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CAM VALLEY FORUM RESPONSE TO THE DEFRA POLICY DISCUSSION DOCUMENT ON ENVIRONMENTAL LAND MANAGEMENT

This paper sets out the Forum's response to the [Policy discussion document](#) issued in February 2020. It focuses first on the substantive questions 6-17. Responses to the 'contact' questions 1-5 are at the back.

6. Do you have any comments on the design principles on page 14? Are they the right ones? Are there any missing?

- (a) The Cam Valley Forum share your vision of a scheme that is successful and effective in delivering on the objectives of the 25-year Environment Plan for environmental improvements and reaching a zero-carbon target. Land managers have a critical role to play in restoring biodiverse rural ecosystems, increasing carbon storage in the soil and safeguarding water supplies; they should be encouraged and supported to do so. As a nation we need to protect and restore our natural capital in all its forms.
- (b) Environmental sustainability should underpin and be written into every option. Greater emphasis should be placed on reinstating self-sustaining natural processes wherever possible, recognising that active management (e.g. blocking drains, de-canalising rivers, removing invasive non-native species) may be needed initially before natural regeneration and natural processes can be allowed to take over.
- (c) We support the delivery of public goods and especially using local people to inform and help to achieve local priorities alongside national objectives. The members of local river groups often have an intimate knowledge of their local watercourses and good relationships with the land managers in their local communities. Their knowledge and advice should be actively sought and tapped.
- (d) Flexibility of approaches is likely to work better than national prescriptions, which blunted some enthusiasm for Countryside Stewardship options. Our geology and soils are immensely varied: not only is there a difference between what is needed and works on Chalk compared with Sand, but within the Chalk, soils will vary considerably across the landscape. Farmers know how different crops fare on different fields; environmental land management needs a similarly fine-grained approach.
- (e) We agree with the aim to deliver benefits for the taxpayer. It is vital to be on a road to continually improve all elements of the scheme to provide clarity and certainty, and to improve on the shortcomings of earlier schemes.

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

- (a) The Cam Valley Forum support the two strategic objectives stated, the idea of delivering a range of environmental benefits and especially tackling the environmental problems associated with agriculture.
- (b) We are very keen to improve water quality and flows in our rivers in the East, where rainfall cannot be relied on to counter evapotranspiration and abstraction.
- (c) We are glad that 'soil management' is included in the Tier 1 proposals. High-quality information on soils from the [National Soil Resources Institute](#) should be viewed as an essential input in developing local environmental land management objectives.

- (d) Soils rich in organic matter tend to hold more water, require less irrigation in summer, and help to reduce runoff (and hence flooding and sedimentation), in winter. Actions that maintain and improve the organic matter content of soil, its structure (e.g. avoiding compaction) and its biodiversity will bring important agronomic benefits, as well as environmental benefits.

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

- (a) Use inclusive farmer/land manager friendly language and avoid ambiguity.
- (b) Use quotations from a range of farmers/land managers who enthuse about the scheme.
- (c) Do not expect farmers automatically to understand how best to 'farm for the environment'. Work undertaken under the Rural Economy and Land Use research programme (summarised [here](#)) showed that farmers value and will greatly benefit from training in conservation management techniques.
- (d) Offer incentives that will secure fundamental changes in behaviour and thinking.

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?

- (a) Tier 1 should not simply reward farmers for avoiding bad behaviour (e.g. 'not polluting'). The activities funded must go beyond simply complying with regulatory requirements. Tier 1 should encourage and fund activities that would not otherwise be delivered.
- (b) We also support actions to improve soil management (to reduce loss to water) and nutrient management in Tier 1. Artificial fertilisers should be applied at the correct rates to match crop needs, so nutrients encourage crop growth rather than eutrophication of water. Organic manures are very important to soil health but also need to be applied skilfully to avoid pollution.
- (c) We welcome the references to 'joined-up' collaboration between land managers. This will be especially important when establishing and managing wildlife corridors and networks along hedges, grass strips, rivers, streams and ditches. Tier 2 should deliver more structural changes than Tier 1.
- (d) Water flows in many Chalk streams are impacted adversely by groundwater abstraction. Abstraction at source needs to be reduced significantly, so that Chalk springs flow naturally; water should instead be taken from the rivers lower down their courses. Changes in land management will also help and 'Managed aquifer recharge' should be added as a specific new option under Tier 2. The East Suffolk scheme mentioned in the Defra Policy Statement on [Flood and coastal erosion risk management](#) (p21) is promising. Freshwater that would otherwise be lost to the sea is being applied to trenches with the aim of recharging the underlying aquifer to support flows or for future abstraction. Further research should be undertaken, for example in the proposed ELM trial being led by Water Resources East in the Cam Valley, to develop a full menu of 'aquifer recharge' ELM options for land managers.
- (e) The poor water quality of our Chalk streams is also a great cause for concern. Watercourses need to be buffered to stop nutrients and pesticides entering them. Buffers should be at least 10 metres wide and include grass and trees (absorbing nutrients and providing shade, if needed, to reduce water temperatures). The vast quantity of soil lost through runoff is evident, for example, in the silt load of the River Cam when in flood. Measures to reduce siltation, such as silt traps, should also be funded.
- (f) 'Riparian corridors', with margins of up to 50 metres on both banks of watercourses, should be viewed as target areas not only for smaller-scale interventions under Tiers 1 and 2 but also for projects to 'rewild' land by restoring natural processes, as far as possible, under Tier 3. Reductions in the intensity

of land use adjacent to watercourses will benefit water flow and quality, flood risk management, and biodiversity, especially if secured over significant contiguous areas through collaboration between land managers. We have suggested elsewhere that Local Authorities should formally define and recognise these riparian corridors as 'Riverscape Opportunity Areas', within which to seek environmental improvements. They should likewise be targeted for funding by Defra through ELM.

- (g) ELM should also embrace 'nature-based solutions' to tackle flood risk. Appropriate Tiers should support interventions highlighted in the Government's recent Policy Statement on [Flood and coastal erosion risk management](#) (p20), including: slowing flows, diverting flows, temporary water attenuation, creating ponds and larger flood storage areas, restoring floodplains or washlands, and creating better linkages between land drainage and water storage needs.
- (h) Tier 3 should also include conservation covenants (to be introduced through the Environment Bill). They could be particularly valuable on riparian land, securing long-term commitments, certainly beyond 10 years, to appropriate environmental management. One option to guard against the understandable concern among land managers about limiting their land-use options in this way might be to provide part of the payment up front and the rest over the remaining period conditional on appropriate management. The covenants should be binding on any successor owner during the period of the covenant. In some cases owners may simply be willing to sell land voluntarily to local organisations better placed to manage it appropriately. The Government should also be prepared to facilitate such purchases.

10. Delivering environmental outcomes across multiple land holdings will in some cases be critical. For example, for establishing wildlife corridors or improving water quality in a catchment. What support do land managers need to work together within ELM, especially in tiers 2 and 3?

- (a) Wildlife does not recognise land boundaries, so cooperation between holdings is vital. However, it needs facilitation. Funding of advisers, meetings and plans must be part of this approach.
- (b) In some cases, these projects can link with local marketing of food and other products and marketing facilitators may be required. Monitoring and reporting of these approaches must include economics, resource use, biodiversity and community involvement, i.e. all aspects of sustainability. Such projects could be valuable in gaining a better understanding of the value of natural capital.

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?

- (a) The Cam Valley Forum welcome the emphasis on local priorities. Local knowledge, ideas and techniques should be used to involve local people and to use approaches that fit local needs. For example, many members of the diverse River Protection and Restoration Groups and Angling Clubs in the Cam Valley have an encyclopaedic knowledge of the watercourses in their local area, often gained over many years (e.g. they know about the locations of old oxbows and former ponds). Such groups may already work well with local land managers.
- (b) Staff working for local voluntary bodies such as the Wildlife Trusts, Wild Trout Trust and Farming and Wildlife Advisory Groups also often have intimate knowledge and experience of advising on, and/or managing, river restoration projects. The knowledge and expertise of staff in the Environment Agency, Natural England and navigation authorities such as the Cam Conservancy should also be actively sought. Data and knowledge held by the Centre for Ecology and Hydrology, British Geological Survey and National Soil Resources Institute should also be tapped in delivering local ELM aims.
- (c) Defra should actively seek out relevant local expertise. Local ELM consultation groups could meet occasionally to share insights and involve local people in advising on local priorities. Good communication with local stakeholders should encourage valuable inputs.

- (d) When tackling water quality, water flow and flooding challenges, a catchment-based approach is vital, so partnerships between adjacent land managers must be encouraged.

12. What is the best method for calculating payments rates for each tier, taking into account the need to balance delivering value for money, providing a fair payment to land managers, and maximising environmental benefit?

- (a) ELM services should be valued financially in their own right, rather than in comparison with food production. The requirement under EU legislation to calculate payments on the basis of the income foregone by adopting the specified land management practices seems unbalanced, given that food is valued by the market without necessarily taking account of the resulting environmental costs (e.g. erosion, water pollution) and benefits (e.g. landscape beauty, biodiversity). It also seems out of step with a natural capital approach, which values all services from land in their own right, not as adjuncts to, or competitors with, food production alone.
- (b) Land managers are best-placed to deliver appropriate benefits and their monopoly situation should be recognised to ensure committed and long-term involvement in the projects. Situations where, for example, arable land on downland slopes was restored to Chalk grassland under previous schemes, then ploughed up again once the agreement term ended, should be avoided.
- (c) Compliance with the conditions of agreements and observable changes in landscape and habitats should be measured using satellite imagery to confirm delivery. Monitoring must also be put in place to track less visible changes such as carbon sequestration in soils.

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

- (a) Participation in ELM by land managers should be encouraged by any opportunities to market scarce or valued *private* goods such as niche foods (meat, dairy products, wool from rare breeds) and other products (e.g. charcoal, firewood, timber, leather goods), or services (e.g. tourism) with branding associated with biodiversity, climate and sustainability achievements. This has been an important way of sustaining rewilding projects. Land managers should be encouraged to consider such opportunities (e.g. by publishing success stories as case studies).
- (b) There are important opportunities for water companies to provide financial support for on-farm investments that will also benefit their operations. These could include: ‘slowing the flow’ to contribute to aquifer recharge, helping to safeguard water supplies in dry periods; and encouraging better practice in nutrient, pesticide and soil management to reduce the costs of water treatment and the nutrient enrichment of Chalk streams. We welcome the Cambridge Water and Affinity Water [Entrade](#) initiative to encourage farmers to plant cover crops to protect the Chalk aquifer from further nutrient inputs.

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?

- (a) Advice is vital in helping land managers change direction. It cannot be assumed that farmers intuitively know how to farm for conservation. Advisers should understand the perspectives of land managers, have good ecological knowledge, and be trusted and effective communicators. These have long been hallmarks of the local Farming and Wildlife Advisory Groups, now represented by the [FWAG Association](#).
- (b) Facilitators will be needed where multiple land managers are involved. They should support land managers (who should be encouraged to lead the groups), by bringing people together at meetings and

demonstrations and providing specialist knowledge. Specialist areas would include marketing, habitat and species restoration, monitoring and whole farm planning.

- (c) We would expect one adviser to be able to support 15 or so land managers of Tier 2 and 3 projects. It is important that expert and timely support is available to all those who seek it.

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 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?

- (a) Monitoring to confirm fulfilment of delivery should be largely self-monitoring by Tier 1 farmers and their evidence should include a report and photographs to illustrate progress.
- (b) Delivery could be confirmed in Tiers 2 and 3 by the use of satellite imagery and occasional visits by Defra representatives as well as reports and photographs.

16. Do you agree with the proposed approach to the National Pilot? What are the key elements of ELM that you think we should test during the Pilot?

- (a) The pilots should be supervised by Defra representatives with independent advisers, for example from FWAG (Farming and Wildlife Advisory Group) and LEAF (Linking Environment and Farming).
- (b) The consultation paper does not list the specific projects that are to be taken forward through the National Pilot. The Cam Valley Forum consider that it is important for there to be at least one project focusing on Chalk streams that are under pressure from over-abstraction, pollution and habitat modifications. Water Resources East is developing proposals for a collaborative project that merits Defra support. Details, as recently forwarded to Rebecca Pow MP, are **annexed** below.
- (c) Defra should also support strategic projects to change how water companies access water from Chalk aquifers. They should cease borehole abstraction, thereby enabling headwater streams to flow naturally, and abstract the water instead from rivers lower down the catchment. Such projects should examine the impacts on water tables, water flows, soils, irrigation needs, food production, biodiversity and river channels, developing an integrated approach to water and land management. The catchment within which the RSPB Fowlmere Reserve is situated would be one suitable project location.

17. Do you have any other comments on the proposals set out in this document?

- (a) The principle of public money for public goods must guide plans, progress and results. The entire world, is suffering from the loss of biodiversity and the threat of climate change, with immense impacts and implications for human populations. Defra's ELM scheme must address both challenges with vigour.

1. Do you want your responses to be confidential? No.

2. What is your name? Cam Valley Forum (Dr Alan Woods, Hon Secretary)

3. What is your email address? aw@awassocs.co.uk.

4. Where are you located? East of England.

5. Who are you? The Cam Valley Forum is a voluntary group, established in 2001. We work with our extensive network of partners to protect and improve the environment of the River Cam and its tributaries.

Annex (Question 16): Promoting shifts in land use and management to safeguard the water environment

Issue: The Cam Valley's Chalk streams – internationally rare habitats – have suffered long term declines in flow and quality due to over-abstraction from the Chalk aquifer, inadequate wastewater treatment, intensive land use, and habitat modifications. Alongside action to reduce current levels of abstraction, action is also needed to tackle pollution and restore natural channels and river processes.

Example: The impacts of low flows are exacerbated by pollution. Sources of pollutants include farmland (e.g. nutrients, pesticides, sediment and animal waste), urban highways and drains (e.g. hydrocarbons and silt), and sewage treatment works (especially nutrients). Inputs from sewage works are constant year-round but their impact, especially in the upper river stretches, is magnified when there is less flow available to dilute them. Habitat modifications further disrupt natural processes. Over-deepening, straightening and field drainage have disconnected rivers from their floodplains, and reduced habitat quality. River bed gravels, essential for spawning fish, have been removed by dredging or buried by sediment. Weirs interfere with flows and obstruct fish. Watercourses are often overgrown and over-shaded.

Water Resources East, in collaboration with Cambridgeshire County Council, Cambridge Water, the Cam Valley Forum and local landowners, is developing a project in the headwaters of the River Granta and River Bourn to understand the impact of various changes in land use and management on the Chalk landscape on water availability, water quality and the opportunity for natural flood management. A key part of this work is to understand the additional aquifer recharge benefits which could be gained from land use change, increasing the resilience of the Chalk system to pressures such as growth and climate change.

Recommendation: Given the strong partnerships already developed, and the significant outcomes that this project seeks to deliver, the Government should follow the progress of this important project with interest and consider funding opportunities to further support its progress, with a view to it becoming one of the national Environmental Land Management Scheme pilots later in 2021. Defra should support the project team through funding and advice, with a view to making it an exemplar of good practice in protecting and restoring Chalk streams through changes in land use and management.
