

BRIEFING NOTE

Wye Catchment Living Labs Programme

To: Members of the Nutrient Management Board
From: Dr Rounaq Nayak, Principal Investigator, UWE Bristol
Date: May 2026
Re: Response to questions raised at the NMB meeting

Purpose of this note

Thank you to all members who engaged with the programme presentation at the NMB meeting. A number of important questions were raised and this note responds to each of them directly. The questions covered four main areas: how farm sites will be selected; whether Welsh farmers will be equally involved; how the programme will ensure environmental need is not sacrificed to farming business interests; and how we will avoid duplicating the Haskoning evidence review.

What the existing evidence tells us

Before responding to the specific questions, it is worth being clear about what the existing evidence already shows us about the scale of the challenge, because it provides the scientific baseline against which this programme's work must be measured.

The Mott MacDonald modelling (2024), commissioned by the Environment Agency, is a comprehensive quantitative analysis of the catchment to date. Its headline findings are clear: the management of manures and fertiliser application is the single largest lever for improving water quality in the Wye. Even a 25% reduction in manure and fertiliser application would reduce average dissolved inorganic nitrogen in the river by 12–28% and average soluble reactive phosphorus by 3–25%, depending on location. The most ambitious scenario modelled - combining a 49% reduction in manure and a 75% reduction in fertiliser with improved soil health across 65% of English agricultural land and 40% in Wales, increased tree cover, and wastewater treatment upgrades - could achieve nitrogen reductions of 35–72% and phosphorus reductions of 29–82%. But even that most ambitious combination does not guarantee Good Ecological Status across the whole catchment.

The Lantra workshops (March 2026), funded by the Welsh Government, found that the problems of the Wye are broadly understood and that the priority is no longer more theoretical and primary research but trial-based science: living labs and solutions-based projects that can quantify and validate what specific interventions actually deliver in practice. That is precisely what this programme is designed to do. 84% of participants in the Lantra process said there is currently not enough collaboration across the catchment, especially between England and Wales, and the biggest barriers to change identified were inconsistent funding (30%) and financial constraints on farm businesses (23%).

How will farm sites be selected?

Farm sites will not be selected until we have completed the first phase of the programme, which runs for approximately five months. Critically, site selection will be led by the evidence, and not by landowner access or convenience. This is a deliberate methodological choice and one that distinguishes this programme from previous work in the catchment.

The approach will work as follows. We will use existing data (including from the Wye Alliance Data Group and the current Haskoning evidence review) to identify where in the catchment interventions would have the greatest measurable impact on water quality. From that data-informed shortlist of locations, we will then work with Herefordshire Rural Hub and our wider partner network to identify and approach suitable farms. This means the geography shapes the farm selection, not the other way around. We are also deliberately avoiding the default of recruiting through dominant landowners, which can skew both where the living labs are sited and what interventions it is realistic to test. Based on initial assessment, the most important hotspot areas are likely to span the English and Welsh border given the watercourses involved, which is consistent with the co-funded, cross-border nature of the programme.

The criteria for confirming specific sites, once the evidence has identified the right geography, will include farm type (with a specific focus on intensive poultry operations and farms on shorter tenancies), monitoring feasibility, and farmer willingness to participate.

The Mott MacDonald evidence also shows that improving soil health across large areas of agricultural land is critical for flow management. This will inform the range of farming systems and soil types we look to represent across the three sites.

Will Welsh farmers be equally involved?

Yes. Welsh Government is a co-funder of the programme alongside Defra and Welsh perspectives are formally embedded in its governance. Natural Resources Wales and the Wye and Usk Foundation are partners, and the Lantra Wales workshops (funded by the Welsh Government specifically to inform this research programme) were designed to ensure Welsh catchment voices shaped the research priorities from the outset.

The Mott MacDonald modelling confirms that while nutrient loads are higher in the English sub-catchments, the Welsh part of the catchment plays a significant role in overall flow management and in the upper river's water quality. Interventions in the Welsh part of the catchment are therefore important in their own right, not an afterthought. We are committed to ensuring that the farm sites, the workshops, and the governance of the programme reflect both sides of the catchment.

Will farming business interests shape what interventions are tested?

The concern about the Farm Scope modelling process is well-founded and the programme team takes it seriously. The process progressively narrowed its intervention list through consultation until the options that remained, even if fully implemented across every farm in the catchment, are modelled as insufficient to restore the river to Good Ecological Status. Options that were considered unpalatable to farming interests were removed at early stages.

This programme is designed differently in three specific ways.

The science sets the floor, not the consultation

The first five months of the programme are focused on establishing what the evidence actually shows about the scale of intervention needed, drawing on the Mott MacDonald modelling, the Haskoning evidence review, and all other available catchment evidence. That scientific baseline is established before any conversation about feasibility or acceptability. Candidate interventions will be assessed against whether they are measurable and whether the modelling shows they can make a meaningful difference to water quality. Interventions that cannot meet that bar will not be taken forward, regardless of who advocates for them.

Independent scientific scrutiny

A Technical Group of independent scientific experts (covering water quality science, soil science, hydrology, ecological monitoring, and catchment governance) will provide independent assessment of which interventions are scientifically robust before any prioritisation decisions are made by the wider governance body. If any interest group were to push for interventions that the evidence does not support, the Technical Group provides a check on that which is not subject to political pressure. This is not a process where everyone holds a veto on the science, but it is a process where the science sets what is on the table.

Co-design is not the same as a veto

Farmers' knowledge and practical experience is valuable in this programme, not because we need permission, but because understanding why previous interventions have not worked, what the real constraints are on different farm types, and how interventions might be designed to be more effective are all things that farmers know and researchers do not. That is a different thing from allowing farming interests to remove inconvenient interventions from consideration. The first five months of the programme are specifically about creating a space where difficult conversations can happen honestly, including conversations about interventions that are not currently palatable but which the evidence says are needed.

What this programme cannot promise is that the interventions it tests will on their own be sufficient to restore the river. The Mott MacDonald modelling makes clear that even the most ambitious combination of agricultural interventions is not enough. That is a structural challenge for the catchment that extends beyond the scope of this research programme. What the programme can do is generate rigorous, credible evidence about what specific on-farm interventions actually deliver in real-world conditions; evidence that currently does not exist in sufficient quality to drive the scale of change needed. That evidence is a tool for the catchment, not a ceiling on ambition.

Avoiding duplication with the Haskoning evidence review

The point was well made and the short answer is that the two workstreams have different and complementary purposes, and we are already in active contact.

The Haskoning review, like the Mott MacDonald modelling before it, is an evidence synthesis exercise: it brings together what is already known about the catchment. The NMB has kindly shared the current iteration of the Haskoning evidence with us and we are treating it as a foundational input into our own WP1 evidence review, not as something to be repeated. The Lantra report itself concluded that the priority for the catchment is no longer more desk-based evidence synthesis but trial-based research that validates what works in practice, and that is the explicit purpose of this programme.

The relationship between the two workstreams is therefore additive: Haskoning identifies what the evidence says and where the gaps are; this programme tests specific on-farm interventions in those gap areas and generates new evidence. If we work closely together, and we intend to, the outputs of Haskoning will inform which interventions this programme prioritises, and the outputs of this programme will provide the trial-based evidence that Haskoning cannot.

A WCP meeting on 29th May and the lunchtime webinar being organised with Judith Whateley, Herefordshire Council, for the week of 8th June will both be opportunities to discuss how the two workstreams are joined up in practice.

Offer of support from the CLA

Thank you for the CLA's offer of support on farmer and landowner engagement. The Lantra workshops identified engagement through trusted intermediaries as critical to the success of any research programme in the catchment: farmers are more likely to engage honestly

through networks they already trust than through direct approaches from a university. We will be in touch about how the CLA can support the farmer engagement process, particularly in reaching farms not already connected through our current partner networks.

Next steps

The programme is currently in its first five months, focused on evidence review and workshop planning. Key upcoming touchpoints for the NMB and catchment participants include:

- WCP online meeting, 29th May: an opportunity to discuss the programme's approach and early evidence review.
- WCP lunchtime webinar, week of 8th June: being organised with Judith Whateley as a broader briefing on the programme's direction.
- Participatory workshops, months 2-5: the NMB is well placed to contribute to these workshops, both through Cllr Swinglehurst's role on the Project Steering Group and through the wider evidence and intelligence the NMB holds on nutrient management in the catchment.

We welcome the NMB's continued engagement and are grateful for the rigour of the questions raised at the meeting. Please do not hesitate to contact me directly with any further questions.

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