Consultation response

Leverhulme Centre
for Nature Recovery

April 2025

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Land use framework consultation (England)

See details of the consultation process

Comments from the Leverhulme Centre for Nature Recovery

The Leverhulme Centre for Nature Recovery (LNCR) welcomes Defra's work on creating and sharing the Land Use Framework (LUF), and the opportunity to respond to the consultation. The LUF needs to address multiple policy areas and in our response, we make suggestions that we believe would improve outcomes for nature and support health, food, agriculture and net-zero carbon targets.

Where we have provided a long answer, we have included a summary paragraph.

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?

Summary: We broadly agree with the direction and range of changes envisaged but note that the 9% category 4 change may be insufficient to meet the Government's targets for 30x30. However, further information is required for a complete response.

It is not possible to comment meaningfully on this breakdown in detail because insufficient detail is provided in the consultation and the technical annex.

Specifically, we suggest information is needed on the split of tree-planting between forestry plantations and semi-natural woodlands, the breakdown of habitat types created, the areas of agroforestry, peatland restoration, and biofuels, the assumed deforestation rates, what type of woodland would be deforested, why and where. For example, Table 2 of the annex states that "There are assumptions on the breakdown between conifer, broadleaf, and silvo-pastoral systems." but this breakdown is not provided. The footnote to the table states that "Note that the indicative breakdowns cannot be published at this time. Different levels of aggregation are however available in section 30". However, there is no section 30 in this document. Similarly, the analysis of how much additional land is needed to meet the 30 x 30 target is not yet available, although this seems like a fairly simple calculation.

Without these details, it is impossible to determine:

1. whether the target is realistic, or under-ambitious,
2. whether the outcomes will meet UK targets on climate and nature; or
3. whether the assumption that all other environmental targets will simultaneously be delivered by these land-use changes is realistic (species abundance and extinction, 30 x 30, N and P targets, accessible green space, etc).

However, the current plans appear unlikely to deliver the 30x30 target. The Analytical Annex states that just 11% of currently protected land meets the criteria for 30x30, though there is no explanation as to why this is larger than the cited government analysis of 7.1% (Special Scientific Interest (SSSIs) SSSIs in 'favourable' or 'unfavourable recovering' condition plus some public woodlands and National Nature Reserves) or the Wildlife and Countryside Link analysis of just 2.9% (SSSIs in favourable condition). These estimates imply that 19-27% of land needs to be changed in some way to deliver the 30x30 target. While in some cases this could involve enhancing existing semi-natural habitats and/or giving them effective protection rather than changing land-use, it still seems likely that considerably more than 9% of agricultural land, which is only 5.9% of all land in England, will need to change from agricultural use to being effectively protected for nature (category 4 of the proposed land use changes). Categories 2 and 3, which cover another 10% of agricultural land (6% of all land in England), represent important and welcome changes to enhance farmland biodiversity, but they cannot meet the 30x30 criteria of being effectively protected for nature for at least 20 years because they will be on land that is still actively managed primarily for food production.

Even if these area-based targets are delivered, we do not believe this will ensure that species abundance targets will be met, unless the land use changes are accompanied by species recovery plans or other focussed species-based actions. The wildlife-rich habitat creation target under the Environmental Improvement Plan uses the statutory biodiversity metric from Biodiversity Net Gain (BNG) to define 'good condition' habitats likely to be 'wildlife rich' for many habitat types. Yet previous work has shown no correlation between the statutory biodiversity metric and bird, butterfly, and ground invertebrate abundance and richness (se England's statutory biodiversity metric enhances plant, but not bird nor butterfly, biodiversity and Metrics based on habitat area and condition are poor proxies for invertebrate biodiversity). For species-based targets to be met, species-specific targeted actions are needed alongside habitat creation. The proportion of different habitat types is crucial here, as many of the species in the species target indicators are specific to particular habitat types.

The area-based targets have a risk of failing to deliver wider goals if they are not implemented correctly. For example, the outcomes of tree planting for biodiversity depend on the starting land-use (high nutrient loads limit the development of rich ground vegetation communities in the future), species planted, proximity to existing semi-natural woodland, and future management to enhance structural diversity. Therefore, high-level semi-natural habitat creation targets will need to be underpinned by habitat-specific principles of good habitat creation: fortunately a huge amount of knowledge and expertise on this exists in the UK.

Note that the Forestry Commission 'Ecological site classification' used to generate the maps in the Appendix is more suited to the establishment of commercial plantation (its intended purpose) than for identifying suitable sites for recovery of native woodland: here in Oxfordshire we have flourishing beech woods on sites identified as unsuitable for beech, for example. Alternative models or classifications may need to be developed, perhaps building on the experience of Scotland's Native Woodland Model, developed by the James Hutton Institute and Nature Scot.

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

1. Co-design.
2. Multifunctional land.
3. Playing to the strengths of the land.
4. Decisions fit for the long-term.
5. Responsive by design.

Summary: We broadly agree with the proposed land use principles but are concerned that their application may be compromised by some proposals in the Planning and Infrastructure Bill in its current form.

1. **Co-design and local participation is vital**. However this is not aligned with the current direction of planning policy, which is moving towards more central government control of decisions on housing and infrastructure location and reducing local democratic control. For example, reintroduction of mandatory housing targets and the five-year housing supply rule transfers more power to developers to force through speculative developments, especially when delayed development of existing sites means that prices stay high and housing targets are not met. This is risks driving the development of biodiverse green spaces that are important to local people. Also, decision-making power transferred from locally elected representatives on planning committees to unelected officers reduces democratic accountability within the system and restricts the ability of ordinary people to object to new developments in unsuitable locations. Similarly, the new Environmental Delivery Plans (EDPs) laid out within the Planning and Infrastructure Bill will not be open to consultation outside the small, selected group of statutory consultees. It is important that the new EDPs are integrated with other tools such as Local Nature Recovery Strategies (LNRS), which have been designed with community involvement, to ensure that there are local benefits – it is not currently explicitly specified that this integration will happen. This is part of a wider shift away from community participation as more decisions such as BNG and EDPs are being moved to the post-consent phase of planning, which limits the ability of the community to respond. This means community needs are not being heard, which could well result in a loss of some key health and wellbeing benefits.

2. **Multifunctional land use**. We agree that this is very important, but it would be good to explicitly mention biodiversity in the list of examples, as this underpins long term delivery of multiple benefits. The example of 'such as the health benefits of co-locating new homes and nature' could be slightly reworded to avoid inadvertently encouraging siting of new developments next to sensitive nature sites such as SSSIs (this is happening in Oxfordshire); we suggest 'such as the health benefits of planning new homes around nature-rich green and blue spaces'.

3. **Playing to the strengths of the land**. We welcome the principle of avoiding land use change on the best agricultural land and encouraging land use change that achieves wider benefits without taking land out of food production. For example, much off-site BNG currently involves conversion of arable land into semi-natural habitat; it is important to ensure that this does not result in loss of high-grade land (Agricultural Land Classification (ALC) 1 and 2 in England), as off-site BNG legal agreements span 30+ years. It is important to recognise biodiversity in this statement too, as indicated in the technical annex, e.g. adding the text here: 'Give priority to land uses that are more scarce or spatially sensitive (for example grid capacity places restrictions on new renewable generation sites or protecting priority species and habitats, and land that is best suited for food production)'. Decision-making around enhancing and extending scarce/valuable and priority habitats should be spatially targeted to locations with connectivity to existing habitat, to maximise newly-created habitat value and benefits for associated biodiversity.

4. **Decisions fit for the long term**. We support this and nature-based solutions have a key role to play in delivering long-term climate resilience, as well as multiple additional benefits for health, biodiversity and the local economy. For example, planning new developments around a well-designed network of nature-rich green and blue infrastructure (which retains and incorporates existing features such as trees, streams and hedgerows) can reduce flooding, provide cooling and shading in hot weather, support health and wellbeing, and make places more attractive to live, work and invest in.

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

Summary: We strongly agree that combined and local authorities, landowners and land managers would benefit from applying these principles. Moreover, it is essential that these principles are enshrined in the planning system.

At present, as discussed for Q2, the direction of planning policy in the new Planning and Infrastructure Bill and other pronouncements appears to be moving away from these principles and towards central government approval of development in almost any location. Therefore, ensuring the Ministry of Housing, Communities and Local Government support for these principles should be the first priority. The Bill should include a clear commitment to maintain and strengthen protection for biodiversity for its vital role in delivering multiple benefits to people over the long term. This could be done by taking the advice of expert groups such as the Chartered Institute of Ecology and Environmental Management (CIEEM) and Wildlife and Countryside Link. The land use framework could be integrated into the National Planning Policy Framework, local plan development, and other planning policies.

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?

Summary: Clear long-term policies consistent with statutory targets and supported by stable incentive schemes are needed for farmers and other landowners to enhance nature on farms. These need to be complemented by incentives for sustainable consumption aligned with policies for healthy diets.

It is essential that decision-makers in the agricultural sector and other landowners are able to see a stable and consistent set of incentives to deliver these changes. This includes stability and consistency for the Environmental Land Management Scheme (ELMS), BNG and nutrient neutrality. There is certainly scope for improving BNG and ELMs, but landowners and land managers need the confidence that government is fully committed to these funding systems in the long term before they invest in land use change. For example, the recent abrupt withdrawal of SFI funding with no warning (despite a 6-week warning being promised) came as a shock to the farming community and will undermine confidence going forward. It is important that public funding for sustainable farming is re-instated and that it fully reflects the scale of the land use changes that will be need to meet policy commitments on nature, carbon emissions, food and health.

Similarly, for the statutory nature markets, there has been a substantial uptake of BNG (and Nutrient Neutrality to a lesser degree) within the agricultural sector. However, BNG does not necessarily incentivise the implementation of multifunctional landscapes e.g., An influential biodiversity market may not direct investment towards habitats of national importance. For the BNG market to flourish, certainty is needed. Certainty has not been provided by government in this regard, specifically proposals for a nature restoration fund in the new Planning and Infrastructure Bill. It has now been stated that BNG will be unaffected by the Planning and Infrastructure Bill but there are currently insufficient legal safeguards to prevent this happening.

Furthermore, if nature markets are to be used as a tool for delivery, they will need better integration with this framework and with agri-environment schemes. As the off-site register shows that arable land (cereal crops) is one of the main targets for BNG, it is important to add safeguards to prevent loss of food production on high grade land (ALC 1 and 2 in England).

For voluntary nature markets (e.g., voluntary biodiversity credits), we have not seen much evidence of demand for their use, therefore we do not think that these should be relied upon as a habitat delivery mechanism. Any use of biodiversity credits should be consistent with the framework developed by the UK-France led International advisory panel.

Additional incentives are needed and we suggest incentives/support for technology and R&D, with meaningful farmer participation, to support increase agricultural production without negative environmental consequences – an assumption of increased productivity on land remaining in agricultural production underpins the proposed land-use changes.

The Climate Change Committee recommends that UK diets should shift away from meat products to include a greater proportion of plant-based foodstuffs. As well as reducing greenhouse gas emissions from livestock farming, this would result in land now cultivated for animal feed being available for other uses. Thus we believe that land use framework and the emerging Food Strategy should be aligned.

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?

Consistent and coordinated policies and incentives for agroforestry, silvo-arable and silvo-pastoral schemes are needed.

Agroforestry has historically fallen between the cracks for funding, not qualifying for either woodland creation (e.g. Woodland Carbon Code) or agri-environment funding. It was encouraging to see agroforestry finally funded under ELMs, but the sudden withdrawal of SFI funding (response to Q4) has undermined confidence in those wishing to invest in agroforestry. Agro-forestry is a long-term change requiring long-term commitment from government.

Agroforestry also requires support for demonstration and knowledge exchange, especially peer-to-peer learning. Channelling additional funding towards excellent existing initiatives in this space would be very beneficial.

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

Summary: The government should make use of the available guidance and criteria for promoting multi-functional land use.

Over the last few years the University of Oxford has been working with stakeholders in Oxfordshire and elsewhere to develop a set of simple criteria for targeting multifunctional land-use. Many of these are integrated into an associated mapping tool (the Agile Nature Recovery and Nature-based Solutions Opportunity Maps). We propose the following.

- Avoid converting high grade farmland (Grade 1 and 2) to other uses such as woodland, housing or infrastructure (including renewables). However, high grade farmland can be considered for:
  - silvo-arable agroforestry (on arable land)
  - silvo-pasture (on improved grassland)
  - peatland or wetland conservation and restoration (on deep or shallow peat)
  - conversion of improved grassland to semi-natural grassland (with a reduced grazing density)
  - other agroecological measures such as cover crops, beetle banks and species-rich field margins.

- Avoid building housing and infrastructure on floodplains, where it will create avoidable flooding risk and damage priority habitats and species, designated sites, ancient and veteran trees or peaty soils, or where it will conflict with the Local Nature Recovery Strategy priority areas.
- Avoid planting trees on either deep peat (as at present) or shallow peat (as evidence indicates this can cause a net loss of carbon).
- Avoid planting trees on existing species-rich grassland.
- Natural regeneration/rewilding can reduce any loss of soil carbon (and, unlike planting, may thus be suitable for peaty soils). As trees and shrubs establish naturally rather than being actively planted, they often create a highly biodiverse, carbon-rich and resilient habitat mosaic.
- In upland and wetland areas reducing grazing levels can enable natural regeneration of rare and highly ecologically valuable habitats including 'mountain woodland' (shrubs and dwarf varieties of alder and willow, also known as montane scrub), temperate rainforest and willow carr. This would be particularly valuable in locations that help to link or buffer the existing remaining fragments of these habitats. Note that the Forestry Commission 'Ecological site classification' used to generate the maps in the Appendix is more suited to the establishment of commercial plantation (its intended purpose) than for identifying suitable sites for recovery of native woodland: here in Oxfordshire we have flourishing beech woods on sites identified as unsuitable for beech, for example.
- Arable fields on slopes over 7 degrees, especially on erodible soil types, can be targeted for measures to reduce soil erosion and thus improve water quality as well, e.g. cross-slope hedgerows, buffer strips, arable reversion to grassland or woodland.
- Upper catchments and lower slopes of valley sides can be targeted for natural flood management options such as restoration of woodland, cross-slope hedgerows or leaky dams.
- Floodplains can be targeted for creation of wetland mosaics: a mix of floodplain meadows, ponds, wetlands, wet woodlands and scrub.
- Riparian buffers of shrubs, trees, tall grasses and wildflowers can help to protect rivers from polluted runoff and provide natural ecological corridors.
- All habitat restoration should be in line with the range of options prioritised in the Local Nature Recovery Strategy, whether the area is in the priority network (i.e. the 'Local Habitat Map') or the 'wider landscape', aiming to support local species and habitats of importance.
- Once the criteria above have been met, do not be too prescriptive: allow local stakeholders who understand the land to have the final say in what habitats to restore in the light of local context, needs and values (e.g. wetland, heathland, grassland, shrubland, woodland, rewilding, agroforestry, orchards).
- Prioritise connectivity of new habitat to existing habitat networks.

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?

Summary: Mapping tools and applications are available or under development to support land managers to promote co-benefits and avoid trade-offs.

As mentioned for Q6, we have developed a mapping tool that can help users to target interventions in the most useful locations, (the Agile Nature Recovery and Nature-based Solutions Opportunity Maps). Maps can be created anywhere in England using open-source software, but users do need an ArcGIS license and OS Mastermap license. This system is being used to support Local Nature Recovery Strategies in several areas.

We are working towards being able to incorporate this approach into LandApp, a mapping system widely used by farmers. The maps are a starting point, intended to be integrated with local knowledge, views and values, and should always be ground-truthed. We would be happy to demonstrate the maps.

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.

Summary: Land use policy should be complemented by messaging and incentives to promote sustainable and healthy diets, aligned with the National Food Strategy.

We agree with the need to monitor and account for displaced food production, and especially the need to protect the best agricultural land (ALC 1, 2 and possibly 3a in England) from permanent land use change, including housing or tree-planting (e.g. as part of nature and carbon markets) as this could simply displace food production abroad or elsewhere in the UK, where it could cause more damage.

However, the strategy appears to rely entirely on productivity improvements to make space for land use change. It is widely accepted that dietary change (towards more plant-based foods) and food waste reduction are also needed to make space for carbon sequestration and nature recovery, e.g. see the CCC reports, as well as land use modelling by UKCEH and Oxford University (e.g. Smith et al., 2022) and similar models by other groups. We suggest that this is integrated into the land use framework.

Little evidence is presented to support this complete reliance on productivity improvements. The technical annex mentions that it is based on:

1. Calculating the required rate of productivity improvement (1% per year)
2. Comparing this with the rate of improvement in total factor productivity over the last few decades
3. Deciding that the two are compatible.

However, there are several issues with this approach:

- The key question is how much land can be freed up through productivity improvements; this cannot be deduced from the trends in total factor productivity.
- Yields of major crops in tonnes per hectare have remained almost static over the last few decades, with the exception of a slight increase in wheat yield.
- Future climate change is likely to place further stress on crop and livestock yields.
- The approach does not appear to consider the potential adverse impacts of certain approaches to enhancing productivity, e.g. if it relies on increased agrochemical use there will be adverse impacts on climate change, water quality, soil health and biodiversity.

At the same time, there may be opportunities for productivity improvements from regenerative approaches including improved soil management, the better use of biodiversity in the farm landscape thus improving pollination, natural pest control, water availability etc.

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

Summary: Consistent evidence-based policy supported by stable incentive schemes are needed to provide long-term confidence to farmers, landowners and other private investors.

Sensible criteria such as those outlined for Q6 should be used to avoid damaging interventions such as planting trees on species-rich grassland, high grade farmland or peat.

Investors need certainty that they are investing in high-integrity interventions, to avoid accusations of greenwashing that have dogged the forest carbon market recently. Following the IUCN Global Standard for Nature-based Solutions and the four NbS guidelines can help to provide this assurance. In particular, it is important to actively plan to deliver benefits for biodiversity, e.g. by planting a diverse mix of native species appropriate for the location. Plantations of non-native species will not deliver multifunctional benefits for biodiversity and climate.

If nature markets are being used to increase private investment toward the appropriate land use changes, then proper integration with the land use framework to avoid transitioning valuable arable land is necessary. If biodiversity credits are used they should be consistent with the framework developed by the UK-France led International advisory panel (https://www.iapbiocredits.org/framework).

To increase private investment e.g., via BNG then stakeholders need certainty of demand. For example, when BNG becomes mandatory for Nationally Significant Infrastructure Projects (NSIPs) this could massively increase the demand for off-site BNG units, generating higher levels of private investment than that currently observed.

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

1. Strengthened Protected Landscapes legislation (around governance and regulations or duties on key actors) with a greater focus on nature
2. Tools: such as greater alignment of existing Defra schemes with the 30by30 criteria
3. Resources: such as funding or guidance for those managing Protected Landscapes for nature
4. Other (please specify)

Summary: Changes are needed across all areas (beyond Protected Landscapes), with a focus on improving the condition of statutory sites, aiming to contribute to all statutory and other agreed nature targets.

1. **Protected Landscapes**. We agree that moves to increase the value of Protected Landscapes (formerly known as Areas of Outstanding Natural Beauty) for nature are very important, but this is not enough. They are not connected, they only cover isolated parts of England, and currently they mainly consist of farmland, often with limited nature value. We need a landscape-wide approach with better protection for nature everywhere, to deliver a connected network so that species can move around in response to environmental change. This is exactly what Local Nature Recovery Strategies are developing. People everywhere (not just in Protected Landscapes) need access to nature close to home, for health & wellbeing and climate resilience.

2. **Tools**. Wildlife and Countryside Link estimated that only 3% of land in England is currently both i) protected for nature and ii) in good ecological condition. To meet the 30x30 target while simultaneously meeting the targets for species abundance and reducing species extinctions, we need to start by protecting the good habitats we already have – and not just those in designated sites. Nature everywhere needs much stronger protection in the planning system. This includes giving greater weight to Local Nature Recovery Strategies, not just 'have regard to'. We would like to see environmental issues taken into account far earlier in planning processes, working with local partners to incorporate local knowledge, views and values into planning.

3. **Resources**: More resources are needed to fund ecologists at Local Planning Authorities so that they can effectively carry out their statutory duties to protect nature in their local areas, including by checking delivery of BNG and other planning conditions. Most Local Authorities only have one ecologist and some have none. In addition, investment needs to be directed into improving the condition of statutory sites e.g., Sites of Special Scientific Interest (SSSIs), many of which are currently in an unfavourable condition. It is far from clear that nature markets will provide sufficient investment and government should be ready to step in with resources where markets are not working well.

4. **Other 1**: The proposed measures in the Planning and Infrastructure Bill will greatly weaken protection for existing habitats and species, pushing species further towards extinction and making delivery of the legally binding Environment Act 2021 targets to halt and reverse the decline in species abundance impossible. Change being proposed to the Bill by environmental organisations such as Wildlife and Countryside Link, and the CIEEM would be needed to help to maintain protection for existing habitats.

Other 2: There is considerable potential to bring more areas into good condition for nature recovery. Large areas of moorland are currently subject to damaging practices to maintain grouse shooting, including peat burning. We support moves to close the loopholes that still permit burning peat (including shallow peat) in some circumstances. Similarly, approximately 50 million non-native pheasants are released into our woodlands every year (more biomass than all native UK breeding birds combined); these eat threatened native species including lizards, snakes, frogs, invertebrates and wildflowers. Landowners on shooting estates regularly kill native species such as birds of prey, foxes, badgers and hares: much stricter control and licensing of these damaging activities is needed, with the aim of substantially reducing the ecological imbalances they create.

Land use policy should not be limited to the so-called 30x30 target alone, but aim to support the full range of agreed UK and global nature targets, including those specified in the Environment Act and Environmental Improvement Plans, the National Biodiversity Strategy and Action Plan (NBSAP) and the Kunming-Montreal Global Biodiversity Framework (GBF). The Land Use Framework is a direct application to GBF/NBSAP Target 1 (land use planning and protection of high value biodiversity) and has a major opportunity to contribute in particular to targets 2 (restoration), 3 (conserved areas), 4 (species and genetic diversity protection and management of human-wildlife conflict), 7 (pollution reduction), 8 (climate change mitigation and adaption), 10 (sustainable agriculture, forestry), 11 (ecosystem services) and 12 (urban green spaces).

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

Summary: Maintain, enhance and plan around existing green spaces and green infrastructure

- **Plan around a central network of green infrastructure**. New developments should be planned around the existing layout of natural features such as trees, hedgerows and watercourses, incorporating these high value assets into a network of green and blue infrastructure that connects to ecological corridors in the wider landscape and provides active travel routes and recreation for people. By considering this at the first stage of planning, rather than at the end when it is too late, benefits for people and nature can be maximised (e.g. 'People love being here': London development shows harmony between nature and housing).
- **Multifunctional sustainable drainage systems (SuDS)** can be a central part of this Green Infrastructure (GI) network, to reduce stormwater runoff– critical for reducing combined sewer overflows and thus protecting water quality in our rivers. It is urgent to implement Schedule 3 of the Flood and Water Management Act 2010 to make SuDS mandatory in all new developments, as finally promised last year but still not delivered. In addition, SuDS need to be truly multifunctional, rather than just being an underground tank and pipe (currently the cheap default option), so they can also improve water quality, improve infiltration to recharge groundwater supplies, provide attractive amenity green space and support biodiversity. A report commissioned by Defra in 2021 recommended that the technical standards for SuDS should be updated to deliver these multifunctional benefits, but this has not yet been implemented.

- **Nature-friendly grassland management**. Land managed for recreation is typically short-mown grass treated with fertilisers and herbicides. While many areas need to be kept short for playing pitches etc, often there are opportunities for a more relaxed mowing regime elsewhere, including on roadside verges and other amenity grassland (see our guidance here). Trees and species-rich grassland can also be added around the edges of playing fields and sports pitches.
- **Support green roofs and walls**, meeting the Green Roof Organisation standards for biodiverse green roofs.
- **Hedgehog highways and swift bricks**: hedgehogs need holes in walls and fences, and swifts need swift bricks for nesting. These can be built into all new developments. Where ecological features are conditioned in the planning process, resourcing needs to be made available for regulatory enforcement. The Lost Nature report reveals that only 53% of ecological features that are conditioned as part of the planning process are being delivered on the ground. The fact that many Local Planning Authorities are inadequately resourced to regulate development on the ground is a major causal factor.
- **Protect existing urban green spaces**, which are disappearing rapidly due to new developments in many areas. Loss of nature-rich green space for housing could be avoided by focusing on low grade intensive farmland or previously developed sites, bringing unoccupied homes back into the market where possible, and tackling the housing crisis by increasing the proportion of affordable homes (rather than building lots of large investment properties). Land take for housing can also be reduced by mandating more compact development (at least 30 houses/hectare), and wider use of mid-tier developments (3 or 4 storeys) where appropriate.

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

- Avoid locating development on land of high value for nature, high grade farmland or flood zones (see Q6)
- Retain existing natural features such as trees and hedgerows (see Q11)
- Start by planning a network for green and blue infrastructure (see Q11)
- Incorporate features such as hedgehog highways, swift bricks and green roofs (see Q11)

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

Transport planning has a key role to play by focusing on sustainable transport modes (walking, cycling and public transport) rather than building new roads or airports, which simply create more traffic, noise, air pollution, carbon emissions and roadkill, as well as causing loss and fragmentation of habitats.

Where new sustainable transport infrastructure is needed, it should be sited where it will not damage land of high value for nature or food production.

SuDS can often be incorporated alongside new transport infrastructure to reduce flood risk and filter out pollution from runoff.

Green bridges or underpasses can help to mitigate impacts on nature connectivity.

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

- At local level, this co-ordination already happens via development of the Local Plan. It is important that these efforts are supported by national government (although this is not featured in the proposed Planning and Infrastructure Bill), and that local democracy is respected, in line with the principle of co-design.
- Make full use of Local Nature Recovery Strategies.
- Close co-ordination is also needed at national level, between Defra, Natural England, the Environment Agency, DESNZ and MHCLG. This is vital to deliver multiple benefits and reduce trade-offs between climate, food and nature.

QUESTION 15: Would including additional major landowners and land managers in the Adaptation Reporting Power (ARP) process (see above) support adaptation knowledge sharing? Please give any reasons or alternative suggestions

Yes: this would be an excellent opportunity to support further uptake of nature-based solutions such as natural flood management and agroecology, that have benefits for climate adaptation, carbon storage and nature recovery (see Nature based solutions in UK climate adaptation policy).

We see merit in extending the ARP to major landowners and land managers. However, not all nature-based adaptations to climate change will be ones that benefit nature and some could even threaten biodiversity, e.g. tree planting of non-native species. We note that the Natural England, National Trust, RSPB and Wildlife Trust already report under the ARP, so this activity is happening already and could be an opportunity to share guidance for new reporting organisations. The most recent Wildlife Trust ARP report includes a useful assessment of evidence gaps for nature-based adaptation.

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.

1. Providing better information on local climate impacts
2. Providing improved tools and guidance for turning climate information into tangible actions
3. Developing and sharing clearer objectives and resilience standards
4. Supporting the right actions in the right places in a changing climate
5. Other (please specify)

We support these approaches, and recommend that these should be complemented by no-regrets nature-based interventions such as protecting and restoring peatlands and other wetlands and wooded areas, and using green infrastructure, including SuDS, to support adaptation to climate change.

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?

1. Updating existing Government tools, apps, portals or websites
2. Changes to support use through private sector tools, apps or websites
3. Bringing data from different sectors together into common portals or maps
4. Increasing consistency across spatial and land datasets
5. More explanation or support for using existing tools, apps or websites
6. 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
7. Other (please specify)

Note that this response is also give for Q20.

We propose making Ordnance Survey Mastermap data freely available. The licensing conditions make it hard to share detailed maps outside academia and the public sector.

Similarly it would be useful to reinstate central government funding for the Local Environmental Record Centres (abolished about 10 years ago) so that they can make their data on local habitats and species available more widely without having to charge for it.

There does not yet appear to be any spatial data published on the uptake and location of ELMS schemes, in contrast to the previous Environmental Stewardship and Countryside Stewardship schemes where spatial data has been made freely available by Natural England. As these schemes are spending taxpayer money, we propose that the Rural Payments Agency should publish the data.

We also support the proposals to make the Land Registry data more freely available through linking to INSPIRE IDs.

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

ALC (Agricultural Land Class) data is already freely available both to download and online. While it was created a long time ago, it is largely based on factors that have not changed much (slope, aspect, stoniness, drainage). However in some areas there will have been changes, e.g. the status of shallow peat soils (some of which has been degraded) and with respect to flood risk. If ALC data is to be refined, care must be taken that this is done objectively and is evidence-based.

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?

Note that this response is given for Q17.

We propose making Ordnance Survey Mastermap data freely available. The licensing conditions make it hard to share detailed maps outside academia and the public sector.

Similarly it would be useful to reinstate central government funding for the Local Environmental Record Centres (abolished in 2016) so that they can make their data on local habitats and species available more widely without having to charge for it. This is particularly important for semi-natural grassland data, which is typically quite out of date in Natural England's Priority Habitat Inventory.

There does not yet appear to be any spatial data published on the uptake and location of ELMS schemes, in contrast to the previous Environmental Stewardship and Countryside Stewardship schemes where spatial data has been made freely available by Natural England. As these schemes are spending taxpayer money, we propose that the Rural Payments Agency should publish the data.

We also support the proposals to make the Land Registry data more freely available through linking to INSPIRE IDs.

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.

Ecologists are in short supply, and will be needed to ensure that land use change delivers biodiversity benefits. As a starting point, we strongly support the introduction of the new Natural History GCSE, which after some delays looks likely to be taught from 2026.

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

We suggest the land use framework should be updated at least every 5 years to ensure that the proposed land use proportions are being met and to give the opportunity to modify it if outcomes are not as intended.

QUESTION 24: To what extent do you agree or disagree with the proposed areas? Please include comments or suggestions with your answer.

Making Government effective in policy co-creation. Government will consider how best to co-ordinate and provide:

1. A strategic oversight function to ensure the right information and policy is in place to enable delivery against a long-term land use vision;
2. A cross-governmental spatial analysis function to produce evidence-based advice on strategic implications across different demands on land;
3. Processes to embed land use considerations in strategic Government decisions;
4. Open policy-making processes in collaboration with research organisations.

We warmly welcome all of these. Open policy-making in collaboration with research organisations is important and we are happy to work with government on this.

About us

The ongoing loss and degradation of nature is one of the greatest challenges of our time. In response, the Leverhulme Centre for Nature Recovery (LCNR) was created in 2022 as a hub for innovative research on nature recovery. It brings together experts from a broad range of disciplines across the University of Oxford. The team collaborates with partners in communities and organisations around the world.

What is nature recovery?

We define nature recovery as the activity of helping life on Earth to thrive by repairing human relationships with the rest of the natural world.

Our aims

- To understand the societal, biophysical, policy and systemic factors that enable or challenge nature recovery
- To collaborate with partners in case study landscapes to test and enhance frameworks, technologies, and tools for effective, inclusive, scalable, nature recovery delivery that also provides for society and its wellbeing
- To establish an inclusive nature recovery community at Oxford, leveraging its intellectual capital and interdisciplinary convening power to address key debates and challenges in the field.

Leverhulme Centre
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The work of the Leverhulme Centre for Nature Recovery is made possible thanks to the generous support of the Leverhulme Trust.