

Sustainable and Inclusive Growth Commission

Consultation Document with Extended Evidence

Cheshire and Warrington: Transitioning to a sustainable and inclusive economy



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About the Commission

The Cheshire and Warrington Sustainable and Inclusive Growth Commission was set up by the Subregional Leaders' Board in November 2020, with the aim of contributing towards realising Cheshire and Warrington's ambition of becoming the most sustainable and inclusive subregion in the UK. It has been divided into collation, planning, engagement (and consultation) and action phases, with a final report to be produced in summer 2022.

The Commission is made up of elected representatives from each local authority and a Local Enterprise Partnership Board member, as well as representatives from carbon intensive industries and agriculture, finance and investment, energy, and experts from civil society including university, housing and local nature sectors, and has also worked with expert advisers from beyond the Commission. It has worked with locally based bodies and considered previous / ongoing work within the subregion and examples of best practice beyond the subregion, drawing in experts from a wide variety of fields for advice. Whilst an extensive amount of work has been done, the Commission itself is a voluntary endeavour, supported via a small amount of resource from public bodies. The Commission's Secretariat is drawn from the LEP with support from the Local Authorities.

The Commission has been working on four themes: Inclusive Economy, Sustainable Transport, Sustainable Land Use, and Net Zero, as well as a supporting Finance and Funding function. For each of these themes the Commission has developed an evidence base for Cheshire and Warrington's current position, a vision representing where the Commission believes the subregion should aim to be and a set of recommended actions to achieve these visions. These findings are presented in this document.

The Commission has had regard to national policy and opportunities for investment in projects which will make a real difference to meeting the twin objectives of sustainable and inclusive growth (alongside improving health outcomes). There will be opportunities to align with the recently published Levelling Up White Paper which includes twelve 2030 missions that range from increasing pay, employment, and productivity; to improving public transport systems; or addressing illiteracy and innumeracy in primary education, which will be given legal status, and the forthcoming health white paper. There are also opportunities within the new national Net Zero Strategy, for example by becoming an exemplar for industrial decarbonisation, and a leader in low carbon energy, securing good, green jobs for our residents.

Timeline and Process

The remit of the Commission was split by topic into the five thematic working groups outlined above, and the work has been divided into four phases:

Collate:

Over a period of ten months the Commission assembled a set of ideas and evidence base across the five themes. The working groups covered investments, programmes, and examples of best practice, as well as any activities beyond the subregion which either directly overlap with subregional activities or might usefully be considered as part of future plans.

Plan:

Based on the information gathered, resource requirements identified and stakeholder/actor involvement, the Commission created four thematic action plans for Cheshire and Warrington.

Investable projects were evaluated for social impact using an inclusivity toolkit and for investment potential where appropriate through an outline business case template.

Consult:

A key element of the Commission is the active engagement and buy in from as many parts of our subregional communities and stakeholders as possible. Getting sign up to the goals and activities proposed in the report will be critical to its future success. Following consultation, Commissioners will actively update the final report based on feedback and will promote the findings from the consultation exercise.

Promote:

It is intended that a high-quality Final Report will be the outcome of the Commission and the Commissioners will be actively involved in promoting the outputs to their relevant sectors while making sure that each recommendation reaches the organisation it is aimed at.

Consultation

We have reached the engagement and consultation phase of the Sustainable and Inclusive Growth Commission. The evidence, vision, and recommendations for each of the four themes (Inclusive Economy, Sustainable Transport, Sustainable Land Use and Net Zero) have been collated into a Consultation Document.

The Commission are looking to hear from a wide variety of people and organisations about their views on the content of this document, including members of the public, public and private sector organisations, civil society and local interest groups. This will help the Commission to ensure we have identified the right actions, to increase the chance of achieving the broad visions that have been set out.

The feedback from the consultation process will be used to sense check, review, and update the recommendations, creating a final report. Findings from the consultation exercise will be shared with those who took part in the consultation.

This document is the Consultation Document with an extended Evidence Pack. If you would like to access a more high level version of this document, please refer to the Consultation Document available here: [Sustainable and Inclusive Growth Commission - Cheshire and Warrington](#) **Please let us have your comments on the report. Comments are welcome on the whole report or just one or more sections of the report. Questions can be found at the end of this document.**

You can access an online survey tool here: <https://forms.office.com/r/nU7gkStw3k>

We will also be running several events both virtually and in person. All are welcome to these events and details can be found below.

Wednesday 30th March 2022 - Online

Monday 4th April 2022 - Online

Thursday 7th April 2022 - Online

Friday 29th April 2022 - Crewe Alexandra Football Club

Thursday 5th May 2022 - Ellesmere Port Civic Centre

Monday 9th May 2022 - Warrington Village Hotel

If you would like to attend one of these events, please register on Eventbrite link. This can be found on the Sustainable and Inclusive Growth Commission webpage:

<https://cheshireandwarrington.com/what-we-do/sustainability/sustainable-and-inclusive-growth-commission/>

Consultation Questions

We would be grateful to receive specific responses to the following questions for each theme. Please feel free to respond to the themes that are of interest to you, but all are invited to answer every section.

1. Is the document hitting the priorities you consider important overall?
2. Do you consider that there are any gaps in the document? If yes, please explain your answer.
3. Are we ensuring that our sustainability-led recommendations are inclusive enough?
4. Do you agree with our vision statements?
5. Do you agree with our recommendations?
6. Which of the recommendations do you think are most important to prioritise?
7. Are there projects or initiatives that are already delivering on our recommendations, or additional evidence that we have not mentioned?
8. Please let us have any other comments or views.

Introduction and Purpose

Within Cheshire and Warrington, and nationally and globally, the global pandemic has hit some of the most vulnerable people in our communities the hardest, including the lowest paid, young people, women, and minorities, and those living in more deprived areas with fewer facilities and green spaces. It has brought about an increased awareness of the inequities in society and stimulated greater collective action across all sectors of society to meet basic needs, address poverty and hunger, and champion fair employment. It has come at a time when the effects of climate change are becoming ever more real and visible across the globe, and no one can deny that it poses a serious risk to our local society and economy. This area has especially high carbon emissions across our industrial sector, and agriculture as well as transport and housing. We also need to contend with the serious risk that global warming poses to food security and production, biodiversity loss, health, and infrastructure, and with impacts such as flooding and sea level rise, the latter of which some models predict will affect parts of the area by 2050 without mitigation¹.

It is in this context that the Leaders of Cheshire and Warrington committed not to return to the 'old normal' - an economy that worked for many but not for everyone, and in which the impact of our activities on the earth's natural resources was not fully acknowledged or addressed.

In response to these challenges Cheshire and Warrington's Leaders set out an ambition to become the most sustainable, inclusive, healthy, and growing subregion in the country. As well as delivering benefits and improving outcomes for local people and the environment, delivering against these ambitions will enable the area to be better able to attract both public and private investment and become a leading example of a just transition to a green, fair, and growing economy: distributing the benefits of local economic development more evenly within the area; and also exporting skills and know-how within the UK and globally. This is especially important and timely in the context of the UK's hosting of the global COP-26 climate change agenda, and the UK Government's flagship Levelling Up White Paper and Net Zero Strategy.

The Leaders have established this independent Sustainable and Inclusive Growth Commission to act as a catalyst for how the subregion can go further, faster towards achieving this vision. Its recommendations for action are outlined in this document.



¹ [Climate Central | Land projected to be below annual flood level in 2050](#)

Inclusive economy

Vision and overview

In response to the evidence we reviewed, our overall ambition is to encourage economic growth that combines increased prosperity with greater equality, creates opportunities for all, and distributes the benefits of increased prosperity fairly across the subregion. We propose this will be delivered through three priority actions:

- By mainstreaming inclusion into policy, investment, procurement and hiring practices across the subregion, using agreed toolkits.
- By implementing a joined up approach to inclusion in the subregion through shared initiatives such as social value (Fair Employment Charter, Anchor Networks), inclusive skills and employment, digital inclusion, and positive action.
- By creating new and collecting existing data more efficiently to identify inequities and inform policy making, and piloting recent and new approaches such as embedding lived experience in policy.



For the purposes of this work, we have defined ‘inclusive economy’ as the encouragement of economic growth that combines increased prosperity with greater equality, creates opportunities for all, and distributes the benefits of increased prosperity fairly. When thinking about inclusivity, it is important to consider equality issues related to both 1) protected characteristics and 2) to socioeconomic status, as well as ‘intersectionality’², where categorisations overlap.

When the Commission was considering wider sustainability challenges and solutions, these were reviewed in terms of their impact on inclusion and inequality. An inclusivity toolkit was introduced, and proposed projects have been assessed using this toolkit. This process and the inclusivity toolkit has also identified potential stakeholders who may be affected by the proposals, for the Commission to target with this consultation.

The working group looked at both (a) how we can ensure that an inclusive approach is mainstreamed through our environmental sustainability work, as the evidence suggests that environmental sustainability measures will not succeed without ensuring they are rolled out with reference to inclusivity (and we used the toolkit for this) and (b) how to address the inequalities in society more generally.

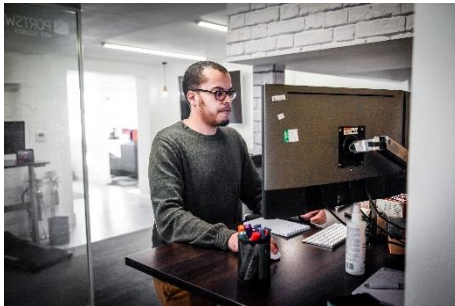
In relation to inequalities, the working group agreed that the Commission would pay specific attention to work, education and skills via a lens of socioeconomic status/deprivation, sex, race and disability. In doing this we found that whilst data collection has improved greatly in recent years, there is often a lack of analytical consistency and collection across sectors, regions and protected characteristics, leaving gaps in data, particularly regarding gender, disability and race.



² Intersectionality is the interconnected nature of social categorizations such as race, class, and gender as they apply to a given individual or group, regarded as creating overlapping and interdependent systems of discrimination or disadvantage.

The Government has stated that it is committed to ‘levelling up’ inequalities to create a fairer society, with the Levelling Up White Paper having been recently published. We welcome this commitment to create a fairer society, addressing areas of socio-economic disadvantage, and the invitation for areas to work in partnership with government to identify priorities for targeting via forms of devolution such as County Deals.

The existing Public Sector Equality Duty also requires public authorities to consider alleviating disadvantage through advancement of equality of opportunity, including through positive action in certain circumstances. Additionally, the Public Services (Social Value) Act requires commissioners of public services to think about how they can secure wider economic, social, and environmental benefits.



For Cheshire and Warrington to be successful for everybody, we need to consider the impact of proposals on all our diverse communities, and to work in partnership with the public sector, businesses, and voluntary and community organisations, to address the challenges and ensure that all residents live their best lives.

Cheshire and Warrington Inclusive Economy – Current Position

**30 neighbourhoods
in the most
deprived 10%
nationally**

At the subregional level, Cheshire and Warrington is performing well with high skills levels, employment rates and earnings, but the aggregated data hides inequalities across the subregion.

In terms of socio-economic status, whilst most of the subregion can be considered prosperous, 5% of the population (30 neighbourhoods) live in the top 10% most deprived places in the country on the Index of Multiple Deprivation³, and there are high levels of deprivation in some of our urban areas, particularly Chester, Crewe, Ellesmere Port, Macclesfield, Warrington and Winsford. Across the subregion, between the lowest and highest performing areas, healthy life expectancy varies by 18 years⁴. In the highest earning neighbourhood, annual household income is twice as high as in the lowest performing neighbourhood⁵ and the proportion of jobs earning below the Real Living Wage varies across the subregion with 11.4% of jobs earning below this level in Chester, compared to 31.9% in Congleton⁶. While in general the area has a highly skilled resident workforce, there are places where disadvantaged young people have few qualifications.

The Cheshire and Warrington LEP Skills Report 2021 has reported that in England, the gap in attainment of Level 3 for those eligible and those not eligible for free school meals has been approximately 25% in this period. The three Cheshire and Warrington local authorities have all consistently had a wider gap than England, usually greater than 5 percentage points in any given year, and this has been so for at least 15 years. As in other parts of the country, where young people live links to their level of attainment and the likelihood that they will claim benefits when adult.

It also confirms that too few disadvantaged 16-year-olds progress to a sustained place in education; too few disadvantaged young people achieve Level 2 aged 19; and too few disadvantaged young

³ Ministry of Housing, Communities and Local Government (MHCLG) Index of Multiple Deprivation (2019).

⁴ ONS Life Expectancy and Healthy Life Expectancy (2009-13).

⁵ ONS Income estimates for small areas (2018).

⁶ ONS Annual Survey of Hours and Earnings (2020).

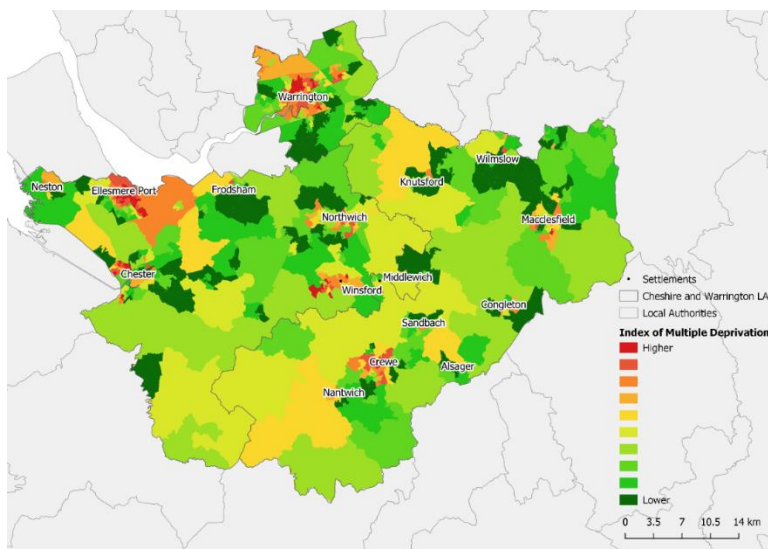
people achieve a Level 3 aged 19. There is a need to support the progression into education or employment of adults and young people with mental health conditions, disabilities and/or learning difficulties.

There are issues with in-work inequalities - the percentage of jobs in the area paying below the real living wage (which acts as a proxy for in work poverty) is higher than the UK and regional average, with 20% of employees in the subregion earning less than this⁷.



Significant gender disparities also remain in Cheshire and Warrington in terms of economic activity and earnings and there is also continued gender segregation in apprenticeships and other learning routes and a subregional gender pay gap (with females on lower pay on average)⁸. It is the Commission's view that the proportions of female participation in digital skills is too low across every level and age. There are significant gender disparities in Level 3 delivery in ICT, Engineering, Health and Social Care, and Construction across all learning routes⁹. In our view this embeds a structural deficiency in the labour market where some occupations only draw on the talents of half of the population. However, there is also a disparity in representation of males in post-16 education with fewer males than females overall¹⁰.

Deprivation across Cheshire and Warrington¹¹



Currently there are 113,800 residents economically inactive¹², and 16,794 claiming Universal Credit¹³. We know that the economically inactive are the most likely to be internet non-users, particularly those adults on long-term sick leave or disabled and that there is therefore a need to target those areas most deprived for Digital Inclusion Investment. There is also a need to address complex worklessness and economic inactivity to ensure that those who are economically

inactive but with the right support could enter and sustain employment. Focus is on those who are out of work to be helped to access employment; those who are threatened with unemployment to be helped to stay employed; and those furthest from the labour market to be helped to move closer to it.

⁷ Cheshire and Warrington Strategic Economic Plan 2018

⁸ Cheshire and Warrington LEP Skills Report April 2021

⁹ Ibid

¹⁰ Ibid

¹¹ MHCLG Index of Multiple Deprivation (2019).

¹² Nomis (85,100 without retired)

¹³ Cheshire and Warrington Workforce Recovery Group February 2022

There is no single cause of deprivation – it is driven by low outcomes in education, employment, income, and health. There may also be hidden deprivation in rural areas, which perform well overall, but where there may be challenges around social isolation, barriers to housing and services, and the living environment – including quality of housing, air quality and road safety.

There is already a significant amount of work aimed at addressing disadvantage and underpinning an ‘Inclusive Economy’ approach taking place across Cheshire and Warrington, such as the Cheshire West Poverty Truth Commission and their Inclusive Economy Plan. Many other existing documents are focused on equalities and meeting the Public Sector Equality Duty, and there are also diverse approaches to addressing socio-economic disadvantage. However, the pockets of excellent activity taking place across the subregion are not joined up, and it is the view of the Commission that more joined up thinking and partnership working across the inclusive economy remit would help to deliver the outcomes sought.

Recommendations

Delivering social value

The Commission recommends that the Leaders’ Board:

- Commits to establish and adopt a Fair Employment Charter which subregional businesses would sign up with commitments to fair employment principles such as paying a living wage and embedding equality and diversity.
- Commits to the establishment of a subregional Anchor Network building on the good practice led by Cheshire West and Chester Council, and the Cheshire and Merseyside Health and Care Partnership. This would use the combined commissioning/procurement, employment and social value principles of anchor institutions to deliver an inclusive (and sustainable) economy.
- Commits to undertaking a study to understand the scale and make-up of the socially-trading and cooperative sector in the subregion, and their potential to achieve inclusive economy outcomes.

Cheshire West and Chester Council are exploring a fair employment charter as part of their new Inclusive Economy Plan, and the project could be more impactful at a subregional level, especially through a network of Anchor Organisations. It is also well documented how socially-trading organisations can support inclusive economy outcomes.



Data, policy and investment

The Commission recommends that the Leaders’ Board:

- Adopts a Decision Support Tool/s to ensure that investment and policy decisions take proper account of inclusive economy (and sustainability) considerations and that commissioned projects benefit rather than further disadvantage the most vulnerable in the subregion. This could also be promoted to the Anchor Network. There are a number of pre-existing decision support tools available to support this.
- Set up a subregional inclusive economy coordination steering group and commit to the ongoing robust analysis of inclusive economy data, address data gaps, and develop recommendations on where key inclusive economy initiatives could be shared and



implemented more widely, with the intention of undertaking a feasibility study on an ongoing Data Hub. This project could be linked with the LEP's Data and Labour Market Steering Group.

- Extends the approach and commitment to embedding lived experience of poverty in policy and decision making across the subregion to be able to draw upon the insight of real people to understand existing issues/ barriers and co-produce solutions, drawing on the Poverty Truth Commission run in Cheshire West. There may be an option to run this as a consistent model but delivered locally (e.g. like The Pledge model).
- Ensure that any potential County Deal asks of Government, and approaches to levelling up funding, such as the Shared Prosperity Fund, properly consider inclusion.
- Ask a suitable organisation to run a pilot project to understand how public investments can properly consider inclusive and sustainable factors.
- Commissions the LEP's Data and Labour Market Steering Group to carry out a pilot study (or PhD Studentship) to establish a clear understanding of the barriers to employment and progression in targeted geographical communities where the evidence collected to date shows that residents are at a disadvantage.

Digital inclusion

The Commission recommends that the Leaders' Board:

- Promotes and embeds good practice from the Digital Policy Lab project led by Cheshire West and Chester Council via the Cooperative Councils Innovation Network. This has produced a how-to guide/toolkit for local authorities and others looking to understand and tackle the digital divide.
- Lobbies Government to provide funding for internet (broadband and mobile) access and training to digitally excluded communities in the subregion.

Inclusive skills

The Commission recommends that the Leaders' Board:

- Commissions the LEP to create a subgroup of its skills and employment board looking specifically at inclusion.
- Makes *inclusive* green skills a strategic subregional priority so that all can share in the benefits from new and existing jobs which will deliver clean growth, and support with investment (e.g. via the LEP Skills and Employment Board).
- Commissions the creation of affordable, accessible short courses on green skills / carbon literacy at subregional education and training organisations and ensures these are promoted and available to disadvantaged areas and groups.
- Sponsor a marketing and engagement campaign showcasing inspiring stories of women in IT and STEM careers to encourage take-up in the subregion, potentially working with the Pledge and Marketing Cheshire.



Positive action

The Commission recommends that the Leaders' Board:

- Commits to the development of a subregional Positive Action Toolkit to encourage and provide confidence on the use of robust positive action aimed at addressing the skills deficit.

The toolkit would promote greater representation of protected groups such as those with a disability and from disadvantaged socio-economic groups and help address issues such as the gender pay gap, attainment, and the disparity in representation of males in post-16 education.



Sustainable transport

Vision and overview

The Commission considers that the subregion should set itself an objective of full decarbonisation of all transport in Cheshire and Warrington by 2035, to be delivered through three priority activities:

- Creating an ecosystem which makes the adoption of electric cars the most cost effective and accessible means of private and business transport by 2030.
- By creating a public transport system which is zero carbon, accessible and integrated across the subregion making bus use a first choice for shoppers, commuters and visitors by 2030.
- By making active travel, on bikes and walking, easy, clean, and healthy option for all our residents, employees and visitors, fully integrating it with other forms of travel.

This will require a sustained collaborative effort from a range of delivery organisations including Department for Transport, Great British Railways, Highways England, local authorities, bus operators, private sector operators (e.g. taxis, haulage companies). Hence this is a long-term strategy covering 20+ years, but with some interventions that could start within 6 to 12 months. It will require a mix of working with and lobbying businesses and other public sector bodies alongside investing in specific projects.

The Case for Action

In the UK surface transport is the largest contributing sector to greenhouse gas emissions, accounting for 22% of all emissions in 2019, of which more than 95% are from road transport. Furthermore, transport emissions have grown overall since 2013, despite modest falls in the last few years¹⁴.

It is therefore essential that the transport network is decarbonized if the UK, and Cheshire and Warrington is to successfully shift to a low carbon economy. We cannot achieve a carbon reduction from transport on our own, this is a collaborative effort.

The majority of Cheshire and Warrington residents live and work in the sub region, re-enforcing the importance of intra-regional connectivity and the need to ensure that residents are offered high quality options for getting around within the subregion.



Cross boundary movements are also important. Cheshire and Warrington rely heavily on commuters from surrounding regions to fill a significant proportion of the jobs in the subregion, whilst a number of Cheshire and Warrington residents travel to locations outside the area, in particular Manchester for their employment. These links, and access to economic and cultural opportunities, are crucial factors in attracting and retaining graduates and

those aged 25-35.

Based on the Cheshire and Warrington Transport Strategy 120,000 jobs could be generated in the subregion along with 127,000 additional homes by 2040, with increases in demand for travel occurring

¹⁴ <https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-to-2019>



across the subregion.¹⁵ Consultancy work for the development of the subregional transport strategy identified that the highest levels of growth are likely to occur in mid-Cheshire which is currently the least well served by sustainable modes.

The table below sets out how, pre-pandemic, residents of Cheshire and Warrington travelled to work, with drivers and passengers of cars or vans accounting for over 70% of journeys to work. Whilst this is comparable to the average for Wales, it is significantly higher than the figure for England as a whole. Although these statistics are relatively old it is evident that it remains the case that public transport is responsible for a relatively low proportion of journeys to work, with the proportion of journeys by bus being around half that for England.

Travel to Work Mode Splits

Mode of Travel (2011 Census ¹⁶)	Cheshire East	Cheshire West & Chester	Warrington	England	Wales
Work mainly at or from home	7%	6%	5%	5%	5%
Underground, metro, light rail, tram	0%	0%	0%	4%	0%
Train	3%	2%	2%	5%	2%
Bus, minibus or coach	2%	3%	5%	7%	5%
Taxi	0%	1%	0%	1%	0%
Motorcycle, scooter, moped	1%	1%	1%	1%	1%
Driving a car or van	68%	68%	71%	57%	67%
Passenger in a car or van	5%	6%	6%	5%	7%
Bicycle	3%	3%	3%	3%	1%
On foot	10%	10%	8%	11%	11%
Other method of travel	1%	1%	1%	1%	1%

Source: 2011 Census

¹⁵ <https://cheshireandwarrington.com/what-we-do/analysis-and-plans/>

¹⁶ Last available data until 2021 census results are published.



Other data shows that households with no car are concentrated primarily in urban areas, but there are also parts of mid-Cheshire where car ownership is comparatively low. Lack of accessibility is a key barrier for people accessing employment opportunities, meaning that low incomes are both a symptom of and a cause of low car ownership. Expanding public transport and good active travel options therefore both have an important part to play not only meeting Cheshire and Warrington’s sustainability goals but can also make an important contribution to the subregion’s inclusivity agenda.

A significant contributor to the underutilisation of bus use across the sub region is the poor quality of connections and frequencies. The limited nature of services is encouraging greater dependency on car use as the dominate mode of travel, in turn putting greater pressure on parking facilities at stations and places of employment. The changing economy from traditional 9-5 to more flexible employment means that poor bus connectivity is also constraining job opportunities, because many services are not operating in alignment with changing shift patterns or accommodating more flexible working (e.g. part time work or working across multiple locations). It is important that the subregion begins to implement policies that address these problems to make sure that we lower transport related emissions, provide better access to jobs, improve air quality, and create a good experience for people using public transport.

Whilst 2011 census data identifies travel to work by bike as matching the national average in all three areas (3%) walking is slightly below national levels with 10% of journeys in Cheshire East and Cheshire West and 8% in Warrington. Many of our local trips are suitable for walking and cycling either as part of a single trip or as a leg on a longer journey. Our topography is generally favourable for active travel and our urban areas are of a scale where travel on foot or by bike is a viable option for many.

Electric Vehicles and Charging Points

Given how little public transport is used for journeys within Cheshire and Warrington, it is unlikely that a policy based solely on improving public transport will lead to a substantial reduction in emissions. The subregion therefore needs to look, as well, towards a rapid transition towards electric vehicles.

	ULEVs 2021 Q3	ULEVs 2011 Q4	BEVs 2021 Q3	PHEVs 2021 Q3
Cheshire East	3,521	31	1,757	1,688
Cheshire West and Chester	2,218	38	1,258	875
Warrington	1,316	5	730	562

Source: DfT Vehicle Licensing Statistics, Ultra-low emission vehicles (ULEVs), Battery electric vehicles (BEVs) and Plug-in hybrid electric vehicles (PHEVs) licensed at the end of the quarter

	Total devices	Total devices per 100k of population	Rapid devices	Rapid devices per 100k of population
UK	28,375	42.5	5,156	7.7
Cheshire East	122	31.6	33	8.5
Cheshire West and Chester	101	29.4	19	5.5
Warrington	89	42.5	19	9.1

Source: DfT, Electric Vehicle Charging Statistics January 2022



Statistics compiled by the Department for Transport show the number of fully electric or plug in hybrid cars, LGVs and quadricycles registered in the local authority areas in 2021. It shows a significant increase in ownership since 2011 but still a relatively small number of charging points available. Current issues include:

- lack of standardisation with charging points – there is a mix of connectors, charge points and tariffs
- regional networks with drivers requiring different memberships (a card and/or app for access)
- finding locations (charging points generally in car parks and in random locations)
- occupied charging stations
- slow charging times (varies per car model and charging type)



To support the transition to net zero, it is crucial that residents have access to EV charging devices, and active travel with cycling lanes and walking routes. In 2022 Warrington had 42.5 charging devices per 100,000 population, which is the same as the UK average, whilst availability was lower in Cheshire East (31.6 per 100,000 population) and Cheshire West and Chester (29.4 per 100,000 population)¹⁷. Charging Devices are most concentrated in towns with fewer located in rural areas an inequality issue that could be easily addressed.



Recommendations

Changes to the Way We Do Business

The Commission considers that there are a range of measures and investments that the three local authorities can put in place that would help to significantly reduce emissions from transport:

Development of a subregional zero-emission transport infrastructure plan

¹⁷ Department for Transport (DfT) (2022) Electric vehicle charging device statistics: January 2022.

The Commission recommends that the local authorities commission consultants to develop a subregional zero-emission transport plan which links up initiatives and identifies gaps and examples of best practices. It should identify the key actions needed for the subregion to transition towards zero-emission vehicle ownership and the standardisation of charging infrastructure. It should also develop guidance to help local authorities to understand the issues, opportunities, and solutions to rolling out charging infrastructure, including any implications for planning policies. The objectives of the plan should be faster rollout of zero-emission vehicles in the subregion, greater standardization of charging infrastructure and a stronger link to spatial planning that helps to secure modal shift reducing the overall number of vehicles on the roads.

A step-by-step pathway to streets for all

The Commission considers that the three local authorities should employ consultants to develop step-by-step guide to help them identify the steps necessary to successfully transition to car-free city and town centres in the next 30 years. The steps would gradually improve the environment for visitors, residents and businesses in the centres and give back space to pedestrians and other sustainable modes of travel. The guidance would need to consider what measures would need to be implemented over what timescale and set out how to overcome barriers to implementation. A key component should be to ensure that investment is undertaken in alternative modes prior to any mechanisms being introduced that prevent people using current means of travel. The benefits of such a plan would be improved quality of living/environment in town centres including better air quality, noise reduction and improved safety, more space for urban life on pedestrianised streets and facilitating the transition towards sustainable modes of travel.



Encouraging Bus Use

To encourage greater use of buses, the Commission considers that the local authorities should:

- Carry out a feasibility study on how a subregional integrated ticketing, timetabling and real time passenger information system could be rolled out, building on and pulling together related strategies from the local authority Bus Service Improvement Plans. Such a study will help bus travel become more attractive, more comfortable, and easier to navigate resulting in decarbonisation benefits and reduction in traffic congestion.
- Lobby for the use of open access platforms for electronic ticketing so that they are readily usable by different companies.
- Include the need for bus companies to make provision for more luggage space and bike racks in their bus service improvement plans to encourage more journeys.
- Develop and implement bus priority measures in their Bus Service Improvement Plans.
- Work closely with the LEP (via the Transport Advisory Group) utilising the work being undertaken by consultants for the subregional bus strategy.



Encouraging active travel

Alongside the development of this guidance, the Commission also considers that to encourage more active travel local authorities should engage with and lobby relevant organisations to deliver:

- More walk/bike to school, bike to work schemes
- More information on active/sustainable travel modes when people move house
- Securing more and better bike parking at train stations
- Securing showers and changing facilities available for people to encourage more commuting by bike
- Securing more bike racks on trains and buses
- Encouraging the Dutch model of commuting in which commuters leave bikes at both end of their railway journeys

Encouraging zero-emission vehicles

Alongside this plan, the Commission considers that there are some important early steps that the local authorities can take by:

- Replacing their fleets with EVs as part of their regular replacement programs and to avoid wherever possible buying/leasing fossil fuel vehicles
- Requiring all buses to have zero emissions by 2030
- Reviewing parking policy in city and town centres to incentivise the use of more sustainable modes of transport and support the transition to electric vehicles



- Commission work to help local authorities and the LEP to understand the issues, opportunities and solutions to supporting the second-hand EV market, helping to improve inclusivity in accessing EVs

Further Measures

Alongside these major steps, the Commission have identified several other measures that would help to reduce carbon dioxide emissions from transport in Cheshire and Warrington:

- Adopting low carbon materials for highway maintenance and improvement schemes, and for new developments.
- Carry out a pilot study to assess shared transport schemes for travel from rural to urban areas, especially for young people wanting to attend events. The study should consider how such a scheme could be best rolled out, how much it would cost, how many people would it benefit and would need to consider the work currently being undertaken by Cheshire West and Cheshire East Councils on the rural bus mobility grant.
- Commission consultants to help local authorities and the LEP to understand the issues, opportunities, and solutions to supporting projects that turn plastic into fuel.



Establishing Subregional Stakeholder Groups

Finally, the Commission recommend that the local authorities and the LEP:

- Establish a subregional stakeholder group to engage with when developing transport policy and strategy allow local people to report issues found in the transport infrastructure.
- Lobby HS2 to improve stakeholder engagement, integration with wider transport networks and reduce environmental impacts.

Sustainable land use

Vision and overview

Our overall ambition is to make current land use net carbon negative in the subregion and unlock the massive economic potential of the rural area. We propose this will be delivered through three priority activities:

- By realising the potential of the rural and land use sectors to generate economic growth and accelerate the move to regenerative agriculture and deliver our carbon zero ambition.
- By reversing the decline of Cheshire’s natural environment and biodiversity, promote the natural capital approach and promote the environment as our natural health service.
- By supporting producers, landowners, and local authorities to increase the amount of accessible, fresh, low carbon, locally produced food available to people within the subregion.

Whilst heavy industry emissions may be concentrated in certain places, there are new opportunities across Cheshire and Warrington, in rural areas and other brownfield sites to deliver net zero. Agriculture, which currently is a net emitter, has the potential to be a significant part of the solution. We have reviewed land use from the point of view of agriculture, natural capital and biodiversity, vertical farming and innovation, diet change and energy/renewables.

Agriculture is an important part of our economy in rural areas with 9,000 jobs and a further 5,400 jobs in agri-food¹⁸. Major employers include NWF Agriculture, Meadow Foods and Aviagen Turkeys. We also have major landowners including Grosvenor, Cholmondeley Estates, Bolesworth Estates, Tatton Estates, Combermere Abbey Estates, Barnston Estates and National Trust, who collectively control over 40,000 acres. Cheshire is the second largest milk producing sub region in the UK, with some of the most productive pastures in the world. This has resulted in higher-than-average herd sizes and above average milk yields. Whilst this has enabled many farmers to weather the volatility of the global liquid milk market, and has supported diversification into added value dairy products, and leadership in the global dairy market, the lack of mixed farming, historic predominance of extensive grazing livestock operations and higher density of stocking rates has resulted in a significant degradation of soils and highly polluted watercourses.



In Cheshire and Warrington our large dairy herds and numbers of other types of livestock mean that the area is a net emitter of 400,000 tonnes of carbon dioxide per year, at the cost of £30.5m annually. Tree and woodland coverage is below the national average¹⁹ meaning there

¹⁸ ONS BRES (2020).

¹⁹ Cheshire and Warrington Natural Capital Audit and Investment Plan.



is potentially less sequestration²⁰ occurring naturally, however there is also the opportunity to consider the potential of hedgerow restoration. Emissions from UK farms presently amount to 45.6 million tonnes of carbon dioxide equivalent a year – about one tenth of UK GHG emissions. But in stark contrast to the rest of the economy only 10 per cent of this is carbon dioxide. Around 40% is nitrous dioxide (N₂O) and 50% is methane (CH₄)²¹ which is even more harmful for global warming in the shorter term. At COP26 part of the global agreements made including the reduction of levels of methane by 30% by 2030.

National policy is also driving change for agriculture practice. Following Brexit, the UK is leaving the EU's Common Agricultural Policy (CAP). 80% of payments under CAP were made through the basic payments scheme where farmers were paid according to the number of hectares farmed. The new Agriculture Bill and Environment Bill provides the legislative framework to replace the CAP with the Environment land Management scheme (ELMS) whereby farmers will no longer receive subsidies under the basic payment scheme but instead be paid to produce 'public goods' such as environmental or animal welfare improvements including carbon reduction and increasing biodiversity. Helping inform the new payments and mechanisms, still under development, is critical to support the move of agriculture from a purely yield driven system. ELMS test and trial projects are being rolled out in Cheshire and Warrington and across the UK to help inform the level of payments required to deliver the required changes in farming practices. National government policy is moving towards 'delinking' farms, whereby direct payments from the land will be ended for all farmers by 2024. The intention is to enable older tenant farmers or less profitable operations to leave the sector, with the aim to provide opportunities for new entrants. It is more likely to accelerate the move to larger farm businesses and more intensive farming, as the capital costs for new entrants remains prohibitive.

What this could mean for Cheshire is fewer total number of dairy farmers, with a smaller number of bigger farmers operating a more intensive system. A combination of large herds operating a grass-fed New Zealand system, and indoor systems with open sided indoor housing for cattle. It is predicted that herd numbers will increase from an average of 180 in 2009 to a minimum of 300 spanning to 1000+. It is likely to also lead to larger intensive farming operations investing in Anaerobic Digestion (AD) (via indoor herds) as part of their manure management and to diversify, reduce energy costs, address diffuse pollution issues, and improve water quality. Evidence suggests that farms should use digestate produced via AD to run pastures organically rather than synthetically to improve carbon reduction.

The large number of tenant dairy farmers would suggest that 2024 (when ELMS is decreased to 10% of the CAP) would be a significant milestone in the restructuring of the dairy sector and present opportunities to accelerate the decarbonisation of agriculture, and scale developments to support net zero.

Agriculture is uniquely placed to be part of the net zero solution, as both an emissions source and a carbon sink. Farmers have a special responsibility to protect carbon reserves already in our soils and vegetation. To achieve this will require a **reduction in emissions and to return carbon to the soils** (not only via trees which is less efficient, but predominantly other forms of vegetation) as quickly as

²⁰ Sequestration is a natural or artificial process by which carbon dioxide is removed from the atmosphere and held in solid or liquid form.

²¹ NFU net zero strategy



possible. Evidence suggests that the following actions would support farms to diversify, move to regenerative agriculture, and contribute to net zero:

- **Boosting productivity and reducing emissions** – use of controlled release fertilisers, feed additives to reduce methane emissions from livestock, precision farming, improved animal health, soil improvement to increase carbon capture and anaerobic digestion.
- **Farmland carbon storage in soils and vegetation** – improving land management and changing land use to capture more carbon, through bigger hedgerows, more woodland, and especially more carbon-rich soil.
- **Coupling bio energy to carbon capture, utilisation, and storage** – requiring a clear carbon price trajectory, and credit system to support replacement of fossil fuel use with land-based renewables.

Environmental benefits and impacting climate change through land management practices requires a long-term strategy. Consequently, there is an urgency to start shaping frameworks for change and develop viable commercial propositions.

Moving to sustainable and regenerative agriculture requires a focus on reducing carbon emissions, increasing renewables, and increasing sequestration. In addition expanding woodland, restoring grassland and bog (mire habitats), and enhancing biodiversity is essential to addressing climate change and environmental degradation. This shift change in land use management will also improve the quality of life for our residents who can make the most of our natural capital – and enjoy the great outdoors on their doorstep, improving health and wellbeing. Connecting people to nature, has been shown to be especially important during the pandemic and we need to ensure all our residents have equal access to open spaces in towns, on rural-urban fringes as well as our countryside.

The subregional Natural Capital Audit and Investment Plan (published September 2021) outlines the current economic value to the subregion of natural capital (£465m pa). As well as establishing our current position, the investment plan has evidenced key opportunities to optimise our natural capital by increasing biodiversity, sequestering carbon, and increasing access to green space for peoples' health and wellbeing benefits. There is the potential to create a local Carbon Market that would enable local companies to offset their carbon footprint and reward farmers for their good practice. There is also the potential to create new green investment opportunities such as habitat banking and development of large-scale strategic environment schemes such as the Bollin Valley project and Chester wetlands restoration scheme, and to use the audit as part of a sustainable land management strategy that is fully integrated into wider growth strategies.

The Commission believes that for our land and agriculture sector to fulfil its role in the subregion achieving net zero by 2050 whilst maintaining a strong food production sector, there are two broad groups of economic and societal changes required:

- **Behavioural change:** by increasing access to locally produced, fresh, low carbon food, encouraging changes in diet with the help of improved labelling and reducing food waste by 60%
- **Improvements in agricultural practices:** crop yield improvements, stocking densities and moving horticultural production indoors. Also includes an average increase in wheat yields from 11 to 15t Dry Matter per ha, and an increase in intensive horticulture with 10% production under glass/vertical farming.



The Local Food Sustainable Place Award is a very helpful way to address diet change. It would address food poverty, improve access to healthy nutritious local food, and unlock new markets for producers through unlocking public procurement and support local co-operatives.

Innovation is driving new opportunities for intensive horticulture production either through vertical farming, extensive glasshouses or new developments in polymers which may provide new opportunity for extended growing seasons for field scale vegetables, in traditional farming areas, and beyond this, with the development of new, large scale greenhouse schemes collocated on industrial sites utilising waste heat and CO₂.

Some of these innovations are still being developed by the Catapult Centres but need accelerated field trials to enable commercialisation. This is an area in which Cheshire could position itself as the leading field research subregion, driving the decarbonisation of the dairy sector via increased use of

land for horticulture and biodiversity. There is a need for applied research centres to develop new programmes of learning and knowledge transfer to develop the skills that will be required to support a more mixed precision farming agriculture/horticulture sector in the near future.

Growth in horticulture could help the move towards a more plant-based diet. Overall, whilst meat and dairy provide just 18% of calories and 37% of protein, it uses the vast majority – 83% – of farmland and produces 60% of agriculture’s greenhouse gas emissions²². The scientists also found that even the very lowest impact meat and dairy products still cause much more environmental harm than the least sustainable vegetable and cereal growing.



The government is also developing a national food strategy. However, much of behavioural change will be driven by food standards, the Department for Education, and engagement with food processors to drive a move from livestock products to plant-based ingredients and food. In addition there is a call for improved labelling and a drive to reduce food packaging. As stated above, the Local Food Sustainable Place Award, which Cheshire West and Chester Council is looking at, would be a useful way to address diet change locally.

²² https://www.theguardian.com/environment/2018/may/31/avoiding-meat-and-dairy-is-single-biggest-way-to-reduce-your-impact-on-earth?CMP=Share_AndroidApp_Facebook



There is also opportunity for smaller solar farms supported by battery storage units, supporting renewable energy demand in rural areas, and for larger solar farms in various locations across the subregion (including brownfield) to support wider energy requirements. It is also essential that the power network enables rural properties to decarbonize and move away from carbon-based fuels - but in most places our local networks haven't yet got the capacity.

Recommendations

Agriculture

We recommend that subregional organisations:

- Works with the NFU, CLA and other bodies to mitigate the threats of the sector abandoning government support mechanisms resulting in further industrialisation of agriculture through active promotion of good farming practice and the benefits of regenerative agriculture to reach net zero.
- Lobby the Intergovernmental Panel on Climate Change to accelerate the recognition of soil (as well as tree planting) for carbon sequestration/storage.
- Create a network of world class demonstration facilities in regenerative and profitable agricultural practice (to showcase technologies).
- Ensure that the skill requirements of green agriculture are provided through the skills and education system, including new initiatives such as the Institute of Technology

We recommend that the Leaders' Board:

- Lobbies Government to invest in required infrastructure and connectivity to unlock the economic, social and environmental potential of the rural areas and agriculture including delivering net zero including:
 - Invest in the national grid capacity to enable the switch from fossil fuels
 - Deliver 100% coverage of broadband and 4G and 5G mobile phone signal
 - Invest in a pipeline network to enable the decarbonisation of our dairy sector by moving manure off site and into large scale Anaerobic Digestion
- Includes land based low carbon technology and innovation in any County Deal/Levelling Up ask.
- Creates an industry led environmental sciences cluster with the ambition to establish a world leading research establishment at INCE/Rocksavage bringing together local universities including Tyndall, Chester, Liverpool John Moores with global research leaders e.g Wageningen University, Netherlands.
- Commissions the new Energy Officer post at the LEP to actively engage with key landowners, promoting collaboration to accelerate investment in greenhouses near plants creating waste heat. and inform local authorities on the infrastructural blockages of creating those greenhouses (waste heat network, carbon dioxide pipeline).



- Ensures that the new Energy Officer post at the LEP also looks after the portfolio of land use related energy projects and facilitates investment by removing blockages like planning issues.
- Ensure that local planning policy prioritises schemes which maximise anaerobic digestion, solar photovoltaics and other renewables including vertical farms under PV installations.
- Actively promote new innovative projects being delivered in the region such as anaerobic digestion (Grosvenor) and DEFRA funded Hedge and Edge (Cholmondeley) as case studies that can be scaled and rolled out

We recommend that landowners and farmers in the subregion: -

Engage with demonstration networks, assessing the economic viability and market potential of land sparing by intensifying the most productive areas to spare the least productive areas for carbon sequestration, biodiversity etc. This could potentially include conversion to vertical farms for crops.

- Engage with the Local Food Sustainable Place Network to unlock new local food market demand and develop a direct to consumer supply chain, restoring pride in the production of high quality locally produced food
- Engage with the Local Nature Partnership to shape emerging environmental policy implementation including Biodiversity Net Gain, Trees for Climate, Local Nature Recovery Networks and implementation of the Natural Capital investment plan

As part of this, the Commission recommends that the Leaders' Board:

- Brings together the oil and fertiliser sector, with landowners and research establishments to scope the opportunity for an environmental science cluster as part of the net zero offer
- In partnership with the private sector identify gap funding for the projects that will springboard collaborations and commercialisation of existing world leading companies to deliver new technologies that will accelerate the ability to address the climate crisis.
- Allocates resource to manage and support a project pipeline of land use (and natural capital) investment opportunities. The pipeline needs investment in coordination and staged funding and support to move projects along concept, outline business case, feasibility, and implementation. This will help to decarbonise the dairy sector / agriculture, create growth and jobs, move towards a more plant-based diet and conserve resources with the move to a circular economy.

Insetting-Offsetting/ Natural Capital

We recommend that local authorities:



- Increase the volume of hedgerows on Council owned land and via planning policy and encourage others to increase the size of existing ones to achieve an easy and quick result for decarbonisation.
- Restore bog (mire) habitats on Council owned land and to incorporate in planning policy to reduce GHG emissions and improve water quality.
- Adopt the target of initiating 500,000 tonnes of carbon dioxide sequestered in trees and hedges and 100,000 tonnes in our soils by 2030.
- Bring together stakeholders to ensure that a field study is done to support the Defra ELMS test and trial (with Cholmondeley).
- Use the Natural Capital Audit to inform their planning policy and to identify best value locations for investment and to have the ambition to become national leaders in the field.
- Hold training sessions and workshops to embed the ideas presented in the Natural Capital Audit in working practices. Sessions can be held with local authority planners and with other sectors such as local businesses, health boards, and potential investors.
- Work together to host the natural capital evidence base on a GIS based system/portal and complete a data sharing protocol.
- Set up and manage a mapping service to provide natural capital information to developers.
- Update the natural capital evidence periodically, probably every 3-5 years, or when it is considered that substantive land cover change may have occurred. This will also enable change to be tracked compared to the baseline.
- Work with the Environment Agency to get more Natural Environment Investment Readiness Fund projects in the area.
- Ensure that the investment opportunities in natural capital are held and promoted subregionally by an appropriate body.
- Develop and deliver 5 investment deals in landscape scale restorations and enhancement projects by 2030.
- Convene relevant partners to establish a more suitable funding mechanism for the Local Nature Partnership.



Additionally in support of this we recommend the Leaders' Board should:

- Identify an organisation and funding to carry out a study to identify insetting and other investment opportunities in the area based on the Natural Capital Audit and feed them into an investment pipeline with project owners to manage each opportunity and facilitate the investment process. This would speed up the rate of investment into the natural environment, improve Carbon Sequestration, create more natural land available for recreation and improve air quality.
- Identify funding to carry out a study to overlay the heat map of



deprivation with the heatmap of the natural capital audit to identify the areas where creation of new green spaces provides the most benefits for local people's physical and mental wellbeing, which could be done via Active Cheshire.

Diet

We recommend that the Leaders Board:

- Adopt the Sustainable Local Food Place Award across the sub region, including reconnecting consumers and producers, highlighting the health and low carbon benefits of local food through improved labelling,
- Adopt the recommendations of the National Food strategy to address food poverty, providing targeted healthy eating support for people on low income and, healthy start voucher scheme to support changes in diet
- Works with GPs/the health sector to promote a range of projects suitable for natural health prescribing and link to diet as an extension of the Nature for Health Programme.



We recommend that local authorities:

- Apply for a Sustainable Local Food Place Award and ensure they have the evidence base to support this.
- Review the potential of Council owned farms to deliver local food production e.g. community growing and to become demonstrators for this.

Renewable Energy Generation

We recommend that Leaders' Board:

- Identifies an organisation and funding to complete a piece of work to identify the total planning and infrastructure requirements for renewable energy generation e.g. anaerobic digestion and solar farms, to inform project development towards the Invest Net Zero Cheshire Pipeline, in order to contribute to net zero targets within appropriate timescales.

Net Zero

Vision and overview

Our overall ambition is to support and develop carbon reduction projects across Cheshire and Warrington while creating employment in a way that generates opportunities for all. We propose this will be delivered through three priority activities:

Housing decarbonisation and retrofit

- By speeding up decarbonisation and retrofitting of the existing housing stock. Retrofitting insulation and clean energy to housing, particularly social housing, will reduce carbon emissions, boost employment, save money on heating bills and improve the health of disadvantaged residents. A new cohort of workers will need to be trained in fitting and maintaining heat pumps.

Industrial decarbonisation

- By building the UK's first new zero industrial cluster which can act as a blueprint for industrial decarbonisation, enabling us to export our skills and expertise around the world. Supporting our industry to move away from fossil fuels and adopt renewable energy and sustainable processes will make a significant contribution to lowering emissions, safeguard existing jobs, create new jobs and act as a blueprint for industrial decarbonisation allowing us to export our skills to the rest of the world.

Circular economy

- By developing a whole system approach to waste collection, disposal, energy distribution including the use of farm waste and slurry. Our economic model of make, use, and dispose, needs to change to a circular, more sustainable, system where products can be repaired, reused and recycled using fewer raw materials. We are seeking to take a regional approach to survey opportunities and work with business, public sector and agriculture to hasten this transition.

Decarbonisation of Housing

Cheshire and Warrington lags behind the national average in terms of its green infrastructure with more houses with an EPC rating of Band 'D' or below (over 60% in Cheshire East, compared to 42.1% in England).

Enhancing the quality of housing through a retrofit programme is essential in the transition to net zero and creates supply chain opportunities for local SMEs. It also has the potential to improve the quality of life of our residents through improved health outcomes.

**Around 11%
of
households
are in fuel
poverty**

Poor quality, poorly insulated housing can result in people in fuel poverty living in cold, damp housing. In some areas in Cheshire and Warrington, typically in larger towns, over 20% of households are in fuel poverty rising to over three in ten households in Crewe.

Planning could be a major influence in achieving change but local flexibility to raise standards is currently very limited in this regard. Planning legislation is a key factor.

There are 19 Social Housing Decarbonisation Fund Demonstrators underway across the country: commenced Dec 2020 and managed by BEIS. They have five objectives:

- stimulate the economy
- support supply chains/ create and support jobs
- cut bills by £300-500 per household
- reduce the cost of whole house retrofit
- identify key lessons for the forward programme.



Achieving a circular economy to reach net zero

The current and traditional energy flow model of the modern economic system is the linear extract, produce-use-dispose model. This model creates large environmental and economic costs including loss in biodiversity, soil degradation, fresh water depletion and high emissions in greenhouse gases.

There is therefore a need for a new, sustainable model that puts less pressure on the eco system.

The circular economy is what provides the economic system with an alternative flow model, one that is cyclical. It is based on renewable energy, smarter product design, supply chain collaboration, reuse, and recycling.

The UK glass sector has an excellent recycling record of 68.8%, one of the highest rates of any packaging material. Glass is 100% recyclable and can be endlessly melted and re-melted without ever reducing its quality. It uses less emissions when it's recycled. For this reason, Encirc, the UK's largest glass bottle manufacturer based in Ince, has ambitions to achieve a 90% collection rate for recycling by 2030.

Recycling rates for household waste in the subregion 2020-21:

Cheshire West and Chester: **54.5%**

Cheshire East: **57.5%**

Warrington Borough Council: **44.4%**

UK average: 44%

Source: gov.uk, ENV18 - Local authority collected waste: annual results tables



However, the challenge faced by Encirc if it is to produce a truly sustainable product in the future it needs to be able to decarbonize its energy supply, making Hynet a crucial part in the equation.

One of, if not the, most important challenges in strengthening the subregional circular economy is getting our residents on board. Following the lead of areas with higher recycling rates, the subregion needs to promote/embed a culture of recycling. This could be achieved by engagement, education, consultation, and the development of a straightforward, comfortable waste collection system that rewards the consumer with the right incentives. The three councils are already doing many of these things, and the Commission can help by reinforcing the need for such campaigning and help spread best practice on what works well and what does not.

Reducing industrial emissions to net zero

Cheshire and Warrington have some of the highest carbon dioxide emissions in the country so reducing these is essential to meeting the challenge of the climate emergency, ensuring the future resilience and growth of our economy, and improving the quality of life of our residents. This green transition will require transforming how industry operates and how residents live and travel. Whilst this will be a challenge and require significant investment and planning, this is an opportunity to create more jobs, become the home of green industrial revolution, and improve our communities and towns.

The Cheshire and Warrington economy is driven by its strong manufacturing sectors and industrial base, contributing £6.8bn to the economy, with 43,000 jobs²³. We have strengths in oil refining, chemicals, glass manufacture, nuclear enrichment and automotive with major employers including Essar, TATA Chemicals, Vauxhall, Siemens, and Bentley. Alderley Park has invented a new medicine on average every two years since it opened and Thornton Science Park developed the fuel for Spitfires, Concorde, and the Ferrari F1 team.

Industry in Cheshire and Warrington is responsible for a third of our emissions – (2,571 kt)

This industrial sector continues to be a source of productive growth for the subregion, but it has high energy usage and carbon emissions. Much of Cheshire and Warrington’s manufacturing is based in large industrial sites with a concentration of high intensity energy users along the Mersey Estuary, consuming 5% of UK’s energy²⁴, making Cheshire West and Chester the fifth highest emitter in the country.

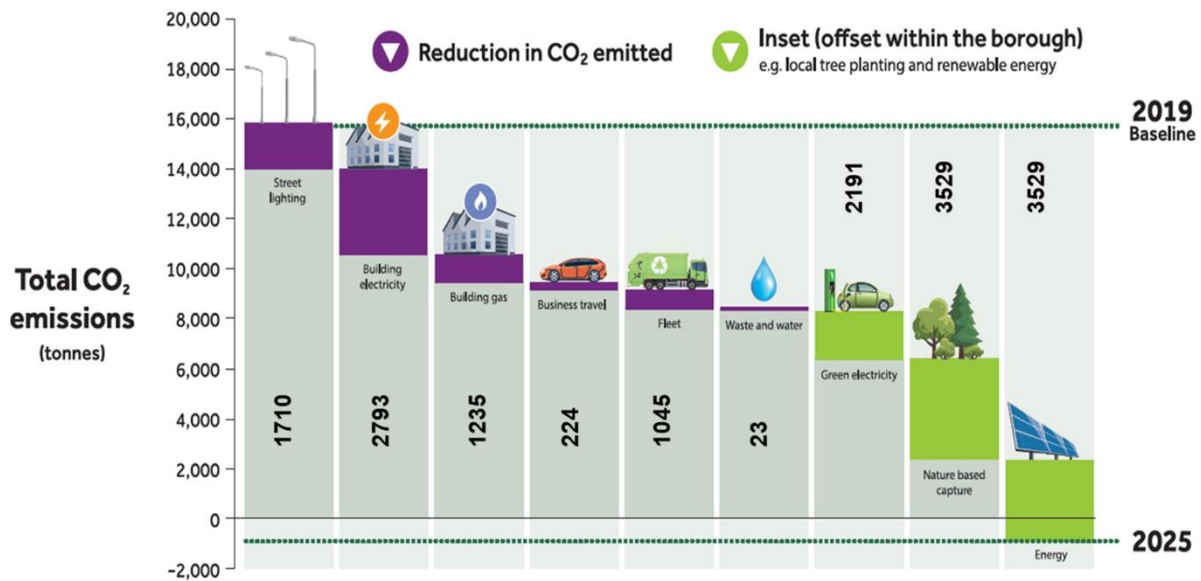
Industrial carbon dioxide emissions are very high and only falling slowly, so urgent action is required to rapidly make this a decreasing trend. However, our local industry is not well placed to pass on additional decarbonisation costs to customers because they operate in competitive international markets.

The graphs below show carbon savings for projects identified through the Invest Net Zero Cheshire Pipeline and for some happening outside that remit in Cheshire and Warrington. The second graph illustrates how carbon savings will add up from these projects in the next 10 years to get the subregion close to its 2030 target of achieving Net Zero. But even if all the projects identified are



²³ ONS Business Register and Employment Survey (BRES) (2020).

²⁴ Net Zero Cheshire – Invest Net Zero Cheshire: A Blueprint for Industrial Decarbonisation.



The Net Zero sub-group considered a range of projects that will support the decarbonisation of industry in Cheshire and Warrington, including HyNet North West. That project which will play a critical role in the world's fight against climate change, accelerating the UK's transition to 'net zero' greenhouse gas emissions by 2050 by developing a hydrogen network that will produce, store and distribute hydrogen to support the North West of England and North Wales. Together with carbon capture and storage (CCS), HyNet has the potential to reduce carbon dioxide emissions by 10 million tonnes every year by 2030 – the equivalent of taking four million cars off the road.

The project is a game-changer. It will realise the potential of the hydrogen economy through the creation of state of-the-art infrastructure. It will offer a viable alternative to the use of natural gas, providing a safe transition to a decarbonized world.

Alongside this, the Protos energy and resource hub at Ince is leading the way in low carbon energy and waste management with the deployment of innovative technologies including the UK's first plastic-to-hydrogen facility, a 50MW windfarm, a 21.5MW biomass plant, a 49MW energy from waste plant in construction and a plastic park blueprint to revolutionise plastic recycling nationwide. Protos...

- ...is a strategic cluster of innovative technologies in energy generation and resource management united in delivering clean growth.
- ...aims to deliver low-carbon energy directly to industrial and domestic customers through local energy networks which could lower costs and save thousands of tonnes of carbon emissions.
- ...promotes the decarbonisation of industry to support the economy, safeguard jobs and help the UK meet our zero carbon goals.
- ...creates an environment that encourages inward investment and the growth of high value manufacturing jobs.
- ...develops a blueprint for the rest of the UK.

Decarbonisation of existing and future energy distribution systems

In addition to schemes like HyNet and Protos there are other potential options for decarbonising existing energy systems at scale. The Government's energy white paper has set a goal of a decisive

shift from fossil fuels to clean energy, in power, buildings and industry. The paper promises to accelerate the development of clean electricity generation through the 2020s.

A low-cost, net zero consistent system is likely to be composed predominantly of wind and solar, but to ensure the system is reliable, renewables need to be complemented by technologies such as clean hydrogen and long-duration storage. These technologies will satisfy the need for peaking capacity, ensure security of supply at low cost and hopefully eliminate the reliance on generation from unabated gas.

Recommendations

The Commission considers that the three priority areas for action discussed above can be successful tackled if the Leaders' Board adopts a number of recommendations and invests in a number of key projects.

Housing Decarbonisation and Retrofit

The Commission recommends that the Leaders' Board:

- Works with the LEP and local skills and training organisations to develop the skills to assist the commercial sector to meet the needs of housing retrofit and decarbonization.
- Lobbies Central Government to improve building standards to require new build properties to be zero carbon (cf the Future Homes Standard consultation)
- Lobbies Central Government to review Social Housing policy and rules to allow retention of savings made on energy by the social housing providers to provide a fund for further improvements to prevent the cost of improvements falling to the occupants through rent rises.
- Lobbies Central Government to change the right to buy legislation to take account of any environmental improvements made in the value of the property.
- Lobbies Central Government to allow claw back of home improvement costs for local authorities in right to buy sales.

We recommend that:

- Where local government are commissioning housing construction procurement should be used as a tool to specify zero carbon standards. Suppliers should be encouraged to be carbon literacy trained.
- LAs provide advice on retrofit opportunities and encourage carbon literacy training to householders, tenants, and landlords to support behavioural changes across the boroughs.
- LAs connect suppliers and housing organisations to share policy advice and best practice.
- LAs review the feasibility of establishing heat networks in each local authority area integrated with private wired power from renewable sources, EV charging and broadband upgrade.

These recommendations can be supported by a small investment in specialist consultancy support to collate existing, available data from the three local authorities and key housing trusts to develop a regional picture of the need to retrofit and from that recommendation key next steps in lobbying, policy changes and potential projects for funding bids including corresponding business cases.

Circular Economy

The Commission also recommends that the Leaders' Board:

- Commissions work on reinforcing the need for campaigning on recycling and helps spread best practice on what works well and what does not.
- Seeks ways to support the Grosvenor trials and explore options to spread the news and engage with farmers
- Engages with specialists to identify key opportunities in heat mapping.
- Supports the CWAC inward investment conference in June 2022 so that the widest range of opportunities can be provided to potential funders.
- Supports the development of a whole system approach to waste collection, disposal and energy distribution including the use of farm waste and slurry

If successfully developed, the Protos Plastics Park will contribute to a reduction in plastic waste, increased recycling, and the production of Hydrogen for energy use. The Commission therefore recommends that a business case for grant support for the Park should be developed and submitted to the Enterprise Zone Investment Fund.

WORK ON BUILDING THE UK'S FIRST NET ZERO INDUSTRIAL CLUSTER

Alongside the Commission's work, the LEP has been developing plans with the Cheshire Energy Hub and North West Net Zero to make Cheshire and Warrington the home of the UK's first net zero industrial cluster. The work has four key elements:

- Delivering reliable and cost-effective net zero energy
- Strengthening Cheshire and Warrington's energy R&D ecosystem
- Attracting investors looking to invest in net zero projects
- Ensuring that businesses have access to the green skills that they need

Delivering Zero Carbon Energy

To successfully build Cheshire and Warrington's net zero energy infrastructure, LEP recommends that the Leaders' Board works with it to:

- Lobby Central Government to ensure that HyNet Phase 2 and the extension to the network is fully funded.
- Support Cadent's Hydrogen Village bid and lobby Government to secure the Hydrogen Village trial in Cheshire and Warrington.
- Lobby BEIS/OFGEM to allow Distribution Network Operators (DNOs) to invest ahead of demand.
- Ensure that planning policies and frameworks are aligned with and actively enable industrial decarbonisation and the transition to low carbon/renewable energy.
- Lobby Central Government to ensure that there is a level playing field in terms of pricing and incentives for industry to switch to low carbon energy and technologies will be key in decarbonising our industrial base.



Strengthening Cheshire and Warrington's R&D eco-system

The LEP also recommends that the Leaders' Board works alongside it to:

- Secure DfT High Potential Opportunity status for low carbon investment sites/opportunities in Cheshire and Warrington.
- Attract an industrial decarbonisation catalyst to Cheshire and Warrington.
- Lobby Central Government to make changes required to allow peer to peer networks to be established (current DNO/Regulatory barriers).
- Ensure we are accessing appropriate funding and explore potential to ring-fence funding for industrial decarbonisation in the subregion.
- Work in conjunction with key landowners, to persuade Rolls Royce (Aerospace, Power, Defence sectors) to select Cheshire and Warrington as a location for nuclear Small Modular Reactor manufacturing.
- Lobby BEIS/Ofgem to identify funding for SME decarbonisation programmes.

The LEP also considers that there is a strong case to find funding to commission consultants to develop business cases for several potentially investable projects:

- A hydrogen demonstrator at Thornton Science Park, supporting the development of HyNet by providing a working example of a hydrogen energy plant which can demonstrate the benefits of switching to hydrogen in the industry and in this way attract capital funding. Alongside this, significant opportunities can be realised by working with the University of Chester and the LEP to identify and develop investable development projects at Thornton Science Park to be funded through the Enterprise Zone Investment Fund. The latter has the potential to increase levels of low carbon R&D/innovation activity and investment in the subregion accelerating industrial decarbonisation.
- A Nuclear Technology Catalyst at Birchwood Park, supporting and strengthening the development of the nuclear cluster at Birchwood Park and across the subregion.
- Undertaking a low carbon R&D/innovation eco-system mapping exercise, enabling the identification of existing strengths, weaknesses, opportunities, and gaps in the low carbon R&D/innovation eco-system, enabling the development of a clear cluster development plan for the sector and facilitating access to increased investment into the subregion.



Attracting Net Zero Investors

The LEP also considers that there is a strong case to:

- Develop a compelling low carbon inward investment proposition for Cheshire and Warrington.
- Lobby the Department for International trade to secure High Potential Opportunity status for low carbon investment sites/opportunities in Cheshire and Warrington.
- Work in conjunction with key landowners and persuades Rolls Royce (Aerospace, Power and Defence sectors) to select Cheshire and Warrington as a location for SMR manufacturing.



To further support this, LEP considers that there is merit in investing a relatively small sum of money to commission financial consultants to undertake a feasibility study into the creation of Cheshire and Warrington low carbon investment fund to invest in low carbon projects across the subregion. The benefits of this can be further strengthened through the development of a soft-landing package for low carbon inward investors and a low carbon inward investment marketing campaign and, potentially the development of a special purpose investment vehicle for low carbon investments, all of which together would increase investment into the subregion, strengthen the existing low carbon cluster and secure the region's reputation as a low carbon investment location.

Green Skills

The LEP proposes to:

- Work with industry and education providers to ensure that there are appropriate education and training programmes in place to ensure that the workforce can support industrial decarbonisation.



Appendix 1 – Members and Advisers

Members

The working groups are supported by the Secretariat provided by the Cheshire and Warrington LEP. Additional officer policy support and expert support has been identified for each subgroup. Commissioners are shown in italics and non-officer expert representatives are noted below.

Name of group	Chair	Group members	Expert support
Net Zero Roadmap	<i>Cllr Sam Corcoran, Cheshire East Council</i>	<i>Cllr Sam Corcoran, CEC</i> <i>Adrian Curry, Encirc</i> <i>Mark Howden, Peaks & Plains</i>	Helen Boyle, Cadent Alec Gaston, Peaks & Plains
Transport	<i>Robert Davis, EA Technology</i>	<i>Robert Davis, EA Technology</i> <i>Rachel Shorney, Scottish Power Energy Networks (SPEN)</i> <i>Annette McDonald, Cheshire and Warrington Local Nature Partnership/Tatton Group</i>	Elaine Meskhi, Cenex
Climate Change and Land Use	<i>Annette MacDonald, Cheshire and Warrington Local Nature Partnership (LNP)/Tatton Group</i>	<i>Annette MacDonald, LNP/Tatton</i> <i>James Hall, Cholmondeley Estate</i> <i>Cllr Matt Bryan, Cheshire West and Chester Council</i>	Niall MacFadyen, Cheshire Heritage and Sustainability Enterprises CIC Paul Nolan, The Mersey Forest Matthew Clegg, Binnies
Inclusive Economy	<i>Rotated chair</i>	<i>Cllr Richard Beacham, Cheshire West and Chester Council</i> <i>Prof Chantal Davies, University of Chester</i> <i>Cllr Hitesh Patel, Warrington Borough Council</i> <i>Yulanda Duff, Cheshire and Warrington LEP Engagement Board</i>	Cllr Nick Mannion, Cheshire East Council Hannah Cotton, Equalies* David Perfect, Retired
Funding and Finance	<i>Helena Anderson, Ikigai Capital</i>	<i>Clare Hayward, Cheshire and Warrington LEP</i>	Lauren Pamma, Green Finance Institute

**Until October 2021*

Appendix 2 – Commissioners

Councillor Sam Corcoran



Leader, Cheshire East Council

Sam Corcoran has been the Leader of Cheshire East Council since May 2019. At the first meeting under his leadership the Council passed a resolution on climate change and has since adopted an Environment Strategy and a detailed Carbon Action Plan committing the Council to be carbon neutral by 2025 (one of the most ambitious targets in the country). The Carbon Action Plan includes innovative proposals around ‘insetting’ carbon emissions by using local tree planting and other measures, as well as plans to assist local businesses to reduce their carbon emissions. Sam qualified as a chartered accountant in 1989 and is also a Fellow of the Chartered Institute of Taxation.

Joint Chair

Robert Davis



CEO, EA Technology

Robert is the Chair and CEO of EA Technology. He sits as a NED on the Energy Systems Catapult Board, is the founder of The Energy Innovation Centre, The Cheshire Energy Hub and has been working with Sam Corcoran and Clare Hayward to establish this Commission. He is also past president and Life Fellow of the Institute of Asset Management, Chairs the Cheshire and Warrington Local Enterprise Partnership R&A Committee and sits on their Strategy Board.

Joint Chair

Clare Hayward



Chair, Cheshire and Warrington LEP

Clare is a highly competent chair and facilitator at senior management and board level. Co-founded, developed and sold Academee, a global leadership development consultancy, to Oliver Wyman, a division of Marsh and McLennan Companies in 2008. Retained post-acquisition as Global Partner of Sales and Market Development within this Fortune250 group. A successful business woman and entrepreneur focused on leadership and strategic engagement who has coached, facilitated and chaired boards, senior management teams and leaders across the globe over the last 20 years working in industry sectors including technology, banking and finance, natural resources, retail and

manufacturing. Experience also includes investment funding and negotiating the sale and purchase of several businesses. Clare also has significant experience within the community, charity and local political landscape.

Professor Chantal Davies



Professor of Law, Equality and Diversity/Director Forum for Research into Equality and Diversity, University of Chester

After graduating with a Law degree from Oxford University, Chantal Davies qualified as a solicitor with Eversheds in Cardiff specialising in Employment, Human Rights and Discrimination Law. In 1998, she moved to work as a solicitor for the Equal Opportunities Commission (EOC) in Manchester heading up a Department tackling strategic and wider enforcement of the gender equality legislation. Chantal is now professor of Law, Equality and Diversity in the School of Law at the University of Chester. She has also developed and is Director of the Forum for Research into Equality and Diversity. Past research focuses on the experiences of ethnic minority students within HE and the use of positive action by organisations in the UK. Chantal has also recently completed a funded project looking at the gendered obstacles to research activity faced by academics in the UK. More recently Chantal has been funded by the Young Women's Trust and the Equality and Human Rights Commission to research the use of positive action in apprenticeships. Chantal has also worked with the Higher Education Authority in Ireland to roll out a ground breaking positive action initiative aimed at increasing female representation within professorships. She has sat on the board of Cheshire Halton and Warrington Race and Equality Centre and the Equality Challenge Unit and in this latter role has been working with them to develop institutional confidence in developing positive action initiatives within higher education.

Mark Howden



Chief Executive, Peaks and Plains Housing Trust

Mark joined Peaks & Plains Housing Trust in May 2019 as Director of Place and was appointed Chief Executive in July 2020 following a period as Interim CEO. Peaks & Plains manage over 5000 homes across East Cheshire and the High Peak and they exist to help improve lives by playing a part in addressing local housing need. As Chief Exec he reports to the Board and has overall responsibility for the Strategic and Operational direction of the Trust and the delivery of the Five-Year Plan.

Prior to joining Peaks & Plains Mark spent 11 years at Balfour Beatty Investments working across a range of sectors including education, health and residential development and has more

than 20 years' experience in housing, urban regeneration and economic development.

Rachel Shorney



Stakeholder & Community Engagement Manager, Scottish Power Energy Networks

Rachel is a Chartered Electrical Engineer with over 30 years of experience in the electricity distribution industry, having worked for BICC Power Cables and then Manweb, now SP Energy Networks, since before privatisation in 1990.

During this time Rachel has had various roles in design, operations and maintenance, project management and construction of large infrastructure projects for SP Energy Networks.

For over ten years Rachel has been responsible for facilitating the connection of renewable generation onto the SP Energy Networks distribution network and is dedicated to assisting local authorities and communities to take advantage of the innovative low carbon technologies available.

For the last 2 years Rachel has been focusing on the electrification of transport and heat and helping all SP Energy Networks customers to understand the implications for their domestic, industrial and commercial needs. She was part of the successful bid for Ofgem innovation funding for the Electric Vehicle project CHARGE, which is developing a transport map for the SP Manweb licence area to help facilitate the uptake of electric vehicle charging points onto the SP Energy Networks electricity network.

Adrian Curry



Managing Director, Encirc

After entering the container glass industry as a project engineer Adrian has enjoyed more than 20 transformational years in the food and beverage sector.

During this time, he has led the growth of a new entrant from start-up to c 35% market share with revenues in excess of €410m with a manufacturing presence in, UK and Italy. Adrian is well respected in the industry holding the position of President of British Glass, sits on the board of WSTA (UK Wine and Spirits Trade Association), member of a Parliamentary advisory committee and executive member of Vidrala (Spanish PLC with €1bn revenues).

Over the past 20 years Adrian has led capital projects totalling more than €1bn, 5 greenfield start-ups, M&A and business consolidation, worked under family, private equity and PLC

ownership.

Adrian is very focused on continuous learning having recently graduated from the IESE business school in Barcelona having completed an Advanced Management Program there. Married with four children he now lives in Cheshire.

James Hall



Estates Manager, Cholmondeley Estate

As a Chartered Surveyor, James has practiced in Cheshire and the North West for 30 years after graduating from the Royal Agricultural College, Cirencester. He is Managing Agent at Cholmondeley Estate, looking after a portfolio of agricultural, residential, commercial and tourism interests. He is a Board Member of the Environment Group chaired by Dieter Helm and is on the Business and Rural Economy Committee of the Country Land and Business Association.

As an enthusiast for environment improvement, James co-established the Cheshire Eco Partnership (ChEP) for Estates that share these values and he is a Soil Advocate for the “Kiss the Ground” movement. Cholmondeley Farms Ltd. are organic and practice regenerative agriculture, where the focus is on increasing biomass and sequestering carbon.

Annette McDonald



Chair, Cheshire and Warrington Local Nature Partnership

Annette McDonald joined The Tatton Group as Deputy MD in September 2019 following 9 years as Head of Projects, Innovation and Commercial for Reaseheath college, where she managed teams delivering a wide range of innovation projects focusing on agriculture, food and environment.

Annette is a board member of the CLA National policy committee for the environment, shaping and influencing central government policy, and Chair of the Cheshire Local Nature Partnership, which, with the LEP has commissioned a Natural Capital Audit, investment and implementation plan for the sub region. As MD of Tatton Food, Farming and Environment, she is shaping a strategy for the Tatton Estate farming operations, including identifying environmental enhancements as part of the sub regions wider climate mitigation and carbon zero targets.

She has long been an advocate that the environmental agenda can be a significant driver of economic growth, championing the need for this to be integrated into economic, spatial and growth strategies. She is also an independent member of the LEP Enterprise Zone board and previously the LEP Rural Strategy Board.

Yulanda Duff



Representative of the LEP Engagement Board

Yulanda is an IT project consultant by day but writing, storytelling and content creation has been at the heart of her endeavours since childhood. She has written for many major publications and won several writing competitions throughout her lifetime. She is keen on digital media, hosting her flagship radio show alongside her podcast, The Millennial Introvert Lifestyle. Yulanda also runs her own business where she provides services to young women who are looking to take the jump into entrepreneurship as well as curating bespoke training courses for businesses.

Richard Beacham



Councillor, Newton and Hoole Ward, Cheshire West and Chester Council

Councillor Richard Beacham represents the Newton and Hoole ward in Chester on Cheshire West and Chester Council. He is the Cabinet Member for Inclusive Growth, Economy and Regeneration. He has a close working relationship with the managers of the Business Improvement Districts in West Cheshire and serves on various development boards across the Borough. He is a member of the Cheshire and Warrington Rural Strategy Board and is on the LEP Enterprise Zone Board.

Helena Anderson



Founder, Ikigai Capital

Helena founded Ikigai, a Net Zero investment consultancy, accelerator and developer, in December 2017 after two years at the UK Department for International Trade, where she was head of energy capital investment.

At the Department for International Trade, she was responsible for shaping Government policy-aligned, private sector led, energy and integrated energy, transport and regeneration projects, businesses and technologies such that they became bankable and attracting international investment into those opportunities, working on a X-Government and local authority basis.

Prior to joining Government, Helena had 10 years' experience as a project finance lawyer at Herbert Smith Freehills, advising on renewables, oil & gas, telecoms and infrastructure in EMEA. She was recognised by Legal 500 2016 as a leading lawyer in renewable energy projects and as an industry expert in

managing environmental and social risk lending under the Equator Principles. Helena is also a Non-Executive Director on the regulated board of the largest social housing and regeneration company in the UK, Places for People.

Councillor Hitesh Patel



Councillor Hitesh Patel, Cabinet Member, Environment, Housing and Public Protection

Hitesh Patel was first elected as a Councillor for Warrington Borough Council in June 2004. He has represented three different ward in the Borough since his initial election: Bewsey and Whitecross (2004-2008), Great Sankey South (2010-2021), and currently has represents Great Sankey North and Whittle Hall (2021 – present). Councillor Patel has been a member of the Cabinet (formerly Executive Board) since May 2011, first serving as the Personnel and Communications member, before taking over the role of Environment, Housing and Public Protection in 2021.

We would also like to thank Judith Guthrie, Mark Thompson, and Ryan Burke for their contributions in the early stages of the Commission.