A toolkit for city regions and local authorities:

Chapter 2: Health and wellbeing

Climate action co-benefits
Cutting carbon and improving people’s lives

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Guide to this toolkit

This toolkit is primarily intended for use by local authority officers when briefing elected members, mayors and senior managers. Each of the co-benefits sections includes facts and figures, links to data for local areas, the business case for taking action, opportunities for action and inspirational examples of successful initiatives from around the country. Case studies are shown in boxes with Ashden Award winning organisations indicated via the Ashden logo.

These can be used as the building blocks for making the case for action in your area; the intention is that users can pick and choose the messages and examples that will resonate in their areas.

The following links take you to different sections of the toolkit, or you can click here to download the whole document.

The links to films in this toolkit are designed to bring to life some of the challenges that people in towns and cities face. The aim is to facilitate conversations around the co-benefits of climate action, ‘multi solving’ climate and social issues.

Acknowledgements

This toolkit has been produced with support from CAG Consultants (Denny Gray) and with input from Dr Neil Jennings, Sarah Woods, Paul Bourgeois, Leanne Wilson, Jane Wildblood and Simon Slater. We would like to thank all of the Ashden winners who have allowed us to feature their work in the toolkit.

Ashden’s work on co-benefits

Ashden is working with UK cities to help them realise their sustainability ambitions. Our vision is of healthy, liveable cities where people want to live and work. Through our Liveable Cities programme, we created the Sustainable City Region Network – to help sustainability leaders to realise this vision and tackle common challenges. Realising the wider benefits of climate change such as better homes, more money in local economies, clean air, healthier travel options, and new employment opportunities is essential to connect climate policy to the needs of all citizens, demonstrating that action to combat climate change can improve lives, not diminish them. We are working with city regions to develop policy that delivers these wider benefits, securing a Just Transition. Find out more about our work: https://www.ashden.org/programmes/liveable-cities-programme
Climate action co-benefits – health and wellbeing

Climate action and health – key facts

- Particulate matter and nitrous oxides contribute to around 40,000 air pollution-related deaths per year in the UK.
- Active travel promotes good health: an increase in physical activity in the UK has been estimated to generate a potential saving to the NHS of £17 billion within 20 years.
- The cost of cold homes to the NHS is estimated at £2.5 billion/year.
- Those living closer to green space in urban areas have been found to experience lower rates of anxiety.
- Extreme weather events, such as heatwaves and flooding, have significant health impacts; UK heatwaves in summer 2016 resulted in 908 excess deaths.
- If the average dietary intake in the UK complied with the recommendations of the World Health Organisation, a reduction in greenhouse gas emissions of 17% could be achieved whilst increasing average life expectancy by over 8 months.
- Research commissioned by the Climate Change Committee found that the health benefits of reduced car travel (and corresponding increase in walking and cycling), uptake of low carbon vehicles and a shift towards less meat-intensive diets could generate annual net benefits of up to 0.6% of GDP.
## Accessing facts that relate to your area

<table>
<thead>
<tr>
<th>Topic</th>
<th>Source</th>
<th>Description</th>
<th>Link</th>
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<tbody>
<tr>
<td>Travel</td>
<td>Gov.uk – National Travel Survey and Active Lives Survey</td>
<td>National walking and cycling statistics, including local authority-level data</td>
<td><a href="https://www.gov.uk/government/collections/walking-and-cycling-statistics">https://www.gov.uk/government/collections/walking-and-cycling-statistics</a></td>
</tr>
<tr>
<td>Air quality</td>
<td>UK Air: Air Information Resource</td>
<td>A library of data on air quality including local air pollution forecasts and modelled data</td>
<td><a href="https://uk-air.defra.gov.uk">https://uk-air.defra.gov.uk</a></td>
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<tr>
<td></td>
<td>London Atmospheric Emissions Inventory (LAEI) 2013</td>
<td>Borough-level emissions and concentrations data</td>
<td><a href="https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory-2013">https://data.london.gov.uk/dataset/london-atmospheric-emissions-inventory-2013</a></td>
</tr>
<tr>
<td>Green space</td>
<td>Ordnance Survey Green Space Map</td>
<td>Depicts the location and extent of spaces such as parks and sports facilities that are likely to be accessible to the public and, where appropriate, their access points</td>
<td><a href="https://data.gov.uk/dataset/5d009d8a-702b-4a88-bf71-d4d6df87df53/os-open-greenspace">https://data.gov.uk/dataset/5d009d8a-702b-4a88-bf71-d4d6df87df53/os-open-greenspace</a></td>
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<tr>
<td>Flood risk</td>
<td>Flood risk map</td>
<td>Map showing degree of flood risk (from rivers and sea, and from surface water) by place or postcode</td>
<td><a href="https://flood-warning-information.service.gov.uk/long-term-flood-risk/map">https://flood-warning-information.service.gov.uk/long-term-flood-risk/map</a></td>
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## Why it matters

Taking action on climate change can have substantial benefits for public health and wellbeing:

- Decarbonising the transport sector has the potential to make considerable improvements to air quality and public health;
- Improving the energy efficiency of homes can help to alleviate fuel poverty;
- Access to good quality green space and nature is a significant contributory factor for mental and physical wellbeing, particularly in urban areas;
- Changing weather patterns, more frequent extreme weather episodes and rising temperatures have direct implications on our health and pose challenges to the way in which the public health and social care systems operate.
The business case for action; what difference can taking action make?

Health, travel and air quality
A video telling the story of someone whose health is affected by poor air quality can be found here.

Decarbonising the transport sector by promoting active forms of travel such as walking and cycling, making vehicles more fuel efficient and moving from petrol and diesel to electric or hydrogen-powered vehicles, has the potential to make considerable improvements to air quality across the UK, improve physical and mental health, and reduce the strain on the NHS.

- More than 40 towns and cities in the UK reach or exceed air pollution limits with poor air quality linked to around 40,000 deaths per year in the UK.
- The economic cost to the UK economy of premature deaths from air pollution is approximately £54 billion a year.

- It is estimated that between 2017 and 2035 there will be approximately 2.5 million air pollution related cases of disease. The cumulative cost of this to the NHS and social care is predicted to be £18.57 billion.
- 60% of deaths related to the combustion of fossil fuels are caused by the transport sector.
- People’s levels of physical activity can be increased through facilitating active travel; increased physical activity could potentially save the NHS £17 billion within 20 years by reducing the prevalence of type-2 diabetes, dementia, heart disease, cerebrovascular disease, and cancer.

Action to decarbonise travel can also address health inequalities. Air pollution levels in the UK have been shown to have strong associations with deprivation. Those who live in low-income areas are the most affected by air pollution and yet are often those least responsible for producing it.

The Active Wellbeing Society
The Active Wellbeing Society (TAWS) runs programmes to increase physical activity in the Midlands and beyond. Originally part of Birmingham City Council, TAWS now operates as a separate community benefit society.

Their Big Birmingham Bikes scheme, which won an Ashden Award in 2017, has provided thousands of free bikes for adults and children living in high areas of deprivation, where sedentary lifestyles can be more common. For communities where cycling is not widespread, and where cost is often a prohibitive barrier, free cycle training gives people the confidence to go out and cycle safely, especially if others from similar backgrounds are joining in too.

One unique aspect of the programme is the GPS tracking of cyclists (with permission given by participants). The tracking data shows thousands of bike recipients cycling at least 30 minutes a week, with hundreds cycling for 30 minutes at least five times per week.

Their latest initiative is funded by the National Lottery/Sport England.
Health and housing
Homes account for 22% of the UK’s carbon emissions. Poor energy efficiency in housing has a direct effect on the physical and mental health of those living in the worst quality housing. Improving the energy efficiency of the UK housing stock provides an opportunity to reduce costs to the NHS, tackle inequality and improve the productivity of the UK workforce.

- The cost to the NHS of ill health from cold homes is estimated at £2.5 billion/year17.
- Children living in inadequately heated households are more than twice as likely to suffer from conditions such as asthma and bronchitis than those living in warm homes18.
- These conditions are exacerbated or brought on by exposure to mould and dampness that are more likely to be present in cold homes19.
- In the 2016/17 winter period, there were an estimated 34,300 excess winter deaths, a large share of which were attributable to living in a cold home20.
- Individuals living in homes with a bedroom temperature below 15°C are 50% more likely to suffer from mental health problems compared to those whose bedrooms are heated to 21°C21.
- The detrimental physical and mental health effects of inefficient housing also result in economic losses through missed work associated with cold-related illnesses, and impacts on productivity and educational attainment. The Healthy Homes Barometer estimates that minor illnesses such as coughs, colds, flu and other illnesses can be attributed to 27 million lost working days a year in the UK, affecting morale and productivity. The direct cost to the UK economy due to these absences was estimated at £1.8 billion in 201322.

Oldham warm homes
The Warm Homes Oldham scheme was set up by Oldham Council, NHS Oldham Clinical Commissioning Group and Oldham Housing Investment Partnership (OHIP) in 2013. It offers advice, support and energy saving measures to residents in fuel poverty. Sheffield Hallam University have evaluated this programme, considering savings to the NHS as well as wider economic benefits, using self-reported health outcomes. An investment of £250,000 per year from Oldham CCG resulted in a monetary benefit from an increase of Quality Adjusted Life Years (QALYs) of between £399,000 and £793,000 depending on the method used. The study reported £178,000 of extra GDP due to higher employment rates, £37,700 of extra GDP due to reductions in sickness absence, and £137,300 of reductions in benefits claims23.

A video telling the story of someone suffering the impacts of fuel poverty can be found here.

Liverpool healthy homes
Liverpool City Council have been running their Healthy Homes programme since 2010 and targets the private rented sector. Over 25,000 priority homes have been surveyed with ‘cold home hazards’ removed in over 1000 homes. The Healthy Homes team works in partnership with Citizens Advice Bureaux at 39 health centres to refer residents. The programme cost was initially £1.3 million per year but since 2013 the budget runs at £650,000 per year. The Building Research Establishment evaluated the programme and estimated that the programme could save the NHS and wider society £55 million over 10 years. Details are included in NICE’s shared learning database24.
SHINE – lessons from a successful fuel poverty scheme

Ashden award winner, SHINE (Seasonal Health Intervention Network), based in Islington, works with over 80 partners including GP surgeries, health visitors, and housing and community organisations to refer vulnerable people for energy efficiency interventions and advice. John Kolm-Murray, who set up SHINE and now leads on fuel poverty for the GLA, offers the following advice for making the most of health co-benefits:

• Engage with the right health professionals – specialists in respiratory disease and mental health are most likely to see benefits; there is less evidence for impact on cardio-vascular conditions.

• Guarantee delivery of interventions – if a GP refers a patient for a hip replacement, they know that it will happen eventually. But if a new boiler is prescribed but the energy company paying for interventions has hit their ‘boiler cap’, then there is no treatment, and trust between health professionals and energy officers can be lost. So understand what you can definitely deliver and provide regular feedback to referrers on outcomes.

• Ensure ventilation as well as insulation – otherwise health gains from warmer homes may be lost due to poor air quality. The GLA has put forward extra money for ventilation since this is not something that can be funded through ECO (the Energy Company Obligation)\(^2\)

• Learn the language of health professionals – understand what the clinical priorities and targets are for your local CCGs and other health professionals and align the benefits from your programme to those.

• Find a champion – health professionals are more likely to be persuaded by other health professionals.
Cosy homes in Lancashire

Cosy Homes in Lancashire (CHiL) won an Ashden Award in 2016. Lancashire’s Public Health directors recognised the effect of cold homes on people’s health and, in 2014, helped fund the creation of CHiL, a partnership between 14 local authorities in the county, with the goal of improving the energy efficiency of privately owned and privately rented homes. By pooling the members’ resources, CHiL has been able to improve domestic energy efficiency despite government programmes such as the Energy Company Obligation (ECO) being scaled back. Thousands of residents have benefited from warmer homes and have reported improvements in both physical and mental health26.

Michael’s story

Michael, aged 59, is a former lorry driver who has lived in Preston for most of his life. He lived alone in a house with no central heating, with a single gas fire to keep him warm. Michael’s mental health was poor and he says he had a fixation with “building an mdf snow scene comprising of wolves and polar bears and putting up a tent with a sleeping bag to keep warm”. He also had vitiligo and regular chest infections in winter. CHiL installed a new boiler and cavity wall insulation in Michael’s home. After the work, Michael said, “Since I’ve had heat, I keep my home at 20 degrees. My mental state has changed which is a surprise. I had formed an addiction to gambling and that has fallen away. I no longer have a chest infection and my vitiligo has started to fill in.”
Green space

Parks and public gardens – as well as ‘blue spaces’ such as rivers and lakes – are associated with health and wellbeing at the community level, including satisfaction with ‘place’, increased social cohesion and interaction, increases in volunteering, and opportunities for more creative ‘play’ among children, as well as better educational performance.

- If everyone had access to sufficient green space, the benefits associated with increased physical activity could save the health system £2.1 billion per year27.

- Proximity to green space also has mental health benefits. Those living closer to green space in urban areas have been found to experience lower rates of anxiety or mood disorder treatment28, while studies have shown a link between access to green space and reduced levels of stress29.

Green spaces also help to regulate temperature and water flow, reduce noise and air pollution, and can also reduce the energy consumption of buildings. The integration of green space into urban areas can play an important role in helping to reduce extremes of temperature and associated admissions to the NHS, while simultaneously reducing carbon emissions.

Newcastle City Council’s Green Infrastructure Delivery Framework

Newcastle City Council published a detailed Green Infrastructure Delivery Framework in December 2018. Newcastle was a demonstration City for the Blue Green Cities Research Consortium, leading research into cutting edge techniques for advancing Blue-Green approaches to combat flood risk (i.e. natural flood risk management). The Framework builds on this work, identifying co-benefits of green infrastructure including mental and physical health improvements.

A green infrastructure steering group has been established with representatives from across the council, planning, sport and leisure, the Lead Local Flood Authority, and Transport. A detailed delivery and monitoring plan are included to ensure that these co-benefits are delivered30.
Climate

Extreme weather events, such as heatwaves and flooding, are predicted to become more common as a result of climate change and have significant health impacts.

Public Health England research found that over a third of people who were flooded in 2014 suffered with depression, anxiety or PTSD, and nearly a quarter of people were still experiencing these negative mental health impacts two years later.

Heatwaves are associated with increased excess mortality. Public Health England found that in England in 2006 there were an estimated 75 extra deaths per week for each degree of increase in temperature above 25°C.

Exeter City Council – Passivhaus

Exeter City Council has taken a planned approach to low energy development for ten years. The council has already developed over 103 certified Passivhaus’ homes and there are multiple other low energy projects in the pipeline including a leisure centre, swimming pools, offices and care homes.

Key factors that shape their developments are low energy Passivhaus, climate readiness and improving health through building biology, including elements of permaculture landscape. Working with Exeter University and the Met Office (which is based in Exeter), Exeter Council has tested building designs against predicted future climate conditions to ensure resilience to 2080 and beyond. This approach is already delivering benefits, with residents reporting significant health improvements and better air quality.

* Passivhaus buildings provide a high level of occupant comfort while using very little energy for heating and cooling. Thermal comfort is achieved solely by post-heating or post-cooling the fresh air flow required for good indoor air quality, without the need for additional recirculation of air.

** Permaculture is a set of design principles centred around whole-systems-thinking simulating or directly utilizing the patterns and resilient features observed in natural ecosystems.

Health and food

The World Health Organisation (WHO) estimates that greenhouse gas emissions could be reduced if the average dietary intake in the UK complied with its own dietary recommendations (i.e. reducing consumption of red meat, dairy products, eggs and sweet and savoury snacks). Complying with the WHO’s dietary recommendations could also have health benefits:

- Diets with relatively high amounts of beef, lamb and pork are associated with higher risks of cardiovascular disease, stroke and certain types of cancer.

- It would increase average life expectancy at birth by over 8 months and save almost seven million years of life lost prematurely in the next 30 years.

- It could also help to reduce the incidence of obesity and type-2 diabetes thereby reducing the strain on the NHS and saving public money.
Nottingham Good Food Partnership – improving health and cutting the carbon footprint of food

Part funded by Nottingham City Council, the Nottingham Good Food Partnership is an ever-expanding coalition of over 50 member organisations working together to transform the sustainability of Nottingham’s local food system. As part of the Sustainable Food Cities (SFC) Network, the Partnership aims to improve the health and well-being of all and to create a more connected, resilient and sustainable Nottingham. It is addressing six key issues including: promoting the importance of healthy and sustainable food to the diverse local communities; and working towards a circular food economy, radically reducing the ecological footprint of the food system and aiming for zero edible food waste.
Links to statutory duties

Public health

Health and Social Care Act 2012
The Health and Social Care Act 2012 introduced a new duty for all upper-tier and unitary local authorities in England to take appropriate steps to improve the health of the people who live in their areas.

Joint Strategic Needs Assessments
In England, local authorities, Clinical Commissioning Groups and other public sector partners are required to produce a Joint Strategic Needs Assessment to provide evidence on the health and wellbeing needs of their local community. As an example of good practice, Wirral Council have included a detailed section on climate change and health in their Joint Strategic Needs Assessment. Wirral have identified the groups that will be most vulnerable to climate change and the specific health impacts such as increased respiratory diseases, cardio-vascular illnesses, skin Cancer and mental health.

Air quality

2008 ambient air quality directive (2008/50/EC)
The 2008 ambient air quality directive (2008/50/EC) sets legally binding limits for concentrations in outdoor air of major air pollutants that impact public health, including nitrogen dioxide. Note that the WHO air quality guidelines set stricter standards for particulate matter.

Health and housing

Housing Health Safety Rating System (HHSRS)
The HHSRS is a risk-based evaluation tool to identify hazards within homes, including Excess Cold. The operating guidance says that dwellings should be provided with adequate thermal insulation and a suitable and effective means of space heating. Local authorities have a duty to keep housing conditions in their area under review with a view to identifying and enforcing any action that may be needed around HHSRS.

Minimum Energy Efficiency Standards
The Energy Act 2016 required that from 1st April 2018, any properties rented out in the private rented sector should have a minimum EPC rating of E, unless there is an applicable exemption. Local authorities, through trading standards, have a responsibility for enforcing this legislation.

Home Energy Conservation Act (HECA)
The 1995 Home Energy Conservation Act requires all of England’s local authorities to report on action to improve energy efficiency in all residential accommodation in their area and to report every two years to BEIS on progress in implementing improvements.

Climate

Flood and Water Management Act 2010
In England, county councils and unitary authorities, as Local Lead Flood Authorities (LLFAs), are required to lead in managing local flood risks. LLFA responsibilities include the preparation and maintenance of a strategy for local flood risk management, and a duty to cooperate with other Risk Management Authorities.
What role can decision makers play?

**Leadership** – Councils can then play a leadership role through declaring a climate emergency and through encouraging and supporting residents and businesses on health and wellbeing improvements.

**Partnership** – Councils can work with different partners to encourage coordinated action. Organisations like the NHS and local community groups can be key partners in the delivery of fuel poverty and health improvement projects.

**Communicating** – Councillors can explain the opportunities to improve health and prosperity e.g. by raising awareness on air quality mitigation and reduction.

**Public health** – Councils can use public health responsibilities and powers to support and encourage action on improving health and the environment.

**Planning** – Councils can use planning powers to improve access to green space and improve infrastructure for active travel modes.

**Signposting** – Councils can signpost households and organisations to existing support, as necessary.
Waltham Forest – using Section 106 funding to increase walking and cycling

Ashden Award 2019 finalist Waltham Forest Council has allocated Section 106 health funding to increasing walking and cycling as part of its Enjoy Waltham Forest programme. Developers of new housing pay Section 106 funding to upgrade existing infrastructure and facilities to support the additional population. Across England, Section 106 funding paid by housing developers provides around £150 million each year to ‘community’ funding, much of which goes on health41. In Waltham Forest, £500,000 of section 106 money was identified for funding health ‘prevention’ initiatives in 2017. Childhood obesity in the borough is higher than the national average, and the Commission for Prevention group led by Waltham Forest’s public health team decided to allocate some of this funding to initiatives that promote active travel, providing a useful source of additional money42,43.

Opportunities for action

<table>
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<tr>
<th>Topic</th>
<th>Health</th>
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<tbody>
<tr>
<td><strong>Procurement</strong></td>
<td>· Require contractors to operate low or zero emission vehicles.</td>
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<td>· When procuring food and catering services and meals on wheels services, specify food that is low in red meat and dairy products and, where possible, local and seasonal.</td>
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<td><strong>Delivering services</strong></td>
<td>· Reduce carbon emissions through measures to increase access to affordable warmth.</td>
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<td>· Put health and wellbeing at the heart of local planning.</td>
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<tr>
<td><strong>In plans and strategies</strong></td>
<td>· Ensure transport strategies promote and enable sustainable and active modes of travel.</td>
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<td></td>
<td>· Improve access to, and the quality of, green and blue space.</td>
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<td></td>
<td>· Use planning guidance to encourage active travel and encourage car-free new developments.</td>
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<td>· Use public health plans and strategies, including Joint Strategic Needs Assessments, to support action on climate change that improves health.</td>
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<tr>
<td><strong>In partnership</strong></td>
<td>· Work with NHS, energy providers and retrofit organisations to support those vulnerable to ill health from cold homes or effect of severe weather events.</td>
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<td></td>
<td>· Work with travel authorities and organisations to encourage low carbon transport.</td>
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<td></td>
<td>· Work with relevant organisations and the wider community to develop strategic plans for green space within broader neighbourhood plans.</td>
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<tr>
<td><strong>Skills</strong></td>
<td>· Work with partners to offer training for front line staff to identify and offer advice to those in fuel poverty.</td>
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<tr>
<td></td>
<td>· Offer training for energy/transport officers to understand health priorities and targets.</td>
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See: https://thaws.co.uk/

See: https://www.ashden.org/winners/birmingham-bikes


See: https://www.ashden.org/winners/shine

See: https://www.ashden.org/winners/cosy-homes-in-lancashire-1


See: https://nottinghamgoodfoodpartnership.co.uk/

38 See: https://www.wirralintelligenceservice.org/jsna/climate-health/


42 Personal conversation with Waltham Forest public health team, 2019.

43 See: https://www.enjoywalthamforest.co.uk/