Warwickshire Futures 2030/40

This report has been developed to give a long-term view of some of the large-scale challenges and opportunities for Warwickshire into 2030/40 and beyond.

For more information and data on the Warwickshire-specific context, please see "Warwickshire in 2030 and beyond", produced by the Business Intelligence Team.

Contents

Warwickshire Futures 2030/40 1
Societal changes 1
Community and health 4
Jobs, economy, and technology 8
Environment, climate and infrastructure 12
Transport and travel 15

Societal changes

Demographic shifts

Alongside an estimated 5.2% increase in population from 2021 to 2030, population patterns in Warwickshire are likely to shift over the coming years, including an expanding older cohort alongside growing diversity among the younger population.

While the UK population is ageing as a whole, this is particularly prominent in rural areas. Warwickshire is anticipated to experience a 15.3% increase in the number of 70+ year olds, and a 42.1% increase in the number of those aged 85+, compared to 2021, and in contrast to only a 1.3% rise in the size of the workforce. Moreover, the number of people living with major illness nationally is projected to increase by 37% by 2040, nine times the rate at which the working age is expected to grow (4%) – much of this rise will be as a result of our ageing population.

Ethnic diversity is predicted to increase across the UK, and Warwickshire may experience particularly significant change as a rural authority close to a major urban centre (Birmingham). It is estimated that international migration will bring a net average of 790 new residents each year, and it seems likely that historical increases in the percentage of Warwickshire residents without English or Welsh as a first language (6.9% in 2021) may be set to continue. Analysis of school and national census data indicates that Warwickshire children are already becoming more diverse, particularly in relation to ethnicity.

These changes will bring challenges in adapting our offer to meet the changing needs of residents, including delivering inclusive and culturally competent services from cradle to grave, and meeting an inevitable increasing demand for adult social care. We will need to plan for increased demand on services and develop a more detailed understanding.

As demographics shift, public opinion, attitudes, and values – and hence residents' priorities - are also likely to begin to change over time, and our policies and priorities will need to reflect these changes.

Global economic and political uncertainty

Over recent years, we have witnessed considerable international geopolitical instability, meaning we may need to be prepared for a wide range of possible future situations. The current trajectory suggests trends like high inflation may be falling, with the Bank of England predicting a return to the 2% target by early 2025, but significant unpredictability remains over macroeconomic trends into the future. For example, climate change impacts remain uncertain, with potential for both significant disruptions and economic shocks, alongside investment potential. Geopolitical tensions and disputes (such as in Ukraine/Russia and the Middle East) could also continue to disrupt global supply chains. For local authorities, adaptability, resilience, and planning will be key to navigating the evolving economic landscape into 2030/40 and beyond.

Deglobalization:

Deglobalization is a movement towards a less connected world, characterized by powerful nation states, local solutions, and border controls rather than global institutions, treaties, and free movement. There is considerable debate regarding the extent that deglobalization is occurring on different levels of analysis. For example, at a local level, Warwickshire is still attracting foreign direct investment (FDI) and from the period 2018-21, Warwickshire was the leading county for FDI of the 9 Midlands counties, and the third nationally out of the 36 English counties[1]. With FDI being a key indicator of globalisation, Warwickshire's increasing FDI would suggest deglobalisation may not be occurring on a county level.

However, from a macro-level of analysis, perhaps the greatest evidence of deglobalization taking place is in the current political imagination of both democracies and authoritarian states. Recent events such as Brexit, the Ukraine War, Trumpism, chronic supply chain issues and global energy crisis prompts calls from policy makers to look at more isolationist policies.

[1] https://www.countycouncilsnetwork.org.uk/county-leaders-tell-government-to-unshackle-their-areas-as-new-report-reveals-foreign-direct-investment-is-unevenly-focused-across-england/ey-global-britain-global-counties-for-web/

It is difficult to argue deglobalizing forces are inherently bad because there are issues which may be best handled domestically. The COVID-19 pandemic illustrates the danger of relying on global supply chains for essential medical supplies, while climate change demands reductions in the enormous carbon footprint of international trade.

Changing footfall patterns in town centres

Shifting patterns of work mean more people are now working from home for a greater proportion of their working week. This changed pattern of footfall will continue to impact on town centres. Risks to current businesses, exacerbated by the growth of online retail, coincide with potential for innovative new uses for town centre space, including community and entrepreneurship space, digital hubs, blended digital-physical businesses and even housing. More localised centres may also develop in response to the demands of former commuters.

The kinds of support we provide to local businesses may shift in response to these changes, and we will also need to be aware of potential impacts on local government funding if the model of business rates changes to support businesses into the future. The LGA has produced a report on the role of local government in creating resilient and revitalised high streets for the future.

Inequalities within and between groups and places

Inequalities and disparities are likely to continue as key areas of focus for local governments, and as one of the most fundamental challenges facing our society.

We will need a nuanced understanding of societal, economic, digital, geographic, and environmental elements to inequalities, to deliver holistic, community-centred, and localised interventions.

Digital exclusion will be an increasingly important element of broader inequalities, reinforcing existing disparities facing groups including those on low incomes, people over 65, and disabled people. Tackling the digital divide will therefore be crucial to addressing social and economic inequalities and levelling up every community.

It should also be noted that health outcomes in Warwickshire are unequally distributed, with people living in more deprived areas experiencing worse health at a younger age.

Shifting urban/rural living patterns

As a county with a population spread across urban centres, towns, villages and rural areas, Warwickshire will be uniquely affected by any shifts in patterns of inhabitation. Increasing prevalence of remote and hybrid working[2] (and hence reduced concern over commuting times) might mean an exodus from surrounding urban areas like Birmingham and Coventry

[2] See: 'Future of workspaces'

into more rural areas of Warwickshire, adding pressures onto housing and local services that will already be stretched by a growing population within the county. Currently, internal migration is the biggest component of population growth estimates. However, urbanisation is a global trend, and more than two-thirds of the world's population are predicted to live in an urban area by 2050. If Warwickshire residents prefer to move to more urban areas, then there will be increasing challenges to provide amenities and services in rural areas of the county, with potential impacts on isolation for rural populations, particularly the elderly. Planning for these potential geographic shifts in population, particularly in terms of long-term infrastructure development, will be key in meeting the needs of future residents.[3]

Changing living situations

As demographics shift and economic changes impact people's lives, living situations have also adapted and will continue to change over time. Homeownership rates have been declining over the past few decades – by 2025, it is predicted that 25% of all households will privately rent - and it seems likely that this trend may continue, as a result of factors including high property prices, limited housing stock, and changes in employment patterns where people may be more likely to change job and relocate several times over a lifetime. Local authorities may see an increased number of people living in both social and private rented properties, with associated housing and regulation responsibilities, including responding to the increased instability this brings. Changing family structures, including increased prevalence of blended families, multi-generation households, and smaller households, could also have an impact across several areas of council operations, including planning for patterns of healthcare needs, education and support for children and families.

Ongoing impact of pandemic on educational outcomes

The Covid-19 pandemic caused significant disruption to children's education and formative experiences. National evidence shows that the attainment gap at Year 2 (ages 6-7) widened during the pandemic, and this disruption is likely to have a long-term impact throughout children's educational journey and beyond. By 2030, this cohort will be beginning to enter the workplace, and any impact on skills, qualifications and earning potential will begin to become apparent.

Community and health

Workforce challenges

There are a number of workforce-related challenges that may impact on councils' capabilities to deliver services. Continuation of the trend of real-terms pay cuts for senior

[3] For information on projected population growth by district/borough, please see accompanying BI report.

staff may cause issues for recruitment and retention at senior levels. Two thirds of council staff nationally are aged 40-64, and only 5% are under 25, leading to potential issues with succession planning. In conjunction with a growing skills gap and deficit of higher-skilled workers, these issues mean that serious thought will need to be given on how to attract and retain a suitably skilled workforce for the future. In particular, attention is needed to attracting staff to work in social care, with increasing vacancies already signposting a future issue.

Political engagement

Potential challenges to the future of local government can also be found in declining voter turnouts, and a shrinking pool of available councillor candidates; innovative approaches to engagement and delivery are likely to become more prominent into the future. We will likely need to consider the role of new approaches to democracy, like e-voting and citizens' assemblies, and give thought to how a new younger generation can best be engaged in local politics to lead our council into the future.

Public trust

Similarly, an entrenched lack of trust in society and political systems has been becoming evident over recent years. We know that local government is often more trusted by residents than national institutions, and so councils will have an important role to play in rebuilding trust and fostering community cohesion around shared priorities for the local area. Strong engagement with residents will be essential to understand need and demand. Meaningful engagement with disadvantaged groups will be of particular importance to rebuild relationships with communities who may be mistrustful of the council, where listening better and working together could allow us to deliver better, more efficient, services. Co-production and co-delivery of services rooted in local communities will be essential in enabling us to do more with less.

Future of devolution deals and combined authorities

Devolution remains an ongoing national policy and is expected to be an ongoing feature of local government. The Levelling Up White Paper has created the opportunity for a new wave of councils and combined authorities to purpose devolution options across the country. This is creating a growing body of evidence in relation to deal structures and content which will be helpful to future deals.

Long-term health impacts of Covid-19 pandemic

The long-term health consequences of the Covid-19 pandemic remain highly uncertain, particularly in relation to the ongoing risk of Long Covid. According to the ONS, nearly two million people nationally are still experiencing some ongoing symptoms post-infection, and around 380,000 feel that their day-to-day activities are significantly limited by these symptoms. As an emerging and under-researched phenomenon, the potential disabling impact of Long Covid over a period of years or decades is not fully understood, but has the potential to add considerable pressure to health and social care services within the county.

Coventry and Warwickshire's COVID-19 Health Impact Assessment, carried out in 2020, offers some insight into the wide-reaching longer-term impacts of the pandemic, including the disproportionate impact in more deprived areas, and on vulnerable/minority groups. It seems likely that we will see long-term changes to behaviours, including around healthcare uptake and attendance, and health behaviours. The drop off in preventative activity in the health service during the pandemic, including missed screenings, childhood vaccinations and cancellation of routine appointments, is also likely to have an ongoing impact.

Emerging health issues

Several issues seem likely to be prominent public health concerns into 2030/40. A helpful high-level overview of the changing health needs of the UK population can be found here.

An ageing population will experience more complex healthcare needs, increasing demand on health services and adult social care, as the number of people requiring long-term care and chronic disease management will increase. Estimates suggest that in Warwickshire in 2030 approximately 4,935 people aged 65 and over will be living in a care home (both LA and non-LA) with or without nursing, an increase of 35.7% from 2025 estimates. Dementia represents the biggest growing cause of disability; rates are predicted to increase by 28% in people aged 65 or over in Warwickshire between 2020-2030. Falls will also become a greater burden to health in Warwickshire.

Increases in life expectancy are slowing, with the UK falling behind other high-income countries; given the trend in Warwickshire, it is likely that life expectancy by 2030 will be 80 years for males and 84 for females.

The rise of multimorbidity means that people are becoming more likely to have multiple conditions (particularly in relation to conditions whose prevalence increase with age, such as mobility problems and cognitive decline), adding to the complexity of care and need for services to coordinate support. Improving local data collection in this area will enable us to better anticipate and respond to this complex need.

Tobacco is the single risk factor that causes the greatest preventable harm in Warwickshire, leading to around 700 preventable deaths each year, and so long-term work to eliminate smoking is likely to have positive health outcomes. Vaping can be effective in helping existing smokers to quit, but is not risk-free, and concerns remain around its prevalence among (and marketing towards) children and young people, and those who have never smoked.

Growing obesity rates in children and adults are likely to lead to an increased obese population. Currently, 66.2% of Warwickshire adults are overweight or obese, as well as 35.9% of Warwickshire children in Year 6. These individuals may have an increased risk of developing chronic illnesses like musculoskeletal conditions, cardiovascular disease and type 2 diabetes, increasing associated health and social care costs.

Health outcomes are also unevenly distributed across the population, with those living in more deprived areas experiencing poorer health.

It is essential that we understand the likely scale and patterns of demand that health and social care systems will be faced with into 2030/40 and beyond, to enable us to plan services. Strong primary care will be vital in supporting the ageing population and providing generalist medical input in the context of multimorbidity. Services will increasingly need to look at how to best prevent deterioration of health and increase healthy life expectancy. Preventative care will be of increasing importance, focusing on protective factors to keep people well for longer and minimise avoidable use of services, focussing on tackling the biggest risk factors in Warwickshire including tobacco, poor diet, physical activity and alcohol. Crucially, public health responses now can have a significant impact on levels of future demand, particularly in the commissioning of preventative services.

Mental health and loneliness

Mental health and loneliness are likely to continue as key areas of focus in public health and social care, with mental illness becoming an increasingly significant contributor to the 'burden of disease' in the UK. Older people living alone and children and young people whose social development and networks were interrupted by the pandemic are likely to be the focus of this work – but we know that loneliness and poor wellbeing are on the rise among people of all ages. The incidence of depression recorded on practice registers has increased year on year from 5.7% in 2013/14 to 14.4% in 2021/22. As government policy and NHS provision begins to move towards parity of mental and physical health with the growth of initiatives like social prescribing, local authorities will have a critical and likely expanded role in using community connections to provide holistic support and preventative care for mental and physical wellbeing.

Governance of health and social care

Reform to adult social care is underway, focusing on workforce development, digitisation and data, care at home, and recognition of the role that housing plays in health and social care, and with the Health and Care Act 2022 introducing a new requirement for the CQC to assess local authorities' performance of social care responsibilities. Reform to children's social care is also expected, following results from consultation earlier this year - with expected changes from the *Stable Homes, Built on Love* publication to include a greater focus on kinship care. Growing integration between health and care seems likely to continue, and working effectively with health partners though existing and new governance structures will be key in helping us to manage increased demand.

Joint guidance from the LGA/NHSE provides guidance to all partner organisations within Integrated Care Systems (including local authorities), as they define their place-based partnerships for health and care services.

In terms of estimated costs in meeting the growing demand and improving adult social care services in England, the Health Foundation published an analysis on future cost projections. The foundation predicts that between 2021/22 and 2032/33, to keep up with rising demand, funding would need to rise by an average of 3.4% a year. Their analysis spans four scenarios whereby the lowest estimate would require an extra £8.3bn for local authorities to solely meet future demand in adult social care whilst the highest estimate would require an additional £18.4bn by 2032/33 to meet future demand, improve access to care and cover the full cost of care.

Jobs, economy, and technology

Digital connectivity

Warwickshire should be alert to the possibilities 5G will bring and the benefits it will have on communities. Parts of the County that have long suffered from poor connectivity will now stand the chance of gaining fast and reliable broadband. This could in turn attract new businesses to areas and increase the productivity of those already operating. Enhanced speed and access of information will be also transformational for service delivery, allowing councils to operate more targeted, efficient, and data-driven services in multiple areas, from transport and waste collection to tourism and social care[4].

Local energy sources:

A future power grid that relies on renewables will need to be far more extensive and integrated with local areas than it is now, this thus brings up questions around the role, if any, councils should play in local power generation, storage, and control. Future considerations include:

- A fully renewable grid would occupy 4x as much land by 2050 as current infrastructure.
- The grid will also need to become "smarter" as it balances peaks in both demand and supply whilst managing this flexibility will be more effective at a local level and studies are already underway involving local authorities with power distribution .

[4] West of England CA and Liverpool City Council 5G examples, see here.

- Power generation and storage will need to become a visibly bigger presence across the country.

Sustainable local economy:

A key strategic move that needs to be made for Warwickshire to reach its net-zero 2050 goal is a shift towards greater sustainability in the local economy. This is a model where products are shared, reused, repaired, or as a last resort recycled which would be a significant step towards dealing with global challenges[5][6]. 90% of the materials used come from virgin sources, 80% of which are from abroad whilst only 7.5% of materials are circled back into the UK economy after use.

An initial step towards a more sustainable local economy could be a transition towards a 'lease' rather than 'own' model for certain items[7]. For example, a reconfiguration of retail when an individual, for example, would only need to borrow a strimmer/drill/car/baby clothes when needed. This could also apply to manufacturers whereby they take-back items for remanufacture by employing modular components where worn parts could be replaced or repaired. Naturally, this would require a concerted effort from WCC and partners to improved repair and reuse infrastructure as well as improved training/upskilling[8].

Artificial intelligence:

According to the 2021 National AI Strategy, the government believes the UK is well placed to lead the world over the next ten years in research and innovation, talent development and creating a progressive regulatory and business environment. Several councils have already implemented AI-based technologies such as chatbots, and virtual assistants which can provide accurate and efficient responses to queries: reducing workload on staff[9]. However, adopting AI necessitates data security and significant GDPR/ethical considerations to safeguard citizen privacy.

The implications of AI for local government are extensive, with particular considerations towards the impact the technology will have on employment and replacing repetitive tasks through automation. Though it is inevitable that certain roles within local government will be replaced with an increasingly sophisticated AI technology, this also presents an

[5] A Green Alliance Report suggests that a more ambitious approach to a material recirculation economy could generate up to 450,000 jobs, many in areas that have been identified for 'Levelling Up'. Research by WRAP suggests that a move towards a material recirculatory approach could help with the cost of living, saving UK households between £2 billion and £8 billion per year.

[6] Material recirculation projects have already been piloted in several local authorities, such as: Glasgow, Merton, Derry and Strabane

[7] See Merton example.

[8] See 'Future Skills'

[9] For example, Southend have adopted AI into the social care setting to enrich people's experiences of living in a core home or with dementia/Asperger's.

opportunity for new skills/roles to grow[10], especially in the governance of data and maintenance of AI.

Future Skills:

The transition to net zero creates new economic opportunities that can be harnessed to level up the county. To do so will require new skills in the workforce. Nearly 700,000 direct jobs could be created in England's low-carbon and renewable energy economy by 2030, rising to more than 1.18 million by 2050. We need to think again about how we support people into those jobs and ensure they have the skills the local economy needs. Long term recovery can only be delivered by industries that have a long-term future in a post carbon economy. According to the Green Alliance, every major sector in the UK needs to close a significant skills gap to enable them to reach net zero. Moreover, sectors with the most pressing emissions reductions by 2030 face the most immediate skills shortages, including housing and transport. Along with land use, these sectors already face shortages to deliver the status quo, let alone progress on net zero. They also predict that 80% of the current workforce will still be active in 2030. As well as attracting new green entrants there should be a focus on transferring existing skills and retraining for the green/material recirculation economy.

In order for WCC to fully take advantage of a newly skilled workforce, the council must first ensure that these future skills are identified with appropriate training/upskilling in place whilst also maintain existing sector skills to honour all business requirements. Being digitally proficient is now a near-universal requirement for employment, with digital skills now an essential entry requirement for two-thirds of occupations which account for 82 per cent of online job vacancies. According to Hays Recruitment employers struggled to fill one-third of vacancies in 2021 due to lack of digital competency.

It should also be noted that if the current trend of individuals changing careers several times (with the average person currently changing careers an average of 2.3 times in their lifetime) is to continue, it would be prudent to understand what core skills and competencies people can build through multiple careers that enable senior, experienced, and skilled leaders to emerge.

In terms of employment numbers in Warwickshire, in 2030, it is expected that the Retail Trade, Food & Beverage Services, Education, Construction, and Health - will employ the most people. The growth in the number of Other Skilled Trades is expected to be the largest amongst all the occupations in Warwickshire between 2023-2030, followed by Science/Tech Professionals, Teaching/Research Professionals, and Sales Occupations

Future of workspaces:

[10] See: 'Future Skills'.

In February 2022, 84% of workers who had to work from home because of the coronavirus pandemic said they planned to carry out a mix of working at home and in their place of work in the future.

While the proportion of workers who had not planned to hybrid work at all has not changed much since April 2021, that hybrid working pattern has shifted more in favour of spending most working hours at home. This has presented several local authorities the opportunity to save costs by revisiting their operational estate requirements[11][12].

In February 2022, the most common hybrid working pattern that workers planned to use was working mostly from home, and sometimes from their usual place of work. 42% reported this, which is an increase from 30% in April 2021. Meanwhile, the proportion who planned to split their time equally between work and home or work mostly from their place of work and occasionally from home, has fallen.

Skills Gap, Reskilling and Future Employment:

A skills gap predictions for the LGA revealed that by 2030, there would be an oversupply of three million people with low and intermediate qualifications and 2.5 million too few higher skilled workers compared to jobs generated. These gaps were starker within places than between them, emphasising that 'place' really does need to be factored in when designing and targeting provision, as an analysis of the current challenges and opportunities in the labour market shows.

The Institute for Employment Studies showed that there were 1.29 million vacancies and fewer than 1.3 million people unemployed. This recruitment crisis is being fuelled by a participation crisis, with 590,000 fewer people in work and 490,000 more people out of work and not looking, than before the pandemic. All told, there are now 1.2 million fewer people in the labour force than there would have been had pre-pandemic trends continued, with nearly three fifths of this gap – or 670,000 people – is explained by fewer people aged over 50 in the labour market, especially women, with fewer than a quarter claiming benefits. Figures also suggest the largest annual growth in worklessness due to long-term ill health since records began in 1992 – taking the figure to 2.38 million (its highest since 2004).

A CBI report found that as many as nine in ten people will need to reskill by 2030 as a result of changes in the economy and labour market. The City & Guilds found that of a total of 3.1 million key worker job openings expected in next five years - making up 50 percent of openings in UK job market, only a quarter of working age adults would consider those roles which include health and social care. As major local employers in their own right, local

[11] In an email to employees and councillors last year, Kirklees chief executive announced that among other savings measures, the council would seek to reduce its number of buildings. This meant it expected "a shift towards working from home for colleagues who are able to do so".
[12] Buckinghamshire Council approved a new estates policy that proposes reducing the council's operational estate based on need. It says this could lead to revenue savings of £2.4m a year and capital receipts savings of £4m, as well as a lower carbon footprint.

authorities have workforce capacity issues of their own that predate but have been exacerbated by COVID-19. In a recent survey of councils, shortages were highlighted in adults' social care, children's services, planning, environmental health, and waste collection.

Moving towards a high skill, high wage economy will in part be met by a range of further education and technical reforms but also critically joining up skills, education and employment support and work with employers on skills utilisation.

There is more to do given nine million people lack basic skills like literacy or numeracy, while 11.8 million (36 per cent) of working adults lack the digital skills needed for work. This locks people out of the chance to work and build a career, with those qualified below Level 2 (equivalent to five good GCSEs or equivalent) nearly three times more likely to be out of work than those qualified at Level 4 or above (degree level). WCC would need to work with partners to understand what core skills Warwickshire businesses require and at what level they are required.

The place-based joint strategic needs assessments have through stakeholder engagement identified some gaps between the skills present in the local labour market and the employment opportunities that are available, particularly in the north of the County[i]. This is corroborated by recent surveys of businesses which suggest two-thirds are experiencing recruitment difficulties due to skills and labour shortages.

Town Centre Regeneration:

With the decrease in footfall in traditional retail stores, the high street has taken a significant impact – this has presented itself as a pertinent challenge for local authorities. Some retailers like M&S and Next have decided to relocate to out-of-town retail parks[13]. Rents and service charges on retail parks are generally lower than in town centres. Moreover, though all towns have been affected by the decline in high street shopping, poorer towns have generally been hit harder than more prosperous towns.

Clearly, trying to regenerate town centres by building more retail space is now a broken model. A potential solution would be to improve the mix of uses in town centres bringing footfall and vitality back. Empty shops, department stores and even shopping centres can be replaced with green spaces, medical centres, offices, workshops, colleges, and housing.

Environment, climate and infrastructure

Public support for environmental policies

We know that action on environmental issues requires urgency and strength to tackle the climate emergency. However, research indicates that while most net zero policies receive broad support from the public, this level of support falls or is even outweighed by opposition as soon as there is a personal cost to the policy – and with cost of living

[13] Leamington Spa's Parade provides a local example of this.

pressures at the forefront of many residents' minds, there is a risk that action on net zero may be deprioritised. Looking to the future, if cost of living pressures continue or worsen over time, there are concerns over a potential 'green backlash', where residents will find it difficult to prioritise longer-term environmental action (and its associated costs) over other, more immediate priorities like high streets and community, crime and opportunities for young people. If local net zero policies are to be actioned and prioritised, more thought may need to be given to public opinion, keeping residents on board with policy action, and promoting behavioural and attitudinal change. We know that individuals and communities must adapt their lifestyles and habits to reduce carbon emissions and mitigate environmental impacts, but these changes often come with associated costs, such as investing in energy-efficient technologies, transitioning to sustainable transportation, or adopting eco-friendly practices. As a council, we will need to consider the economic implications and equity aspects of these changes, ensuring that vulnerable populations are not excluded from necessary green behavioural shifts.

Evolving national government policy

Changes to government policy are of course likely to be ubiquitous across all policy areas over the timeframe, but there is a strong likelihood of particular emphasis on environmental policy which will increasingly demand prompt action to align with evolving national and global targets. Local government will need to be prepared to adapt to new or changing requirements and duties. The introduction of biodiversity net gain requirements for new developments is a recent example. We have already begun to see a shift in central government policy to recognise the importance of localised climate action, and so it would seem sensible to pre-empt potential new duties by giving due consideration to the possibility of proactive action to anticipate and strategically incorporate localised environmental policy across all areas of council operations. More localised environmental policy and action may also become of increasing importance to meeting Net Zero goals where there is a local desire or commitment to go beyond national government targets and policy.

Climate change

As the impacts of climate begin to be felt more widely, there will be significant mitigation and adaptation work impacting on almost all areas of council responsibilities, the severity depending on the global emissions trajectory. Information and guidance on local government's role in climate change responses is widespread, including from the LGA and a recent House of Commons briefing paper. We will need to focus more on building and maintaining climate-resilient infrastructure, considering how key infrastructure like roads and bridges will withstand extreme weather events like flooding and heatwaves. Just as we provided 'Warm Hubs' this winter, 'Cool Hubs' may need to become a widespread summer phenomenon, and we will need to consider how public buildings can be adapted to reduce temperature fluctuation in periods of extreme weather. Emergency planning teams will need to ensure capability to respond to more frequent, more severe climate-related emergencies, like water scarcity. Public health will also face particular challenges, relating to heat-related illnesses, deterioration of air and water quality, vector-borne diseases, physical and mental health impacts of extreme weather events and, indirectly, from disruptions to food and water supply – and these impacts are likely to be felt most by those living in more deprived areas within Warwickshire.

Alternative fuels, including electric charging infrastructure:

One major change that is already visible on our streets is the rise in electric vehicle ownership and usage. From 2030, the sale of new petrol and diesel cars will be banned in the UK, with hybrid cars following suit in 2035. Access to EV charging infrastructure will become increasingly essential, including on-street chargers as well as people charging from their own homes. EVs and charging infrastructure provision should be considered as part of a sustainable, holistic mobility strategy that also encourages walking, cycling, car-sharing and public transport use. The LGA offers resources to support councils to learn more about electric vehicles. Warwickshire may face particular challenges in developing charging infrastructure to support rural populations, with CCN research showing that county areas currently only have access to one charging point every 16 miles, compared to one every mile in London. Consideration will be needed on ensuring equitable access to affordable charging facilities, even in areas with smaller populations. In addition to public infrastructure, WCC will also need to plan for the transition of our own vehicle fleet to electric vehicles.

Moreover, 'Wholesale, Retail and Repair of Motor Vehicles' is currently the biggest industry in Warwickshire, employing over 48,000 people. By 2030 the transition to electric vehicles and associated rapid reduction in the manufacture of internal combustion engines and related systems means that there is a risk that this will no longer be Warwickshire's most competitive and concentrated industry, with significant impact on the occupations linked to the manufacture of motor vehicles.

Housing pressure – green and right type:

Heating the UK's 28 million households accounts for 14% of our total carbon emissions; buildings are the country's second-largest source of emissions. It is estimated that it will cost UK homes approaching £300 billion to reach the required Energy Performance Certificate (EPC) ratings alone to migrate to Net Zero. This is especially pertinent considering the predominance of lower EPC ratings across poorer regions of the UK.

Upfront installation costs of energy efficient appliances are a barrier to 45% of the public, with a quarter perceiving the running costs of a low-carbon heating system to be too high for them to afford or not providing enough cost savings to be economically viable.

ONS projections suggest that by 2030 there will be 271,250 households in Warwickshire, which would represent a 1.8% rise from 2021. However, given that further housebuilding is planned in Warwickshire, it is likely that the number of households in, and the population of Warwickshire will be greater than estimated by 2030.

Transport and travel

Travel and Transport Demand:

Bus use nationally is forecast to decline towards 2040 due to modal shift and increases in shared services. This trend could, however, be bucked if projected reductions in operational costs can be passed on to the customer and bus services grow in quality, frequency, and coverage.

Total road traffic is forecast to grow by between 17% and 51% between 2015 and 2050 and car traffic by between 11% and 43%. Autonomy, an increase in shared services and incentives to decongest roads will deliver a modest move away from private vehicle ownership. This change may also further reduce reliance on public transport, especially buses, by 2040-2050. While car traffic is projected to increase, the Committee on Climate Change reports that approximately 9% of car miles can be reduced or shifted to lower-carbon modes by 2035, increasing to 17% by 2050.

Connectivity:

It is expected that all road vehicles will be capable of fully cooperative driving by 2050. Road maintenance, traffic planning and routing, traffic management, refuelling systems, freight operations, train operations and air traffic management will all benefit significantly.

This is expected to be enabled by widespread 4G connectivity by 2025 and 5G by 2030. Widespread 7G by 2050 will connect all road vehicles with each other and should enable a sophisticated central traffic management system. This should lead to road vehicles being capable of cooperating with other nearby vehicles to support traffic flow and safety by 2050. Moreover, all recharging and refuelling systems and vehicles will be fully internet connected by 2030 to maximise energy management for motorists, vehicles, and energy networks.

With Warwickshire's unique urban/rural profile, considerations will need to be made around understanding how transport could change for rural areas with very few local amenities and limited (and sometimes inconsistent) public transport. Encouraging active travel in rural communities will be a challenge due to their distance from urban centres, thus their connectivity to major employment centres will be crucial[14]. This may come in the form of buses but integrated multi-modal travel will almost certainly form part of the solution.

[14] This is already well acknowledged in LTP4 actions.

Energy Vectors (sources of power):

The move to net zero by 2050 will require a complete shift from fossil fuels to sustainably produced electricity, hydrogen and other alternatives and a switch to supply chains producing new powertrains. Fossil fuels will still be the dominant energy vector in 2025, and even 2030. However, electric will need to be the dominant vector by 2050 if we are to achieve net zero. It is also expected that hydrogen will be a significant vector for heavy goods vehicles, buses, and aircraft by 2050.

Achieving net zero by 2050 means electric will be a dominant energy vector. It will power >99% of cars and vans, 50% of buses, 50% of HGVs, 95% of rail and 100% of micro mobility.

Autonomy:

Autonomy will make road vehicles smarter, create opportunities for new services such as last mile delivery by drone and deliver fully autonomous urban transport. We anticipate that the urban transport systems, air transport, rail freight, ferries to and from UK islands and 90% of motorway HGVs will be fully autonomous by 2050.

Road vehicles are rapidly becoming smarter. We expect to see private vehicles capable of operating in driverless mode in limited areas by 2030 and common by 2035. They will allow less-able-bodied people to gain or maintain independence. Automated buses and minibuses will undergo trials by 2025 and become commonplace (40% of those in service) by 2035. However, questions remain on the affordability of private EV. Though the ban on sales of fuel-burning cars is now meant to come into force in 2035, EV still remain significantly more expensive than their counterparts.

Transport Infrastructure:

UK transport is expected to consume 5.9 million tonnes of petroleum products by 2050 (down from 60.5 million tonnes in 2021). The balance is expected to be made up of other fuels and energy vectors dependent on different modes. This includes 145TWh electricity to support all electric vehicles, which represents 50% of the 2021 UK annual demand. Whilst generation is not expected to be a challenge, distribution will require some innovation[15].

An estimated 155TWh of electricity will be needed for transport by 2050 – this will require significant and rapid development of zero carbon production and distribution on a national scale and international cooperation on supply chains and standards. For example, significant investment is needed to bring in the estimated 280,000 road charge points needed by 2030.

Concerning the future of parking, new technology developments, such as the DfT-funded 'National Parking Platform', are likely to impact the way that local authorities procure and

[15] See: 'Local Power'

deliver parking services in the future. Looking into the future, the DfT's vision for parking management is much broader. Further developments could include the service providing a more comprehensive information source, the ability to implement dynamic pricing, enabling convenient payments for multiple services (including EV charging), integrating with MaaS (Mobility as a Service) platforms, aligning with kerbside strategies and optimising data analysis for a deeper understanding of the market. There is potential for parking as 'multi-use spaces' with areas becoming 'mobility hubs' rather than simply a place to leave a car.

Active Travel

Active travel (walking and cycling) rose during the pandemic, and we expect to see long-term behaviour change. Over a quarter of YouGov survey respondents were quite likely or very likely to cycle or use e-cycles, with the figures up on pre-pandemic levels. These changing attitudes are recognised in the DfT's 'Gear Change' strategy, which aims for 50% of all journeys in urban areas in England to be cycled or walked by 2030.

Micromobility – use of electric and human-powered vehicles under 200kg and with speeds restricted to under 25mph – will be prevalent in urban areas from 2025 and provide a transport option for all trips under 8km.