

Soils and Water in the Landscape

WORKSHOP SUMMARY

This workshop brought together four organisations leading projects at the forefront of soil, water retention and resilient landscapes – and the connections between them. We heard from:

- **Cat Wallis, Impact Director, 3Keel** – The Landscape Enterprise Networks (LENs) Model.
- **Cat Moncrieff, Head of Policy and Engagement, CIWEM** – “Spongy Landscapes’ policy brief
- **Seren Patterson, Water Stewardship Manager, The Rivers Trust** – The Volumetric Water Benefit Accounting (VWBA) methodology.
- **Emily Brown, Environmental Scientist, AtkinsRéalis**- The Soil Carbon and Water Resilience Project.

The speakers offered different perspectives on how the soil-water-resilience dynamic can be understood, strengthened and operationalised, for different organisations. The approaches the respective projects use ranged from empirical soil science to corporate water accounting, offering distinct pathways for understanding, measuring and enhancing soil- water resilience.

There was a clear consensus that soils are central to proactively managing water supply and risk; underpinning resilient landscapes, supply chains and business operations. Successful projects require partnerships between a variety of stakeholders, reflecting a shared understanding that water supply and overall risk is a collective challenge that cannot be addressed by any single actor. Below, we highlight our 10 key takeaways. To watch the webinar please [follow this link](#).

1. Soils are critical for mitigating flood and drought risk, supporting river health and underpinning resilient food production because of their ability to hold, slow and filter water in our rural landscapes.
2. A growing number of business sectors now understand their increasing exposure to water-related disruption, the role of soils in mitigating this risk and hence how soils underpin their operations. These sectors include food and drink, water, banking, insurance, transport, technology and local government. Representatives of these sectors are investing in landscape projects across the country.
3. The term ‘resilience’ means different things to different stakeholders. Farmers and banks value farm business resilience, food and drink and technology (data hub) companies value resilience in the supply chain and local councils, insurance companies and transport infrastructure value flood risk resilience. This is reflected in the outcomes they are looking to achieve, and the metrics they need to underpin these outcomes.
4. Each project relies on quantification and measurement to understand and record how soil and land-use change influence water movement. Whether through soil sampling, hydrological modelling, or volumetric water benefit accounting, all four approaches use structured metrics to assess change over time, to demonstrate impact and allocate funding.
5. Projects are designed around the needs of the landscape and the farming businesses present, not necessarily the investors. Because every landscape is different, the interventions that are funded will differ from one area to the next – based on science-based research and evidence. These might include cover crops, minimum tillage equipment, species-rich hedgerows, trees and shrubs planting, leaky dams and headwater wetlands – all of which are implemented with the intention to holding back water in the landscape.

6. The projects have broad categories of impact, with projects intended to combine several outcomes, including soil health, water resilience, biodiversity uplift, reduced nutrient losses, climate mitigation (e.g. carbon sequestration), and farmer well-being/business resilience.
7. When it comes to measuring impact, projects face challenges of scale, and how to reconcile measurements at the farm level with wider landscape resilience. Decisions about what monitoring-reporting-validation (MRV) is used, especially for soil, need to balance competing requirements over cost, accuracy and time pressure.
8. The projects build on the widespread understanding that increases in soil organic matter led to increases in water holding capacity. This was demonstrated in different ways across the projects through measurement, modelling and yield impact. Further investment in modelling and independent monitoring and verification is critical for building confidence for funders, investors, farmers and regulators.
9. Soil type and texture is increasingly being built into project strategy and calculations since it is a critical determinant for how much water a given soil can store, and hence the variability of impact across different interventions. The availability since April this year of the Soil Maps of England and Wales will support much stronger local, place-based (landscape and field) decision-making about land use and management choices.
10. There is a need for policy stability, advisory support (including farm clusters) and standardised metrics to scale these approaches across the farmed landscape. Key to this is knowing what the government will and won't fund in terms of measurements and interventions. There is also a pressing need for policy clarity to enable projects to stack different outcomes (biodiversity, carbon, water holding capacity) from a single parcel of land.



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