

## **SOUTH SHROPSHIRE CLIMATE ACTION – LAND AND BIODIVERSITY PLAN**

**Responsible Officer** Phil Holden, AONB Partnership Manager  
e-mail: [phil.holden@shropshire.gov.uk](mailto:phil.holden@shropshire.gov.uk) Tel: 01743 254741

### **Summary**

This paper provides information on the plan being developed for the Land & Biodiversity aspects of South Shropshire Climate Action's plan.

### **Recommendation**

The Partnership is recommended to comment on the issues raised.

### **Background**

The group is working to the area of the Ludlow constituency, of which slightly over half is within the AONB. The full 30 page draft document is not included with these papers but can be made available to members on request. Summary messages and extracts from it are included below. Nick Read who chairs the Land & Biodiversity group will attend the Partnership meeting to speak on this and take part in discussion.

### **Land Management for the climate and ecological crisis**

Just like in other sectors (energy, transport, etc), fairly fundamental changes are needed in farming and other land management practices, both to significantly reduce greenhouse gas (GHG) emissions and to significantly improve ecological health. Systems based on the integration of ecology and agriculture are needed, characterised locally by mixed farming, use of legumes to fix nitrogen, high biodiversity for soil nutrient cycling and pest control, effective recycling of nutrients, lower inputs, minimal or no use of pesticides and avoidance of over-stocking.

#### Key messages for land management:

- Protect the environmental assets we already have
- Recognise the inter-relationships between food production and biodiversity
- Increase land use practices that support an agro-ecological approach, thereby reducing GHG emissions, enhancing soil carbon sequestration and supporting nature's recovery
- Develop widespread stakeholder engagement locally and a policy framework that supports transformational change

### Summary of local actions for land management:

- Work with local stakeholders to generate and deliver local solutions
- Do no harm, protect our existing fauna and flora, trees, woodland, rivers and hedges
- Recognise that nature exists everywhere and that all land is a habitat for some form of life
- Provide help and advice to all land managers wanting to care and conserve
- Stop emissions from modified peatlands, and reverse this into becoming a carbon sink by rewetting these soils
- Link those areas of habitat that are in favourable condition and restore those that have deteriorated to create a Nature Recovery Network
- Reduce emissions from energy use in farming, including in vehicles, buildings, use of materials and bought in resources
- Improve the biology of local soils by reducing compaction and soil run-off, manage soils to improve soil health and fertility
- Reduce Greenhouse Gas (GHG) emissions from methane and nitrous oxides, through management of livestock, manures and fertilisers
- Increase carbon sequestration by increasing soil organic content, and increasing tree and woodland cover in appropriate ways for the local landscape
- Naturalise existing watercourses, create more diverse riverine habitats and employ natural approaches to support flood alleviation, be prepared to reverse some past drainage
- Ensure that farmers are rewarded for the quality of the food they produce and for delivering public benefits, enable policy drivers to support a low carbon and high biodiversity trajectory
- Improve people's access to, and connectivity with, their local natural environment to improve health and well-being and generate local support for farming-led initiatives

The landscape is of high environmental value but also strongly influenced by socio-economic factors as it is a product of human agency, Options for change must be considered within the parameters of what the natural environment can accommodate without further harm and also responding to cultural, economic and technical drivers. Our priority must be to value what already exists and enable a transition to more effective ways of reducing GHG emissions and protecting and enhancing biodiversity.

The UK Government's commissioned report on the economics of biodiversity (Dasgupta 2021) makes the following points:

- Our economies, livelihoods and well-being all depend on our most precious asset: Nature
- We have collectively failed to engage with Nature sustainably, to the extent that our demands far exceed its capacity to supply us with the goods and services we all rely on.
- Our unsustainable engagement with Nature is endangering the prosperity of current and future generations.

Whatever terminology we use to address climate change and nature recovery, the balance of land uses will need to encompass sustainable food production, habitat protection and restoration, ecological processes and carbon sequestration. Farmland which has high environmental value will need to be maintained as such by continuing low intensity or sustainably intensive farming methods. To achieve this often requires public support both financially and through social acceptance of what is being proposed, so that farming methods

remain both socially and economically viable. The report "Farming for Change" [FFCC 2021] argues for a vision that connects food, health, nature and climate and demonstrates how, with the right enabling conditions, we can grow enough food for a future UK population, release land for more flexible uses such as recreation and biodiversity and reduce GHG emissions.

GHG emissions from land use include carbon dioxide, nitrous oxide and methane. Soil is an important carbon store and the 4per1000 initiative is an international commitment linked to the Paris agreement to try and increase soil carbon stocks by 0.4% (4 parts per thousand) year on year.

A traffic light table of land management measures and their effect (positive or negative) in relation to both climate and biodiversity is presented in the report.

#### Principles of land management strategies for climate change and nature recovery:

- Value and safeguard what we already have before making significant changes. In addition to new woodland, restore existing woodland, maintain tree cover and allow hedgerows to thrive. Expand tree cover in nature-friendly ways, mimicking natural patterns and using native species
- Survey for existing conservation interest first when planning new planting. Consider the suitability of steep banks, upland gullies and streams, f corners, hedges, agro-forestry and wood pasture.
- Avoid simplistic assessments, land-use is not one-dimensional. Whilst livestock contribute to GHG emissions, they are also important grazing managers and income earners. Existing permanent pasture is a carbon store that needs active management, so consider alternatives such as lower stocking densities, small areas of market gardening etc.
- Prioritise the role of agro-ecological farming systems based on ecology, diversity, integration of farming and wildlife, and soil biological activity.
- Consider the whole life cycle and effects of the farming system. Cattle housed indoors may offer better management of GHG emissions, but this may ignore environmental factors such as inputs, soil and water management, and biodiversity - for which grazing systems may be essential – as well as the emissions generated in producing the inputs used.
- Recognise the importance of economically viable food production. This may lead to areas being utilised to produce "sustainable intensification" (raising yields), so that other land is available for biodiversity and carbon storage.
- Wherever possible, ensure that multiple uses or values of land overlies in the same place. Avoid thinking of land as arable, pasture, or woodland, but look at the benefits or "ecosystem services" that come from intact ecosystems on all land.
- Riverine management is important for flood management and biodiversity. Where possible, re-naturalise rivers and enhance river corridors with tree and shrub cover, which may also involve controlling stock access and restoring floodplain wetlands.
- Maximise community interest in South Shropshire's natural environment so that people value what it contains and will be encouraged to make behavioural changes to lower carbon emissions. It will require the combined impact of the public, private and voluntary sectors to effectively tackle net zero and nature recovery in the next decade

South Shropshire woodland cover is 17.6% which is quite well above the national average. Current levels of new woodland creation are low. 83% of carbon storage in a woodland is in soil, below ground biomass and leaf litter.

Hedgerows can store 15 tonnes of carbon per hectare (tC/ha) for short hedges (up to 1.5m high) and 30-40 tC/ha for tall hedges (up to 2.7m), with a similar amount of carbon in below-ground biomass.

Connections are made between land use and food. Most plans for net zero expect some dietary changes to be necessary as well as reducing food waste. There is a significant opportunity for improvement and the promotion of a "healthy" diet, for both people and the environment, bringing Public Health and its resources into the debate about carbon reduction.

<b>List of Background Papers</b>
Information on South Shropshire Climate Action was included in the paper for item 3 at the 24th November 2020 meeting, and more is available at <a href="https://shropshireclimateaction.co.uk/">https://shropshireclimateaction.co.uk/</a> . Extensive resources are available in the Land section.
<b>Human Rights Act Appraisal</b>
The information in this report is compatible with the Human Rights Act 1998.
<b>Environmental Appraisal</b>
The recommendation in this paper will contribute to the conservation of protected landscapes.
<b>Risk Management Appraisal</b>
Risk management has been appraised as part of the considerations of this report.
<b>Community / Consultations Appraisal</b>
The topics raised in this paper have been the subject of earlier consultations with Partnership members.
<b>Appendices</b>
None