

'Environment Land Management: Policy Discussion REA Consultation Response

The Association for Renewable Energy & Clean Technology (REA) is pleased to submit this response to the above consultation. The REA represents a wide variety of organisations, including generators, project developers, fuel and power suppliers, investors, equipment producers and service providers. Members range in size from major multinationals to sole traders. There are over 500 corporate members of the REA, making it the largest renewable energy trade association in the UK. The Wood Heat Association is the members forum within the REA that advocates for the modern wood heating and related biomass heating industry including wood fuel suppliers, biomass boiler and stove installers and distributors, and anyone involved in the supply chain.

Consultation Question 1: Do you want your responses to be confidential? If yes, please give your reason.

No.

Consultation Question 2: What is your name?

The Association for Renewable Energy & Clean Technology (REA)

Consultation Question 3: What is your email address?

stickle@r-e-a.net

Consultation Question 4: Where are you located? North East/North West/Yorkshire and The Humber/East Midlands/West Midlands/East of England/London/South East/South West/Remote

London, but representing businesses in all nations of the United Kingdom as well as members who operate in Europe.

Consultation Question 5: Who are you? Internal to Defra/Defra arms length body (ALB)/Lobby group/Other government department/Parliamentary group/Land manager/Other (please specify)

Lobby Group

Consultation Question 7: Do you think the ELM scheme as currently proposed will deliver each of the objectives on page 8?

ELMs proposes it will achieve the following objectives:

1. secure a range of positive environmental benefits, prioritising between environmental outcomes where necessary
2. help tackle some of the environmental challenges associated with agriculture, focusing on how to address these in the shorter term

The ELMs scheme is an important step to reforming land use policy and a scheme that moves towards prioritising environmental good is a positive step. However, more breadth of solutions is needed, with a clearer effort by DEFRA required to advise farmers and landowners on different activities for their land.

We believe the following changes are required to meet the objectives:

1. ELMs should be an opportunity to promote broader solutions

- a. The UK has a wealth of experience when it comes to land-use management, with specialists available on forest management, application of renewably-sourced fertilisers and soil improvers to agricultural land, and use of different crop solutions, for instance perennial energy crops and break crops for bioenergy. All of these will be required to deliver optimal environmental impacts for the UK, with different solutions being appropriate to different localities. A clear strategy from Government within the ELMs design is needed in order to see uptake rates across these solutions increase rapidly.
- b. Through ELMs, farmers and land-owners should be compelled to consider different options, to hear about the breadth of what is available and discuss with an advisor what might be the most appropriate and cost-effective activity.
- c. Only promoting a limited 'package' of options through ELMs specified by farm or land type will not create an environment for innovation.
- d. Instead, an integrated vision is needed, where ELMs gives farmers and landowners the financial cushion to explore different options and progress with their ambition throughout the scheme.
- e. As highlighted in question 9, we believe the tier structure should reflect this need for innovation.

2. Greenhouse Gas mitigation and Net Zero should be at the centre of ELMs

- a. The current design is undeniably centred around local environmental benefit, with climate not even featuring in the strategic objectives. It is insufficient to achieve local environmental benefits if the overall carbon benefit cannot be quantified.
- b. Currently, only Tier 3 refers to Net Zero Carbon – which does not reflect the opportunities for carbon reduction in Tier 1 and 2. For instance, reducing use of carbon intensive synthetic fertilisers by replacing them with renewably-sourced fertilisers (digestates and composts) could be included in Tier 1. Similarly, carbon sequestration from forestry will be vital to reaching Net Zero.
- c. Crucially, we believe this will be a missed opportunity to bring subsidy in line with the current trajectory of the agriculture and land use sectors, which is towards the carbon market being a crucial driver.

- d. Having GHG mitigation at the centre, as well as a method of quantifying the carbon benefit, will open up many opportunities for private investment in these projects, for offsetting purposes, as well as to set clearer price signals and markets for bioenergy feedstocks and renewably-sourced fertilisers and soil improvers (e.g. digestates and composts).
- e. Failing to do this risks ELMs being out of step with other Government priorities, with BEIS and DfT being principally focused on carbon reduction as an indicator of success.
- f. The scheme must have a greater sense of joined-up thinking – one that not only considers the farming and land use sectors but the whole cycle of possible carbon reductions. Having meaningful interaction between ELMs and BEIS market-based schemes for bioenergy feedstocks is absolutely vital.
- g. DEFRA should revisit how they quantify benefits and look at options for carbon accounting to truly open up these opportunities.

3. Restoring soil health should also be at the centre of ELMs

- a. We would like to see more emphasis placed on the health of the soil. Restoring soil health (including its organic matter content) is paramount to ensure that soils can withstand stresses exacerbated by climate change.
- b. Repeated use of organic soil improvers (e.g. composted biodegradable wastes and digestates (e.g. fibre digestates, made from anaerobically digested biodegradable wastes and non-wastes which have undergone a post-digestion separation step) as per guidance for their good practice use in agriculture has an important role to play in building up soil organic matter.
- c. Such use also improves soil moisture dynamics, e.g. increasing water holding capacity of sandier soils and improving permeability of clay and silty soils) and improving resilience to the erosive forces of rain or irrigation surface water runoff.

Consultation Question 8: What is the best way to encourage participation in ELM? What are the key barriers to participation, and how do we tackle them?

Large parts of the farming and landowners' sectors are already doing the right thing, and through support under the Basic Payments Scheme (BPS) and other Government schemes are delivering environmental outcomes. Yet, ability to participate or accelerate activity is not the same across the board, and considerations need to be made to account for varying up-front cost for different land types, size of farm or land holding, as well as the time taken for the change to become profitable. In most cases, businesses are not unwilling to change, but rather need assistance in understanding the available options and a statement of intent from Government to make the decision.

In this case, and if DEFRA wants to encourage participation, special consideration should be made to the trade-off between environmental outcome and profitability. For instance, in Tier 1, DEFRA may promote hedgerow management and the creation of belts of woody vegetation for the purpose of wildlife corridors. Perennial energy crops would be effective here, as well as delivering a broader range of environmental benefits. Yet, the cost of managing these will be

higher than if they had been planted at a larger scale, with farmers and landowners needing to be able to ensure any potential lost revenue is substituted. Additionally, the planters will only see the benefit after 3-4 years, upon harvest, whilst the environmental benefits are apparent throughout that period. These barriers around up-front cost and the time taken to repay investment are key blockers to broader participation, and ELMs should aim to provide this certainty as a priority.

We strongly believe that to inspire confidence in the scheme, DEFRA must address the shortcomings in the administration of past schemes. These schemes are designed to provide security for farmers and land-owners to make decisions in the public good, yet if they have little confidence in the payment system and are fearful of delays in processing payments, many will choose not to participate at all. Gaining the trust of the sector is vital to encouraging new entrants to consider larger scale activities and progress through the tiering structure. We know that some will participate no matter what, but this scheme needs to target those that are hesitant if it is to achieve as wide participation as possible.

Overcoming these barriers is vital to incentivising the vast majority and delivering the widespread environmental outcomes the scheme promises.

Consultation Question 9: For each tier we have given a broad indication of what types of activities could be paid for. Are we focussing on the right types of activity in each tier?

In the past, land use policy has favoured prescription for the sake of simplicity, but more dynamic solutions are needed if ELMs is to effectively decarbonise the sector by 2050. We are calling for broad solutions that fully harness the range of land use solutions. These include:

- 1. The role of forestry under ELMs is a positive step towards an integrated land use policy, but should have a role in all three tiers**

As is well noted, the Committee on Climate Change's pathway to Net Zero requires an increase in tree planting to at least 30,000 hectares per year to 2050 [1]. The Government agrees with this, and most recently in its Tree Strategy for England confirms the Conservative manifesto commitment to reach this level by 2025. This position and aim is fully supported by the REA, and once achieved will set the groundwork for more ambitious targets.

Yet, we must acknowledge the scale of the challenge, especially as tree planting in England last year was 2,330 hectares, increasing from 1,420 hectares the year before. At this trajectory, 30,000 hectares by 2025 will not be achievable without a marked shift.

If we look at the Royal Forestry Society's recent survey of almost 700 members, it found that 23% of its members had created new woodland in the past two years, but 42% were planning to do so in the next five years. Of those surveyed that were not planning on woodland creation, many were concerned about the complexity of receiving grants, and concerns about reduced value of land [2].

These concerns are compounded by a policy landscape where forestry has often been separated and handled in a siloed sense. To truly address these barriers, and encourage new businesses to consider forestry, as well as further incentivise those already involved – ELMs must incentivise farmers and landowners to think in a more integrated way. It must also consider how to incorporate forest management into tier 1. If forestry is not included in all three tiers, it will only widen the belief that forestry is separate and will not cause the momentum shift that is needed.

Initially, we have found the barrier for new entrants is financial support, with farmers and landowners compelled to make the decision that makes the most sense from a profitability perspective. Forestry, there is no denying, is a long-term endeavour, and a journey that businesses need to be supported on. If ELMs is to boost woodland creation beyond current growth, it needs to reassure businesses that it is more profitable than their current land-use. If it does not do this, it is unrealistic to expect deployment will be greater than any past effort to promote woodland creation.

Once this barrier has been overcome, the policy must ensure they are managed going forward. Only then will the maximum environmental and carbon benefit be realised. For instance, of the 1.3 million hectares of woodland (2018), approximately 59% of it is managed in a recognised way. The other 41% is mostly smaller woodlands situated on farms or by non-professional owners is probably in declining condition [3]. The benefits for biodiversity, carbon sequestration and bioenergy will be lost if the woodland is not managed through cycles.

Many things are already in place, and the UK Forest Standard (UKFS) and other rules that regulate the sector ensure standards. Where ELMs can be of value is by providing the right system of payments and advice to drive woodland creation. We are calling for a framework that promotes education on the opportunities created by woodland, as well as a financial framework that overcomes the initial cost hurdle. This, will ensure that ELMs delivers both increased tree planting, and better forest management – rather than encouraging one without strong support to achieve the other.

2. ELMs needs to recognise that crop rotations for anaerobic digestion and other bioenergy feedstocks can help deliver environmentally sustainable farming in Tier 1

Anaerobic digestion on farms of manures, wastes and residues combined with crops grown as part of a rotation can deliver many of the environmentally sustainable farming practices described in Tier 1, including better nutrient management (and manure management), soil management (including soil organic matter content) and field cover (such as cover crops and crop rotations).

Within ELMs the Government must recognise the benefits that are brought to farming businesses from the integration of rotational cropping for anaerobic digestion into arable rotations (e.g. by increasing the number of crop cycles - three in a two-year period). This practice provides robust rotational options, local markets and opportunity for improving soil health (e.g. in arable intensive areas of the UK where organic matter is less readily available), biodiversity and mitigate against pests and diseases. BEIS consultation on the future support

for low carbon heat (including the Green Gas Support Scheme) recognises that '*energy crops can be incorporated into arable locations as cover crops*', and that '*where appropriate, such approaches would integrate energy and food production and could bring additional benefits to agriculture and the rural economy*'.

Regardless of the purpose for these crops are grown, best practise must be adopted in their production, harvest and storage. The Code of practice [4] for growing energy crops has been developed by the AD industry to minimise any environmental risks from growing crops and has been adhered to by this sector since the code introduction. Meeting best practice should be set as a minimum requirement in the ELMS.

These crops are often used to complement low biogas yielding feedstocks such as slurries and manures or other wastes/residues that would be difficult to treat on their own. Also, they can use to balance the nitrogen level of feedstocks with high nitrogen level that could inhibit the AD process.

On-farm AD of agricultural residues and crops is not a stand-alone activity, but is normally seen as part of the agricultural system and is often associated with a shift of the whole farming business to one that is more environmentally sustainable. For example, anaerobic digestion on farm is often combined with other good agricultural practices that aim to increase biodiversity, improve soils, protect the environment and enhance ecosystem services. The combination of these has been recently referred to by the sector as 'regenerative agriculture', also known as 'conservation agriculture'. Common principle of regenerative farming include:

- Limiting soil disturbance (e.g. reducing tillage)
- Building diversity and control pests through rotation
- Keeping the soil covered
- Maximising nutrient use efficiency

Example: the use of digestate on cover crops, which allows nutrients from digestate to be locked into cover crops over the winter period, which is then turned back into the soil in the sowing period thereby delivering nutrients to the soil. These practices have become more widely used on AD plants which rely on crops for digestion as they are more integrated with the cropping cycles. Good practices such as these can then be applied to the wider AD sector. They can also support jobs in rural areas.

BEIS and Defra should also consider the merit and potential role of sequential crops (multiple crops in the same field) in the UK. There may be some parts of the UK where the climate makes it possible to grow these types of crops. This approach has been developed mostly in Southern Europe, pioneered by the Consorzio Italiano Biogas (CIB) to integrate anaerobic digestion with agro-ecology. This highly sustainable model has proven to deliver significant reduction in GHG emissions from agriculture and carbon sequestration, as well as to restore soil health and organic matter. The EBA's position on sequential cropping and the associated benefits can be found [here](#). '*EBA collected from the biogas sector shows that proper biogas production based on sequential cropping is a sustainable activity. On top of that, it is a powerful solution leading to decreased greenhouse gas (GHG) emissions, protection of biodiversity and restoration of soil quality through agro-ecological innovation and organic fertilization.*'

3. **Perennial energy crops must be included in all three tiers, and recognised as both an economic choice for businesses, and a vital part of adapting to the impacts of climate change.**

The Committee on Climate Change in its January 2020 report into '*Land use policies for a Net Zero UK*' calls for 23,000 hectares per year of planting for miscanthus, short rotation coppice and short rotation forestry by mid-2020s. The Government itself have commissioned several reports on the use of perennial energy crops, which all give positive recommendations for their use. DEFRA must now listen to its own evidence and give perennial energy crops a firm place under ELMs. As such their inclusion in ELMs will be essential for realising the following benefits:

They give farmers a reliable income from economically marginal land

Bioenergy Crop case studies outlined by the Energy Technologies Institute [1] found that all experienced an increase in the profitability of the land over 23-year lifetime, with initial investment costs being recouped within the first six to seven years. One case study found the net margin of land will be £403/ha/yr higher than if the land had continued under an arable rotation.

They have benefits for biodiversity, as well as flood management

As well as helping mitigate future impacts of climate change, through reducing Greenhouse Gas Emissions, ELMs must aid the UK's adaptation efforts. When placed in the right locations, perennial crops such as willow increase the surface roughness of vegetation, slowing runoff during floor events. They are also effective in trapping flood debris and sediment, reducing the risk of blockages downstream. To illustrate, according to date included in a Forestry Commission report [6], dense willows had the highest N Value, which is a measure of hydraulic roughness, indicating it resulted in the greatest surface resistance. It also scored four times higher than cultivated land uses, such as field or row crops. Landowners are already implementing these solutions yet are not rewarded for this public benefit [7]. As well as achieving a public benefit, perennial energy crops are very resilient and harvesting is flexible, meaning harvesting can be left until the year after the flooding. They are also found to increase biodiversity, with the overwinter cover they provide found to increase variety of bird species in different seasons, and earthworm diversity and abundance is improved in arable soils. Please see the endnote below for academic literature supporting these statements. [8]

When harvested, most are used for bioenergy, delivering further Greenhouse Gas reductions

If planting of perennial energy crops were increased in line with CCC recommendations, the UK's available feedstock market for bioenergy would be significantly bolstered. This would give biomass power and green gas production plants access to more secure feedstock, and thereby strengthen UK's energy security, but also secure supply for biomass heat wood chips and pellets. This is a low carbon source of energy and is providing further benefits from the carbon sequestered while the crop is in the ground. Looking ahead there is also the potential for carbon negative emissions when Carbon Capture Usage and Storage (CCUS) is successfully deployed.

The REA recently published a Bioenergy Strategy for the UK, setting out what bioenergy could sustainably deliver across power, heat, and transport by 2030 and beyond to help the UK meet its Net Zero ambitions. This can be read here: <https://www.bioenergy-strategy.com/publications>. The establishment of a strong bioeconomy, which delivers domestic bioenergy feedstocks is crucial to realising bioenergy potential in the UK, meeting our net zero carbon targets, and delivering large numbers of jobs and growth opportunities, especially for rural communities. The interaction between the bioenergy sector and the bioeconomy should be recognised within and strengthened by the design of ELMs.

There are already compliance measures in place for sustainability, and best-practice guidelines can aid new growers

Ensuring perennial energy crops are produced in the most environmentally friendly manner is an important consideration for both the industry and for our natural environment. There are already several ways this can be ensured, and further best-practice guidelines and advice will help strengthen this. For instance, the Sustainable Fuels Register provides compliance to ensure that non-wood fuels meet the sustainability criteria under the Renewable Heat Incentive (RHI). Models such as these could be used as a way for farmers and landowners to easily prove their crops are produced in a sustainable way under ELMs. Further reassurance could be given by providing industry-led best practice guidelines, which new planters can review and assess applicability.

References:

- [1] <https://www.theccc.org.uk/wp-content/uploads/2020/01/Land-use-Policies-for-a-Net-Zero-UK.pdf>
- [2] <https://www.rfs.org.uk/media/710684/woodland-creation-opportunities-and-barriers-020620-embargo-3-june.pdf>
- [3] <https://www.rfs.org.uk/media/671068/forestry-elms-position-paper-july-2019.pdf>
- [4] https://adbioresources.org/wp-content/uploads/2014/09/cbp-a5_Web.pdf
- [5] <https://www.eti.co.uk/library/an-eti-perspective-bioenergy-crops-in-the-uk-case-studies-of-successful-whole-farm-integration>
- [6] Forestry Commission: Natural Flood Protection – reducing downstream flood risk
- [7] https://westcumbriarivertrust.org/assets/content/projects/downloads/11882_nfm_handbook_web.pdf
- [8] Supportive evidence:
[https://pure.aber.ac.uk/portal/files/6593598/McCalmont et al 2015 GCB Bioenergy.pdf](https://pure.aber.ac.uk/portal/files/6593598/McCalmont_et_al_2015_GCB_Bioenergy.pdf)
<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1474-919X.2006.00522.x>

https://www.researchgate.net/publication/251628692_Potential_benefits_of_commercial_willow_Short_Rotation_Coppice_SRC_for_farm-scale_plant_and_invertebrate_communities_in_the_agri-environment

Consultation Question 11: While contributing to national environmental targets (such as climate change mitigation) is important, ELM should also help to deliver local environmental priorities, such as in relation to flooding or public access. How should local priorities be determined?

As outlined in the policy discussion document for this consultation, ELMs will pay for public goods that meet the following priorities:

- clean and plentiful water
- clean air
- protection from and mitigation of environmental hazards
- mitigation of and adaptation to climate change
- thriving plants and wildlife
- beauty, heritage and engagement

Under the current Country Stewardship grants, priorities are outlined through National Character Areas (NCAs) and Natural England's statements of priorities for each area.

We are supportive of the proposal outlined in the policy document to integrate local participation and natural capital planning into the decision making for local priorities. Decisions on which activities to support under ELMs should be underpinned by evidence that suggests they are the right decision for that local area and ensures the widest benefits.

We also urge DEFRA to update its satellite imagery or buy-in to a larger dataset and give farmers and landowners access. As time will be limited for farmers and landowners, providing them with the most up-to-date and detailed imagery will allow them to look at their land and make decisions on how they can best deliver the priorities outlined above.

We are, however, concerned about how the scheme will determine whether they have achieved progress towards national environmental targets.

Consultation Question 13: To what extent might there be opportunities to blend public with private finance for each of the 3 tiers?

We believe that creating an environment for public finance to blend with private finance would be valuable, particularly where it could be orientated to deliver further carbon savings. For this to be successful and deployable at scale, it will need to have a determined benefit for businesses to get involved, as well as a clear method to measure the carbon savings.

We would draw your attention to initiatives such as the Severn Trent's Environmental Protector Scheme (STEPS) [9] which match funds up to £5,000 per application for farmers delivering a range of biodiversity options including improving soil health, cover crops, herbal leys, wetland and pond management and improving and enhancing habitats. This is a good example of a

private organisation achieving a 'public good', whilst also achieving a private good for themselves in terms of improved water quality.

We are interested in future opportunities for this blending, for instance in a future Emissions Trading Scheme, with industry able to offset emissions by investing in land use projects. We believe this would give a real opportunity for deployment at scale, yet this would need to be co-ordinated and allow investors to have confidence through an accreditation scheme. As mentioned in previous answers, we are concerned about how carbon would be measured and determined under ELMs, which would be a necessary criterion from a carbon accounting perspective.

The REA would be happy to help facilitate further discussions between DEFRA and our Finance Forum to explore how private finance could be better integrated into the three triers.

Endnotes:

[9] <https://www.stwater.co.uk/about-us/environment/catchment-management/severn-trent-environmental-protection-scheme/>

Consultation Question 14: As we talk to land managers, and look back on what has worked from previous schemes, it is clear that access to an adviser is highly important to successful environmental schemes. Is advice always needed? When is advice most likely to be needed by a scheme participant?

We are supportive of the proposal around advisers and agree that they are vital in ensuring a well-executed and effective scheme. This support, however, should be paid for where necessary, to ensure that small scale farms do not lose out on access to an advisor. Additionally, farmers and landowners should be given the choice to decide whether they need an advisor or not. This will give flexibility for those who are experienced in the area.

The emphasis should also be on experienced advisers, and the option for a farmer or land manager to discuss proposals with several different advisers throughout the process. For instance, speaking to a more general adviser in the first adviser, followed by more specific consultations following it to provide the business owner with the best available advice.

Central Advisors and training should also be prioritised for Local Authority workers to enable them to consider how best to promote appropriate land managements for their region and provide relevant advice to the land managers and farmers operating there.

Consultation Question 15: We do not want the monitoring of ELM agreements to feel burdensome to land managers, but we will need some information that shows what's being done in fulfilling the ELM agreement. This would build on any remote sensing, satellite 35 imagery and site visits we deploy. How might self-assessment work? What methods or tools, for example photographs, might be used to enable an agreement holder to be able to demonstrate that they're doing what they signed up to do?

We understand DEFRA's obligation to ensure the correct use of public funds, and therefore the focus should be on making it easier and less time consuming for businesses to provide the required information.

As highlighted in our response to question 11, we believe that all efforts to support best use of technology will reduce the burden on ELMs participants. Giving all participants access to the most up-to-date and detailed satellite imagery would make the process of self-assessment and monitoring much more straight forward, with the scheme administrators having confidence in the data they provide.

Government should look at gaining access to this technology and integrate their use into the proposed monitoring structure.

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If you have any questions relating to this consultation and the REA's response please contact Sam Tickle at stickle@r-e-a.net