Land Action Plan summary

Produced by The Mersey Forest on behalf of Cheshire West and Chester Council.

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Introduction

Acknowledging that climate change is the greatest threat to our social wellbeing and economic future, Cheshire West and Chester Council declared a Climate Emergency. We are also in the midst of a nature emergency. Nature is in long term decline and urgent action is needed to reverse this, with a thriving natural environment essential to a healthy and prosperous society. The climate and nature emergencies are intrinsically linked, and as such, it makes sense to tackle them together. Climate change will further drive nature's decline, whilst restoring nature can help to tackle the climate crisis.

The Council's Climate Emergency Response Plan is set out across six themes: energy and industry; transport; housing; business premises and engagement; land use, adaptation, climate repair; and waste and recycling. This "Land Action Plan: for the climate and nature emergencies" focuses in detail on the "land use, adaptation and climate repair" theme.

It sets out a vision and 64 actions for using land in west Cheshire to help tackle the climate and nature emergencies. These actions will support the delivery of the target, in the Climate Emergency Response Plan, of a 10 per cent reduction in emissions from land use by 2025 (from the baseline of 340 ktCO_2e per annum).

The Council can deliver some of the actions itself, but will also need to work with a broad range of partners, from businesses and farmers, to communities and individuals. We all have a part to play in delivering this Plan.

The Land Action Plan updates a Framework for Action, developed in 2011 for the North West Climate Change Partnership. This included significant evidence gathering and 72 organisations, including Cheshire West and Chester Council, helped to shape it. The update has been prepared with consultation and engagement with a wide range of Council teams and boards, as well as with external partners. There was also a six week public consultation with 130 responses.

The vision

To act immediately so that, by 2045, all land in west Cheshire helps tackle the climate and nature emergencies. This will have wider social, economic and environmental benefits. Land use will be optimised to reduce greenhouse gas emissions, store residual emissions, and help us to adapt to inevitable changes.

To reduce emissions and store residual emissions, land needs to be used to:

- **Produce food** – ensuring food security through low carbon and regenerative farming and local food growing that restores soil health
- **Sequester and store carbon** – in soils and vegetation
- **Provide low carbon energy** – including bioenergy with carbon capture and storage, wind and solar
- **Provide low carbon materials** – replacing energy intensive materials with timber and other natural materials
- **Reduce the need for car travel** – high quality local recreation areas and green travel routes to encourage walking and cycling.

To help adapt to inevitable changes, land needs to be used to:

- **Support biodiversity** – recover, protect and maintain diverse habitats to ensure a connected landscape and natural resilience
- **Keep us cooler** – evaporative cooling and shading to ensure that during heatwaves urban areas remain attractive, comfortable and healthy places to live, work, visit and invest

- **Manage water in an integrated way** – natural flood management and managing water quantity and quality, to slow down peak flows, reduce runoff and associated soil erosion, store and re-use water, sustain river flows, catch sediment, and prevent pollutants from entering waterways
- **Provide a resilient outdoor recreation and visitor resource** – connecting people with nature and improving wellbeing, whilst managing visitor pressure on sensitive landscapes and wildlife.

The actions

64 actions are set out according to the different roles we need to use land for, as identified in the vision above. This is for presentation purposes, as many of the actions will play more than one role, and it is desirable that they do so. The actions will need to be delivered by many Council teams, working with a broad range of partners, and using different mechanisms including strategies and plans, as well as public and private funds. Please see the full Action Plan for a list of Council teams, potential partners, and mechanisms identified so far.

1. Cross-cutting actions

Land can perform a number of roles to help tackle both the climate and nature emergencies. These overarching actions are cross-cutting, helping to combine and optimise these roles.

1.1 Champion this 'Land Action Plan: for the climate and nature emergencies' and embed it in the broadest range of policies, strategies, plans, programmes, initiatives, decision making, and ongoing work across the Council and borough, not just those directly related to the environment.

1.2 Establish an ongoing dialogue and reporting between all Council teams, the climate change team and senior management on promoting and actioning the delivery of this Action Plan and the rest of the Climate Emergency Response Plan.

1.3 Identify and meet the skill gaps within the current and future workforce needed to deliver this Action Plan.

1.4 Review the Council's approach to business case development in order to take into account whole life costs, bringing together capital outlay, maintenance and carbon accounting.

1.5 Procurement of products and services must seek to minimise greenhouse gas emissions, store residual emissions (e.g. in timber products), ensure they are adapted to inevitable changes in climate, minimise nature depletion and contribute to nature recovery, and be sustainable and free from deforestation throughout the supply chain. Imported commodities must come from certified sustainable sources.

1.6 Use strategic regeneration programmes in Ellesmere Port, Northwich and Winsford, and Chester to act as exemplars, showcasing partnership working and community engagement to deliver multifunctional green infrastructure, with optimised climate change services.

1.7 Work with the Local Enterprise Partnership to develop, finalise and launch a Natural Capital Audit, Investment and Implementation Plan for Cheshire and Warrington, and target strategic interventions using this.

1.8 Review the Council's land holdings, including its farm estate, to explore the case for this land to contribute to the Council's goal of becoming carbon neutral by 2030, as well as helping adapt to climate change and nature recovery, including the potential to introduce a biodiversity net-gain commitment on this land.

1.9 Engage with other public or public facing land holders to look at assets and how land is managed collectively to better tackle climate and nature emergencies. This could include health, defence, education, police, as well as Housing Associations, Parish and Town Councils, and large land holders.

1.10 Review the opportunity following the Local Plan Conversation to use updates to the Local Plan, if any, to strengthen existing green infrastructure, biodiversity net gain, and other policies in relation to this Action Plan; and ensure more expedient enforcement and implementation of policies.

1.11 Engage with and support the Planning Team to share best practice and support ambitious net-zero, nature recovery, and climate adapted policy making and enforcement.

1.12 Encourage and enable new or revised Neighbourhood Plans to incorporate climate change, nature recovery, and green infrastructure policies. This could include providing templates, exemplars, and other guidance or facilitation methods.

1.13 Review the Council's tree replacement policy and promote the value of urban trees to justify and secure resources for urban planting, taking into account the range of ecosystem services they provide across the borough.

1.14 Use nature based solutions to climate change where possible, in order to tackle the climate and nature emergencies together. Ensure that biodiversity is a consideration in the delivery of all actions. All interventions should also seek to: optimise other green infrastructure services through careful design and management, take into account other considerations (including landscape character, historic environment), make provisions for long term management, involve appropriate partners including local communities in decision making and delivery.

1.15 Proactively engage, communicate, and support the wider community and businesses to raise awareness, educate, elicit ideas and expertise, co-create, encourage and support delivery of actions, and in some cases explain why the actions taken are needed. This will include volunteering and community action (e.g. through Friends of Groups, community groups, and charities), meaningful engagement with disadvantaged and underrepresented sections of society, and the use of citizen science or participatory research where appropriate.

1.16 Collect and regularly update GIS data on urban and rural green infrastructure, including quantity, types, functions, and where it is needed for different socio-economic and environmental reasons.

1.17 Liaise nationally to ensure that GIS datasets relating to this agenda are freely or readily accessible by local authorities.

1.18 Monitor, review and report on delivery of actions and their effectiveness via the reporting mechanism of the Climate Emergency Response Plan, which provides an annual report to Council, and use this information to refine the Plan.

2. Produce food

West Cheshire has a large amount of agricultural land, largely used for dairy and non-dairy livestock, and crops that feed them. However, there are significant greenhouse gas emissions associated with livestock farming, which account for about eight per cent of all emissions in west Cheshire.

Reducing meat and dairy consumption will help to reduce emissions and will also free up land to play a wider range of roles in tackling the climate and nature emergencies. Nationally, the Climate Change Committee have proposed a 20 per cent reduction in meat and dairy consumption, whilst the National Food Strategy proposed a 30 per cent cut. However, west Cheshire should continue to play an important part in ongoing meat and dairy production as, due to the nature of its climate and soils, it is one of the most efficient places in the world for dairy production.

The challenge and opportunity here is to work with farmers to adopt low carbon and regenerative farming practices across west Cheshire, to reduce emissions and help store carbon in soils, whilst ensuring food security. Less versatile and more marginal agricultural land could be put to other uses such as woodland and habitat creation. Urban food production and community food growing also has a role to play in reducing food miles, as well as helping with issues such as health and food poverty.

2.1 Encourage dietary change in line with national recommendations to free up land for habitat creation and other uses by reducing intake of carbon intensive foods such as beef, lamb and dairy. Encourage locally sourced (or British), seasonal agricultural produce, including meat and dairy, including through public procurement.

2.2 Safeguard the ‘best and most versatile’ agricultural land (grades 2 and 3a) for food production.

2.3 Keep up to date with advice and best practice and encourage low carbon/methane farming practices, regenerative farming, and agricultural practices adapted to a changing climate, and optimise the delivery of other services. According to the Climate Change Committee, cost effective mitigation measures include: biological nitrogen fixation with grass-legume mixtures, livestock breeding, increased milking frequency, high sugar content grasses, anaerobic digestion of manure, better

health planning for livestock, precision feeding, high starch diet for dairy cattle, covering slurry with impermeable plastic, nitrate and 3NOP as feed additives, catch/cover crops. Adaptation practices include farm water management to reduce flooding and provide for droughts, changing crop types, field and hedgerow trees and copses to provide shade for livestock.

2.4 Advocate livestock are not fed on soy linked to rainforest destruction.

2.5 Review the Council's approach to supporting allotment and community growing.

2.6 Use new and re-development to encourage and incorporate urban food production, through the creation of allotments, community farms and gardens, inclusion of orchards, fruit trees and bushes into urban design, and including ‘meanwhile’ and temporary uses of land.

2.7 Encourage community and home food growing, through practical work and awareness raising programmes, including in schools, faith-based land, allotments, orchards, and parks.

3. Sequester and store carbon

Soils and vegetation can both store carbon in the long term and sequester it, or remove it from the atmosphere. This is essential in helping to mitigate any residual or hard-to-eliminate emissions.

About 9.6MtC are stored in vegetation and the top 30cm of soils in west Cheshire. Soils are the largest carbon store, and peaty soils are particularly important here. Peat covers about three per cent of west Cheshire, and this is likely to be in a degraded state, where rather than sequestering carbon it is actually releasing it into the atmosphere. Vegetation can also play a role here, with woodlands generally having significantly higher above-ground carbon stores than other vegetation, and the ability to continuously sequester carbon. Woodland covers about six per cent of west Cheshire, with a significant additional cover of trees outside of woodlands.

The challenge here is to restore and manage existing carbon stores, whilst also establishing trees, woodlands and other habitats to increase the amount of carbon

sequestered and stored.

3.1 Manage land to optimise the carbon stored in soils and vegetation (e.g. agricultural practices to increase soil carbon stores, regenerative farming, increased tree and woodland establishment, hedgerows, agroforestry (both silvoarable and silvopastural), wetland, peatland and woodland management).

3.2 At least double the cover of woodland, as well as trees outside of woodlands, across the borough by 2045, through natural regeneration and planting, as appropriate. Planting will be a mix of broadleaf and conifer, to provide a range of services and benefits, adhering to UK Forestry Standards and a "right tree, right place" approach.

3.3 To continue to be the accountable body, programme managers, funding recipient and distributor for the Trees for Climate national programme, ensuring the effective management of this nationwide programme.

3.4 Support the ongoing delivery of The Mersey Forest Plan.

3.5 Review the existing peat habitats and soils within west Cheshire, in order to develop appropriate retention and restoration targets. This could be in line with national recommendations by the Climate Change Committee to restore at least 25 per cent of lowland peat by 2050 (or 50 per cent under a higher level of ambition), while allowing food production to continue on the most productive land.

3.6 Review procurement processes to confirm that contracts are peat-free, and take corrective action where necessary.

4. Provide low carbon energy

The ‘energy and industry’ and ‘waste and recycling’ themes of the Climate Emergency Response Plan will largely deal with this topic. However, we have highlighted a few actions here which relate more specifically to land use.

Land within west Cheshire can help to provide low carbon energy, through sensitive siting of small-scale solar photovoltaics and windfarms, growing bioenergy crops (such as short rotation willow coppice, miscanthus, or woodland) and anaerobic

digestion (of manure, general waste, maize, food waste, mixed waste) in combination with carbon capture and storage technologies.

West Cheshire may be well placed to capitalise on bioenergy with carbon capture and storage (BECCS) due to its significant industrial infrastructure, a proposed BECCS plant in the Ellesmere Port area, and identified opportunities for a long term underground carbon store at Liverpool Bay. A local supply of the bioenergy feed for the plant would help to reduce emissions associated with transportation.

4.1 Review potential to expand growing of bioenergy crops (e.g. short rotation coppice, miscanthus, or other crops) for use with carbon capture and storage in appropriate locations, including on temporary/meanwhile land to provide some income. Encourage bioenergy with carbon capture and storage facilities in the borough to source their feedstock from within west Cheshire.

4.2 Encourage low-carbon energy production from anaerobic digestion of livestock manure. Support the development of the bioenergy with carbon capture and storage sector in partnership with the Local Enterprise Partnership.

4.3 Support other renewable energy generation from the land, e.g. photovoltaics, wind.

4.4 Keep up to date with potential new ways of generating energy, such as the potential for ground source and water source renewable heat generation in urban green spaces.

5. Provide low carbon materials

The “housing” and “business premises and engagement” themes from the Climate Emergency Response Plan cross-over with this topic, as it relates to the materials used in construction.

There is a lot of embodied energy and significant emissions associated with the production of construction materials such as concrete and steel. Timber can have a much lower embodied energy, and has the added benefit that the carbon that it has

absorbed whilst growing continues to be stored in the buildings in the longer term. As such, the Climate Change Committee has called for an increased use of timber, from sustainably managed woodland, in construction.

It highlights, in particular, the huge potential in the non-residential sector, which currently sees very low levels of timber in larger builds. Any new build would need to be in accordance with the latest fire safety regulations.

Whilst some woodlands in west Cheshire are harvested for timber, there is potential for increased planting and management for this purpose.

5.1 Bring under and unmanaged rural and urban trees and woodlands into management for the range of services they can provide, and to retain these for longer term.

5.2 Review the potential to make use of timber and natural materials in construction, including in public buildings, and ensure that green infrastructure (e.g. trees, green roofs, and Sustainable Drainage Systems where appropriate) is incorporated to make it well adapted to projected climate change.

5.3 Develop public procurement policies, as well as Council Funds, Grants and Capital programmes, that enhance market opportunities for local sustainable materials.

5.4 Support innovation and entrepreneurship in developing new products and market opportunities from timber and other natural low carbon alternatives to energy intensive materials, ensuring that any value added processing is carried out locally.

6. Reduce the need for car travel

The “transport” theme from the Climate Emergency Response Plan crosses over with this topic.

In this Action Plan we do not focus on reducing emissions from transport in its entirety, but rather on the contribution to this agenda that greener settings can

provide. In particular, the provision of green, attractive and safe active travel routes could encourage people to walk and cycle more, helping to reduce emissions associated with transport as well as improving local air quality and health and well being.

In addition, the provision of high-quality local recreation areas could reduce the desire to travel further distances, potentially by car, for recreation.

6.1 Create and green active travel routes to make them more accessible, safe, attractive and comfortable for walking, cycling and wheeling. Existing green corridors can be used (e.g. rivers, canals, disused railway lines, public rights of way) as well as tree lined streets.

6.2 Explore and remove barriers to the use of public green spaces, both physical and non-physical.

7. Support biodiversity

Nature is in long term decline and urgent action is needed to reverse this, and to help it adapt to the further challenges that climate change will bring.

Whilst the actions presented here are to help nature adapt, restoring nature will also help tackle the climate crisis and is essential to a healthy and prosperous society.

7.1 Protect 30 per cent of land in west Cheshire for nature by 2030 (in line with national and international commitments), including the Council's own land holdings, in-line with the Wildflower and Grasslands Strategy. As well as more land for nature, we also need to increase the size of habitats where possible, improve their management so that they are in more favourable conditions and take into account climate change impacts, and link these sites with nature-enhancing land uses into a more coherent Nature Recovery Network.

7.2 We will work with the Local Nature Partnership and other partners to develop a Nature Recovery Strategy for Cheshire, to aid recovery of key habitats and species.

7.3 Identify where there may be substantial barriers to species dispersal, such as major roads, and explore the potential to create green bridges to allow for species migration.

7.4 Planning should continue to identify and protect ecological networks, including internationally important sites, sites of special scientific interest, Local Wildlife Sites, ancient woodlands, other priority habitats and features, and areas for restoration.

7.5 Invest in Council skills and ability to act as lead for Biodiversity Net Gain investment.

7.6 Reduce the frequency of mowing, collect cuttings, and reduce use of pesticides and weedkillers on Council owned land, in line with the Wildflower and Grasslands Strategy.

7.7 Encourage all land to be managed to create a more permeable landscape and reduce pressure on wildlife.

7.8 Encourage low carbon and wildlife friendly gardening practices, that take into consideration potential impacts of climate change.

8. Keep us cooler

Climate change will increase the frequency and intensity of heatwaves, with consequences for people's health and well-being, and for the economic vitality of town and city centres.

Three heatwaves in the summer months of 2020 resulted in 253 extra deaths in the North West of England. Among the most vulnerable are those located in urban centres, the elderly, people with severe illnesses, and those who cannot adapt their behaviour to keep cool (e.g. young children).

About 250,000 people live in the urban areas of west Cheshire.

Public Health England's Heatwave Plan promotes the greening of the built environment to combat overheating. Green infrastructure can help manage temperatures by providing evaporative cooling, shading, and allowing air to flow into

urban areas. It can also help reduce future demand for air conditioning, which would result in increased emissions as well as waste heat further warming urban areas.

Large green spaces play an important cooling role, but it is also important to have green spaces where people live, work and gather. Trees, green walls and green roofs can help to increase green cover in more built up environments. Trees, and especially large canopied trees, are particularly important for the shade they provide.

8.1 Review the potential to target areas to protect existing and create new green infrastructure, and increase tree cover (including trees which will have large mature canopies) to provide shade and cooling.

8.2 Explore the potential to use green space and building alignment to incorporate cool air flows into new developments, and the wider settlement.

9. Manage water in an integrated way

Climate change projections include a shift in the seasonality of rainfall; drier summers and wetter winters, with more extreme events such as heavy rainfall which can lead to flooding, and drought with implications for the quantity and quality of water, with important consequences for both human consumption and wildlife that relies on aquatic ecosystems.

Land use and management also impacts on water; on the speed of runoff over surfaces, soil erosion, pollutants entering water courses, and on demand for water, including abstraction. We must plan for water in an integrated way, to be able to reduce flooding and the impacts of drought, and maintain water resources.

The more extreme rainfall events anticipated with climate change will result in increased flooding from a range of sources including surface water, rivers and tidal. Urbanisation also increases flood risk, with impermeable paved surfaces replacing permeable vegetated surfaces. This results in a faster rate and a greater volume of runoff into drains, and an increased risk of these being overwhelmed and flooding. It

also results in a more frequent occurrence of combined sewer overflows polluting watercourses.

Flooding has severe negative impacts: damaging property, affecting health and wellbeing, and having significant economic costs. Low income families are particularly vulnerable, as they are less able to prepare, respond and recover from it.

Natural Flood Management solutions have a part to play in managing flooding, alongside other solutions such as hard engineering and community resilience. They reduce the maximum water volume and slow down peak flows, by increasing storage, catchment and channel roughness, and infiltrating water to the soil in appropriate locations. They can also help to manage water resources, maintaining base flows during dry periods and filtering water to catch sediment and remove pollutants.

Techniques used include establishing trees, hedgerows and woodlands, restoring river meanders, leaky dams, temporary storage areas and ponds, functioning floodplains, agricultural practices to improve soil structure, green infrastructure, and sustainable drainage systems. Stored rainwater can also be reused during droughts to irrigate the green infrastructure, allowing it to continue to provide evaporative cooling to keep towns cool without adding extra pressure to water resources.

9.1 Implement the Local Plan policies requiring Sustainable Drainage Systems (for water quantity, quality, amenity, and biodiversity), where appropriate, in new developments and restructuring.

9.2 Target areas to retrofit Sustainable Drainage Systems (for water quantity, quality, amenity, and biodiversity), using existing or creating new green infrastructure, subject to funding.

9.3 Divert rainwater falling on properties (including roofs, drives, patios, yards etc) away from public sewers using Sustainable Drainage System techniques such as soakaways, or diverting it to water courses where possible (prior permission required from the Environment Agency or Canal and River Trust).

9.4 In line with Local Plan policy, avoid new developments in areas at risk of flooding, using these areas as open space, with provision for temporary water storage.

9.5 We will identify where natural flood management approaches can be used through an opportunity mapping exercise.

9.6 Encourage and use natural flood management within river catchments to help manage riverine flooding and soil erosion.

9.7 Identify and prioritise river stretches for rehabilitation and restoration (e.g. reconnecting rivers to their floodplains).

9.8 Ensure a sustainable water supply for vegetation in times of water stress in order to maintain its evaporative cooling function.

10. Provide a resilient outdoor recreation and visitor resource

The hotter summer temperatures anticipated with climate change may result in a shift towards more outdoor oriented recreation and tourism in west Cheshire. This could place increasing pressure on landscapes and wildlife, which may also be under direct pressure from climate change.

It is crucial to manage the outdoor visitor resource for these increasing pressures, which include increased trampling and soil erosion. This will include providing a resilient outdoor recreation and visitor resource, and diverting pressure from sensitive landscapes.

10.1 To embed an understanding of the interactions between climate change, visitor behaviour and environmental capacity into any tourism-oriented policy.

10.2 Carefully manage adverse impacts of climate change and visitor pressure on valuable landscapes.

10.3 Create outdoor tourism resources in areas with a high capacity to accommodate visitors, linking in to public right of way network.

10.4 Promote natural visitor destinations.

10.5 Encourage sustainable travel to and around natural tourism resources.

10.6 Explore the use of innovative funding measures, such as visitor payback schemes, in order to increase investment in landscape management.

10.7 In areas where there is high visitor pressure, ensure that footpaths and public rights of way are maintained to reduce erosion. Tourism policy should recognise the reliance that the visitor economy has on key landscapes and ensure that their use as a visitor resource is sustainable.