



“Climate change presents unprecedented and potentially catastrophic risks to health and wellbeing”.

(Fair Society, Healthy Lives – The Marmot Review, 2010*)

*Marmot et al. (2010) Fair Society Healthy Lives. Available from: <https://www.parliament.uk/globalassets/documents/fair-society-healthy-lives-full-report.pdf> (Accessed 14 February 2023).

Aims and Objectives

Introduction

This year, the Director of Public Health annual report aims to

- Highlight the impact of climate change on health, wellbeing and health inequalities
- Show how we can respond to the effects of climate change
- Outline Cheshire East's leadership role in making the borough carbon neutral
- Provide recommendations to continue to tackle climate change and health inequalities

Health impacts of climate change

Climate change has many impacts on our physical health and mental wellbeing. They can result in illness, death, and peoples' ability to access services.

Rising sea levels, less freshwater, and safe water availability, can result in changing patterns of infections, reduced pollination and crop failure leading to food shortages and poor air quality (leading to increase allergens and lung diseases).

There can be livelihood loss, rising prices of food and fuel, supply chain disruption, pressure on health and care services, conflict or forced migration.

Climate change does not affect everyone equally. By reforming our approach to health and social care, we can reap the benefits of living longer, healthier and happy lives.

Cheshire East response

The council declared an environment and climate emergency in May 2019.

We are committed to becoming a carbon neutral council by 2025 and a carbon neutral borough by 2045, strengthening the commitment to our residents in the borough.

We explain our plans, and actions already taken to combat climate change in the full report.

As part of our recovery from the pandemic, it is important to build on the positive changes we have seen, such as the choice to work from home, enhancing local opportunities for active travel and the reduction in traffic and air pollution.

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What is climate change?

Climate change is a long-term shift in temperatures and weather patterns¹.

These may be natural; however the patterns are mostly driven by human activities since the 1800s, mainly due to burning fossil fuels like coal, oil and gas. Greenhouse gas emissions (for example carbon dioxide and methane) generated by burning fossil fuels act like a blanket wrapped around the Earth, trapping the sun's heat and raising temperatures.



Energy, industry, transport, buildings, agriculture and land use are the main producers of these greenhouse gases.

The impacts of climate change are wide ranging including extreme weather events, heavy rainfalls, higher sea levels, flooding, droughts, more and longer-lasting heat waves, air pollution, reduced production of major crops, deaths and illnesses, extinction of species and slow economic growth.

Further information and scientific evidence on climate change can be found at Frequently Asked Questions from the Intergovernmental Panel on Climate Change report on Climate Change Evidence and Causes from The Royal Society and US National Academy of Sciences².

Check how high temperatures might climb and how much rain might fall in your area at [What will climate change look like in your area?](#)

¹ United Nations. What Is Climate Change? Available from: <https://www.un.org/en/climatechange/what-is-climate-change> (Accessed 14 February 2023).

² The Royal Society (2020) Climate change: Evidence and causes. Available from: <https://royalsociety.org/topics-policy/projects/climate-change-evidence-causes/> (Accessed 14 February 2023).

Health impacts of climate change

Climate change has many direct (deaths and illnesses) and indirect impacts (access to services) on health and wellbeing. There are three main ways through which climate change can affect health³:

Effects of extreme weather: Hotter and drier summers (with more heatwaves, droughts and wildfires), and wetter and colder winters (with more flooding and severe storms). These can impact physical and mental wellbeing (for example injuries, drowning, hypothermia, trauma, heat-related illness, loss of productivity). It is anticipated that these events are expected to increase in frequency and severity in coming years.

Effects on the planet's life-support systems: Rising sea levels, less freshwater, and safe water availability, changing patterns of zoonotic and vector-borne disease (for example malaria and dengue fever), food and water borne diseases, reduced pollination and crop failure leading to food shortages and poor air quality (leading to increase allergens and lung diseases).

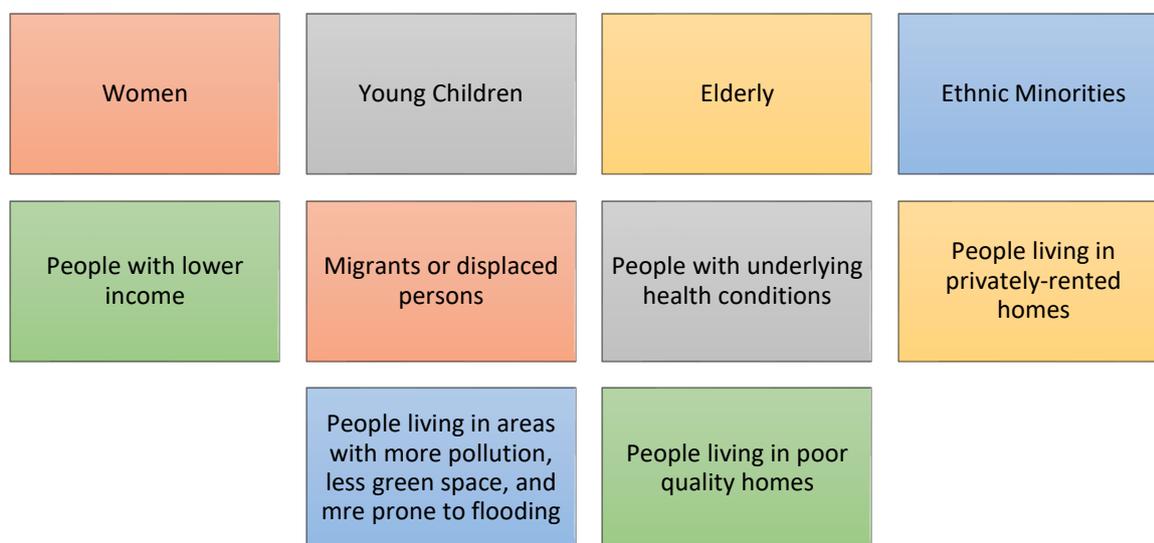
“Greenhouse gas concentrations are at their highest levels in two million years.”

Effects mediated by social systems: Livelihood loss, rising prices of food and fuel, supply chain disruption, pressure on health and care services, conflict or forced migration.

³ Office for Health Improvement and Disparities (2022). Guidance. Climate and health: applying All Our Health. Available from: <https://www.gov.uk/government/publications/climate-change-applying-all-our-health/climate-and-health-applying-all-our-health> (Accessed 14 February).

Who is at the greatest risk?

Climate change does not affect everyone equally. Some individuals, groups and communities are more at risk, due to the impact of climate change on several factors (wider determinants of health) affecting health. Those who are most vulnerable and disadvantaged (figure 1) are at the greatest risk from the negative implications.



Evidence suggests that climate change worsens such inequalities through: greater exposure and vulnerability of disadvantaged groups to climate hazards, enhancing their susceptibility to damage from these hazards, and decreasing their resilience and recovery from harm⁴.

The most vulnerable can face all these disadvantages. For example, older people and people with underlying medical conditions are more susceptible to extremes of heat and health impacts from exposure to air pollution. If they live in low-income communities or poor quality homes, they may also have limited means to reduce their exposure to risks from climate and air quality⁵.

⁴ United Nations (2016) UN-DESA Policy Brief. Available from: <https://www.un.org/development/desa/dpad/wp-content/uploads/sites/45/publication/WESS2016-PB2.pdf> (Accessed 14 February 2023).

⁵ Marmot et al. (2010) Fair Society Healthy Lives. Available from: <https://www.parliament.uk/globalassets/documents/fair-society-healthy-lives-full-report.pdf> (Accessed 14 February 2023).

The case for action

Burden of Climate Change:

Greenhouse gas concentrations are at their highest levels in 2 million years. The Earth is now about 1.1°C warmer than it was in the late 1800s. The last decade (2011-2020) was the warmest on record. The negative outcomes from combined exposures from heat, air pollution, drought and wildfires are increasingly recognised.



The World Meteorological Organization (WMO) [reported](#) that between 2001 and 2010 extreme weather events caused⁶:

- more than 370,000 deaths worldwide (including a large increase in heatwave deaths from 6,000 to 136,000) – 20% higher than the previous decade
- an estimated US \$660 billion of economic damage – 54% higher than in the previous decade

This will create a [significant burden](#) on the health systems.

Between 2030 and 2050, climate change is expected to cause approximately 250,000 additional deaths per year from malnutrition, malaria, diarrhoea and heat stress.

The direct cost to health is estimated to be between \$2-4 billion/year by 2030⁷.

Climate change Implications in the UK:

In the UK, average surface temperature has [already risen](#) by around 1°C and the effects of climate change are already visible. New UK weather and climate records are becoming more frequent, with unprecedented high temperatures and heavy rainfalls. We can also see trends, with recent years bringing lots of extremes. 7 of the last 10 summers (2011-2020) have reached a temperature of 34°C. Before this, just 7 of the previous 50 summers (1961-2010) reached 34°C. Six of the ten wettest years on record have been since 1998⁸. These

⁶ Department for Business, Energy & Industrial Strategy (2014). Guidance. Climate change explained. Available from: <https://www.gov.uk/guidance/climate-change-explained> (Accessed 14 February 2023).

⁷ World Health Organization. Climate Change. Available from: https://www.who.int/health-topics/climate-change#tab=tab_1 (Accessed 14 February 2023).

⁸ MetOffice. Climate Change in the UK. Available from: <https://www.metoffice.gov.uk/weather/climate-change/climate-change-in-the-uk> (Accessed 14 February 2023).

records are not a definite sign of things to come. We also can't say that climate change caused them, but it does make them more likely. [Initial analysis](#) by the UK Health Security Agency (UKHSA) shows that across the 5-heat periods in the summer of 2022, the estimated total excess mortality (excluding coronavirus (COVID-19)) in England was highest for those aged 65 and over, since the introduction of the Heatwave plan for England in 2004⁹. The latest scientific evidence for observed and project climate change by the [UK Climate Risk Independent Assessment \(CCRA3\)](#) concludes that the UK is projected to observe ongoing increases in temperature until the middle of the century even if it meets the targets set under Paris Agreement¹⁰.



“Extreme weather events caused an estimated US \$660 billion of economic damage”

The UK will [face](#) a range of significant and costly changes unless further action is taken now. Even if all emissions are stopped today, some impacts cannot be prevented but their impact will be smaller¹¹.

Evidence for the case to action

Given the significant amount of harm from climate change and our understanding of its sources, there is an urgent need for an action.

[Transport](#) is the largest contributor of greenhouse gas emissions, responsible for about one-quarter of all emissions and it is set to double by 2050¹².

⁹ UK Health Security Agency & Office for National Statistics (2022) Excess mortality during heat-periods: 1 June to 31 August 2022. Research and Analysis. Available from: <https://www.gov.uk/government/publications/excess-mortality-during-heat-periods-1-june-to-31-august-2022> (Accessed 14 February 2023).

¹⁰ Department for Environment, Food & Rural Affairs (2022) UK Climate Change Risk Assessment 2022. Policy paper. Available from: <https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2022> (Accessed 14 February 2023).

¹¹ Department for Environment, Food & Rural Affairs (2022) UK Climate Change Risk Assessment 2022. Policy paper. Available from: <https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-2022> (Accessed 14 February 2023).

¹² UN environment programme. Transport. Available from: <https://www.unep.org/interactive/six-sector-solution-climate-change/transport/index.php#:~:text=Transport%20is%20responsible%20for%20about,set%20to%20double%20by%202050>. (Accessed 14 February 2023).

[More than 90%](#) of people breathe unhealthy levels of air pollution, largely resulting from burning fossil fuels. In 2018, air pollution from fossil fuels caused [\\$2.9 trillion](#) in health economic costs, about \$8 billion a day¹³.

Between 2017 and 2025, the total cost to the NHS and social care of air pollution in England for where there is more robust evidence for an association, is [estimated](#) to be £1.6 billion for PM_{2.5} and NO₂ combined (£1.54 billion for PM_{2.5} and £0.81 million for NO₂). Even a small reduction in nitrogen dioxide (NO₂) annual average concentrations in England could [help](#) to avoid over 30,000 new cases of diseases caused or impacted by NO₂ over the next 18 years¹⁴.

In 2018, 18% of the UK's total greenhouse gas emissions came from housing. Energy-inefficient homes are a [major](#) environmental problem¹⁵: cost effective investments in domestic energy efficiency alone can [reduce](#) the average UK household's energy use by approximately 25% by 2035¹⁶. This is equivalent to the output of six Hinkley Point C nuclear power stations per year. Actions to address this will [cut](#) greenhouse gas emissions and local air pollution, and save households an average of £270/year on energy bills¹⁷.

There is [evidence](#) that living in areas with green space can actually reduce health inequalities, even counteracting the effects of deprivation¹⁸.

¹³ United Nations. Climate action. Available from: <https://www.un.org/en/climatechange/raising-ambition/renewable-energy#:~:text=In%202018%2C%20air%20pollution%20from,also%20air%20pollution%20and%20health>. (Accessed 14 February 2023).

¹⁴ Public Health England (2018) Health matters: air pollution. 14 November 2018. Available from: <https://www.gov.uk/government/publications/health-matters-air-pollution/health-matters-air-pollution#:~:text=It%20estimated%20that%20between%202017,60.81%20million%20for%20NO2>. (Accessed 14 February 2023).

¹⁵ Faculty of Public Health Special Interest Group-sustainable development. Fuel Poverty and Affordable Warmth. Available from: <https://www.fph.org.uk/media/2593/a6-fph-sig-fuel-poverty-affordable-warmth-final.pdf> (Accessed 14 February 2023).

¹⁶ NICE (2015) Excess winter deaths and illness and the health risks associated with cold homes. [NG6] Available from: <https://www.nice.org.uk/guidance/ng6/> (Accessed 14 February 2023).

¹⁷ Centre for Sustainability Energy (2017) Assessing the health impact of cold homes. Available from: <https://www.cse.org.uk/downloads/reports-and-publications/fuel-poverty/energy-advice/insulation-and-heating/Assessing-the-health-impacts-of-cold-homes.pdf> (Accessed 14 February 2023).

¹⁸ European Environment Agency. Who benefits from nature in cities? Social inequalities in access to urban green and blue spaces across Europe. Briefing. Available from: <https://www.eea.europa.eu/publications/who-benefits-from-nature-in> (Accessed 14 February 2023).

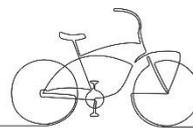
Benefits of reducing the impact of climate change:

There are multiple [co-benefits](#) of taking actions on climate action. For example, more active travel (for instance walking and cycling), which, in addition to reducing carbon emissions, also increases physical activity, and reduces air pollution and traffic accident¹⁹.

The co-benefits of action on climate change include:

Health improvements – Investing in measures such as active travel, promoting green spaces and healthy eating will impact positively on carbon emissions as well as on health, particularly through reduced air pollution and increase physical activity.

Quality of place – Less traffic congestion, job creation in the low-carbon sector, operational cost savings via increased energy efficiency and waste reduction



Green infrastructure - investments in natural solutions to climate change (tree planting, peatland management) can have a wide range of additional benefits including:

- Biodiversity – natural spaces in urban and rural settings create refuges for wildlife.
- Water management – regulation of water availability & quality and flooding.
- Heat regulation – vegetation provides cooling in the summer and warming in the winter
- Economic benefits – increased productivity through greater wellbeing; new revenue streams.
- Health & wellbeing – increased recreation; reduced stress; greater connection to nature.

Economic growth - reduced NHS costs, growth in the low-carbon jobs market and a reduction in poverty

Reduction in health inequalities- The risk factors for climate change are similar to risk factors for health inequalities. The [Marmot review](#) outlined that actions to mitigate climate change would also help to reduce health inequalities and that these policies are compatible²⁰.

¹⁹ Jennings et al (2019) Co-benefits of climate change mitigation in the UK: What issues are the UK public concerned about and how can action on climate change help to address them? Available from:

<https://www.imperial.ac.uk/media/imperial-college/grantham-institute/public/publications/briefing-papers/Co-benefits-of-climate-change-mitigation-in-the-UK.pdf> (Accessed 14 February 2023).

²⁰ Marmot et al. (2010) Fair Society Healthy Lives. Available from:

<https://www.parliament.uk/globalassets/documents/fair-society-healthy-lives-full-report.pdf> (Accessed 14 February 2023).

Response to climate change



Global Response: There is [agreement](#) among scientists across the world that we can avoid the worst climate impacts and maintain a liveable climate by limiting global temperature rise to no more than 1.5°C²¹. At the [Paris climate conference](#) (COP21) in December 2015, Governments agreed to a long-term goal of keeping the increase in

global average temperature to well below 2°C above pre-industrial levels and to aim to limit the increase to 1.5°C²². In December 2019, the EU [agreed](#) to set a target of becoming carbon neutral by 2050²³. The [COP26 summit](#) brought 200 countries together to accelerate action towards the goals of the Paris Agreement. As a result of COP26, the goal of limiting global temperature rise to 1.5°C, while fragile, remained alive.²⁴

“Investing in energy efficiency can reduce UK household’s energy use by approximately 25% by 2035”

UK response: The [Climate Change Act 2008](#) introduced the UK’s first legally binding target for 2050 to reduce greenhouse gas emissions by at least 80% compared to 1990 levels²⁵. Between 1990 and 2017, the UK reduced its emissions by 42%. The UK government [amended the Climate Change Act](#) in 2019 and set a legally binding target to achieve net zero greenhouse gas emissions from across the UK economy by 2050²⁶. The UK government is also committed to the delivery of the [United Nations \(UN\) Sustainable Development Goals \(SDGs\)](#), agreed by world leaders at the UN in 2015²⁷. These goals aim to “end poverty, protect the planet and ensure that all people enjoy peace and prosperity”. The co-benefits of climate change response can directly support greater action on the SDGs – Climate Action

²¹ United Nations. What Is Climate Change? Available from: <https://www.un.org/en/climatechange/what-is-climate-change> (Accessed 14 February 2023).

²² IPCC. FAQ Chapter 1. Available from: <https://www.ipcc.ch/sr15/faq/faq-chapter-1/> (Accessed 14 February 2023).

²³ European Commission. 2050 long-term strategy. Available from: https://climate.ec.europa.eu/eu-action/climate-strategies-targets/2050-long-term-strategy_en (Accessed 14 February 2023).

²⁴ United Nations. Climate action. COP 206: Together for our planet. Available from: <https://www.un.org/en/climatechange/cop26> (Accessed 14 February 2023).

²⁵ Legislation.gov.uk. Climate Change Act 2008. Available from: <https://www.legislation.gov.uk/ukpga/2008/27/contents> (Accessed 14 February 2023).

²⁶ Department for Business, Energy & Industrial Strategy and The Rt Hon Chris Skidmore MP (2019) News story UK becomes first major economy to pass net zero emissions law. 27 June 2019. Available from: <https://www.gov.uk/government/news/uk-becomes-first-major-economy-to-pass-net-zero-emissions-law> (Accessed 14 February 2023).

²⁷ United Nations. Department of Economic and Social Affairs. Sustainable Development. The 17 Goals. Available from: <https://sdgs.un.org/goals> (Accessed 14 February 2023).

(Goal 13), Good Health and Well-Being (Goal 3), Affordable and Clean Energy (Goal 7) and Sustainable Cities and Communities (Goal 11).

Key Principles underlying a local climate change response:

A robust response to climate change is delivered across national, local and individual levels. [Two types of approaches](#) are required²⁸:

Mitigation- reducing and stabilising the levels of greenhouse gases in the atmosphere (reduction in burning of fossil fuel, use of renewable energy, use of electric cars, increase in green space)

Adaptation – responding and adapting to the climate change already occurring or in the pipeline (for example, building flooding defences, improving housing)

The key principles to an effective response are below:

- Local authorities should be at the centre of local leadership, sharing good practice and acting as a role model.
 - Different risk factors should be considered and tackled together across all social gradients. For example, achieving net zero may lead to a reduction in primary air pollutants but there may be unintended consequences for other air pollutants. Substantial gains can be achieved through approaching the challenges of air pollution and climate change together. Ensuring actions included in Net Zero supporting the transport modal shift, to options such as walking, cycling and public transport are delivered to maximise the air quality and health benefits.
 - International and regional collaboration is needed because climate change does not respect borders, and there is little benefit in responding to it in isolation.
- A fully integrated and sustainable approach to policies involving both mitigating and adapting actions should be developed between different departments such as planning, transport, housing, environmental and health systems. For example, Research finds that the most effective policies in terms of housing are not only focussed on energy efficiency policies, as in England, but take the form of ‘whole-house’ approaches. These include changes to housing behaviours and lifestyles as well as changes throughout a property (insulation, heating and ventilation).
 - Climate change and health inequalities are interlinked effective strategies should address both health inequalities and climate change across the social gradient
 - Improving active travel
 - Improving good quality green spaces available
 - Improving the food environment in local areas
 - Improving energy efficiency in housing

²⁸ European Environment Agency. What is the difference between adaptation and mitigation? Available from: <https://www.eea.europa.eu/help/fag/what-is-the-difference-between> (Accessed 14 February 2023).

- Improve community capital and reduce social isolation²⁹
- Employers, private and public-sector organisations should engage with national and local initiatives and play their part.
- Individuals need to change behaviours to reduce their exposure and their contribution to pollution. There are a range of behavioural change interventions that can support these efforts; they are most effective if designed to account for models of behavioural change, differential exposure, sensitivity and adaptive capacity of different groups.
- The strategies should be combined with effective broad public information campaigns to promote engagement.
- On-going research programmes are required to address the gaps in evidence
- Where local action is taken investment and legislation should be focussed on creating the right incentives for positive change
- The strategies should be continuously monitored and evaluated

“The risk factors for climate change are similar to risk factors for health inequalities.”

²⁹ Marmot et al. (2010) Fair Society Healthy Lives. Available from: <https://www.parliament.uk/globalassets/documents>

[ts/fair-society-healthy-lives-full-report.pdf](https://www.parliament.uk/globalassets/documents/fair-society-healthy-lives-full-report.pdf) (Accessed 14 February 2023).

Cheshire East response

An environment and climate emergency was declared by Cheshire East Council in May 2019.

The council is committed to becoming carbon neutral as a council by 2025. In January 2022, the council pledged to make Cheshire East carbon neutral by 2045, strengthening the commitment to the borough. The council is working in partnership with NHS with recommendations for future collaborative working between the public bodies acting as anchor organisations for sustainability within Cheshire East.

A number of policies, plans, projects to raise awareness and undertake actions to combat climate change across the borough through engagement of partners and public.

Cheshire East Profile

- Census 2021 shows that the population for Cheshire East now stands at **398,800** residents. The population in the borough has increased by 7.7% since the last census in 2011, compared to 6.3% in England and Wales, and 5.2% in the North West region. Cheshire East now remains the third largest of the 39 local authorities in the North West – behind Manchester and Liverpool – and fifteenth largest in England.
- Cheshire East is the ninth least densely populated in the North West, with around two people living on each football pitch-sized area of land.
- Cheshire East has the fifth largest population increase across the North West region, below Salford (15.4%), Chorley (9.9%), Manchester (9.7%) and Cheshire West and Chester (8.4%).
- The oldest aged group (those aged 90 and above) increased by a third (32%) in Cheshire East which is above the England average (23%).
- Individuals aged 70 to 74 increase by nearly half (45%), which was also above the England average (37%)
- The health of people in Cheshire East is generally better than the England average. Life expectancy for both men and women is higher than the England average
- Deprivation in Cheshire East is demonstrated through the IMD score (index of multiple deprivation). Most of Cheshire East has a relatively low score (i.e., relatively affluent by the norm for England). Scores are higher (i.e., relative deprivation) in urban areas of Crewe and Macclesfield. The ward of Handforth also has a relatively high score.
- More than half of the households in Cheshire East (55%) are not deprived in any IMD dimension, whereas least 1% households are deprived in four or more dimension
- There is a correlation between healthy life expectancy at birth and deprivation in Cheshire East. Healthy life expectancy decreases are low in the wards with high levels of deprivation.
- Life expectancy at birth is 9.5 years lower for men and 7.2 years lower for women in the most deprived areas of Cheshire East than in the least deprived areas.

- Expected death from cancers, respiratory, cardiovascular diseases seen in Cheshire East (if national rates applied) indicate a lower (better) mortality outcome than the national norm. Much of Cheshire East enjoys favourable comparisons, but this is markedly not the case in areas of lower deprivation. Despite the favourable comparison, many of these deaths are occurring before their time due to avoidable causes like smoking and air quality
- A more detailed list of indicators at ward level in Cheshire East is available in the “Tartan Rug” spreadsheet. [Tartan Rug \(cheshireeast.gov.uk\)](https://www.cheshireeast.gov.uk)³⁰

Cheshire East Council leading by example

Cheshire East Council declared an environment and climate emergency in May 2019. The council is committed to becoming carbon neutral as a council by 2025.

Environment Strategy:

The [Environment Strategy 2020-24 \(PDF, 683KB\)](#) outlines the priority actions³¹:

- Cheshire East will be a [Carbon Neutral Council](#) by 2025³²
- Waste and pollution will be reduced
- Air quality will improve
- The availability and use of sustainable transport and active travel will increase
- New development will be sensitive and sustainable
- We will manage the environment to restore nature, conserve heritage and enhance the beauty of our landscapes

Carbon Neutral council:

Our carbon neutral by 2025 target is based on an assessment of the council’s carbon emissions during 2018-19. The carbon footprint of the council in 2018-19, based on the emissions outlined above, was just under 15,500 tonnes of CO₂. This covers the carbon emissions that the council has direct control over, which are emissions from:

³⁰ Cheshire East Council (2022) Health Profiles for Electoral Wards plus Primary Health and Social Care Areas. February 2021 Available from: <https://www.cheshireeast.gov.uk/pdf/jsna/ward-profile-tartan-rug/tartan-rug-cec.pdf> (Accessed 14 February 2023).

³¹ Cheshire East Council. Environment Strategy 2020-24. Available from:

<https://www.cheshireeast.gov.uk/pdf/environment/environment-strategy-2020-24-final.pdf> (Accessed 14 February 2023).

³² Cheshire East Council. Carbon Neutral Council. Available from: <https://www.cheshireeast.gov.uk/environment/carbon-neutral-council/carbon-neutral-council.aspx> (Accessed 14 February 2023).

- Streetlighting
- Gas and electricity from council-owned buildings
- council business travel
- council fleet vehicles
- Water and waste from council buildings

The projects outlined above aim to halve the carbon emissions by 2025. The remaining emissions will be offset within the borough through initiatives including:

- Use of green electricity in council buildings
- Capturing carbon through tree planting
- Generating green energy

[Carbon Neutral Action Plan](#) approved by the council in May 2020 sets out the actions to consider in support of the target of carbon neutral by 2025³³. Further details on how the council is reducing its carbon emissions can be found at [Carbon Neutral council \(cheshireeast.gov.uk\)](#)³⁴.

The action plan set a carbon reduction target of 46% and an inseting target of 60% by 2025 from 2019 baseline levels. To date the council has achieved carbon reduction of 5% and delivered 28% of its inseting target. However, there are a series of projects in development that are forecasting total carbon reduction of 49% and total inseting of 60%. Further information can be found at [Report Template v4.0 \(cheshireeast.gov.uk\)](#)³⁵.

The council is undertaking several projects to reduce carbon across its operations, and to offset (within the borough) the emissions which cannot be eliminated completely. [Cheshire East Carbon neutral case studies](#) provide more information on completed projects as we work towards becoming carbon neutral by 2025³⁶.

Visit a [short video](#) demonstrating the decarbonisation work done by the council³⁷.

The council is engaged with Town and parish councils are engaged through the Sustainability hub and Climate Emergency toolkit, designed to support Town and Parish councils to consider their role in accelerating their own carbon neutral transition and establishing targets and delivering change within their communities.

³³ Cheshire East Council (2020) Carbon Neutrality Action Plan 2020-2025. January 2020. Anthesis. Available from:

<http://moderngov.cheshireeast.gov.uk/ecminutes/documents/s76206/Carbon%20Neutral%20Action%20Plan%20-%20appendix.pdf> (Accessed 15 February 2023).

³⁴ Cheshire East Council. Carbon Neutral Council. Available from:

<https://www.cheshireeast.gov.uk/environment/carbon-neutral-council/carbon-neutral-council.aspx> (Accessed 15 February 2023).

³⁵ Cheshire East Council (2022) Carbon Neutral Programme Update. Available from:

<http://moderngov.cheshireeast.gov.uk/ecminutes/documents/s91586/Carbon%20Neutral%20Programme%20Update%20Committee%20Report%20THIS%20ONE.pdf> (Accessed 15 February 2023).

³⁶ Cheshire East Council. Cheshire East carbon neutral case studies. Available from:

<https://www.cheshireeast.gov.uk/environment/carbon-neutral-council/cheshire-east-carbon-neutral-case-studies.aspx> (Accessed 14 February 2023).

³⁷ Cheshire East Council building decarbonisation. Available from:

<https://www.youtube.com/watch?v=EFCUNEz2llc> (Accessed 14 February 2023).

Improving air quality

Air pollution and climate change impact each other through complex interactions in the atmosphere.

Air pollution is the largest environmental risk to public health in the UK.

[Short-term exposure](#) (over hours or days) can lead to a range of health impacts including coughing, wheezing, exacerbation of asthma, increases in respiratory and cardiovascular hospital admissions and mortality³⁸.

- [Long-term](#) (years or lifetimes) exposure can lead to reduced life expectancy, due to cardiovascular diseases, respiratory diseases, and lung cancer³⁹. It is [estimated](#) that long term exposure to man-made air pollution in the UK has an annual effect equivalent to 28,000 to 36,000 deaths⁴⁰. More recent research has associated air pollution with affecting the brain causing dementia and cognitive decline; diabetes and affecting early life leading to various birth outcomes, for example, low birth weight and developmental problems.
- A [modelling framework estimates](#) that a 1 µg/m³ reduction in fine particulate air pollution in England could prevent around 50,900 cases of coronary heart disease, 16,500 strokes, 9,300 cases of asthma and 4,200 lung cancers over an 18 year period⁴¹.
- The sources of outdoor air pollution are clearly understood. They include transport and the fuels used for transport, particularly road vehicles but also trains, shipping and aircraft. They also include industry, agriculture and emissions from homes and businesses. Particulate matter (PM) and nitrogen dioxide (NO₂) are both [major components](#) of urban air pollution⁴².

³⁸ Office for Health Improvement and Disparities (2022) Air pollution: applying All Our Health. Guidance. Available from: <https://www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health> (Accessed 15 February 2023).

³⁹ Office for Health Improvement and Disparities (2022) Air pollution: applying All Our Health. Guidance. Available from: <https://www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health> (Accessed 15 February 2023).

⁴⁰ Public Health England (2019) Public Health England publishes air pollution evidence review. News story 11 March 2019. Available from: <https://www.gov.uk/government/news/public-health-england-publishes-air-pollution-evidence-review#:~:text=Air%20pollution%20is%20the%20biggest,lung%20cancer%2C%20and%20exacerbates%20asthma>. (Accessed 15 February 2023).

⁴¹ Office for Health Improvement and Disparities (2022) Air pollution: applying All Our Health. Guidance. Available from: <https://www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health> (Accessed 15 February 2023).

⁴² Office for Health Improvement and Disparities (2022) Air pollution: applying All Our Health. Guidance. Available from: <https://www.gov.uk/government/publications/air-pollution-applying-all-our-health/air-pollution-applying-all-our-health> (Accessed 15 February 2023).

Percentage of deaths associated with long-term exposure to particulate air pollution in Cheshire East is slightly lower than the regional and national levels. The reduction in 2020 could be due to lockdown in response to the covid pandemic and resulting reduction in air pollution. Mortality and illnesses from respiratory diseases in Cheshire East is also lower than national levels.

Table 1: Fraction of mortality attributable to particulate air pollution

	Cheshire East	North West	England
2018	5.4%	5.9%	7.1%
2019	6.4%	6.2%	7.1%
2020	4.6%	5.0%	5.6%

Source: OHID fingertips. Office for Health Improvement & Disparities. Public Health Profiles. [2 February 2023] <https://fingertips.phe.org.uk> © Crown copyright [2023]

The council’s air quality strategy and [AQAP Final Aug 2021 \(cheshireeast.gov.uk\)](https://www.cheshireeast.gov.uk) provides a strategic framework and a range of measures to deliver local air quality improvements within Cheshire East⁴³.

“More than 90% of people breathe unhealthy levels of air pollution, largely resulting from burning fossil fuels.”

Air Quality Management Area:

Local authorities have a duty under the Environment Act 1995 to assess local air quality within their areas against a set of health-based objectives for a number of specific air pollutants. When areas are found where pollutants are either exceeding or close to the objectives, in locations where there is relevant public exposure, local authorities are required to declare an Air Quality Management Area (AQMA) and to prepare an Air Quality Action Plan (AQAP). The purpose of the AQAP is to set out measures the local authority intends to take to reduce concentrations of pollutants in pursuit of the objectives.

Air quality across Cheshire East is generally good, although there are Air Quality Management Areas (AQMA’s) across the borough which haven declared for levels of nitrogen dioxide that exceed the Air Quality Objective (AQO). The main source of nitrogen dioxide in Cheshire East is road traffic so measures that will reduce emissions and also have a complementary effect of health are encouraged.

⁴³ Cheshire East Council (2021) Cheshire East Borough Council Air Quality Action Plan 2020-2025. Available from: <https://www.cheshireeast.gov.uk/pdf/environment/air-quality/aqap-final-aug-2021.pdf> (Accessed 14 February 2023).

Details of the 12 AQMA's and the Cheshire East Action Plan can be found on our website at [Air Quality in Cheshire East \(arcgis.com\)](https://www.cheshireeast.gov.uk/air-quality/air-quality-in-cheshire-east)⁴⁴.

Cheshire East has developed a [Low Emission Strategy \(LES\)](#) to ensure that current emissions are reduced as far as possible and emissions associated with new development are minimised⁴⁵. The LES will provide a package of measures selected on the basis of research and current best practice in emissions management.

Smoke Control Areas

Smoke Control Areas (sometimes called Smokeless Zones) are declared by local authorities in order to control the types of fuel that can be burnt on heating appliances in buildings. The aim is to prevent air pollution that affects the environment and can have a serious impact on health. In February 1952 over 4000 people died in a five day period in the London smog attributed mainly to the burning of coal.

Smoke Control Areas are located within areas of Crewe, Wilmslow, Handforth and a small area of Disley, and are available to view on the [smoke control area map](#)⁴⁶. When viewing the map, Smoke Control Areas are shaded grey and further information can be obtained by clicking the shaded area.

Show The Air You Care:

The Cheshire East Air Quality and Public Health teams are also working together to communicate air quality effects on health to the public. To do this, we have launched an air quality awareness campaign themed "[SHOW THE AIR YOU CARE](#)"⁴⁷. This campaign encourages everyone to do their bit to help tackle air pollution. We will also look to develop a Cheshire East based health impact assessment

⁴⁴ Cheshire East Council. Air quality in Cheshire East. Available from: <https://cheshireeast.maps.arcgis.com/apps/MapJournal/index.html?appid=c91838f3f37e428a89bc743948a3e929> (Accessed 14 February 2023).

⁴⁵ Cheshire East Council (2018) Low Emission Strategy. Available from: https://moderngov.cheshireeast.gov.uk/ecminutes/documents/s65739/Cheshire%20East%20Low%20Emission%20Strategy_Final%2030-8-18.pdf (Accessed 14 February 2023).

⁴⁶ Cheshire East Council. Smoke control area map. Available from: https://moderngov.cheshireeast.gov.uk/ecminutes/documents/s65739/Cheshire%20East%20Low%20Emission%20Strategy_Final%2030-8-18.pdf (Accessed 14 February 2023).

⁴⁷ Cheshire East Council. Show the Air You Care. Available from: https://www.cheshireeast.gov.uk/business/environmental_health/local_air_quality/air-quality-awareness/air-quality-awareness.aspx (Accessed 14 February 2023).

'Show the Air You Care'



Further Information is available at

[Health matters: air pollution - GOV.UK \(www.gov.uk\)](https://www.gov.uk/health-matters/air-pollution)

Air Pollution forecasts for Cheshire East Can be found at [UK Air \(Air Information Resource\)](#)

Review of interventions to improve outdoor air quality and public health - [Review of interventions to improve outdoor air quality and public health \(publishing.service.gov.uk\)](https://publishing.service.gov.uk/review-of-interventions-to-improve-outdoor-air-quality-and-public-health)

Improving active travel

In the UK transport is the largest contributor of greenhouse gas emissions. Road transport [accounts](#) for 31% of nitrogen oxides, 19.5% of [PM_{2.5}](#)⁴⁸ and 18% of PM₁₀ UK emissions⁴⁹. It frequently accounts for more than 64% of air pollution at urban monitoring site.

⁴⁸ NICE. Air pollution: outdoor air quality and health. NICE guideline [NG70]Published: 30 June 2017 <https://www.nice.org.uk/guidance/ng70/chapter/glossary#pm25-pm10> (Accessed 14 February 2023).

⁴⁹ NICE. Guideline scope. Air pollution: outdoor air quality and health. Available from: <https://www.nice.org.uk/guidance/ng70/documents/air-pollution-outdoor-air-quality-and-health-final-scope2> (Accessed 14 February 2023).

Car ownership in Cheshire East is higher with 40% of households having two or more cars against a UK average of 29%. Due to Cheshire East being a predominantly rural area, a high proportion of trips are made by private transport methods, and public transport usage is relatively low compared to densely populated areas such as Greater Manchester.



The [evidence](#) shows a largely positive impact of interventions to support active travel (physical and mental health, economic benefits and reduction in pollution)⁵⁰. There is also strong evidence of the impact of interventions in school settings. As such interventions have the potential to develop active travel habits that may be continued into adult life. The evidence for the effectiveness of individualised marketing was also strong, demonstrating that once people have stated their desire to change travel behaviour, they can be encouraged to change through the provision of relatively simple information.

An [overview of evidence](#) on increasing active travel shows that schools in urban locations achieved higher levels of change (with one large-scale evaluation concluding that urban schools were able to achieve double the level of change, compared to rural schools). Some interventions may be more effective (with lower cost per trip) in urban areas, as compared to **rural** areas. However, some interventions like use of e-bicycles have shown that there was a significant increase in the distance (even doubling) and enable longer and hillier trips and replacement of car trips. The evidence indicates that different types of intervention can successfully add to the UK economy across both urban and rural settings, although the type of intervention should be targeted to the area⁵¹.

Table 2 shows that Cheshire East has low proportion of physically inactive adults but higher prevalence among children and young people as compared to North West and England. Additionally, percentage of adults walking or cycling for travel is lower than the regional and national levels.

		Cheshire East	North West	England
Percentage of physically active adults	2020/21	70.6%	64.5%	65.9%

⁵⁰ Public Health England (2020). Health matters: physical activity - prevention and management of long-term conditions. Available from: <https://www.gov.uk/government/publications/health-matters-physical-activity/health-matters-physical-activity-prevention-and-management-of-long-term-conditions> (Accessed 14 February 2023).

⁵¹ Hopkinson et al. (2019) CWIS Active Travel Investment Models: Model structure and evidence base. Technical appendix 4: Overview of evidence on increasing active travel. Transport for Quality of Life. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/846325/appendix_4_Overview_of_evidence_on_increasing_active_travel.pdf (Accessed 14 February 2023).

		Cheshire East	North West	England
Percentage of physically inactive adults	2020/21	19.4%	24.9%	23.4%
Percentage of physically active children and young people	2021/22	45.1%	48.5%	47.2%
Percentage of adults walking for travel at least three days per week	2019/20	9.1%	13.4%	15.1%
Percentage of adults cycling for travel at least three days per week	2019/20	0.8%	1.8%	2.3%

Source: OHID fingertips. Office for Health Improvement & Disparities. Public Health Profiles. [2 February 2023] <https://fingertips.phe.org.uk> © Crown copyright [2023]

Walking is still the most popular way of travelling to and from school. Approximately 65% of Cheshire East children travel by sustainable modes on the school journey, whilst 35% travelled by car, with sustainable modes used more for journeys to secondary schools. Car use has been steadily decreasing over the last few years.

Councils [Local Transport Plan 2019 - 2024](#) outlines how transport will support wider policies to improve economy, protect environment and make attractive places to live, work and play. As part of the plan the council is taking a range of actions across the borough⁵².

Active travel Fund

Cheshire East Council has received a total of £743,000 from the Active Travel Fund towards the implementation of active travel schemes within the borough.

The funding is available in 2 tranches:

- Tranche 1 (Summer 2020) supported the installation of temporary projects as part of the response to the COVID-19 pandemic;
- Tranche 1 Consultation

Eight new temporary schemes came into effect in Autumn 2020 to improve routes to schools and workplaces, boost social distancing, encourage walking and cycling and improve town centre environments. Measures were also aimed at reserving capacity on public transport for those who need it during the pandemic.

The eight active travel schemes installed include:

- Coronation Street, Crewe
- Crewe town centre
- Congleton town centre

⁵² Cheshire East Council. Local Transport Plan 2019-2024. Available from: <https://moderngov.cheshireeast.gov.uk/ecminutes/documents/s72327/Local%20Transport%20Plan%20-%20app%201.pdf> (Accessed 14 February 2023).

- Macclesfield town centre
- Ivy Road, Macclesfield
- Hawthorn Lane, Wilmslow
- Old Middlewich Road, Sandbach
- Lodge Road, Alsager

Following a review, the Lodge Road scheme in Alsager has been removed. The council is now reviewing the remaining schemes to determine whether they are amended, removed or made permanent.

Tranche 2 (Summer 2022) supports the creation of more permanent Active Travel projects.

Tranche 2 Consultation

Cheshire East Council secured £588,000 of DfT funding in the second Tranche of the Active Travel Fund to implement permanent walking and cycling infrastructure schemes.

Five schemes were consulted on in February 2021:

- West Street, Antrobus Street and Mill Street (Congleton)
- Vernon Way and Market Street (Crewe)
- Black Lane and Hurdsfield Road (Macclesfield)
- Manchester Road (Tytherington)
- Manchester Road (Wilmslow and Handforth)
- Following this consultation, feedback has been reviewed and the Manchester Road (Wilmslow and Handforth) and Manchester Road (Tytherington) scheme designs have been developed further.

The LTP is supported by a number of other strategies that have been recently developed or are under development. They include the '[Cycling Strategy](#)'⁵³, a '[Sustainable Modes of Transport to School](#)'⁵⁴ strategy and a 'Compulsory School Age Education Travel Policy', [Rights of Way Improvement Plan](#)⁵⁵

The council has been awarded £50,000 by the Department for Transport (DfT) to develop a feasibility study into the pilot 'active travel social prescribing' project, which, if further funding is approved, would see new cycle and walking routes created in Crewe to help boost the health and wellbeing of residents.

⁵³ Cheshire East Council. Cycling Strategy 2017-2027. Available from: <https://modern.gov.cheshireeast.gov.uk/ecminutes/documents/s72327/Local%20Transport%20Plan%20-%20app%201.pdf> (Accessed 14 February 2023).

⁵⁴ Cheshire East Council. School Travel Planning. Available from: https://www.cheshireeast.gov.uk/schools/school_transport/school_travel_planning.aspx#:~:text=Walking%20is%20still%20the%20most%20popular%20way%20of,been%20steadily%20decreasing%20over%20the%20last%20few%20years. (Accessed 14 February 2023).

⁵⁵ Cheshire East Council. Improving Our Public Rights of Way Network. Available from: https://www.cheshireeast.gov.uk/leisure_culture_and_tourism/public_rights_of_way/improving_public_rights_of_way.aspx (Accessed 14 February 2023).

[Crewe Town Centre Regeneration programme](#)⁵⁶ includes projects include a proposed new pedestrian walkway and cycleway between High Street and the Lifestyle Centre – a planning application for which was recently submitted – and the '[Flag Lane link](#)' scheme⁵⁷, which will connect Dunwoody Way to Delamere Street via Flag Lane.

Improving energy efficiency of housing

Approximately 40% of greenhouse gas emissions [come](#) from buildings. While public and industrial structures play a part, burning, cooling, and heating primarily happen in the housing sector⁵⁸.

A household experiences fuel poverty if they are on a low income and face high costs of keeping adequately warm and ensuring other basic energy services.

England's housing stock is [made up](#) of relatively energy inefficient properties which can result in homes that are difficult or costly to heat. However, households can be cold without being in fuel poverty if people choose not to heat their homes adequately where they have the means to do so⁵⁹. Homes that are cold due to fuel poverty exacerbate health inequalities. Cold homes can [cause and worsen](#) respiratory conditions, cardiovascular diseases, poor mental health, dementia, hypothermia and problems with childhood development. In some situations, health conditions may become severe and cause death⁶⁰.

In England, there were an estimated 29,200 excess winter deaths in 2012-13. Estimates suggest that some 10% of excess winter deaths are directly attributable to fuel poverty and 21.5% of excess winter deaths are attributable to the coldest 25% of homes.

3.5 million households in England are in fuel poverty. Proportion of fuel poor households in CE is 10.8%, which is lower than North West (14.4%) and England (13.2%)

⁵⁶ Cheshire East Council. Crewe Town Centre Regeneration Project. Available from: https://www.cheshireeast.gov.uk/business/major_regeneration_projects/crewe-town-centre-regeneration-programme/crewe-town-centre-regeneration-programme.aspx (Accessed 14 February 2023).

⁵⁷ Cheshire East Council. Flag Lane link. Available from: https://www.cheshireeast.gov.uk/business/major_regeneration_projects/crewe-town-centre-regeneration-programme/flag-lane-link-road.aspx (Accessed 14 February 2023).

⁵⁸ European Commission (2020) In focus: Energy efficiency in buildings. Available from: https://commission.europa.eu/news/focus-energy-efficiency-buildings-2020-02-17_en (Accessed 14 February 2023).

⁵⁹ Public Health England & UCL Institute of Health Equity. Local action on health inequalities: Fuel poverty and cold home-related health problems. Available from: file:///C:/Users/AA122F/Downloads/Fuel_poverty_health_inequalities.pdf (Accessed 14 February 2023).

⁶⁰ Institute of Health Equity (2022) Fuel Poverty, Cold Homes and Health Inequalities in the UK. Available from: <https://www.instituteofhealthequity.org/resources-reports/fuel-poverty-cold-homes-and-health-inequalities-in-the-uk> (Accessed 14 February 2023).

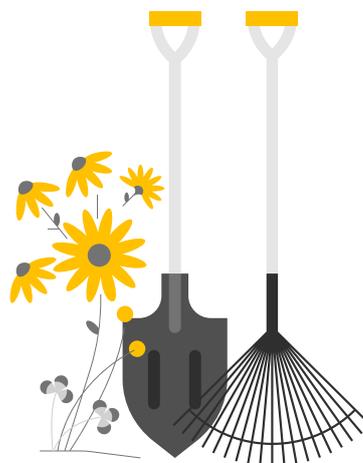
[Cheshire East's housing strategy](#) further support the plans to improve the energy efficiency of housing⁶¹.

[Cheshire East's HUG scheme](#) provide Home Upgrade Grants or homes which are not heated by gas and have a low Energy Performance Band E, F or G. Grants can be used for⁶²

- solid wall insulation (internal or external)
- cavity wall insulation
- loft, room-in-roof and flat roof insulation
- under-floor insulation
- air source heat pump
- ground source heat pump
- solar thermal for hot water
- solar PV for electricity generation
- high heat retention electric storage heaters
- heating controls
- external door and window upgrades (only in conjunction with other improvements)

Improving quality of green spaces

Green spaces have a positive influence on population and individual level health and wellbeing. There is [evidence](#) to indicate that increase access to green infrastructure has a positive impact on physical activity, mortality rates, certain types of morbidity, mental health, quality of life, and is associated with less stark inequalities in health⁶³. Green infrastructure may also [benefit](#) health and wellbeing through contributing to healthy microorganisms and better nutrition⁶⁴, and through reducing noise pollution, flooding,



⁶¹ Cheshire East Council. Housing Strategy 2018-2023. Available: Housing Strategy 2018-2023. Available from: <https://www.cheshireeast.gov.uk/pdf/housing/cheshire-east-housing-strategy-2018-2023.pdf> (Accessed 14 February 2023).

⁶² Cheshire East Council. Reduce your energy bills today. Available from: <https://improveasy.com/cheshireeast/#:~:text=Your%20property%20could%20qualify%20for%20FREE%20fund%20from,won%E2%80%99t%20have%20to%20pay%20as%20much%20in%20bills> (Accessed 14 February 2023).

⁶³ World Health Organization. Urban Green Space Interventions and Health. A review of impacts and effectiveness. Available from: https://www.euro.who.int/_data/assets/pdf_file/0010/337690/FULL-REPORT-for-LLP.pdf (Accessed 14 February 2023).

⁶⁴ Natural England A rapid scoping review of health and wellbeing evidence for the Framework of Green Infrastructure Standards. Available from: <https://beyondgreenspace.files.wordpress.com/2020/10/neer015-a-rapid-scoping-review-of-health-and-wellbeing-evidence-for-the-framework-of-green-infrastructure-standards-final-draft-sept-2020-1.pdf> (Accessed 14 February 2023).

and poor air quality. Access to green spaces can [assist](#) local government to improve health and wellbeing, managing health and social care costs, reducing health inequalities, improving social cohesion and taking positive action to address climate change⁶⁵.

The total proportion of urban greenspace in England [declined](#) by 8 % points between 2001 and 2018 (from 63% to 55%)⁶⁶, however it is recognised that this is a rural issue. 93% of Cheshire East is GI, 74% of which is agricultural land. The Best and Most Versatile Land Report (2016) found that 47% of agricultural land across Cheshire East was Best and Most Versatile Land (BMV), which is regarded as a national asset.

Cheshire East's Green Space strategy can be found at [Green Space Strategy \(cheshireeast.gov.uk\)](#)⁶⁷.

Green Spaces for Wellbeing is a partnership between Ansa Environmental Services, Everybody Health and Leisure, NHS, Cheshire East Council and the voluntary sector. Designed around the Five Ways to Wellbeing, these nature-based activities help prevent and tackle mental ill health; and support people with long-term health conditions.

Further Information is available at

A review of [improving access to green spaces](#)⁵²

A [review of impacts and effectiveness of Urban Green Spaces](#)⁵¹

Improving social capital and reducing social isolation

The links that connect people within communities, often described as social or community capital, can bring a range of benefits. As well as physical places, the communities and social networks to which individuals belong is important to adapt to the potential impacts of climate change, for example, coping with extreme weather such as flooding.

⁶⁵ Public Health England (2020). Improving access to greenspace. A new review for 2020. Available from: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/904439/improving_access_to_greenspace_2020_review.pdf (Accessed 14 February 2023).

⁶⁶ Climate Change Committee (2019) Progress in preparing for climate change – 2019 Progress Report to Parliament. Available from: <https://www.theccc.org.uk/publication/progress-in-preparing-for-climate-change-2019-progress-report-to-parliament/> (Accessed 14 February 2023).

⁶⁷ Cheshire East Council. Green Space Strategy. Available from: https://www.cheshireeast.gov.uk/planning/spatial-planning/research_and_evidence/green_space_strategy.aspx (Accessed 14 February 2023).

Social capital can provide a source of resilience, improve health and reduce health inequalities, a buffer against particular risks of poor health, through social support and connections that help people find work or get through economic and other difficulties.

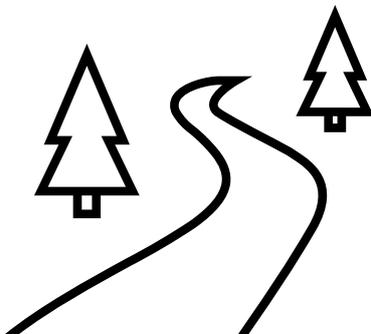


Across Cheshire East an asset-based approach is being used to bring together and build upon our assets (organisations, places/buildings, knowledge and enthusiasm) in our communities.

Cheshire East Council will support and engage with communities including the voluntary, community and faith sector and the many active volunteer-based partnerships,

for more details you can view the council's [Connected Communities strategy](#)⁶⁸.

[Connected Communities Centres](#) host a range of activities and support services available on your doorstep. Each centre delivers services tailored for their community, from coffee mornings, computer classes and line dancing, to learning a language, sharing a problem and support for stroke sufferers – there's something for everyone⁶⁹.



[Cheshire East Crowd](#) is a crowdfunding platform, Cheshire East Crowd, with up to £10,000 available to support great community projects⁷⁰. This initiative, in partnership with crowdfunding platform Spacehive, enable local people, businesses, the council and other organisations to pledge alongside each other to crowdfunding campaigns that bring your ideas to life. In the first round of crowdfunding the council pledged to support 11 community-led projects including A community sensory projector in Crewe, a repair café in Macclesfield, the restoration of the footpath along part of the Trent and Mersey canal bank at

Wheelock Wharf and a project to provide adaptive bikes on a local cycle track in Poynton.

[Preparedness for Extreme Weather events](#)

⁶⁸ Cheshire East Council. Connected communities strategy 2021-25. Available from: https://files.smartsurvey.io/2/0/3OCEPIDT/Connected_Communities_Strategy_v4.pdf (Accessed 14 February 2023).

⁶⁹ Cheshire East Council. Connected communities. Available from: https://www.cheshireeast.gov.uk/council_and_democracy/connected-communities/Connected-Communities.aspx (Accessed 14 February 2023).

⁷⁰ Cheshire East Crowd. Available from: <https://www.spacehive.com/movement/ce> (Accessed 14 February 2023).

Cheshire East has developed plans to support communities to prepare and respond to extreme cold, heat waves and flooding.

[Winter Wellbeing in Cheshire East](#) provide advice on how to stay warm and stay safe during winter⁷¹.

Intense extreme rainfall events are becoming more frequent across Cheshire East and flooding is occurring to properties and business located within areas of surface water and fluvial flood risk. A multi-agency team responds to flooding within Cheshire East. This includes teams from Cheshire East Council, the Environment Agency, United Utilities and the Emergency Services.



[Flooding \(cheshireeast.gov.uk\)](#) provides advice on flooding for individuals and businesses⁷².

⁷¹ Cheshire East Council. Winter Wellbeing in Cheshire East. Live Well in Cheshire East. Available from: <https://www.cheshireeast.gov.uk/livewell/health-matters/keeping-well/winter-wellbeing/winter-wellbeing.aspx> (Accessed 14 February 2023).

⁷² Cheshire East Council. Flooding. Available from: <https://www.cheshireeast.gov.uk/planning/flooding/flooding.aspx> (Accessed 14 February 2023).

Table 3: Flooding in Cheshire East

Year	Date(s)	Rainfall in mm (Duration)	Indication of Rainfall Intensity(based on long term recorded monthly rainfall totals)	Main areas of reported property flooding experienced in;
2022	20 - 21 February (Storm Franklin)	50mm (30hrs)	A months' worth of rain in 30hrs	North of the borough
2021	18 – 20 January (Storm Christoph)	70mm (48hrs)	Over a months' rain in 48hrs	Borough wide
2019	25-26 October	68mm (28hrs)	3 weeks of rain in 28hrs	South of the borough
2019	27 - 31 July	150mm (5 days)	Over 2 months of rain in 5 days	North of the borough
2016	13 September	30mm (2hrs)	Nearly half a months' rain in 2 hrs	North of the borough
2016	11 June	45mm (6hrs)	2/3rds of a months' rain in 6 hrs	North of the borough

Behaviour change

There is a range of [evidence](#) that changing people's health-related behaviour can have a significant effect on some of the major causes of mortality and morbidity.

Adopting healthier lifestyles including active travel and healthy diet also has a positive impact on reducing carbon emissions.

Behaviour change should be promoted through regular communication and engagement, emphasising the significance of reducing carbon footprint and recommending ways that this can be achieved⁷³.

The WWF My Footprint calculator is a quick and easy way to understand individual's own carbon footprint – and suggests ways to implement actions.

Individual Actions

Individual actions do make a difference. Per capita emissions in the UK [need](#) to reduce from approximately 10-12 tonnes CO₂ per annum to 1-2 tonnes over the next decade⁷⁴.

⁷³ [www.parliament.uk](https://www.parliament.uk/publications.parliament.uk/pa/ld201012/ldselect/ldscstech/179/17902.htm) Science and Technology Committee - Second Report Behaviour Change. Available from: <https://publications.parliament.uk/pa/ld201012/ldselect/ldscstech/179/17902.htm> (Accessed 14 February 2023).

⁷⁴ Faculty of Public Health Special Interest Group-sustainable development. Reducing Greenhouse Gas Emissions. Available from: <https://www.fph.org.uk/media/2530/a1-fph-sig-reducing-greenhouse-gas-emissions-final.pdf> (Accessed 14 February 2023).

<p>Researchers have summarised the actions individuals can take to reduce climate change and categorised them into low, moderate and high impact actions.</p> <p>Source: Wynes & Nicholas 2017⁷⁵</p>
<p>Low impact actions</p> <ul style="list-style-type: none"> • Upgrading light bulbs
<p>Moderate impact actions</p> <ul style="list-style-type: none"> • Hang dry clothes • Recycle waste • Wash clothes in cold water • Replace typical car with hybrid
<p>Higher impact actions</p> <ul style="list-style-type: none"> • Eat a plant based diet • Switch to an electric car • Buy green energy • Avoid transatlantic flights • Go car free • Have one fewer child Source

The [One You Cheshire East](#) provides a range of advice and interventions for public to adopt healthy lifestyles⁷⁶.

Cheshire East's [Health and Wellbeing Service](#) offers free walk-in wellbeing checks and provide advice for adopting healthier lifestyles⁷⁷.

⁷⁵ Faculty of Public Health Special Interest Group-sustainable development. Reducing Greenhouse Gas Emissions. Available from: <https://www.fph.org.uk/media/2530/a1-fph-sig-reducing-greenhouse-gas-emissions-final.pdf> (Accessed 14 February 2023).

⁷⁶ Cheshire East Council. One You Cheshire East. Livewell Cheshire East. Available from: <https://www.cheshireeast.gov.uk/livewell/health-matters/keeping-well/one-you-cheshire-east/one-you-cheshire-east.aspx> (Accessed 15 February 2023).

⁷⁷ Cheshire East Council. Health and Wellbeing Service. Livewell Cheshire East. Available from: <https://www.cheshireeast.gov.uk/livewell/health-matters/health-and-wellbeing-service/health-and-wellbeing-service.aspx> (Accessed 15 February 2023).

Recommendations

We will continue to make progress to meet our pledge to make Cheshire East a carbon neutral borough by 2045 through:

- Public sector leading by example
- Working in partnership with the NHS, businesses, voluntary sector to ensure that climate change and sustainability is a priority for all
- Developing multi-agency integrated sustainable policies across different sectors and departments
- Ensuring that policies address both climate change and health inequalities
- Engaging all stakeholders and public through information campaign and consultation exercises
- Monitoring and evaluating the implementation of policies and strategies.

In response to the recovery from the pandemic it is important to build on some of the positive changes seen during our response to the pandemic, such as the choice to work from home, enhancing the local opportunities for active travel and the reduction in traffic and air pollution.

Terminology

1. **Adaptation** – Taking action to minimise the current and expected impacts of climate change
2. **Carbon dioxide CO₂** - carbon emissions - The main, but not the only gas that traps heat in the atmosphere, acting like a blanket. The term is widely used to describe greenhouse gas emissions
3. **Greenhouse gases** – all the gases that contribute to trapping heat in the atmosphere, including not only carbon dioxide but methane and water vapour
4. **IMD** stands for Index of Multiple Deprivation and is a measure of relative deprivation for small areas. It is a combined measure of deprivation based on a total of 37 separate indicators that have been grouped into seven domains, each of which reflects a different aspect of deprivation experienced by individuals living in an area
5. **Mitigation** - Taking action to reduce Greenhouse Gas Emissions and enhancing natural and artificial processes that remove greenhouse gases from the atmosphere
6. **Vector borne diseases:** Illnesses that are transmitted by organisms that act as vectors such as mosquitoes, flies, ticks.
7. **Zoonotic Diseases:** a disease which can be transmitted to humans from animals.