimates, we assume a figure of 8m tonnes of fibre. We use a multiplier of 2.5 to convert tonnage to cubic metres (400g/litre) to estimate 20 million cubic metres of digestate fibre. In reality most of this will be unsuitable for use in horticulture due to the nature of the feedstocks – fibre produced from agricultural vegetable matter is required for a useful product for horticulture. In the absence of better data we assume that the potential for horticulture to access usable material is up to 2.5% of this fibre volume, which equates to the 500,000 cubic metres that is the maximum amount of material the industry could use due to the technical ceiling on the proportion of a growing media digestate can account for.

Whilst this volume has the potential to play a substantial role in replacing peat, the current Environment Agency Quality protocol for digestate specifically excludes digestate fibre from use as a growing media, and only allows for its use in professional field horticulture as a soil improver²⁵ The impact of this is that growing media manufacturers are unable to access digestate fibre for use in growing media unless they can specifically agree with the Environment Agency at a local level that use of the fibre would be acceptable. Restrictions on the use of digestate are desirable insofar as they mitigate the risk of harmful pathogens being released into the environment. Where fibre is the result of processing (for instance) materials such as animal slurry or food waste there are high risks of this. However, where other feedstocks are used (such as vegetal matter) this hazard is significantly reduced.

Proposal 5: The industry, Defra and the Environment Agency change the Quality Protocol by March 2023 to allow use of fibre in growing media where defined feedstocks and processes have been used to produce the fibre.

²⁵ Quality Protocol for Anaerobic Digestate pg 11

A further (indirect) barrier to using digestate fibre in growing media is that the addition of materials such as animal slurry and food waste to feedstocks for digestion tend to increase the yield of biogas whilst making the resulting fibre unusable in growing media (whether because of salt contamination from food or biohazards introduced from animal waste). This makes it economically less attractive for AD operators to produce fibre that is suitable for use in growing media

Proposal 6: The industry, Defra, and the Anaerobic Digestate industry conduct a research and economic impact study into this issue and propose options for fiscal incentives to enable economic production of AD fibres that can be used in growing media, for roll out in FY2023/24

5.2 Green compost (150,000 cubic metres of additional materials that could potentially be enabled by 2029)

Green compost is produced by waste management companies (among others) from green waste, often under contract with local authorities via garden waste collections. There is a standard (PAS100) which was designed as a way of ensuring that the green compost produced would provide a usable quality of output for growing media (among other purposes). Around 2.8 million cubic metres of green compost are produced in the UK annually. Due to its nutrient density and other biological and physical characteristics, we estimate that the maximum proportion of a growing media that green compost could account for would be 15% to 20%, meaning that (in theory) up to around 800,000 cubic metres of green compost could be used by the industry as opposed to current levels of around 300,000 cubic metres.

However, the current PAS100 standard is not fit for purpose in providing green compost of sufficient quality for its wider use in growing media. For instance, the criteria on physical contaminants such as glass and metals but excluding stones of 0.25% of air-dry mass limits the usefulness of green compost in growing media. Were green compost to be used as 20% of the volume of a 50 litre bag of growing media, then this would result in an 'allowable' content of up to 25 ml (circa five 5 teaspoons) of glass, plastics or metal contamination in the bag. Such a product would be unacceptable to consumers and to manufacturers aiming to deliver a safe, high quality growing media product. Similar issues relate to other potential contaminants allowed in the standard such as stones. We assess that the level of change to local authorities and waste management companies contracts subsequent to any improvements to the PAS100 standard would mean that there is limited potential for green compost to play a much more substantial role in replacing peat in the next five years, in spite of the volume of material potentially available. However, even at these volumes the material still has the potential to play a role in growing media, and 'de-risks' a move to peat alternatives insofar as with access to the material the industry is less reliant on a narrow range of alternative materials; should supply of a material such as coir or bark be compromised, then availability of quality green compost will be of significant value to the industry.

Proposal 7: That Wrap, Defra and the industry work together to revise the PAS100 standard into a more rigorous standard, using the RAL standards currently in use in Germany as a model with a view to revising the standard effective from April 2023

We would also encourage Defra to provide an update in its summer 2021 consultation into Consistency in Household Recycling. In our response to this consultation, we flagged the opportunity not only to review the standard, but for measures to incentivise or to mandate local authorities to collect domestic garden waste free of charge, and to build standards that result in usable green compost into their contracts with waste management companies. We acknowledge that this change would take time and involve complexity, and for these reasons are cautious as to the volumes of additional material that could be accessible to the industry by 2028.

Proposal 8: That Defra should mandate free of charge garden waste collections (separately from food waste) from domestic properties and should further mandate the inclusion of information to householders on the importance and purpose of ensuring garden waste is free of contamination. This should also include guidance on the inclusion of materials such as lawn clippings which have the potential for contamination with persistent herbicides used in some lawn treatments.

6. Accelerating access to long-term (2028+) peat alternatives: farmed sphagnum via paludiculture and bracken

We estimate that up to 400,000 cubic metres of peat alternatives could be accessible from these sources from 2028 and to 2030. These two materials are in the very early stages of research and development, but they show potential as a component in growing media. Whilst they are likely to play a limited role in the replacement of peat in amateur growing media by 2025, they are important insofar as they may present even more sustainable and high-performing alternatives to peat than those alternatives that are currently available. In this sense they are potentially key to the industry's ambition not only to remove peat, but to continuously improve the quality and sustainability of growing media. The proposals in this section show what collaboration between government and industry could help to ensure that commercially useful volumes of material could be made available to the industry as a component in growing media.

6.1 Farmed Sphagnum Moss (Up to 300,000 additional cubic metres of supply to be enabled from 2028)

Farmed sphagnum moss produced through paludiculture shows potential not only as a peat replacement in growing media, but as a way of restoring peatlands and former peat extraction sites to reduce CO2 emissions, encourage biodiversity gain and generate new economic activity. Defra is currently supporting trials into its production in the UK, and research from Europe²⁶ has shown potential to generate substantial yields. A conclusion of some of this research is that in order to replace the 3m cubic metres of peat used in German horticulture sphagnum farming area of around 40,000 hectares would be required. Achieving 300,000 cubic metres for supply to UK

²⁶ Sphagnum farming Paludiculture on degraded bogs in Germany, University of Greifswald, cited IUCN: <https://www.iucn-uk-peatlandprogramme.org/projects/sphagnum-farming-paludiculture-degraded-bogs-germany>

horticulture would require farming on 4,000 hectares of land. Assuming this volume could be harvested on a three-year cycle, an area of approximately 12,000 hectares would be required, although further trialling and pilots may provide better data on this and the achievable yields in different situations.

To date most of the pilot work has been on trialling sphagnum farming on former agricultural land as a way of finding an economically viable way of using the land whilst minimising damage to peaty soils. Some current and former peat extraction sites in the UK could be used for sphagnum farming. However, no provision is made in Defra initiatives like the Environmental Land Management Scheme (ELMS) fund to enable or incentivise owners of peat extraction sites to transition to sphagnum farming. Current UK peat extraction sites in the UK total around 1,000 hectares and could be part of producing a crop for use in growing media. The process for converting to sphagnum farming would take several years, but nonetheless with support from government these sites could support useful volumes of sphagnum production towards the end of the 2020s.

Proposal 9: That owners of licences for peat extraction for horticulture be eligible to apply for support and funding via ELMS or other appropriate mechanisms to transition to sphagnum farming, and that Defra engage with the industry and extraction licence holders to develop a mechanism to incentivise and facilitate transition these sites away from peat extraction to sphagnum farming (or other economically and environmentally useful land uses that could produce a ‘crop’ usable in growing media) by 2028.

Proposal 10: That Defra accelerate its overall sphagnum farming programme and adopt targets to pump prime and begin sphagnum farming on 12,000 hectares of land by 2025 as part of its commitment to restore 35,000 hectares of degraded peatland by 2025 in its peatlands strategy.

6.2 Bracken (up to 100,000 additional cubic metres of supply to be enabled from 2030)

Bracken has been used in small quantities of specialist growing media in the UK, and pilots were conducted on bracken harvesting in the early 1990s in the New Forest. Consultations with industry figures suggest that bracken has potential as a component in growing media due to its low nutrient density and low PH. However, it is not produced or managed as a commercial crop in the UK, and it is highly unlikely that landowners with the potential to supply bracken at commercial scale are aware of UK growing media as a potential market for this ‘crop’.

No research or feasibility studies have been performed either into the economics of producing bracken as an input into growing media, nor into the necessary logistics and processing that would be required to convert the crop into a useful ingredient in growing media. Nor has substantial research been conducted into the environmental benefits of commercial bracken production, for instance on upland habitat preservation or restoration.

Proposal 11: That Defra scope and fund and work with the industry to scope an economic feasibility study into commercial bracken production for supply as a component in growing media in the 2023/24 year and that, dependent on the

outcomes of this, measures be incorporated into future iterations of ELMS or other land management initiatives to accelerate bracken production at commercial scale.

ANNEX B: Species list

The Taskforce has established a non-exhaustive list of species that do not perform well in peat free growing media mixes. This list should not be used to exclusion of any other species, nor should it be taken as the definitive list.

Species that do not perform well in peat free growing media mixes

as of 2022 (Growing Media Taskforce)

Acers

Anemone

Azalea deciduous & evergreen

Brassica

Bulbs (in general)

Calluna / Erica /Daboecia

Camelia

Carex species

Ceanothus

Crinodendron types

Daphne

Fungi (edible)

Gaultheria

Helianthemum

Hydrangea

Hydrangea quercifolia

Hydrangea villosa types

Kalmia

Lactuca sativa

Libertia

Lithodora

Magnolia

Narcissus

Pieris

Rhododendron

Saxifraga

Skimmia

Tulip

Vaccinium

Viburnum - deciduous types

Viburnum - some evergreen

ANNEX C: Full set of actions for Government

1. Government needs to consider the potential for disruption and fluctuations to already fragile ingredient supply chains because of regulatory action. Those supply chains need to maintain a steady volume flow of consistent materials which result in consistency in growing mixes.
2. Urgently make available / develop support grants for businesses to make the transition. For example - manufacturing businesses to move to producing alternative ingredients; for plant producers to change from current growing media handling machinery and equipment; for plant producers to have access to support grants that were not historically available to them.
3. Enable support grants available and investment in comprehensive and co-ordinated research and development with immediate effect.
4. Ensure that there is a principle for exemption included for any products that currently have no suitable alternative available, for example but not limited to plug plants, mushroom production, and some species of acid-loving plants. The exemptions must be in place while ongoing research and development is undertaken.
5. R&D into Growing media selection specifically to use for replacement of Mushroom Casing peat, blocking mixes for salad crops, module filling mixes for brassica and similar transplant crops, mixes for ericaceous crops, pharmaceutical crops and forestry nurseries.
6. R&D into Machinery development for the handling of alternative mixes at both the level of GM manufacturers and also at the nursery level of handling and potting on of crops,
7. R&D & investment in Growing systems for irrigation and fertigation to meet the needs of the alternative mixes whilst making the best use of resources, water and fertiliser,
8. Identification of the specific microbiological interactions of the range of peat alternative materials and how this affects the use of fertilisers and crop performance.
9. Ensure financial relief is available for wood chipping machinery and related capital expenditure (as per the equipment currently listed on Defra's farming Transformation fund) to be used at growing media manufacturers
10. Produce a consistent phytosanitary protocol for importing de-barked wood chip that is economical for exporters to apply and for importers to specify while ensuring biosecurity is maintained while reducing complexity and overall cost.
11. Ensure Environment Agency regulations for the processing of UK waste wood destined for growing media manufacturers do not create barriers to accessing the material
12. That Government develop a business case, in collaboration with all stakeholders, to increase access to and awareness of UK horticulture as an end-market for coir
13. We expect the market for peat alternatives to be vibrant and dynamic in coming years with novel materials becoming available from sources such

as utility companies and agricultural wastes. We will monitor this and look to maintain dialogue with Government to ensure access to these potential sources.

14. To change the Quality Protocol for anaerobic digestate fibre to allow the fibre to be used in growing media
15. For Government to work with stakeholders to conduct research and produce an economic impact study into anaerobic digestate as a growing media fibre and to enable production of those fibres for growing media use.
16. Revise the PAS100 standard for green waste into a more rigorous standard to ensure it is as contaminant-free as possible
17. To mandate free of charge garden waste collections from all households, with effective householder advice on garden waste being contaminant free
18. Business holding peat extraction licences become eligible for funding to transition to sphagnum moss farming
19. Defra to accelerate its sphagnum moss farming programme and commit to establishing 12,000 hectares of sphagnum farming by 2025
20. Government to scope out and fund joint work into an economic feasibility study into commercial bracken production as a growing media ingredient.
21. All of the above must be done in a timely manner and before even considering any legislative action.

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