

Submission to the Land Use consultation

Guy Shrubsole, 12th March 2025

QUESTION 1: To what extent do you agree or disagree with our assessment of the scale and type of land use change needed, as set out in this consultation and the Analytical Annex?

[Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don't know]

I strongly agree that significant land use change is needed in England to meet nature and climate targets, and have ticked 'strongly agree' here to support this. In particular, I support DEFRA's calculation that at least 9% of the country's least-productive farmland needs to be taken out of production and prioritised instead for nature (restoring peat and woodlands).

However, I think that DEFRA's analysis as presented here **underestimates** the scale of land use change needed to meet our legally-binding targets. I also disagree with some of the spatial modelling underpinning the consultation, as I think it underestimates the potential for trees in the uplands.

In particular, without additional land use change, the Government will not meet its water pollution target, nor its international commitment to reach 30by30 (protecting 30% of England's land for nature by 2030).

As the Analytical Annex states, *"We are currently assuming that no additional land use change is needed for these [outcome-based] targets over and above that needed for the area-based targets. We have made the same assumption for non-statutory EIP commitments [ie the 30by30 goal]. These assumptions might lead to an underestimation of the overall scale of change."*

I agree with this last sentence, and set out below why I think the Consultation underestimates the necessary land use changes.

Firstly, it is clear that the government needs to do far more to meet 30by30.

- The Analytical Annex suggests that just 11% of land in England is likely to meet the criteria for 30by30 at present (presumably meaning habitats already protected and managed for nature).
- So that implies needing to protect, restore or create land for nature over an additional 19% of England.
- Perhaps the changes proposed in the Consultation are commensurate with this? The Annex proposes that "total land use change to deliver our environment and climate targets and commitments amounts to 1.6Mha [3.95m acres] by 2050, around one-fifth of Utilised Agricultural Area". Elsewhere this is broken down into four different categories of land use change, totalling some 19% of Utilised Agricultural Area (UAA).
- But it is important to note that UAA is only a subset of the total area of land in England (some 12.9m ha, or 32m acres). The proposed land use changes therefore sum to just 12.4% of England overall.
- Additionally, the Annex's assertion that 11% of England already counts towards 30by30 is questionable – not least because DEFRA's own policy paper on meeting 30by30, published in October 2024, stated that just 7.1% of England currently counts towards the target. This seems like a key discrepancy and needs to be clarified by the Government.

- Other independent assessments are still more gloomy: [Wildlife & Countryside Link, for example, argue](#) that because of the poor state of many SSSIs, just 3% of England counts towards 30by30 at present.
- Whichever set of figures are used, we are left with a considerable shortfall in meeting 30by30:
 - Land use change over 12.4% of England + 11% already protected = 23.4%
 - Land use change over 12.4% of England + 7.1% already protected = 19.5%
 - Land use change over 12.4% of England + 3% already protected = 15.4%
- Lastly, there is the question of delivery date. The Consultation talks about delivering these land use changes by 2050, whereas 30by30 is of course meant to be delivered by 2030 – just 5 years away.
- The finalised Land Use Framework needs to show how the Government will meet 30by30. The scale of land use change proposed in this Consultation and its Analytical Annex fall far short of meeting this international commitment. Without additional policies, Ministers would be forced to admit to other world leaders at UN biodiversity summits that they have only protected 15-23% of England for nature - and likely even less than this by the deadline of 2030.

Secondly, meeting the government’s legally binding water pollution target will clearly need additional land use change.

- The Government is bound by a target under the Environment Act 2021 to “reduce nitrogen, phosphorous and sediment pollution of the water environment from agricultural land by 40% by 2038 (from 2018 baseline).”
- Meeting this target will clearly require significant land use change. The Annex is correct to say (p.11) that other land use changes will help towards meeting this target (e.g. the creation of 500k ha of new habitat, woodland creation to meet afforestation target etc). But *where* these land use changes take place in a catchment is crucial to reducing the run-off of pollutants into watercourses.
- DEFRA’s proposal to prioritise England’s least-productive farmland for nature – much of which lies in upland watersheds – will certainly have benefits for water quality. Restoring peat bogs, for instance, would reduce the amounts of dissolved organic carbon flowing into streams and burns. Reducing stocking densities on upland pastures would cut nitrates run-off from animal manure finding its way into watercourses. Reducing inappropriate ploughing on steep hillsides would reduce sediment run-off.
- However, much of the agricultural pollution in our watercourses originates in the English lowlands, on more agriculturally productive land: such as fertiliser run-off from arable fields, and leaks in slurry ponds from intensive dairy farms in lush lowland pastures. Furthermore, changes to land use in areas immediately abutting rivers and streams will likely have more impact on water quality than changes far from a watercourse. The government needs to be encouraging riparian buffer strips along all rivers.
- I understand that the Environment Agency has carried out a study that suggests around 25% of farmland in the Solent catchment would need to be taken out of production in order to meet nutrient neutrality rules. This rumoured figure may or may not be accurate, but there is currently no way of finding out. When I first asked the Environment Agency to release this study in 2023, I was told that it was unfinished at the time, and was being finalised in order to input to development of the Land Use Framework. When I requested it be released a second time, in February 2025 – after publication of this consultation – I was again told that the study is *still* not complete. This huge delay strains credibility, and arouses suspicion that it is not being published simply because it is not politically palatable. The Government should now publish this study in full.

- In 2023, development consultancy Lichfields [estimated](#) that to build 120,000 new homes and meet nutrient neutrality rules would require taking 400,000 acres of farmland out of production. The workings for this estimate sound very suspect, and given that Lichfields was also lobbying against nutrient neutrality rules, it should be taken with a giant pinch of salt! But the Government could help debunk myths and clarify the true scale of land use change required to clean up our waterways by publishing its own analysis as part of the Land Use Framework.
- The finalised Land Use Framework needs to set out the overall scale of land use change needed for the Government to meet its legally binding target to reduce water pollution from agricultural land. In line with the precautionary principle, uncertainties in modelling must not prevent the Government from taking immediate ‘no-regrets’ actions to reducing agricultural river pollution – such as mandating riparian buffer strips, and properly enforcing the Farming Rules for Water.

Thirdly, I disagree with some of the spatial modelling underpinning the consultation, which underestimates the potential for far more trees in the uplands of England.

- The Analytical Annex presents some excellent spatial analysis of potential for land use change in England and DEFRA is to be commended for including this. In particular, it’s very welcome that the Government acknowledges that not all land is equally productive for growing food. The bivariate maps shown in Figures 7-9 of the Analytical Annex are particularly useful for highlighting that some land is highly productive in terms of calorific production, whilst other areas – particularly in the uplands of England – are not.
- I strongly agree with the Consultation that at least 9% of England’s least-productive farmland can be spared for habitat restoration without having any significant impacts on food production. Indeed, as the independent National Food Strategy identified in 2021, using similar spatial modelling of calorific production, 9% of farmland could be spared for nature and only reduce food production by 1%; and 21% of farmland could be spared for nature and only reduce food production by 3%.
- However, I **disagree** with the basis of the Annex’s spatial modelling for tree growth potential, which is based on Forest Research’s Ecological Site Classification (ESC) tool (Figure 2). This then feeds into the ‘tree growth’ bivariate maps shown in Figures 7 and 8.
- Whilst the ESC rightly excludes areas of deep and shallow peat from artificial tree-*planting*, its methodology appears to generate a blanket exclusion of trees from vast areas of the uplands. It’s understandable that the Forestry Commission would wish to avoid repeating disasters like the drainage and ploughing of peat soils that it oversaw at what’s now Kielder Forest in Northumberland, given the carbon this has released into the atmosphere. But ruling out the natural regeneration of native trees in the uplands entirely is throwing the baby out with the bathwater.
- Across Europe, upland habitats generally have far more trees than England’s uplands do today. A visit to south-west Norway would confirm how poor the ESC model is, and how it’s predicated on an unnatural baseline.
- Historically, England’s uplands have been cleared of montane scrub, birch forests, juniper woods, temperate rainforest (upland oakwoods), willow carr woodland, and in Scotland, Caledonian pinewood. On Dartmoor, just 3 fragments of temperate rainforest survive today (the upland Atlantic oakwoods of Wistman’s Wood, Black Tor Copse and Piles Copse), but these are survivors of much more extensive upland oakwoods that once clung to the mineral soils and boulder scree that still characterise many of Dartmoor’s steep-sided valley systems.
- Historic evidence points to these woods being felled for firewood, timber and for tin-smelting up until the Early Modern period. Moorland burning (or ‘swaling’) – a practice which continues to this day – has suppressed regrowth of trees on many of the English uplands. So has overgrazing by livestock, with sheep numbers in our

uplands vastly in excess of historical precedents and far beyond grazing densities needed to suppress all natural regeneration.

- The ESC methodology simply does not recognise the impoverished state of our modern uplands. One Scottish ecologist I've spoken to used the ESC tool for a reforestation project in the Cairngorms: it told him that an area where an ancient Caledonian pinewood *still survives* would be 'unsuitable' for pine.
- It's very welcome that the Analytical Annex mentions England's temperate rainforests (p.5). But if the Land Use Framework were to adopt Forest Research's ESC model for tree growth, it would effectively rule out the restoration of England's temperate rainforests in precisely the places where they can thrive – the rainy uplands of the west of England (Dartmoor, Bodmin Moor, the Lake District, and beyond), where an oceanic climate exists.
- Moreover, this oceanic climate is predicted to still exist by 2100 under a range of climate change scenarios, as a [recent study by Leeds University has shown](#). The same study points out that, although the UK hosts a significant proportion of the world's temperate rainforest biome, very little of this biome is currently forested, due to historic deforestation. The authors argue that "this highlights an opportunity for the UK and Ireland to become global leaders in restoration and reforestation of temperate rainforests." It would be nonsensical if inaccurate tree growth models adopted by the Land Use Framework were to artificially constrain this opportunity.
- I recommend that the Land Use Framework does *not* adopt Forest Research's ESC model for tree growth modelling, but instead tasks Natural England with developing a more ecologically literate model. This could be an English version of Scotland's [Native Woodland Model](#), developed by the James Hutton Institute and Nature Scot. The Native Woodland Model is also based on soil type, climate, NVC woodland types and so on. But it suggests that only a small proportion of the highest and rockiest peaks in Scotland are truly unsuitable for trees – about 3% of the Scottish land mass. It recognises that historically, trees, woods and scrub would have existed virtually everywhere else: from high-altitude birch and pinewoods, to scattered trees growing even on deep peat soils.

QUESTION 2: Do you agree or disagree with the land use principles proposed?

[Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don't know]

I strongly agree with the five land use principles proposed. I agree with the need for co-design (principle 1), for long-term decision-making (principle 4) and for land use policy to be updated in light of new evidence and pressures (principle 5).

I'm glad to see that principle 2, on multifunctional land use, is balanced by principle 3, which accepts the reality that there are trade-offs in land uses and a need to prioritise. Achieving 'win-wins' through multifunctional land use (e.g. an apple orchard, providing food, habitat for pollinators, recreational use etc) is of course to be encouraged wherever possible, but principle 3 is vital to face the reality that some land is inherently less productive for growing food, and is best prioritised for nature and carbon storage.

QUESTION 3: Beyond Government departments in England, which other decision makers do you think would benefit from applying these principles?

- **Combined and local authorities (including local planning authorities)**
- **Landowners and land managers (including environmental and heritage groups)**
- **Others (please specify)**

Yes, I think it would be highly beneficial for these five land use principles to be adopted by landowners and land managers (encompassing public, private and third sector landowners & managers), and all tiers of combined and local authorities.

They should also, as proposed, be adopted by the whole of central government, encompassing all ministerial departments and arm's-length bodies. Public sector bodies own around 8.5% of England and so are significant landowners in their own right; but even when ministries do not own land, their decisions can have profound effects on land use (e.g. tax and spending decisions by HM Treasury). It is only right that the government as a whole accepts these principles and is held to them.

It would be helpful if the Land Use Framework published and promoted these principles alongside a summary vision statement for how it is envisaged land will be used in England, in the manner of the [Scottish Land Rights and Responsibilities Statement](#). This would enable ongoing dialogue between the public, landowners and government over their respective rights and responsibilities with regard to land and land use. The Scottish Land Rights and Responsibilities Statement, in the [words](#) of the Scottish Government, "exists by virtue of the Land Reform (Scotland) Act 2016", "has delivered culture change", and "has helped, in many cases, to normalise proactive engagement [by landowners] with communities".

QUESTION 4: What are the policies, incentives and other changes that are needed to support decision makers in the agricultural sector to deliver this scale of land use change, while considering the importance of food production?

See my answer to Qs 4-7 below

QUESTION 5: How could Government support more land managers to implement multifunctional land uses that deliver a wider range of benefits, such as agroforestry systems with trees within pasture or arable fields?

See my answer to Qs 4-7 below

QUESTION 6: What should the Government consider in identifying suitable locations for spatially targeted incentives?

See my answer to Qs 4-7 below

QUESTION 7: What approach(es) could most effectively support land managers and the agricultural sector to steer land use changes to where they can deliver greater potential benefits and lower trade-offs?

In answer to Qs 4-7: the most comprehensive and elegant way to give effect to the Land Use Framework, and ensure it actually impacts on decision-making by land managers, would be to extend the planning system to cover agriculture and forestry.

The [Town and Country Planning Act 1947](#) explicitly excluded agriculture and forestry from being treated as 'development' (see section 12(2)(e) of the Act), meaning many profound land use decisions taking place over 80% of England's land surface lie outside the planning system. It remains largely a tool for governing the built environment.

The benefits of bringing agriculture and forestry within the remit of the planning system are plain:

- Doing so would clearly impact on real-world land use decisions, avoiding the very real risk that the Land Use Framework remains as just some fine words gathering dust on a shelf.
- The planning system is already familiar to most people, and already has an existing administrative apparatus in the form of planning authorities and planning officers.

- It offers a local, democratic, and participatory way to decide how land is best used.
- It is a fair and equitable way of settling disputes over land use. It cannot simply be dismissed as ‘telling landowners what to do’ – unless we think that landowners, uniquely, should not be subject to the same social contract that binds the rest of us when we submit a planning application for approval. I’m sure some landowner lobby groups *do* take such an exceptionalist view, but the government should not pay attention to such special pleading.

If agriculture and forestry were finally brought into the planning system, the Land Use Framework would act like (or indeed be an extension of) the National Planning Policy Framework (NPPF), setting priorities and principles for land use at the national level. Additionally, the government would need to define in law the sort of changes to agricultural and forest land use that would qualify as ‘development’, and require a planning application (e.g. the ploughing up of permanent pasture; hedgerow removals etc). It would then be down to local planning authorities to adjudicate on these applications, taking into account the Land Use Framework’s principles and priorities. Local Nature Recovery Strategies could become more meaningful plans carrying equal weight to Local Plans. Local Authorities would need to employ more ecologists to help planning officers with land use decision-making – but they will have to do this *anyway* if the government is serious about delivering BNG, LNRS, or meeting Environment Act and climate targets.

If the Government baulks at doing this, there are other useful policies it can still implement, but they will inevitably be less joined-up, less comprehensive in scope and have less purchase on decision-making on the ground. Such policies could include:

- **Spatially targeting incentives** to restore habitats and grow more trees towards the areas of land which are least productive for growing food. This would enable the most effective spatial targeting of ELMS payments, BNG, and the Nature Restoration Fund that developers are to be required to pay into. In particular, the highest tier of ELMS, Landscape Recovery, should be getting at least a third of the ELMS budget, as was originally intended – before the last government cut the Landscape Recovery budget to just 5% of the total. This would enable many more farmers, landowners and land managers to join together to pursue genuinely transformational nature restoration schemes, particularly in upland areas where food production is most marginal.
- **Tightening regulations** over land use in areas where the Land Use Framework prioritises habitat restoration – e.g. moving to ban all forms of moorland burning, in order to help restore blanket bog and upland heaths; mandating riparian buffer zones around rivers to reduce agricultural river pollution.
- **Better resourcing regulators** like Natural England and the Environment Agency to actually enforce existing regulations (e.g. Farming Rules for Water; SSSI protections), carry out more frequent and comprehensive monitoring, and deliver better on-farm advice to land managers.

QUESTION 8: In addition to promoting multifunctional land uses and spatially targeting land use change incentives, what more could be done by Government or others to reduce the risk that we displace more food production and environmental impacts abroad? Please give details for your answer.

- **Monitoring land use change or production on agricultural land**
- **Accounting for displaced food production impacts in project appraisals**
- **Protecting the best agricultural land from permanent land use changes**
- **Other (please specify)**

The most useful thing the government can do to reduce England’s overall ‘land footprint’ is encourage a shift in diets towards eating less meat and dairy. As the Land Use consultation

points out (p.12), “85% of the UK’s Utilised Agricultural Area (UAA) in 2023, across both arable and grassland, was used for animal feed or animal production”.

The independent [National Food Strategy 2021](#) stated that UK-wide “consumption of beef and lamb takes up... an area more than three times the size of Wales overseas” ([The Evidence](#), p.38). It calculated that four steps could “halve the UK’s land footprint for food”, of which by far the most significant was “limiting our meat consumption” ([The Evidence](#), p.39). It went on to propose that 9% of the least productive farmland in England should be managed mainly for nature and carbon storage – as the Land Use consultation proposes – and that “very limited dietary change would enable this to happen without offshoring production” ([The Evidence](#), p.42).

UK diets have *already* begun shifting away from meat and dairy. A [study by Oxford University](#) found that Britons reduced their consumption of meat and dairy by 17% between 2009 and 2019. The Committee on Climate Change has recommended that “policies are needed to encourage consumers to shift diets”, including “information provision” (ie. a public information campaign) and “the public sector taking a lead in providing plant-based options with all meals”. The CCC further notes that a “20% per capita reduction in beef, lamb and dairy consumption in our scenario is modest compared with government nutritional guidelines”. ([CCC Land Use Report](#) 2020, p.11). In other words, Department of Health advice is *already* to reduce meat consumption – but this clearly needs to be backed by a properly-resourced public education campaign.

QUESTION 9: What should Government consider in increasing private investment towards appropriate land use changes?

I would urge the Government to take a realistic view of how unlikely it is for significant private investment in nature restoration to materialise anytime soon; and to not substitute blind faith in private finance for the ongoing urgent need to increase public investment in restoring nature and natural carbon sinks.

The reality is that significant markets for ‘natural capital’ have simply not yet emerged and are unlikely to do so for years:

- One year on from the launch of Biodiversity Net Gain (BNG), Wildlife & Countryside Link [found](#) that just 773 hectares of habitat had been created, which “dramatically missed the Government’s BNG delivery expectations, achieving just half the minimum amount of annual habitat creation expected.”
- The [global voluntary carbon market collapsed by 61%](#) in 2023 following the Verra scandal, in which the vast majority of offset projects were found to be worthless;
- As the [FT reported in 2024](#), “Scotland’s rural ‘land rush’ slows as bubble for natural capital bursts”;
- The Real Wild Estates Company, a ‘natural capital startup’ [launched](#) to much fanfare in 2021, [went into liquidation in 2024](#).

In summary, the Government would be extremely foolhardy to rely on private investment in nature restoration to achieve its own legally-binding environmental targets. It must continue to invest public money in public environmental goods.

QUESTION 10: What changes are needed to accelerate 30by30 delivery, including by enabling Protected Landscapes to contribute more? Please provide any specific suggestions.

- **Strengthened Protected Landscapes legislation (around governance and regulations or duties on key actors) with a greater focus on nature**

- **Tools:** such as greater alignment of existing Defra schemes with the 30by30 criteria
- **Resources:** such as funding or guidance for those managing Protected Landscapes for nature
- **Other (please specify)**

The Land Use consultation is quite correct to highlight Protected Landscapes (National Parks, NPs, and National Landscapes, NLs) as being crucial to achieving 30by30. Collectively Protected Landscapes comprise some 26% of England's land area.

However, as [DEFRA accepted in 2022](#), “under their current statutory purposes, level of protection and management, it is our view that they cannot be said to contribute towards 30 by 30 at this time.” In its [October 2024 criteria](#) for meeting 30by30, DEFRA stated that “only areas within Protected Landscapes which are assessed as meeting all 3 of the 30by30 criteria will be able to contribute towards the target”.

The Government's [announcement](#) in December 2024 that it would update the statutory purpose of National Parks and National Landscapes to include “nature recovery” was therefore very welcome and a first step towards enabling more land within them to count towards 30by30. The primary legislation needed to achieve this must be brought forward swiftly in the next King's Speech (and given that 2030 is just five short years away, time is of the essence).

But for Protected Landscapes to be capable of delivering this updated statutory purpose, they also need to have greater funding. Having suffered [budget cuts of 40% since 2010](#), National Park Authorities are [still facing a 12% real-terms cut](#) in their budgets this financial year. It is not credible to expect NPAs to bolster their finances through becoming more 'entrepreneurial' (particularly when budget cuts are forcing Dartmoor NPA, for example, to close its principal visitor centre – a key source of income). If the Government wants to meet 30by30, it has to invest in NPAs and NLs.

The Government's [recent publication of guidance](#) on the new 'Protected Landscapes duty', giving effect to provisions in the Levelling Up and Regeneration Act 2023 to oblige all public bodies and statutory undertakers to further the purposes of Protected Landscapes, was also very welcome. This will be particularly useful once NPs and NLs' statutory purposes have been updated to include nature recovery.

But it is important to note that [public bodies own just 10% of the land in Britain's national parks](#) (and about the same percentage of England's ten NPs). So whilst more public sector landowners will be bound into delivering nature recovery, this will have no impact on 90% of the land in our national parks that remains privately owned.

Therefore, additional policies will be needed to make more land within NPs and NLs count towards 30by30. I recommend that:

- Firstly, the Government should bring in a **reporting requirement** for all large landowners (public and private), so that they are obliged to publish regular reports on what they are doing to help meet 30by30, restore nature and repair natural carbon sinks. To ensure this is not onerous to small-to-medium-scale landowners, this reporting requirement should apply only to estates of 1,000+ acres. It should apply to such landowners within Protected Landscapes, but also outside of them. Landowner reporting has been successfully pioneered in this way by the South Downs National Park Authority with their Whole Estate Plans. (See also Q15 below.)
- Secondly, the Government should **extend the Protected Landscapes duty to large private landowners** within Protected Landscapes. Given that we already accept that

public landowners and statutory undertakers – including water companies – should have to abide by this duty, why it should not also apply to major private landowners? Extending the duty would mesh well with the reporting requirement above, but mean that landowners within Protected Landscapes are rightly held to a slightly higher standard than those outwith national parks and national landscapes.

- Lastly, there is a strong case to **update the statutory purposes of all public bodies to include nature recovery**. If we accept this is necessary for National Park Authorities and National Landscapes, why not the Forestry Commission, or the Crown Estate? The Government might point to the general public sector biodiversity duty, last updated by the Environment Act 2021. But this general duty remains weak, compared to the core statutory purposes of government departments and arm's-length bodies. The Forestry Commission, for instance, has not had its statutory duties significantly updated since the 1967 Forestry Act – long before the nature and climate crises were even known about. The Government should adopt [Lord Krebs' Environmental Targets \(Public Authorities\) Private Members' Bill](#), explained in this [briefing](#) by Wildlife & Countryside Link.

QUESTION 11: What approaches could cost-effectively support nature and food production in urban landscapes and on land managed for recreation?

When we consider 'land managed for recreation', it isn't sports grounds, football pitches or even golf courses that take up the most amount of land. No, the most land-hungry recreational uses of land in England are grouse moors and pheasant shoots – neither of which are properly discussed in the Land Use consultation (with just one passing reference to 'shoots' in footnote 25).

Golf courses take up some 238,000 acres of England, according to [Ordnance Survey's Greenspace dataset](#). As golf wanes in popularity, [more of them are being rewilded](#) and turned into public parks.

But intensively-managed [grouse moors cover at least 550,000 acres of England](#), according to [my own GIS analysis](#) – and that's a more conservative figure than the grouse shooting industry themselves reckon. The Moorland Association [state](#) their members are "responsible for over a million acres of the moorlands of England and Wales", including "860,000 acres of upland heather". (The vast majority of this will be in England, since there is only one active driven grouse moor left in Wales.) This huge area belongs to around 150 landowners (the UK National Ecosystem Assessment (2011) [suggests](#) there are some 144 grouse moors in England; whilst a [1992 study](#) by the Game Conservancy [suggested](#) there were 153 English grouse moors.)

The land taken up by driven grouse moors all lies within areas mapped by the Land Use Consultation as being England's least-productive farmland. Moreover, it is almost exactly contiguous with the extent of upland peat soils and blanket bog in England – an enormous natural carbon store. Unfortunately, landowners' recreational use of this land has greatly damaged its ability to store carbon. Moorland burning (carried out for the purposes of boosting numbers of red grouse) over the past century-and-a-half has resulted in great damage to blanket bog habitat and the desiccation and degradation of peat soils, causing the release of millions of tonnes of carbon. Moorland drainage, carried out historically for reasons of agriculture *and* because it was believed to be better for the sport, has exacerbated damage to the peat bogs; and many grouse moors remain criss-crossed with drains that have still not been blocked up.

Grouse moors can be readily identified from aerial imagery by looking for the distinctive chequerboard pattern of vegetation generated by rotational burning of heather. Pheasant shoots, which largely take place in lowland areas - on arable and pasture land, and with

release pens often located under woodland canopies – are harder to map accurately with remote sensing. But the shooting industry themselves [estimate](#) that shoots influence land use over 7.6m hectares (18.7m acres) of the UK. This is unsurprising when one considers that [around 50 million non-native pheasants](#) are now released annually into the British countryside. The weight of pheasants released each autumn is [greater](#) than the total breeding biomass of the entire British wild bird population.

DEFRA acknowledges that these recreational land uses have negative impacts on nature, because it has put in place various (albeit inadequate) regulatory systems to try to manage them. For instance: a) regulating moorland burning on protected blanket bogs; b) prosecuting gamekeepers who illegally kill birds of prey; and c) licensing the release of pheasants in and around SSSIs / SACs. (For a fully-referenced assessment of the impacts of driven grouse shooting and intensive pheasant shoots on nature and carbon, please see chapters 2 and 6 of my book *The Lie of the Land*, 2024).

If the government wishes to “cost-effectively support nature” on “land managed for recreation”, the most effective interventions it could make are to:

- **Ban moorland burning outright**, closing the loopholes in the Heather & Grass Burning Regulations 2021 so that burning on any depth of peat is banned (not just peat deeper than 40cm), and regardless of whether the peat soils are within SSSI / SAC designations.
- **Ban driven grouse shooting** – it’s a Victorian sport in which wildlife crime, notably illegal raptor persecution, is completely endemic; and it relies on the suppression of all natural predators of grouse in order to boost the size of the game bag. It will be impossible for nature in the English uplands to fully recover (and hence contribute to 30by30 and other government targets) whilst driven grouse shooting continues to dominate these landscapes.
- **Licence pheasant shooting** – it’s long past time to better regulate an industry that releases such vast numbers of non-native gamebirds into the countryside, with unchecked impacts on food webs, woodland ground flora and fauna, hedgerow structure, predator numbers, the spread of avian influenza and many other deleterious effects.
- **Implement its plans to introduce a Community Right to Buy in England**, as the Consultation document refers to. In Scotland, where a Community Right to Buy has been in place since 2003, half a million acres of land are now owned by communities. This includes former grouse moors – such as Langholm Moor in southern Scotland, a 10,000-acre former grouse shoot which was purchased by the community in 2021-23 and which is now being turned into the [Tarras Valley Nature Reserve](#). Blanket bog is being rewetted and trees are naturally regenerating on the fells. The government needs every tool at its disposal to meet 30by30, carbon budget and Environment Act targets – it needs to give communities in England these same powers to purchase land for nature. Crucially, it should extend the definition of what counts as an Asset of Community Value to include ‘environmental benefits’ alongside social and economic ones.

QUESTION 12: How can Government ensure that development and infrastructure spatial plans take advantage of potential co-benefits and manage trade-offs?

I have chosen not to answer this question.

QUESTION 13: How can local authorities and Government better take account of land use opportunities in transport planning?

I have chosen not to answer this question.

QUESTION 14: How can Government support closer coordination across plans and strategies for different sectors and outcomes at the local and regional level?

I have chosen not to answer this question.

**QUESTION 15: Would including additional major landowners and land managers in the Adaptation Reporting Power process support adaptation knowledge sharing? Please give any reasons or alternative suggestions
[Yes / No / Don't Know]**

Yes, this is an excellent proposal. Indeed, DEFRA already [consulted](#) in 2022 on including major landowners in the Adaptation Reporting Power (ARP) process, with [63% of respondents agreeing](#). It is unclear whether this was acted upon by government, and why landowners are not listed as a category in [those recently reporting under the ARP's 4th round](#). The Government should press ahead with requiring more major landowners submit reports under the ARP.

However, I would also go further. The ARP only covers climate adaptation reporting; the Government should also be requiring major landowners to report on climate mitigation and nature restoration efforts (see also Q10, above).

It's clear that without more action from private and public landowners, the Government will fail to meet its Environment Act targets, carbon budgets and fall far short of reaching 30by30. [DEFRA's criteria for meeting 30by30](#) accepts that only 7.1% of England currently counts towards the goal, and proposes to "enable land to be brought forward by landowners and land-managers, to be approved by Natural England." At minimum, therefore, the Government ought to require some large landowners to publicly report on their contribution towards 30by30 and other public goals.

The Government already has powers to require landowners to make such reports, under the Agriculture Act 2020 (see [sections 23-28](#) on collection and sharing of data from persons within the agri-food supply chain). Ministers would simply need to table a statutory instrument detailing the specific information required, and the frequency of reports. This should include carbon and ecological baseline reporting (see also Q18 below).

A reporting threshold should be established: I suggest owners of 1,000 acres and above, as per my answer to Q10 above. Verification of which landowners meet this threshold can be done through analysis of HM Land Registry and Farm Survey data (see also Q20 below), ensuring that only large estates with ample resources and capacity for reporting would be required to do so, and that the vast majority of small-to-medium farms would be exempt.

Crucially, however, the *area of land* that would be encompassed by this reporting would be substantial, because – as the Consultation states – "land ownership in England is highly concentrated" (p.20). Indeed, DEFRA's own [June Agricultural Survey data](#) shows that 52% of England (16.7m acres, or 6.8m ha) is controlled by just 25,000 landholdings. When I asked DEFRA's Farming Statistics team to break down these figures further, it [emerged](#) that just 2,500 landholdings own or manage 5.6m acres (2.3m ha) – 26% of the total farmed area, or 18% of England overall.

If the Government wants a simple, cost-effective route to meeting national environmental goals, it should require these 2,500 landowners to regularly report on what they are doing to meet 30by30, restore habitats and repair natural carbon sinks. Indeed, it would meet the current shortfall in meeting the target, even if using the lowest figures:

- Land use change over 12.4% of England + 3% already protected + 18% obliged to report on how they're delivering the target = 33.4% of England.

QUESTION 16: Below is a list of activities the Government could implement to support landowners, land managers, and communities to understand and prepare for the impacts of climate change. Please select the activities you think should be prioritised and give any reasons for your answer, or specific approaches you would like to see.

- Providing better information on local climate impacts to inform local decision making and strategies (for example, translating UK Climate Projections into what these mean in terms of on-the-ground impacts on farming, buildings, communities and nature)
- Providing improved tools and guidance for turning climate information into tangible actions (for example, how to produce an adaptation plan for different sectors)
- Developing and sharing clearer objectives and resilience standards (for example, a clear picture and standards of good practice for each sector under a 2°C climate scenario)
- Supporting the right actions in the right places in a changing climate (for example, prioritising incentives for sustainable land uses where they will be most resilient to climate change)
- Other (please specify)

I have chosen not to answer this question.

QUESTION 17: What changes to how Government's spatial data is presented or shared could increase its value in decision making and make it more accessible?

- Updating existing Government tools, apps, portals or websites
- Changes to support use through private sector tools, apps or websites
- Bringing data from different sectors together into common portals or maps
- Increasing consistency across spatial and land datasets
- More explanation or support for using existing tools, apps or websites
- Greater use of geospatial indicators such as Unique Property Reference Numbers (UPRNs) and INSPIRE IDs to allow data to be more easily displayed on a map
- Other (please specify)

The Government should focus on releasing more spatial data as Open Data – which can then be used by citizens, civil society groups and start-ups to create user-friendly tools, apps, online maps etc. This is a more cost-effective use of time and money than e.g. redesigning government map interfaces like MAGIC Map (which despite recently being redesigned, still has lots of odd glitches and fails to load layers).

I particularly agree with the suggestion here of making greater use of geospatial indicators, especially INSPIRE IDs, in government datasets. There is a particular need for this relating to land ownership data (see also Q20 below). Since 2017, HM Land Registry has published datasets listing the land titles owned by UK-registered and overseas-registered companies and corporate bodies. As a result of the INSPIRE Directive, it also publishes INSPIRE Index Polygons which show the indicative extent and position of registered freehold properties in England and Wales – in other words, digital maps of land parcel boundaries.

However, it is impossible to link these two datasets together to accurately map the land owned by UK and overseas companies. Each INSPIRE Polygon comes with an INSPIRE ID,

but does not list the land title number. The datasets of land owned by UK and overseas companies, meanwhile, list the relevant land title numbers, but not the INSPIRE IDs. Hence, the two sets of data cannot talk to one another.

Having discussed this at length with officials at MHCLG, Ordnance Survey and Land Registry, it appears there is nothing preventing this from being fixed apart from political direction. There are no licensing restrictions: the Land Registry has published its UK and overseas company datasets since 2017, and the licensing governing republication of INSPIRE Index Polygons was [relaxed in 2020](#). There is a clear public interest in joining them together and a clear set of user cases for doing so. For example, being able to accurately map corporate landholdings could:

- Make it easier for Landscape Recovery projects to identify neighbouring landowners and collaborate on bids;
- Aid Local Authorities when drawing up Local Nature Recovery Strategies;
- Help with projects to reduce flood risk and clean up water pollution by identifying the location of land owned by water firms and other companies who could change their land management practices to do so.

QUESTION 18: What improvements could be made to how spatial data is captured, managed, or used to support land use decisions in the following sectors? Please give any reasons for your answer or specific suggestions.

- **Development and planning: such as environmental survey data**
- **Farming: such as supply chain data and carbon or nature baseline measurements**
- **Environment and forestry: such as local and volunteer-collected environmental records**
- **Recreation and access: such as accessible land and route data**
- **Government-published land and agricultural statistics**

The Government should use its powers under the Agriculture Act 2020 to require large landowners (as persons within the agri-food supply chain) to publicly report on what they are doing to help restore nature, meet 30by30 and repair natural carbon sinks (see my answer to Q15, above). As part of this, they should publish carbon and nature baseline measurements. It's welcome to hear, therefore, that DEFRA will be publishing its NCEA data under the Open Government Licence – landowners can then draw upon this to inform their reporting.

The Government should also fund Local Environmental Records Centres (LERCs) so that they can stop paywalling data and instead make it open and more useful to everyone. LERCs briefly received public funding in 2014-15 but [this was abruptly halted](#). Yet LERCs hold far more detailed species and habitat data than is held by central government. Natural England's Priority Habitat Inventory maps of species-rich grassland, for example, are notoriously incomplete. Having greater public access to local environmental records – built up by naturalists over a century or more – is essential to making informed decisions over changes to land use.

DEFRA must dramatically improve the transparency of data relating to Environmental Land Management Schemes (ELMS). There is still no public information online about who is in receipt of the Sustainable Farm Incentive (SFI) or even any of the boundaries of the 56 Landscape Recovery (LSR) pilots. Since they took over administration of Countryside Stewardship (CS), the Rural Payments Agency have been notoriously bad at publishing details of new CS agreements online (in contrast to Natural England, who published downloadable maps of CS agreements when they administered the scheme). DEFRA must

require the RPA to publish downloadable maps of all current SFI, CS and LSR agreements by summer 2025, and then update this data monthly.

The Government should also publish new National Statistics on land ownership, conducting analysis of data from HM Land Registry – such as on the degree of concentration of land ownership, and geographical patterns in the scale of landholdings (see also Q20 below).

QUESTION 19: What improvements are needed to the quality, availability and accessibility of Agricultural Land Classification (ALC) data to support effective land use decisions?

It's very welcome that the Consultation asks about this: the Agricultural Land Classification (ALC) system is crucial to good land use planning, but suffers from badly out-of-date maps and data.

When I made an FOI request to DEFRA about this last year, I was appalled to discover that the last government had [rejected](#) reviewing the ALC maps, despite being urged to do so by officials. Senior civil servants had [warned](#) the former Environment Secretary, Steve Barclay that the current ALC system is “now decades old”, and that “after 2030 ALC assessments using the current climatic data may become unreliable”. The Secretary of State's [response](#), however, was that he was “not minded to take forward the review this year.” (See coverage of this in *The Times*, 4th September 2024).

A [recent report by CPRE](#) outlines in detail the changes that need to be made to make the Agricultural Land Classification system fit for purpose. Amongst other things, it recommends that the Government:

- Updates ALC maps using the **latest climate data**: given that they were last updated in 1988, they no longer reflect the UK's current (and rapidly changing) climate.
- Creates an updated ALC map for the whole of England for all grades at the **most detailed level** practicable – including publishing maps showing the subdivisions between **Grades 3a and 3b land** (a crucial distinction for planning decisions).
- **Re-surveys lowland peatlands** to appraise their current state and ALC grade. Given that the Fens have been losing topsoil at a rate of 10-30mm annually ([Natural England, 2010](#)) due to ongoing drainage and intensive agriculture, the likelihood is that much of the Grade 1 land in Cambridgeshire is no longer so fertile and needs re-grading.
- **Uses this updated ALC system as one tool in the Land Use Framework.**

QUESTION 20: Which sources of spatial data should Government consider making free or easier to access, including via open licensing, to increase their potential benefit?

I hugely welcome the Government's proposals in this Consultation to open up HM Land Registry data.

As the Consultation states, “*HM Land Registry keeps the definitive record of land ownership in England and Wales but charges fees for access to certain information... We want to move towards a system where data is more widely accessible for the public benefit... For HM Land Registry, we want to do this by making more data free to access, with plans to change the structure of their fees. This includes reviewing whether they are aligned with the Government's strategic ambitions, how they can be made less complex and fairer for customers, and lower barriers to accessing data. These proposals will explore options to increase transparency of land and property data to support innovation and enable citizen participation in co-design of land use policy.*”

I strongly agree with all these points, and have been making the case for opening up the Land Registry for many years (see my book *Who Owns England?* (2019) and [website](#)). Since this consultation was published, it has also been very welcome to see the Housing Minister, Matthew Pennycook, outline MHCLG's priorities for HM Land Registry in his [Chair's Letter](#), calling for far more transparency in land ownership data. In particular, there are a number of specific changes that the Government should make that would open up data on land ownership, with numerous public benefits:

- **Drop Land Registry fees for 'views of the register'**, which provide [just 5.3% of the organisation's income](#), but which make it prohibitively expensive to uncover who owns land. At present, HM Land Registry charges £7 to view a single land title register; with 24 million land titles registered, it would cost a member of the public £168m to find out who owns England and Wales! Ministers should table a very short and simple Statutory Instrument to amend the [Land Registration Fee Order 2024, Schedule 3, Part 2](#), so that fees for inspection of the register by electronic means are reduced from £7 per individual title register and title plan to £0. Users would still need to create an account with the Land Registry to access the information, and paper copies could still be charged for. Other government bodies have shown they can open up huge quantities of data for free in this way: in 2015, Companies House – which previously charged the public £3 to view every document it held – [dropped all of its search fees](#). HM Land Registry would continue, as now, to make the vast majority of its income from conveyancing fees. As Minister Matthew Pennycook stated in his recent [letter](#), he wants to see HM Land Registry “opening up existing data and information on land, improving its accessibility and lowering the barriers to access, including tackling the cost of obtaining data”; and expects “HMLR to work quickly on plans to restructure their charging model... I would like plans to be developed which prioritise free access to data, in particular minimising the cost of information services wherever possible”.
- **Make it possible to map land owned by corporate landowners.** HM Land Registry should be required to include INSPIRE IDs for each land parcel listed in the datasets of [UK](#) and [overseas](#) company land ownership that it publishes each month. This very simple tweak would enable land owned by these companies to be mapped using INSPIRE Index Polygons. There are no licensing or technical restrictions on doing so; all that is lacking is political direction. For more on this, see my answer to Q17 above. As Minister Matthew Pennycook stated in his recent [letter](#), “I am also very interested in making rapid progress towards enabling others to map HMLR data, for example by linking title numbers with INSPIRE IDs... in published datasets”.
- **Direct all Local Authorities to publish maps of their landholdings.** Since 2015, Local Authorities have been obliged by the [Local Government Transparency Code](#) to publish Asset Registers listing the addresses of the land and properties they own – but not maps. This greatly limits the utility of this data. Since 2020, when Land Registry and Ordnance Survey [relaxed the licensing conditions on re-publication of INSPIRE Index Polygons](#), it has been possible for Local Authorities to publish GIS maps of their landholdings. But hardly any do – because they remain unaware of the change in the licensing conditions, and are not obliged to do so. The Government should update the Local Government Transparency Code, directing councils to publish GIS maps of their landholdings.
- **Open up the rest of the Land Registry's data, after putting in place secure checks to address privacy concerns.** The above measures would open up information on the companies and public sector bodies that own approximately one-

third of England and Wales, and render it easier to make searches of the rest of the register. However, ownership data on the trusts, charities and individuals who own the other two-thirds of England and Wales would still remain harder to access. For example, although it would now be free to download land titles, it is not possible to search the Land Registry by landowner name. There are entirely legitimate privacy and fraud considerations around changing this, but they are not insurmountable to resolve. For instance, the Land Registry could screen out residential properties – either by removing all land parcels below a certain size, or by using Price Paid data to screen out those above a certain value – before allowing the rest of its data to become searchable. The Government should put forward proposals that address such legitimate concerns about privacy and fraud whilst recognising the huge economic, social and ecological benefits of more transparent land data, and consult on them if necessary.

QUESTION 21: What gaps in land management capacity or skills do you anticipate as part of the land use transition? Please include any suggestions to address these gaps.

- Development and planning
- Farming
- Environment and forestry
- Recreation and access
- Other (please specify)

I have chosen not to answer this question.

QUESTION 22: How could the sharing of best practice in innovative land use practices and management be improved?

I have chosen not to answer this question.

QUESTION 23: Should a Land Use Framework for England be updated periodically, and if so, how frequently should this occur?

- Yes, every 5 years
- Yes, every 3 years
- Yes, another frequency or approach. Please provide details
- No
- I don't know.

Yes, I think the Land Use Framework for England should be updated at least every 5 years, and perhaps every 3 years. Ideally, updates should be done on a time cycle that helpfully synchronises with carbon budgets and Environment Act target deadlines, if possible.

QUESTION 24: For this process to be meaningful, we know that Government will need to speak with one voice on land use and clarify how its different policy objectives interact spatially. [Consultation sets out some ways for Government to better coordinate land-related policies.] To what extent do you agree or disagree with the proposed areas above? Please include comments or suggestions with your answer. [Strongly agree / Agree / Neither agree nor disagree / Disagree / Strongly disagree / I don't know]

- As the Consultation states, cross-government coordination on land use would be improved if all government departments had to take into account the five land use **principles** proposed. As I suggest in answer to Q3 above, it would be beneficial for the Government to regard this as having similar weight to the [Scottish Land Rights and Responsibilities Statement](#).

- *“A cross-governmental spatial analysis function to produce evidence-based advice on strategic implications across different demands on land”* – Yes, this would be helpful, and should be linked to **opening up the Land Registry (see Q20) and other government datasets on land (Q18)**.
- *“Processes to embed land use considerations in strategic Government decisions”* – Sure, this sounds good, but more details are needed! One very clear way to embed land use considerations into decision-making is to **bring agriculture and forestry into the planning system**, as discussed in Q7 above. If the Government baulks at doing this, what does it propose to make the Land Use Framework actually impact on decision-making on the ground?
- *“A strategic oversight function to ensure the right information and policy is in place to enable delivery against a long-term land use vision”*. The most obvious way of doing this is to set up a **Land Use Commission for England**, as was recommended by the House of Lords inquiry into land use in England, and give it statutory underpinning. I understand that DEFRA may not wish to see the creation of another arm’s-length body, but I am unconvinced that there is a better way of providing such strategic oversight. The Committee on Climate Change provides a clear model of an independent advisory body, created with a clear statutory remit, with a long-term goal (net zero by 2050), clear waymarks (5-yearly carbon budgets) and a regular reporting schedule (annual progress reports, etc). A Land Use Commission could similarly be set up with a statutory goal of delivering (e.g.) 30by30, or a 2050 land use change figure (see my answers to Q1 on level of ambition required). It would then be tasked with updating the Land Use Framework every 3-5 years (see Q23 above), and would provide annual reports on progress. A Land Use Commission would also serve a purpose of consulting and engaging with stakeholders and the public on these issues, and keeping land use questions in the public eye, similarly to how the Scottish Land Commission operates.