

## Peer Review Comments (AJ): Background and overview

The aim of this introduction is to give a more coherent explanation of the set of comments I have been invited to provide. They were explicitly to be targeted to the farming sector and its strategic significance to ecological, climate, economic, health, and other ecosystem public goods. This may be particularly useful for those who less familiar with the agriculture and farming sector.

—I have no pecuniary interests to declare.

—My professional background is as a business leader, tech designer, research professor, strategist, and advisor in the ecology of organisations and their development.

—*Cllr Angus Jenkinson, Councillor for Regenerative Agricultures and Ecology, Cotswold District Council.*

*“We affirm that agriculture and food systems must urgently adapt and transform in order to respond to the imperatives of climate change... we commit to expedite the integration of agriculture and food systems into our climate action and, simultaneously, to mainstream climate action across our policy agendas and actions related to agriculture and food systems...”*

*“We stress that any path to fully achieving the long-term goals of the Paris Agreement must include agriculture and food systems... agriculture and food systems must urgently adapt and transform in order to respond to the imperatives of climate change... conserving, protecting and restoring land and natural ecosystems, enhancing soil health, and biodiversity, and shifting from higher greenhouse gas-emitting practices to more sustainable production and consumption approaches...”*

— COP28 Declaration by UK and 158 other countries

My review focuses on the economic strategy related to agriculture, including farmers and growers (farming and horticulture), and supporting activities. Farming and horticulture will both be generally represented by “farms” or “farming”. Supporting activities include county competencies and policies, research, education, on-farm business stacking, key enablers (such as local abattoirs), county food procurement policies, useful agri-tech, and so on.<sup>1</sup> It applies to county, commercial and NGO farms. The “food chain” including production and retail industries are relevant to this, but treated here as a context for the focus on agriculture. The county’s own policies for food procurement are relevant.

This Introductory section outlines the basic argument and proposal for adjusting the Gloucestershire strategy and then supplements this with additional clarification and rationale. Not all readers will be conversant with the underlying principles for the transformation in farming and the effect of this on the technologies that have driven it for the past 100 years. While urban civilization runs on a mechanised frame, agriculture grows best in nature. Even advanced techniques of breeding must

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<sup>1</sup> Although the stated assignment is “Cotswolds”, the District’s response is led by the Chief Executive and by Cllr Tony Dale, Cabinet Member for Economic Development. I was originally involved in this review process as a result of a critique I raised in GEGSC leading to a request for expert input on the sector.

work with nature. This later part will therefore highlight the change in mindset and I kind of know how that is involved. The COP28 UAE Declaration concludes the Introduction.

At the 2024 Oxford Real Farming Conference it was proposed that the role of agriculture and horticulture towards net-zero climate outcomes are:

1. To become a net sink
2. To cultivate a nature-friendly national on-farm ecology
3. To encourage and support transition to a healthy food culture and ordinary practice
4. To ensure agroecological-literacy to ensure wise national, local, and supply chain policies.

My primary recommendations for adjustments to the strategy are threefold: a) Recognise the scale of change and “drama” ahead; b) de-emphasize agri-tech and focus on agricultural techniques (methods, practices, innovation processes); c) make resilience a core element of the county strategy.

## 1.1 Vision for agriculture and a more resilient Gloucestershire

Contributions to the 2050 Vision.

1. Gloucestershire is a resilient county celebrated across multiple sectors (food, cyber, economy, and land use...) as a leader in meeting global and local challenges.
2. Gloucestershire will be a carbon sink county. By 2035, well before 2050, on-farm systems will *in toto* be net zero or better, thereby adhering to the Paris and UAE (COP28) agreements. By 2050, on-farm agroecology will be a [major] carbon sink. This will be based largely on the intrinsic biological processes of agricultural carbon sequestration supported by climate-friendly technologies such as solar, water, and wind.
3. Biodiversity, ecology, and soil will have been transformed enabling resilient economics and vibrant responsive ecology in a fluxing and changing environment. This will better enable farmers to shrug off critical events, whether societal, weather, pests, or pathogens.
4. Gloucestershire has an end to end, soil-to-soil, circular economy for its own food system and is using this to educate and develop count-wide practices. This is supported at one end by good farming and the other by well-educated consumers.
5. Farm economies will be substantially resilient even in a challenging global environment giving sustainable and healthy food due to reduced external input costs, better conservation or use of resources, productive farm and land management plans, stacking of on-farm agriculture- or food-related business units, a complex of policy adjustments in support systems, national, market and food chains, and consumer behaviour.
6. Mixed farm economies will have provided a variety of work, business, and economic opportunities across the age and ability gamut.
7. The National Landscapes, National Forestry, towns, and rural areas will be valued a tourist destination that is enriched by the increased biodiversity, pastures, woods, regional foods

and drinks, food centres, and healthy and health-giving spaces. There will be numerous wild bathing rivers, pools, and lakes. Wild flowers, birds, and ecologically-balanced insects and bees will be abundant.

8. This will be achieved despite an increasingly variable and challenging set of climate-related and possibly social challenges, which Gloucestershire is ameliorating.

