Welcome to CDP-ICLEI Track 2022

Governance

0. Governance

(0.1) Provide details of your jurisdiction in the table below.

Response

Administrative boundary of reporting government^
City/Municipality

Next highest level of government
State/regional

Next lowest level of government
No lower level of government

Land area of the jurisdiction boundary (in square km)^
115.64

Percentage range of land area that is green space
41-50%

Current (or most recent) population size^
557,870

Population year^
2022

Projected population size
590,303

Projected population year
2038

Select the currency used for all financial information reported throughout your response^
GBP Pound Sterling

(0.2) Provide information on your jurisdiction’s oversight of climate-related risks and opportunities and how these issues have impacted your jurisdiction's planning.

Response

Select the processes that reflect your jurisdiction's oversight of climate-related issues

Council (or equivalent) is informed by relevant departments, committees and/or subcommittees about climate-related issues

Relevant departments, committees and/or subcommittees are informed by management about climate-related issues

Climate-related issues are considered by government when undertaking plans and/or strategies

Climate-related issues are considered by government when undertaking budgeting and/or major capital expenditures

Climate-related responsibilities are assigned to a committee(s) or a subcommittee(s) in government

Climate-related responsibilities are assigned to management-level positions in government

Other process related to the oversight of climate-related issues, please specify

Manchester Climate Change Partnership sets the city's high level climate strategy and conducts oversight via annual reports

Provide further details on your jurisdiction's oversight of climate-related issues

The Manchester Climate Change Framework 2020-25 (the Framework) was published in 2020 and was signed of and endorsed by the leader of Manchester City Council (MCC, local authority) and a number of boards and committees sit underneath this that provide oversight on climate-related issues. It was also endorsed by Manchester Climate Change Partnership (MCCP, the Partnership) which is responsible for the delivery of the Framework on behalf of the city and represents key organisations and sectors across the city. Some of the key partners include the local authority, our universities, football club and electric infrastructure provider. Membership can be found here: https://www.manchesterclimate.com/MCCP

The Council has a key role in Manchester Climate Change Partnership, with the Deputy Chief Executive and the Executive Member for Environment attending the Board. Manchester Climate Change Agency also feeds back into the Environment and Climate Change Scrutiny Committee when required.

Manchester City Council has a climate change action plan 2020-25 which articulates how it will deliver its part of the city's Framework. A governance structure (Zero Carbon Coordination Group) sits around this which is led by the city's treasurer and includes senior-level oversight of key thematic portfolios (5 workstreams)
The Zero Carbon Coordination group meets monthly and each of the 5 workstreams meet twice per quarter. Manchester Climate Change Partnership board meets twice per quarter and the Manchester Climate Change Partnership meets once per quarter.

Task and finish groups are convened when required. Manchester Climate Change Agency, originally established by the council in 2015, is an independent organisation that facilitates the work of the Partnership (setting the city's strategy) and champions climate action across Manchester.

Describe how climate-related issues have impacted your jurisdiction's master/development planning

There are a number of master/development plans for Manchester that incorporate climate-related issues and more recent versions of these plans have put climate change at the forefront.

The Our Manchester Strategy 2016–2025 sets out the future Manchester we want to see and the goals of the city, the latest iteration, The Our Manchester Strategy Reset: Forward to 2025, was published in March 2021. It includes the commitment from the original strategy that 'Manchester will play its full part in limiting the impacts of climate change', as one of the six strategic priorities. And it commits the city to reduce its direct CO2 emissions by 50% during 2021-25, towards Manchester becoming a zero carbon city by 2038, at the latest.
https://www.manchester.gov.uk/info/200024/consultations_and_surveys/8148/our_manchester_strategy-_forward_to_2025

All other strategies flow from the Our Manchester Strategy and incorporate the 6 strategic priorities, examples include:

Economic recovery plan
https://www.manchester.gov.uk/info/500113/city_centre_regeneration/8063/powering_recovery_manchester_s_recovery_and_investment_plan#:~:text=It%20has%20two%20main%20elements,a%20catalyst%20to%20further%20investment.

Green and Blue Infrastructure
https://www.manchester.gov.uk/downloads/download/6314/manchester_green_and_blue_strategy

The recently refreshed Digital Strategy for the city identifies Sustainable Resilience as a key theme:
https://www.manchester.gov.uk/info/500002/council_policies_and_strategies/8356/manchester_digital_strategy_2021_%E2%80%93_2026

Manchester’s Strategic Housing Plan commits that 50% of homes built by 2025 will be low or zero carbon, at least a third of the city’s 70,000 social homes will be retrofitted to low carbon standards by 2032, and a retrofit programme will be developed for all the houses in the city.
https://www.manchester.gov.uk/news/article/9038/new_housing_strategy_looks_to_deliver_10000_new_affordable_homes_in_the_next_10_years

A refresh of the Work and Skills Strategy includes a zero carbon theme with several key actions. The Green Skills Action Plan will be reviewed and milestone will be fed into the

council's climate change action plan.
https://www.manchester.gov.uk/news/article/9061/brandnew_work_and_skills_strategy_to_help_everyone_in_manchester_succeed

The upcoming Local plan refresh aims to balance future growth to support our ambition to be a zero-carbon city by 2038 or before.
https://www.manchester.gov.uk/info/200074/planning/6572/local_plan/2

Climate change actions are now included in the Service Plan template across the Manchester City Council and responses from services will be collated to understand what actions are taking place across the Council .

Describe how climate-related issues have impacted your jurisdiction's financial planning

We have declared a climate emergency and therefore have analysed out budgets in to those that can be used to affect our zero carbon journey. We use our spending power (£500m a year) to include a 10% weighting in all procurement decisions to contract with companies who are also working toward zero carbon and can support the local community to do so. This is in addition to a 20% social value weighting that can include the provision and contribution to local environmental schemes, education, skills and training for our local communities.
Our revenue budgets are impacted by the changes to energy prices and whilst these are budgeted to increase, we are using this to redirect these growing resources into greater energy efficiency and different delivery mechanisms (electrification of heating and vehicles for example).
Our budget process includes environmental impact assessments and opportunities for decarbonisation, energy efficiency etc.
Our capital programme decisions all have an environmental weighting and zero carbon factors. High energy efficiency and sustainable building methods being built into capital expenditure decisions. Working towards electrification of vehicle fleet and use of e bikes. This is in addition to environment specific schemes such as tree planting and parks development programme.
Invest to save funding available for all programmes that can demonstrate cost neutrality over the long term – our financing structures allow long pay back periods making schemes possible.
Capital prioritisation also encourages the exploration of capital grants from elsewhere that can support goals and use of matched funding.

Describe the risks to your jurisdiction related to the transition to a low-carbon economy

Transitioning to a low-carbon economy brings a number of risks to jobs
The supply chain not being able to keep up with demand

(0.3) Report how your jurisdiction assesses the wider environmental, social and economic opportunities and benefits of climate action.

Response

Does the jurisdiction assess the wider opportunities/benefits of climate action?

Yes, wider opportunities/benefits are assessed for many climate actions

Outline how your jurisdiction quantifies the impact of these wider opportunities/benefits

Wider opportunities/benefits are considered at the action planning stage
Wider opportunities/benefits are considered at the action implementation stage
Wider opportunities/benefits are considered at post-implementation monitoring and evaluation stage

Describe the wider opportunities/benefits of climate action the jurisdiction has identified

In the 2022 update of the Manchester Climate Chnage Framework 2020-25 opportunities and benefits of climate action have been identified across all areas including
2. Staying within our carbon budget
a. Buildings
b. Renewable energy
c. Transport
d. Aviation
e. Indirect emissions
3. Adaptation and resilience
4. Health and wellbeing
5. Inclusive, zero carbon and climate resilient economy
6. Ensuring a just transition
7. Financing the transition

Examples from Buildings and transport are below

Benefits identified from reducing emissions from buildings :
Retrofitting homes helps to ensure residents are better placed to withstand heat waves or excessively cold spells.
• Energy-efficient appliances, including dishwashers and washing machines, can also minimise water use therefore help mitigate against water scarcity.
• Increasing the energy efficiency of housing stock can reduce overall energy security concerns and help build local energy resilience.
• Zero carbon new builds often incorporate nature-based solutions to climate adaptation in their surrounding areas and so build resilience to a changing climate.
Fuel poverty can be addressed by increasing the energy efficiency of a dwelling to EPC C which would save an average of £223 per year on fuel costs.
• Retrofitting measures create warmer, drier homes and thus impact positively on the health and wellbeing of their residents.
• An improved indoor climate can create health benefits, such as fewer diseases and reduced mortality.
• High energy bills can create financial stress and so reduced energy costs can help the prevention of mental disorders (e.g., anxiety, depression).

• Investing £1 in keeping homes warm is estimated to reduce direct health costs by £0.42.
• Upgrading the energy efficiency of Manchester's homes will present a huge opportunity to boost the local economy.
• Growing the market for green products and services creates opportunities for local companies and local people to diversify and develop new skills and new businesses.
• 9,800 jobs could be supported in the Northwest by an energy efficiency programme in the UK.
• Ambitious retrofit programmes in the public sector and social housing sector, build demand for skills and supply chain growth by providing a stable pipeline to enable rapid expansion of market delivery capability.

Benefits of decarbonising transport:
• Creating new transport infrastructure for active travel and public transport brings the opportunity to increase tree planting and to embed sustainable urban drainage systems, building resilience to climate risk within our critical infrastructure.
• Increased active travel improves health and could save the NHS £17bn within 20 years by reducing the prevalence of type 2 diabetes, dementia, heart disease and cancer
• A more integrated and affordable public transport system can save households money on owning and running a car, significant as the cost of living rises106.
• Reduced use of internal combustion engine cars, vans and motorbikes improves air quality and reduces the negative health effects of air pollution.
• Electric vehicles are cheaper to run and usually cheaper to service and maintain
• The need to create new infrastructure for sustainable travel and electric vehicles is a new opportunity for jobs and business growth – for example, a report by Transition Economics for the TUC suggests investing in the electrification of transport could help deliver 59,000 new jobs in the UK.
• An integrated public transport system and active travel network can reduce the undesirable impacts of congestion on business and help drive economic growth.
• By changing how we move goods around the city, particularly in 'last mile' delivery, we can create opportunities for new business - a report by Accenture notes that, creating local fulfilment centres to support the 'last-mile' supply chain could create jobs and lower last-mile emissions between 17-26% by 2025.

Outline if and how your jurisdiction ensures the equitable distribution of climate action opportunities/benefits

Yes, the jurisdiction is engaging with frontline communities most impacted by climate change

Yes, the jurisdiction is designing or implementing climate actions that address the needs of frontline communities most impacted by climate change

Please provide evidence and/or more details of how your jurisdiction is ensuring inclusive/equitable climate action

A core principle of the Climate Change Framework is to ensure that all of Manchester's residents are protected from the impact of climate change and actions to help the transition to a zero carbon and climate resilient city do not have a negative impact on

the most vulnerable people, and that the costs do not fall unevenly on those that are least able to afford them.

The In Our Nature project is working with frontline communities with a particular focus on trying to engage hard-to-reach and vulnerable communities. It is currently being trailed in 6 areas but subject to funding we plan to ramp this up across the city of Manchester. In addition to the In Our Nature project, the council has employed 3 climate change officers that work across Manchester's communities, as a result each ward within manchester has a climate action plan. These were designed for the communities by the communities and work was done to ensure the voices of hard-to-reach and vulnerable populations were incorporated into the development of the plans. The plans are currently being delivered with support from the neighbourhood teams and climate change officers.

Many of the ION project pilot initiatives have explored engaging with a specific group for which there may be barriers to engagement. This includes ‘Good for you, Good for the Planet’ Cookbook working with people with learningdisabilities and autistic people to develop an easy-read cookbook filled with
healthy recipes and practical tips to help reduce food waste. Communitybased urban greening projects have focused on targeted communities including Manchester’s Kurdish community, Muslim women, and school children, using nature and community-led urban greening projects to inspire
climate action.

The University of Manchester’s Leverhulme Trust-funded project, TIES, 'Toward Inclusive Environmental Sustainabilities’ is the first in-depth study of immigration and household sustainability in the UK targeting the Somali and Pakistani communities. Little is known about culturally specific notions of sustainability and how green agendas are practiced by immigrants with nonWestern views and lifestyles. Moreover, sustainability is often viewed by some population groups as elitist and non-inclusive. This project aims to address these issues. The Neighbourhood Team is working alongside the University to support this work. In promoting climate change awareness consideration has been given by the Neighbourhood Teams to the locations of events and initiatives including:
 Working with faith groups and communities in the wards to bring climate change activities into planned activities for example, the recent Cheetham Cultural Festival included an event hosted at ‘The Yard,’ which focused on ethical fashion and tackling overconsumption in the industry. There was also a climate change/reduce, reuse, recycle information stands on both days of the festival weekend. (Ukrainian Centre and Crumpsall Horticultural Centre).
 Working with LGBT foundation to feed into ION communications. Upcoming “Stories we love” to feature the Derek Jarman Pocket Park Volunteers (over 50s LBGT group) activity on International Day of Older People, ahead of the installation of a new green space they have helped to design.
 Promoting community cohesion by bringing members of local communities into faith spaces. In Cheetham, there are upcoming community screenings of David Attenborough documentary, “A Life on our Planet” and follow up workshops at New Testament Church of God and Khizra Mosque. Local

climate action projects will be planned with CCNO support based on attendee's ideas and feedback.

(0.4) Report on your engagement with higher and/or lower levels of governments regarding your jurisdiction's climate action.

Climate component

Climate risk and vulnerability assessment

Level of governments engaged in the development, implementation and/or monitoring of component

State/Regional-level government

Outline the purpose of this engagement

To facilitate information sharing across different levels of government
To facilitate the integration of this component into assessments and policy developed across different levels of government

Comment

Worded with colleagues in Greater Manchester Combined Authority (GMCA) to produce the Climate risk and vulnerability Framework. Word was steered by The Manchester Climate Chnage Partnership Adaptation and Resilience Advisory Group which has a GMCA representative to ensure that information is shared across different levels of authority and to ensure that work between Manchester and Greater Manchester is aligned.

Climate component

Climate action plan

Level of governments engaged in the development, implementation and/or monitoring of component

National-level government
State/Regional-level government

Outline the purpose of this engagement

To collect data and/or feedback from other levels of government to inform its development
To facilitate information sharing across different levels of government
To facilitate capacity building across different levels of government

Comment

Whilst developing the Manchester Climate Change Framework we have been engaging with higher levels of government to share research and learnings, clear articulations of the challenges and suitable solutions and recommend resources and solution provider to the end customer.

Climate component

Climate mitigation target

Level of governments engaged in the development, implementation and/or monitoring of component

National-level government
State/Regional-level government

Outline the purpose of this engagement

To facilitate information sharing across different levels of government

Comment

Manchester is a member number of networks that bring together both regional and local governments to facilitate sharing of knowledge and learning. For example Core Cities, PCAN, Covenant of Mayors,

(0.5) Report your jurisdiction's most significant examples of collaboration with government, business, and/or civil society on climate-related issues.

Primary entity collaborated with

Business
Other, please specify
Manchester Climate Change Partnership

Mechanisms used to collaborate

Collaborative initiative
City business partnership platform
Knowledge or data sharing
Capacity development
Reporting of climate and/or environmental data
Project implementation and management

Areas collaboration focused on

Emissions reduction
Adaptation
Resilience
Energy
Transport (Mobility)
Building and Infrastructure
Public health

Description of collaboration

Manchester Climate Change Partnership is a city, business partnership that was established in 2018 to oversee, champion and climate change action across the city of Manchester. The Partnership brings together organisations from the city's public, private, community, faith, education and academic sectors that share the common goal

to achieve the ambitious objectives and targets in the Manchester Climate Change Framework 2020-25. Membership can be found here https://www.manchesterclimate.com/MCCP. The Partnership allow for consistent, coherent political and corporate leadership on climate change across the city. Manchester City Council (MCC) have escalated climate action within its priorities at all levels, giving support for this agenda across the MCC remit.
The Partnership is built on two key components:
• Engaging and empowering Manchester residents and organisations to take action, using the Manchester Climate Change Partnership and its networks as our key engagement mechanism, and
• Joint working between Manchester City Council, Manchester's strategic partners, Greater Manchester Combined Authority, UK Government, and their agencies to provide the support, incentives, standards and infrastructure residents and organisations need
The Partnership and the Agency have helped Manchester partners to secure over £10m for the city and the city-region and brought residents and businesses closer to the Cities climate ambition:
The Partnership have created a mandate for action from Manchester's residents via a community assembly and amplified seldom heard voices by creating a Youth Board and Manifesto ;
We have supported the creation and launch of a signposting service for businesses looking to reduce their emissions and grow their companies: www.beenetzero.co.uk.
Programmes such as In Our Nature have successfully improved neighbourhoods, supported the development of ward climate action plans and together with Manchester City Councils Climate Change officers have helped to bring even more people and organisations into the city's climate journey.
As well as challenging and supporting each other, the Partnership is also able to challenge and support the city to do even more:
The Partnership have developed a Net Zero New Build standard addressing both operational and embodied energy which has been shared with the Council as part of the development of the new Local Plan.

Other entities collaborated with

Local government within country
Academia
Residents
Vulnerable population groups
NGO and associations
Education sector
Consumer Staples
Energy
Health care
Real Estate
Utilities

Primary entity collaborated with

Government

Local government outside of country

Mechanisms used to collaborate

City business partnership platform

Areas collaboration focused on

Emissions reduction
Building and Infrastructure

Description of collaboration

Manchester is one of eight global cities. taking part in the 'City-Business Climate Alliance' (CBCA) developed by the C40, CDP and World Business Council for Sustainable Development to build on and support the development of eight new city-business partnerships to accelerate local action toward meeting city, national and international climate change targets.

The other partner cities include: Dallas (USA), Durban (South Africa), Lisbon (Portugal), New York (USA), Stockholm (Sweden), Tel Aviv (Israel), and Vancouver (Canada), and these cities provide Manchester with an exciting opportunity to learn from their innovative zero carbon initiatives.

As part of this work, we have increased membership of the Manchester Climate Change Partnership, shared learning across global cities and held a workshop for Manchester Business to carry out a landscape assessment of existing climate change commitments, activities and support programmes in Manchester's business community are already engaged in. Secondly, to identify gaps in the existing support which could be replicated in cities around the world.

More information can be found here: https://www.city-businessclimatealliance.org/

Other entities collaborated with

Local government outside of country
Climate initiatives
Other, please specify
Manchester Climate Change Partnership

Assessment

1. Climate Risk and Vulnerability

(1.1) Has a climate risk and vulnerability assessment been undertaken for your jurisdiction? If not, please indicate why.

Yes, a climate risk and vulnerability assessment has been undertaken

(1.1a) Provide details on your climate risk and vulnerability assessment.

Assessment attachment and/or direct link^

https://www.manchesterclimate.com/sites/default/files/Climate%20vulnerability%20framework.pdf

Confirm attachment/link provided to assessment

The assessment can be accessed (unrestricted) on the link provided

Boundary of assessment relative to jurisdiction boundary^

Same - covers entire jurisdiction and nothing else

Year of publication or approval^

2021

Factors considered in assessment

Assessment considers vulnerable populations
Assessment considers water security
Assessment considers nature

Primary author(s) of assessment^

Other, please specify
Researcher on secondment at Manchester Climate Change Agency

Please explain

MCCA published Manchester Climate Risk: A framework for understanding hazard and vulnerability. This report identifies the main weather hazards that the city has faced and continues to face and how these are projected to alter given climate change. Beyond this, the document outlines the city's main climate risk exposure and vulnerabilities across a series of six interrelated themes (outlined below).

1. People & society
The health, wealth and well-being of everyone in society are fundamental indicators of the success and vitality of a city. Manchester is a complex and diverse city, composed of many intersecting communities with different strengths and vulnerabilities. Communities and individuals will be affected by climate change in different ways. Some people will have greater capacity to respond than others.

2. Economic Activity
Wealth and economic opportunity is not shared equally across the city and its people. Climate change will bring both threats and opportunities to the economic sustainability and the competitiveness of the city. It has the potential to have significant implications for social justice and inclusive growth.

3. Place & the built environment
The places that we inhabit, and more specifically our built environment, are a key element of our exposure to the impacts to climate change. We need to consider how our urban spaces, public places and parks and green spaces are vulnerable to the impacts of climate change.

4. Infrastructure

The effective functioning of our infrastructure is vital for economic and social well-being of all those that live and work in the city. Climate change threatens to both exacerbate long-standing vulnerabilities and introduce new vulnerabilities to the city's infrastructure networks.

5. Natural environment, biodiversity and green and blue infrastructure
Manchester has a vast range of green and blue space and biodiversity. However, these spaces are of varying quality, and face pressure from development for new homes and workplaces. Some of these spaces and their biodiversity and quality will themselves be impacted by climate change.

6. Cross-cutting themes
There are several cross-cutting factors that should be considered when assessing Manchester's sensitivity and vulnerability to climate change. These include interdependencies that will frame any efforts to adapt to climate change such as the management of risk across the city's boundaries, and evaluating the understanding of climate risk, resilience and adaptation.

Assessment attachment and/or direct link^

www.greatermanchester-ca.gov.uk/media/4542/greater-manchester-resilience-strategy-2020-2030.pdf

Confirm attachment/link provided to assessment

The assessment can be accessed (unrestricted) on the link provided

Boundary of assessment relative to jurisdiction boundary^

Larger - covers the whole jurisdiction and adjoining areas, please explain additions

Greater Manchester City Region

Year of publication or approval^

2021

Factors considered in assessment

Assessment considers vulnerable populations
Assessment considers water security
Assessment considers nature
Assessment considers transition risks
Assessment includes a high-emissions scenario
Identified hazards have been incorporated into the jurisdictions overall risk management framework
A process has been established for prioritizing identified hazards
A process has been established to update the assessment at least every five years

Primary author(s) of assessment^

Dedicated team within jurisdiction

Please explain

It is The Greater Manchester Resilience Strategy
• aligns with the Greater Manchester Strategy, helping to mitigate the impact of shocks on its outcomes.
• supports delivery of the living With Covid Plan.
• has been developed collaboratively across GreaterManchester.
• will be delivered in partnership by agencies working across Greater Manchester.
• provides a framework for meeting our duties under the Civil Contingencies Act.
• runs to 2030 coinciding with the Sendai Framework and Making Cities Resilient 2030.
• builds on our Preliminary Risk Assessment and previous civil contingencies strategies.
• is informed by local and global learning and ideas.
• will be accompanied by an annual action plan.

(1.2) Provide details on the most significant climate hazards faced by your jurisdiction.

Climate-related hazards^

Urban flooding

Vulnerable population groups most exposed

Children and youth
Elderly
Marginalized/minority communities
Low-income households

Sectors most exposed^

Electricity, gas, steam and air conditioning supply
Water supply
Sewerage, waste management and remediation activities
Transportation and storage
Accommodation and food service activities
Professional, scientific and technical activities
Education

Describe the impacts on vulnerable populations and sectors^

Urban flooding is the most significant weather hazard for Manchester; a threat that is projected to increase with climate change.

SUMMER STORMS
Although it is anticipated that, generally, the climate will be drier in Summer in the future, data from UKCP 2018 also indicates future increases in short-lived heavy rainfall events. There is an increased likelihood that there will be greater intensity in hourly precipitation extremes. More particularly, the impacts of increased convectional rainfall events could be exacerbated by significant surface water run-off with precipitation falling on very dry ground.

AUTUMNAL AND WINTER STORMS/ WINTER PRECIPITATION
Winters are likely to be wetter. In particular, successive mid-Atlantic lows have the potential to bring considerable amounts of rain to the region. Groundwater levels and soil saturation could remain high all winter, particularly in the hills and moorlands around Manchester that feed rivers. It is worth noting that UKCP 2018 warns “Users may wish to take the precautionary approach of considering the implications of a very large winter precipitation increase being more likely than the probabilistic projections suggest” (Met Office, 2019: 8).

The GM Critical infrastructure risk assessment looked at the 2050s high GHG emissions scenario (developed under the EcoCities project) and compared it to conditions during 1961-1990. The findings for GM’s Mersey Basin zone (where Manchester city is situated) projects the following hazard increases which will intensify the pluvial/flash flood risk by:
-Precipitation on the wettest day in winter: + 31%
- Precipitation on the wettest day in summer: + 19%
- Winter mean precipitation: +28%
- Annual mean precipitation: +9%

Beyond the damage caused to buildings and infrastructure, flooding also brings secondary impacts including the subsequent psychological stress that can be caused to flood victims. Another secondary impact is that treatment works can overspill into a river during times of excess flow causing pollution.

Proportion of the population exposed to the hazard

<10%

Did this hazard significantly impact your jurisdiction before this reporting year?

Yes

Current probability of hazard^

Medium

Current magnitude of impact of hazard^

Medium

Expected future change in hazard intensity^

Increasing

Expected future change in hazard frequency^

Increasing

Timeframe of expected future changes^

Medium-term (2026-2050)

Climate-related hazards^

Extreme heat

Vulnerable population groups most exposed

Children and youth
Elderly
Marginalized/minority communities
Vulnerable health groups
Low-income households

Sectors most exposed^

Human health and social work activities

Describe the impacts on vulnerable populations and sectors^

Although currently relatively rare, climate projections suggest that Manchester will face warmer summers in the future. There is an associated increased likelihood that we will face intense very hot spells (heatwaves). Some summer days could potentially be extremely hot. Higher night-time temperatures will be a particular problem in cities given the urban heat island effect and because buildings will retain heat overnight. This is particularly important because economic activity is concentrated in the city core (that is, the Mersey basin zone) and given the prevalence of vulnerable groups (deprived, health impacted, young and elderly) in the spatial locations projected to suffer the most from heat waves. Heat waves may also bring the threat of an increased frequency and intensity of intense convectional rainfall.

As part of the Greater Manchester (GM) Critical infrastructure risk assessment, using projected climate change (developed under the EcoCities project: https://resin-cities.eu/fileadmin/user_upload/Resources/City_report_GM/GMCCRA_report_final.pdf) for a 2050's high GHG emissions scenario, projections suggest:
-summer mean daily maximum temperature: + 5.6°C
- Warmest day in summer: + 6°C
- Warmest night in summer: + 4.4°C

The implications are potentially significant particularly for human health. Severe heat waves will increase death rates for the old, the very young and those with underlying health conditions.

There is an equality dimension to heat stress. Those at broader socio-economic disadvantage show the highest potential exposure to this climate change impact.

Heat waves also have the potential to have a significant impact on the thermal comfort of the city's inhabitants. In particular, heat waves could have consequences for the ability of people to rest and sleep, again with implications for human health and productivity.

Further implications include an increased use of air conditioning, paradoxically producing further climate changing emissions.

Heat waves and very hot summer days pose a threat to the functioning of urban

infrastructure including railways and airport capacity and efficiency. For instance, it has been reported to us that in recent heatwaves IT servers have struggled to cope.

Proportion of the population exposed to the hazard

30-40%

Did this hazard significantly impact your jurisdiction before this reporting year?

No

Current probability of hazard^

Medium Low

Current magnitude of impact of hazard^

Medium Low

Expected future change in hazard intensity^

Increasing

Expected future change in hazard frequency^

Increasing

Timeframe of expected future changes^

Medium-term (2026-2050)

Climate-related hazards^

Extreme wind

Vulnerable population groups most exposed

Children and youth
Elderly
Marginalized/minority communities
Low-income households

Sectors most exposed^

Describe the impacts on vulnerable populations and sectors^

Extreme wind, which could be exacerbated by climate change, can cause disruption associated with damage to infrastructure or challenges to transport and mobility. This is likely to include challenges for the mobilisation of emergency responders and the delivery of health and social care services. This could be compounded by disruption to the wider energy and ICT networks.

This, alongside combinations of high wind events with higher rainfall, could see this hazard impact combine with more frequent and higher risk fluvial and pluvial flood risks.

There is also a direct risk to life due to the dangers of high winds.

Proportion of the population exposed to the hazard

<10%

Did this hazard significantly impact your jurisdiction before this reporting year?

Yes

Current probability of hazard^

Medium

Current magnitude of impact of hazard^

Medium Low

Expected future change in hazard intensity^

Increasing

Expected future change in hazard frequency^

Increasing

Timeframe of expected future changes^

Medium-term (2026-2050)

Climate-related hazards^

River flooding

Vulnerable population groups most exposed

Children and youth
Elderly
Marginalized/minority communities
Low-income households

Sectors most exposed^

Describe the impacts on vulnerable populations and sectors^

Fluvial flooding to communities and properties (both residential and commercial) and to infrastructure, is a major weather and climate threat to the city. Fluvial flooding can cause significant economic damage, as well as severe, long-term social and psychological impacts for communities. High river levels may accelerate riverbank erosion, cause silting and potentially alter the course of channels. There may also be overtopping or undermining of reservoirs or water storage.

Manchester has four main river courses. The Irwell flows to the west of Manchester city centre and is canalised in its lower reaches, eventually becoming the Manchester Ship Canal. The Irwell catchment area is wetter than the UK average. It is considered ‘flashy’, responding very quickly to rainfall given the rapid runoff from steep and narrow valleys,

moorland that has lost water retention functionality, and intense urbanisation over several centuries. The Irwell confluences with the much smaller rivers Irk and Medlock in the city centre. These two tributaries, and other subordinate tributaries, are heavily modified in their lower reaches, in many places being fully culverted. The River Mersey flows through the south of the city.

The GM Critical infrastructure risk assessment (2050s high GHG emissions change is from 1961-1990 at 90th percentile) scenario for GM's Mersey Basin zone (which Manchester city is situated in) projects the following hazard increases in precipitation:
- Precipitation on the wettest day in winter: + 31%
- Precipitation on the wettest day in summer: + 19%
- Winter mean precipitation: +28%
- Annual mean precipitation: +9%

There are concerns that river defences may not be adequate in the future. Manchester has relatively extensive flood defences along its waterways. For instance, the River Mersey has two water retention reservoirs used to manage river levels and prevent flooding; the Didsbury basin and the Sale Ees. In mid-January 2021, after a period of heavy rainfall, flood warnings were issued with particular concern regarding Didsbury and Northenden given the anticipated levels of the River Mersey. An evacuation took place against the added complexity of Covid restrictions. Flood water peaked at approximately 5am on Thursday 21st January. It did not overtop the flood basin, however, it was reported that it did come within millimetres of doing so .

Proportion of the population exposed to the hazard

<10%

Did this hazard significantly impact your jurisdiction before this reporting year?

Yes

Current probability of hazard^

Medium

Current magnitude of impact of hazard^

Medium Low

Expected future change in hazard intensity^

Increasing

Expected future change in hazard frequency^

Increasing

Timeframe of expected future changes^

Medium-term (2026-2050)

Climate-related hazards^

Heavy precipitation

Vulnerable population groups most exposed

Children and youth
Elderly
Low-income households

Sectors most exposed^

Describe the impacts on vulnerable populations and sectors^

Although it is anticipated that, generally, the climate will be drier in Summer in the future, data from UKCP 2018 indicates increases in short-lived heavy rainfall events. There is an increased likelihood that there will be greater intensity in hourly precipitation extremes. More particularly, the impacts of increased convectional rainfall events could be exacerbated by significant surface water run-off with precipitation falling on very dry ground. Critically, however, climate change is just one facet of this hazard. Urbanisation and aging urban infrastructures are contributing to this risk.

We have identified the direct impacts below:
- Fluvial flooding for communities and properties - both residential and commercial – and infrastructure. Significant economic damage, as well as potentially severe, long-term social and psychological impacts for communities.
- High river levels may accelerate riverbank erosion, cause silting and potentially alter the course of channels.
- Overwhelming of urban drainage infrastructure. Pluvial flooding of communities, businesses and infrastructure nodes.
- Overtopping or undermining of reservoirs or water storage.
- Treatment works can overspill into a river during times of excess flow causing pollution.
- Land instability, landslips, subsidence or sinkholes.
- Possible (though likely to be isolated) damage from lightning strikes during intense convectional thunderstorms.
- Disruption to – and potential closure of – infrastructure and transport networks.
- Dangerous winds with the potential for fallen trees (in full-leaf), infrastructure disruption, and damage to buildings.

Proportion of the population exposed to the hazard

10-20%

Did this hazard significantly impact your jurisdiction before this reporting year?

Yes

Current probability of hazard^

Medium High

Current magnitude of impact of hazard^

Medium

Expected future change in hazard intensity^

Increasing

Expected future change in hazard frequency^

Increasing

Timeframe of expected future changes^

Medium-term (2026-2050)

Climate-related hazards^

Extreme cold

Vulnerable population groups most exposed

Elderly

Low-income households

Sectors most exposed^

Describe the impacts on vulnerable populations and sectors^

Climate projections indicate winters will generally be warmer. UKCP 2018 suggest that by the end of the century there will be very few, if any, incidents of snowfall lying on the ground, except for on higher ground. This does not, however, entirely preclude periods of relatively prolonged cold snaps and accumulations of ground-lying snow in the short to medium term.

The primary impacts are noted below:
- Threat to human health, particularly for vulnerable people including the elderly, people in fuel poverty and the homeless.
- Pressure on infrastructure including disruption to transport networks, the fracturing of water and drainage pipes, snow and ice on power lines.
- Disruption to transport services, including airport and road closures.
- Disruption to public and human health services, including school closures, health services, and council services.
- Economic impacts given business and infrastructure disruption.

Proportion of the population exposed to the hazard

<10%

Did this hazard significantly impact your jurisdiction before this reporting year?

Yes

Current probability of hazard^

Low

Current magnitude of impact of hazard^

Medium Low

Expected future change in hazard intensity^

Decreasing

Expected future change in hazard frequency^

Decreasing

Timeframe of expected future changes^

Long-term (after 2050)

GCoM Common Reporting Framework Reporting Requirements for European Cities

(1.3) Identify and describe the most significant factors impacting on your jurisdiction's ability to adapt to climate change and indicate how those factors either support or challenge this ability.

Factors that affect ability to adapt^	Degree to which this factor challenges/supports the adaptive capacity of your jurisdiction^	Describe how the factor supports or challenges the adaptive capacity of your jurisdiction^
Infrastructure capacity	Supports Moderately supports	Electricity North West (Manchester's District Network Operator) and United Utilities (Manchester's water provider) are investing significant effort and money into making their respective networks more climate-resilient. Further information: https://www.enwl.co.uk/go-net-zero/our-plans-to-go-net-zero/climate-adaptation/ www.unitedutilities.com/corporate/responsibility/environment/climate-change/climate-change-adaptation/
Other, please specify Partnerships and collaboration	Supports Significantly supports	Manchester has an strong history of working collaboratively. Manchester Climate Change Partnership (MCCP) is a network of 60 organisations across 10 sectors, composing 20% of the city's economy and carbon emissions, with influence over the remaining 80%. MCCP is coordinated and supported by Manchester Climate Change Agency (MCCA), which operates with two core principles: taking a science-based approach to setting objectives, and; the need for 'bottom-up' stakeholder action to meet the city's targets, enabled by strategic interventions by local and national agencies. Combined, MCCA and MCCP champion and facilitate citywide climate change action. Manchester has now developed objectives and a plan for climate adaptation and resilience. Further collaborative work will be undertaken to translate these plans into action across the city and beyond.

Other, please specify Disaster risk response	Supports Significantly supports	Disaster risk response is mandated under legislation (Civil Contingencies Act 2004) means that the public sector is well placed to respond to hazard events. Manchester City Council has some capacity in this regard. However, much of this role is undertaken at a city-region scale by the Greater Manchester Combined Authority (GMCA): https://www.greatermanchester-ca.gov.uk/what-we-do/resilience/
Poverty	Challenges Moderately challenges	Inequality, including income inequality and poverty, negatively affects citizens adaptive capacity. We acknowledge that Manchester is a city with severe challenges in terms of socio-economic disparity, poverty and health inequality. Resulting in low climate resilience / adaptive capacity therefore this is a very significant driver of vulnerability within the city.
Resource availability	Challenges Significantly challenges	Funding available to local authorities and other public sector agencies working in this field has to compete with a range of other statutory priorities. This is occurring against a challenging background of wider public sector funding pressures. There are added challenges with COVID-19 and the long-term recovery, which is having an impact on capacity of key organisations to develop and deliver adaptation and resilience responses.Further challenges will be posed by inflationary pressures, and the on-going cost of living crisis which is impacting the private and public sector finances, as well as household finances.
Access to quality / relevant data	Challenges Significantly challenges	1. The extent and nature of climate related risk is not yet fully understood due to the complexity of interconnections between the changing climate, land use and natural processes. 2. Records have not been systematically kept of the incidence and consequences of extreme weather events impacting on critical infrastructure (and other locations and assets) located within and serving Manchester. This makes it difficult to generate a strategic picture of priority sectors, locations and hazard events that are of greatest relevance to the conurbation. The passing of the Flood and Waters Management Act (in 2010) has started to address this issue in the context of flooding. 3. There are issues and uncertainties concerning the accuracy of data and prediction tools, particularly regarding future flooding projections data. This makes is challenging to develop adaptation and resilience responses, particularly regarding hard infrastructure investments that operate over long time horizons.

Political stability	Supports Moderately supports	Manchester has both political and officer-level awareness and involvement in tackling the climate crisis. It also has history of collaborative working with the wider Combined Authority and neighbouring authorities which can provide a platform to support engagement of other partner organisations involved in adaptation and critical infrastructure activities. Further work needs to be undertaken to increase understanding and awareness of future climate challenges and to explore the potential for greater political and administrative capacity building.
Political engagement / transparency	Supports Significantly supports	Manchester maintains transparent monitoring and reporting on progress from a range of groups, such as MCCA Annual Reports on the city's progress against it's targets, annual reports to CDP since 2019. Manchester City Council also provides quarterly updates on progress against its own Climate Change Action Plan. This has facilitated a critical perspective to be maintained and for areas for improvement to be identified. There are established and active connections between Manchester planners and decision makers in the public sector and universities, research consultancies and community groups working on issues linked to climate change adaptation and resilience. This provides a platform for knowledge exchange and collaborative working. This platform has already delivered positive outcomes including research outputs influencing climate-related strategies and policies.
Access to basic services	Supports Moderately supports	Particularly in relation to disaster risk response which is mandated under legislation (civil contingencies act 2004) means that the public sector is well placed to respond to hazard events. Basic service access is important, both during/ after extreme weather and provides general support (I.e. healthcare, which can reduce specific areas of climate vulnerability) but as a city /UK this provision is fairly consistent and is specifically during hazard events and recovery from them.

2. Emissions Inventory

Emissions Inventory Methodology

(2.1) Does your jurisdiction have a community-wide emissions inventory to report?

Yes

(2.1a) Provide an attachment (in spreadsheet format) or a direct link to your community-wide emissions inventory. In addition, select the inventory year and report the jurisdiction's population for that year.

	Community-wide inventory attachment (spreadsheet) and/or link (with unrestricted access)^	Status of community-wide inventory attachment and/or direct link	Inventory year^	Population in inventory year^	Comment
Response	[1]	The emissions inventory has been attached	2019	547,700	

[1] SCATTER_manchester_CDP-report-inventory_2019.xlsx

(2.1b) Provide the following information regarding your latest community-wide GHG emissions inventory.

Boundary of inventory relative to jurisdiction boundary^

Same - covers entire jurisdiction and nothing else

Primary methodology/framework to compile inventory

Global Protocol for Community-Scale Greenhouse Gas Emissions Inventories (GPC) reported in the format of GCoM Common Reporting Framework (CRF)

Tool used to compile inventory

SCATTER

Gases included in inventory^

CO2
CH4
N2O

Source of Global Warming Potential values

IPCC Fourth Assessment Report (2007)

Emissions Inventory Data

GCoM Common Reporting Framework Reporting Requirements for European Cities

(2.1d) Provide a breakdown of your community-wide emissions in the format of the Common Reporting Framework.

	Direct emissions (metric	If you have no direct emission	Indirect emissions from the use of	If you have no indirect emission	Emissions occurring outside the	If you have no emissions to report	Please explain any excluded

	tonnes CO2e)^	s to report, please select a notation key to explain why^	grid-supplied electricity, heat, steam and/or cooling (metric tonnes CO2e)^	s to report, please select a notation key to explain why^	jurisdiction boundary as a result of in-jurisdiction activities (metric tonnes CO2e)	that are occurring outside the jurisdiction boundary as a result of in-jurisdiction activities, please select a notation key to explain why	sources, identify any emissions covered under an ETS and provide any other comments ^
Stationary energy > Residential buildings^	421,799		200,591		87,613		
Stationary energy > Commercial buildings & facilities^	78,787		184,663		38,505		
Stationary energy > Institutional buildings & facilities^	63,347		40,095		14,352		
Stationary energy > Industrial buildings & facilities^	204,330		224,954		69,236		
Stationary energy > Agriculture^	342			NO	81		
Stationary energy > Fugitive emissions^	77,741			NO		NO	

Total Stationary Energy	846,346		650,304		209,788		
Transportation > On-road^	592,370			IE	129,368		
Transportation > Rail^	6,551			IE	1,559		
Transportation > Waterborne navigation^	39,119			IE		IE	
Transportation > Aviation^	279,416			IE	303,858		
Transportation > Off-road^	5,914			IE		NE	
Total Transport	923,369			IE	434,785		
Waste > Solid waste disposal^	46,501			NO		IE	
Waste > Biological treatment^		NO		NO	0	IE	
Waste > Incineration and open burning^	2,159			NO	0	IE	
Waste > Wastewater^	9,988			NO		NO	
Total Waste	58,648			NO		NO	
IPPU > Industrial process	218,796			NO		NE	
IPPU > Product use		NO		NO		NE	
Total IPPU	218,796			NO		NO	
AFOLU > Livestock	3,555			NO		NE	
AFOLU > Land use	-3,527			NO		NE	

AFOLU > Other AFOLU		NO		NO		NE	
Total AFOLU	28			NO		NO	
Generation of grid-supplied energy > Electricity-only generation^		NO		NO		NO	
Generation of grid-supplied energy > CHP generation^		NO		NO		NO	
Generation of grid-supplied energy > Heat/cold generation^		NO		NO		NO	
Generation of grid-supplied energy > Local renewable generation	221			NO		NO	
Total generation of grid-supplied energy	221			NO		NO	
Total Emissions (excluding generation of grid-supplied energy)	2,047,408		650,304		644,572		

3. Sector Assessment Data

Energy Data

(3.1) Report the total annual electricity and heating and cooling consumption data (in MWh) and the percentage breakdown of this consumption by energy type for your jurisdiction.

Electricity consumption

Total annual jurisdiction-wide consumption in MWh

2,608,248.162

Data source used to provide percentage breakdown of consumption by energy type

Jurisdiction-level data

Percentage of total consumption from coal

3

Percentage of total consumption from gas

39

Percentage of total consumption from oil

1

Percentage of total consumption from nuclear

22

Percentage of total consumption from hydropower

1

Percentage of total consumption from bioenergy (biomass and biofuels)

16

Percentage of total consumption from wind

8

Percentage of total consumption from geothermal

1

Percentage of total consumption from solar (PV and thermal)

2

Percentage of total consumption from waste to energy (excluding biomass component)

4

Percentage of total consumption from other renewable sources

3

Percentage of total consumption from other non-renewable sources

0

Year data applies to

2019

Comment

Data from Digest of UK Energy Statistics 2020 and Sub-national total final energy consumption statistics 2020.

Heating and cooling consumption

Total annual jurisdiction-wide consumption in MWh

Data source used to provide percentage breakdown of consumption by energy type

The percentage breakdown of consumption by source is not available

Comment

(3.2) For each type of renewable energy within the jurisdiction boundary, report the installed capacity (MW) and annual generation (MWh).

	Installed capacity (MW)	Annual generation (MWh)	Year data applies to	Comment
Solar PV	22.58	22,162.8	2020	Data from UK BEIS - Renewable electricity by local authority. https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/920656/Renewable_electricity_by_local_authority_2014_to_2019.xlsx
Solar thermal			2020	Data from UK BEIS - Renewable electricity by local authority Data does not disaggregate Solar thermal from Solar PV
Hydropower	0		2020	Data from UK BEIS - Renewable electricity by local authority
Wind	0	6.476	2020	Data from UK BEIS - Renewable electricity by local authority
Bioenergy (Biomass and Biofuels)	9.67	52,253.327	2020	Data from UK BEIS - Renewable electricity by local authority

Geothermal			2020	Not Estimated
Other			2020	Not estimated

(3.3) Report the following energy access related information for your jurisdiction.

Indicator and metric used	Indicator value	Year data applies to	Comment
Access to clean cooking fuels and technologies Percentage of households within the jurisdiction with access to clean cooking fuels and technologies (%)	100	2022	Clean cooking figure of 100% is based on lack of evidence that cooking methods with poor combustion characteristics are routinely used in the city.
Average unit price of electricity (Currency unit as specified in 0.1) Residential unit price per kWh	28.01	2022	Standard variable tariff rate capped at the Ofgem April 2022 price cap level (28.01p/kWh). Some residents will be on different rates if on a fixed term deal, or if on a pre-payment tariff.

(3.4) How many households within the jurisdiction boundary face energy poverty? Select the threshold used for energy poverty in your jurisdiction.

	Indicator used to quantify energy poverty	Percentage of households or total population within the jurisdiction boundary that face energy poverty	Threshold used for energy poverty	Comment
Response	Percentage of households within the jurisdiction boundary that face energy poverty	20.5	Other, please specify The Low Income Low Energy Efficiency (LILEE) fuel poverty metric.	Figure from the Sub-regional fuel poverty data 2022 published by BEIS for the year of 2020. Link to data: https://www.gov.uk/government/statistics/sub-regional-fuel-poverty-data-2022. The Low Income Low Energy Efficiency (LILEE) fuel poverty metric was set out in the Fuel

			Details in comment	Poverty Sustainable Warmth strategy published in February 2021. The LILEE indicator considers a household to be fuel poor if: 1. it is living in a property with an energy efficiency rating of band D, E, F or G as determined by the most up-to-date Fuel Poverty Energy Efficiency Rating (FPEER) Methodology; and 2. its disposable income (income after housing costs (AHC) and energy needs) would be below the poverty line. 1

[1]fuel-poverty-sub-regional-2022-tables.xlsx

Transport Data

(3.5) Report your jurisdiction's passenger and/or freight mode share data.

Please complete

Passenger mode share data to report

Passenger mode share as share of trips

Passenger mode share: Walking

14

Passenger mode share: Cycling

2

Passenger mode share: Micromobility (including e-scooters)

0

Passenger mode share: Buses (including Bus Rapid Transit)

19

Passenger mode share: Rail/Metro/Tram

25

Passenger mode share: Ferries/ River boats

0

Passenger mode share: Taxis or shared vehicles (e.g. hire vehicles)

0

Passenger mode share: Private motorized transport

40

Passenger mode share: Other

0

Total passenger mode share reported

100

Freight mode share data to report

Jurisdiction does not have mode share data for freight transport

Comment

The 2021 Manchester Key Centre Cordon Surveys were undertaken in March and some, in particular the rail surveys (see below) and the surveys in the NOMA district, were affected by the measures taken to combat the pandemic and were thus affected by measures enacted to combat the Covid-19 pandemic. A national (UK) stay at home order was in place at the time of the surveys. Homeworking was advised where possible. Schools and other educational establishments were open with instruction online except for practical courses. Public transport was restricted locally to essential journeys only. Entertainment and hospitality venues were closed. Non-essential retail outlets were closed. Mass events were banned. In terms of social contact, national restrictions of household/support bubble applied both indoors and out.

Only cars are counted in this survey so taxis and shared vehicles are counted as private motorised transport.

Average made from the tables on sheet 23 from the Transport Statistics Manchester 2020-2021 Key Centre Monitoring Section that can be found here https://www.gmtu.gov.uk/reports/default.htm

Waste Data

(3.7) Report the following waste-related data for your jurisdiction.

	Data availability	Response (in unit specified)	Comment
Amount of solid waste generated (tonnes/year)	Other, please specify Greater Manchester City Region level	1,164,893.96	municipal only
Percentage of the solid waste generated that is diverted away from landfill or incineration (%)	Other, please specify Greater Manchester City Region level	98.12	Municipal only
Percentage of the diverted solid waste generated that is recycled (%)	Other, please specify Greater Manchester City Region level	47.7	Household only
Percentage of the diverted solid waste generated that is	Other, please specify		household only 555,593.88t

utilized for waste to energy (%)	Greater Manchester City Region level		
Percentage of the diverted solid waste generated that is reused (%)	Other, please specify Greater Manchester City Region level		household only 679.30t
Percentage of waste collected where separation at source is taking place (%)	Other, please specify Greater Manchester City Region level	100	The waste under GMCA control ie waste collected from households and at HWRCs, all of it is source separated
Total annual amount of food waste produced in the jurisdiction (tonnes/year)	This data is not available to report		GMCA does not separately collect food waste, it is co-collected with garden waste so we do not hold data for food only
Volume of wastewater produced within the jurisdiction boundary (megalitres/year)	This data is not available to report		Water is dealt with by external company, United Utilities
Percentage of wastewater safely treated to at least secondary level (%)	This data is not available to report		Water is dealt with by external company, United Utilities

Public Health Data

(3.8) Report on how climate change impacts health outcomes and health services in your jurisdiction.

Health area affected by climate change

Health outcomes

Identify the climate hazard(s) that most significantly impact the selected health area

Heat stress
Extreme heat
Urban flooding
River flooding
Air pollution

Identify the health issues driven by the selected climate hazard(s)

Heat-related illnesses
Exacerbation of non-communicable disease symptoms - respiratory disease
Mental health impacts

Direct physical injuries and deaths due to extreme weather events
Food and nutrition security
Disruption to water, sanitation and wastewater services
Disruption to health service provision
Overwhelming of health service provision due to increased demand
Damage/destruction to health infrastructure and technology
Disruption of health-related services

Timeframe of impact

Medium-term (2026-2050)

Identify which vulnerable populations are affected by the selected health issue(s)

Elderly
Marginalized / minority communities
Vulnerable health groups
Low-income households
Other, please specify

Black and minority ethnic communities. Households unable to access transport. Those with fewer educational qualifications. People in social housing or rental housing. Those with communication difficulties/limited proficiency in English. Homeless

What factors affect your jurisdiction's ability to address the selected health issues

Comment

Further work is needed on this topic. This will be undertaken by the 'Manchester Health, Wellbeing and Climate Change Independent Advisory Group, established Q1 2022. This has been scoped in Manchester Climate Risk: a framework for understanding hazards and vulnerability. This report, published in May 2021 states:

The adverse direct impacts of climate change – particularly from flooding and higher summer temperatures/ heatwaves - on human health could be considerable. They will involve both exacerbating existing health inequalities and the introduction of new health risks for people.

Notably, Greater Manchester is referred to as a 'Marmot city-region'; a place necessitating innovative cross sectoral governance responses to address significant health in-equalities (Codling & Allen, 2020). Health inequalities and the impacts on recovery from shocks were further demonstrated by recent work by Public Health England (2020) outlining disparities in the risk and outcomes from COVID19 across a range of population characteristics (see also Marmot et al, 2020).

The human health impacts of climate change may disproportionately affect those who are already vulnerable, for example, older people, very young people, people living in socio-economic deprivation and those with underlying health conditions. Demonstrating

this, heatwaves and air pollution exacerbated by climate conditions or moorland fires can cause death and serious illness, particularly in the elderly, children and those with pre-existing respiratory illness and cardio-vascular disease. Flood water poses a (relatively small) risk of drowning and may harbour disease. Households that flood, but for whatever reason are unable to relocate either during the flood event or the process of reconstruction, report ill-health from living in damp homes.

Experience of hazards can generate severe mental health and emotional impacts that may outlast the immediate impacts of events. For instance, communities that have suffered from flooding often report impacts in mental health several years after specific flood events.

In the longer-term, climate change could increase the risk of new pathogens and diseases borne by invasive insect species.

It is possible that warmer summers and milder winters will encourage greater use of the outdoors and greenspace, potentially bringing benefits to physical and mental health.

Health area affected by climate change

Health outcomes

Identify the climate hazard(s) that most significantly impact the selected health area

Air pollution

Identify the health issues driven by the selected climate hazard(s)

Exacerbation of non-communicable disease symptoms - respiratory disease

Timeframe of impact

Short-term (by 2025)

Identify which vulnerable populations are affected by the selected health issue(s)

Children and youth
Elderly
Marginalized / minority communities
Vulnerable health groups
Low-income households
Outdoor workers

What factors affect your jurisdiction’s ability to address the selected health issues

Comment

Air pollution and climate change are closely related. As well as driving climate change, the main cause of CO2 emissions – the extraction and burning of fossil fuels – is also a major source of air pollutants. What's more, many air pollutants contribute to climate change by affecting the amount of incoming sunlight that is reflected or absorbed by the atmosphere, with some pollutants warming and others cooling the Earth. These short-lived climate-forcing pollutants (SLCPs) include methane, black carbon, ground-level ozone, and sulphate aerosols. They have significant impacts on the climate: black carbon and methane in particular are among the top contributors to global warming after CO2.

Poor air quality is the largest environmental risk to the public's health. Taking action to improve air quality is crucial to improve the health of the general population. Whilst air quality has been generally improving over time, particular pollutants remain a serious concern in many urban areas including across Manchester.

Air pollution affects the health of people living, working and travelling in Greater Manchester. Pollutants such as nitrogen dioxide (NO2) which is the harmful oxide of nitrogen (NOx), and particulate matter (PM2.5 and PM10) that are not visible to the naked eye are found at dangerous levels in many urban areas and on busy roads. Road transport causes two-thirds of NOx emissions and nearly 80% of PM emissions at the roadside.

Diesel vehicles are the main source of road-based NOx emissions in Greater Manchester, and older vehicles are typically more polluting than newer vehicles. Large vehicles such as lorries are the most polluting from the exhaust pipe, and in general, diesel vehicles contribute the most.
Breathing in polluted air contributes to the equivalent of 1,200 deaths a year in Greater Manchester. Both long and short term exposure to air pollution are known to adversely affect health. It affects people's lungs in the short and long term, worsening respiratory issues such as asthma or bronchitis, as well as cardiovascular problems, and reduces life expectancy. Health damage caused by air pollution can begin as early as a baby's first few weeks in the womb and exposure over a long time can lead to heart and lung disease.
The most vulnerable in society are hit hardest – children, older people and those already in poor health. Everyone is at risk. But people who spend more time in areas with a high concentration of air pollution are most affected – which can include drivers. The air you breathe inside your vehicle can be dirtier than the air outside so people who spend a lot of time in their cars, taxis, vans or lorries are particularly at risk. The people living in places with the dirtiest air are often those least likely to drive, and some of the Greater Manchester's most deprived communities suffer the worst air pollution as they live close to busy roads.
In total, it is estimated that the health and social care costs of air pollution in England could reach £5.3 billion by 2035 unless action is taken. Changing the vehicles we drive and how we travel can clean up our air. This will require residents and businesses to take action, with Greater Manchester's local authorities leading the way. Action is already underway, and this Clean Air Plan will bring forward Measures to bring illegally

high roadside NO2 levels within legal limits as soon as possible.

Health area affected by climate change

Health systems

Identify the climate hazard(s) that most significantly impact the selected health area

Extreme heat

Identify the health issues driven by the selected climate hazard(s)

Heat-related illnesses
Mental health impacts
Direct physical injuries and deaths due to extreme weather events
Food and nutrition security
Disruption to health service provision
Overwhelming of health service provision due to increased demand
Damage/destruction to health infrastructure and technology
Disruption of health-related services

Timeframe of impact

Medium-term (2026-2050)

Identify which vulnerable populations are affected by the selected health issue(s)

Elderly
Marginalized / minority communities
Vulnerable health groups
Low-income households
Outdoor workers

What factors affect your jurisdiction's ability to address the selected health issues

Comment

Climate change will have likely impacts on the delivery of functional human health and social care services. There are two key dimensions to this:
1. How climate change will directly impact staff, facilities and the effective delivery of essential human health and social care services. This might include disruption to buildings through flooding or other weather related damage, staff shortages during extreme weather events, or disruption caused by outages to critical infrastructure such as road and public transport networks, power and water supply and/ or IT and communication systems.
2. How climate change will drive further/ or a new demand for services. For instance, heatwaves may put pressure on acute medical services. Dislocation from floods and storms might increase pressure on social services and GP services. There may also be

longer term stresses on services given that climate change is likely to increase chronic physical and mental health challenges.

(3.9) Provide information on the current impact of the COVID-19 pandemic on climate action in the jurisdiction.

Response

Impact of COVID-19 on the implementation of climate action policies in your jurisdiction

Increased emphasis on climate action

Impact of COVID-19 economic response on jurisdiction's budget for financing climate action in your jurisdiction

Increased finance available for climate action

Climate-related impact of COVID-19 recovery interventions

Recovery interventions that boost public and sustainable transport options
Recovery interventions which increase the quality and quantity of access to urban green spaces and channel investment into green infrastructure and nature-based solutions for the benefit of all
Other, please specify
Recovery interventions that accelerate climate action delivery

Comment

Despite initial challenges presented by COVID-19, including the divergence of resources away from climate projects and slow delivery due to remote workings, after the initial shock COVID presented increased opportunities and emphasis on climate action.

In June 2020 Manchester City Council committed to a Green recovery and in November 2020 the Manchester Economic Recovery and Investment Plan was published. The Plan set out Manchester's approach to kickstarting the city's economic recovery from COVID. The Plan included £290m of zero carbon and climate resilience projects. https://www.manchester.gov.uk/info/500113/city_centre_regeneration/8063/powering_recovery_manchester_s_recovery_and_investment_plan

The Our Manchester Strategy, covering the period 2016 to 2025, was 'reset' during 2020-21, to take account of the impacts of the COVID pandemic and provide an opportunity to revisit and reset the city's priorities for the coming five years. The Our Manchester Strategy Reset: Forward to 2025 was published in March 2021. It includes the commitment from the original strategy that 'Manchester will play its full part in limiting the impacts of climate change', as one of the six strategic priorities. And it commits the city to reduce its direct CO2 emissions by 50% during 2021-25, towards Manchester becoming a zero carbon city by 2038, at the latest. https://www.manchester.gov.uk/info/200024/consultations_and_surveys/8148/our_manchester_strategy_reset-_forward_to_2025

Is also allowed further work on understanding Manchester's consumption-based

emissions, where NERC funded a series of reports that can be found here: https://www.manchesterclimate.com/content/incorporating-food-manchester%E2%80%99s-climate-change-response
https://www.manchesterclimate.com/green-recovery/decarbonising-consumption

Build Back Fairer: The COVID-19 Marmot Review has also placed further emphasis on health and equality and in June 2021, Greater Manchester has declared a 'Marmot City Region' following the publication of 'Build Back Fairer in Greater Manchester: Health Equity and Dignified Lives. Following this, in 2022, a Manchester Marmot Taskforce was established to take the Marmot recommendations and create a tailored action plan for the city. Manchester's Climate Change Agency (MCCA) provided expert advice to this Taskforce integrating climate actions.

(3.11) Provide details of the household access to water, sanitation services and water consumption in your jurisdiction.

Response

Data availability

Data is available for the percentage of households with access to safely managed drinking water services
Data is available for the average household water consumption in litres per capita per day

Percentage of households with access to safely managed drinking water services

100

Household water consumption (litres/capita/day)

349

Comment

Household water consumption taken from: https://www.energysavingtrust.org.uk/sites/default/files/reports/AtHomewithWater%287%29.pdf

Food data

(3.12) What percentage of your population is food insecure and/or lives in a food desert?

	Data availability	Comment
Response	No data available for the percentage of population that is food insecure/lives in a food desert	

Targets

4. Adaptation Goals

(4.1) Does your jurisdiction have an adaptation goal(s) in place? If no adaptation goal is in place, please indicate the primary reason why.

Yes, our jurisdiction has an adaptation goal(s)

(4.1a) Report your jurisdiction's main adaptation goals.

Select a reference ID for the goal

Adaptation goal 1

Adaptation goal^

Manchester's Green and Blue Strategy Refresh 2021-2025 -Overall aim: By 2025, climate-resilient well-maintained green and blue spaces remains an integral part of all neighbourhoods. The city's communities will be living healthy, fulfilled lives, enjoying access to parks and green spaces, and safe green routes for walking, cycling and exercise throughout the city.

Climate hazards that goal addresses^

Extreme heat
Urban flooding
River flooding
Storm
Heavy precipitation
Biodiversity loss

Base year of goal (or year goal was established if no base year)^

2,021

Target year of goal^

2025

Description of metric / indicator used to track goal^

The G&BI Strategy and Stakeholder Implementation Plan are based around the following four objectives.
1. Improving the quality and function of G&BI to maximise the benefits it delivers
2. Using appropriate G&BI as a key component of new developments to help create successful neighbourhoods and support the city's growth
3. Improving connectivity and accessibility to G&BI within the city and beyond
4. Improving and promoting a wider understanding and awareness of the benefits that G&BI provides to residents, the economy and the local environment
Under each objective is a series of Headline Actions with associated projects and activities which are being delivered or investigated by the council and external stakeholders as part of the Implementation Plan.

Metrics and indicators used for objectives:
Obj. 1 - Outcome – improved quality and functionality of GI. Metric
• The number of relevant known projects delivered or in delivery
• Amount invested
• Number of trees planted
• Percentage of SBIs in active Conservation Management
• Number of Local Nature Reserves declared
• Number of jobs created.
Obj. 2 - Outcome – increased integration of GI and NBS into development and regeneration
• The number of relevant known projects delivered or in delivery
• Amount invested
• Number of jobs created.
obj. 3 - Outcome – better connected GI
• The number of relevant known projects delivered or in delivery
• Hectares of land or kilometres of green and blue access routes improved
• Increased species recorded as part of Nature Recovery
Network
• Increase in people recording nature as part of Nature Recovery Network
• Amount invested
• Number of jobs created.
obj. 4 - Outcome – increased understanding and awareness-raising
• The number of relevant known projects delivered or in delivery
• Number of events delivered
• Number of people engaged
• Number of volunteer hours delivered
• Number of partners involved
• Percentage of population valuing green spaces
• Percentage of people satisfied with green space management and survey

Comment

The Refreshed implementation plan can be found here:
https://democracy.manchester.gov.uk/documents/s32880/Appendix%202%20Green%20and%20Blue%20infrastructure%20refresh.pdf
The strategy can be found here:
https://www.manchester.gov.uk/downloads/download/6314/manchester_green_and_blue_strategy
An update against the progress as of January 2021 can be found here:
https://democracy.manchester.gov.uk/documents/s22236/Green%20and%20Blue%20Strategy.pdf
With a detailed breakdown of the progress of the actions against the objectives found here:
https://democracy.manchester.gov.uk/documents/s22237/Appendix%201%20GBI%20Progress%202020.pdf

Select a reference ID for the goal

Adaptation goal 4

Adaptation goal^

Managing our land sustainably through improvements to green infrastructure and nature based solutions

Climate hazards that goal addresses^

Heat stress
Extreme heat
Water stress
Urban flooding
River flooding
Heavy precipitation
Loss of green space/green cover
Soil degradation/erosion
Air pollution
Biodiversity loss

Base year of goal (or year goal was established if no base year)^

2,019

Target year of goal^

2027

Description of metric / indicator used to track goal^

There are a number of metrics used to track this goal
- Parks achieving green flag status (a national benchmarking system) 13% of Greater Manchester (GM) Parks achieved green flag status in 2021/22
- area of land improved for nature, 1,052 ha of land improved for nature since 2018/19. 712 of this has been delivered in 2021/22. (NB: Only partial figures were available for 2018-20)

Comment

A number of projects have contributed towards improving green spaces in GM which brings with it many benefits to climate adaptation as listed above as well as wider health and wellbeing benefits.
- The recently launched Green Spaces Fund gives community organisations the chance to bid for grant funding of
up to £10,000 and work with thier Local authority to improve green spaces in their area

Select a reference ID for the goal

Adaptation goal 2

Adaptation goal^

Headline objective: To adapt the city's buildings, infrastructure and natural environment to the changing climate and to increase the climate resilience of our residents and organisations

Climate hazards that goal addresses^

Extreme heat
Extreme cold
Urban flooding
River flooding
Extreme wind
Heavy precipitation

Base year of goal (or year goal was established if no base year)^

2,020

Target year of goal^

2025

Description of metric / indicator used to track goal^

Manchester Climate Change Partnership's independent advisory group for resilience and adaptation monitors this goal annually. Their reports can be seen here: https://www.manchesterclimate.com/progress

Work is underway as part of the advisory groups work plan and the upcoming 2022 update of the Framework 2020-25 to develop a set of indicators.

Comment

Select a reference ID for the goal

Adaptation goal 3

Adaptation goal^

Protect an additional 4000 domestic properties from fluvial flooding by 2027

Climate hazards that goal addresses^

Urban flooding
River flooding
Heavy precipitation

Base year of goal (or year goal was established if no base year)^

2,019

Target year of goal^

2027

Description of metric / indicator used to track goal^

Capital expenditure programme (£140m) delivered
Additional partnership funding of £40m secured

Numbers new properties protected (4,500)

Comment

Target is at a Greater Manchester Level.

Please note, the outcomes of the previous 6 year investment cycle (1300 properties protected and capital investment of £46m completed by 2021) was fully delivered.

Select a reference ID for the goal

Adaptation goal 5

Adaptation goal^

Future-proofing our city for new transport opportunities

Climate hazards that goal addresses^

Extreme heat
Extreme cold
Urban flooding
River flooding
Extreme wind
Heavy precipitation

Base year of goal (or year goal was established if no base year)^

2,021

Target year of goal^

2040

Description of metric / indicator used to track goal^

Manchester's City Centre Transport strategy to 2040. It contains the goal of Future-proofing our city for new transport opportunities alongside the vision for a well-connected, zero-carbon city centre at the heart of the North, offering our residents, employees and visitors a great place to work, live and visit. Metrics are based on improvements to rail, bus, Metrolink and corridor improvements ranging to infrastructure upgrades to tree planting and greening.

Comment

Find the stratgy here:
https://www.manchester.gov.uk/downloads/download/1871/transport_strategy_for_manchester_city_centre

5. Mitigation Targets

GCoM Common Reporting Framework Reporting Requirements for European Cities

(5.1) Does your jurisdiction have an active greenhouse gas emission reduction target(s) in place? If no active GHG emissions reduction target is in place, please indicate the primary reason why.

Yes, our jurisdiction has an active greenhouse gas emissions reduction target(s)

(5.1a) Provide details of your emissions reduction target(s).

Select a reference ID for the target

Target 1

Target type^

Fixed-level target

Boundary of target relative to jurisdiction boundary^

Same - covers entire jurisdiction and nothing else

Emissions sources covered by target^

Only energy emissions sources included in jurisdiction inventory are covered by target

Are carbon credits currently used or planned to be used to achieve this target?^

No, this target will not use carbon credits

Percentage of target to be met using carbon credits generated from outside jurisdiction or target boundary^

Year target was established

2018

Covered emissions in year target was established (metric tonnes CO2e)

2.094

Base year^

Covered emissions in base year (metric tonnes CO2e)^

Emissions intensity figure in base year (metric tonnes CO2e per capita or GDP)^

Target year^

2038

Estimated business as usual emissions in target year (metric tonnes CO2e)^

Percentage of emissions reduction (including offsets and carbon dioxide removal)^

Net emissions in target year (after offsets and carbon dioxide removal) [auto-calculated]

Net emissions in target year (after offsets and carbon dioxide removal) (metric tonnes CO2e)^

0.137

Projected population in target year

590,303

Specify if target is considered a science-based target (SBT) and the SBT methodology it aligns to

Yes, our jurisdiction considers the target to be science-based (select applicable methodology)
Tyndall Centre

Covered emissions in most recent inventory (metric tonnes CO2e)

1.808

Is this target the jurisdiction's most ambitious target?

Yes

Alignment with Nationally Determined Contribution

This target is more ambitious than the Nationally Determined Contribution

Select the conditional components of your emissions reduction target

Target is conditional on mitigation in emissions sources that are controlled by private entity outside of direct control of jurisdiction administration
Target is conditional on complete implementation of legislation, regulation and/or policy set by a higher level of government
Target is conditional on the decarbonization of the electricity grid that is outside the direct control of jurisdiction administration
Target is conditional on a reduction in emissions from air travel that is outside the direct control of jurisdiction administration

Please explain^

1. The target requires national aviation emissions to stay within a given carbon budget which assumes emissions don't continue increasing through to 2030 and start to reduce

after this. If national aviation emissions were to keep growing at pre 2020 levels the carbon budget for Manchester would shrink.
2. National grid decarbonisation. The UK National Grid has stated that full grid decarbonisation is possible before 2038 and this being achieved will help meet the climate goals of the city.
3. National transport strategy. As well as other powers and resources to help decarbonise building energy emissions, Manchester needs a national transport strategy to remove diesel trains in the city and ban fossil fuel vehicles from sale so that travel into the city from outside is primarily public transport or EV.
4. Target requires all stakeholders to take urgent action to reduce their own emissions to reach a target more ambitious than the NDC and therefore national policy developments and interventions

The UK Government has committed to bring all greenhouse gas emissions to net-zero by 2050. Manchester has committed to be zero carbon by 2038, at the latest. But noting that the key parameter is staying within a science-based carbon budget, rather than hitting a specific zero carbon end-date alone.

Select a reference ID for the target

Target 2

Target type^

Fixed-level target

Boundary of target relative to jurisdiction boundary^

Same - covers entire jurisdiction and nothing else

Emissions sources covered by target^

Only energy emissions sources included in jurisdiction inventory are covered by target

Are carbon credits currently used or planned to be used to achieve this target?^

No, this target will not use carbon credits

Percentage of target to be met using carbon credits generated from outside jurisdiction or target boundary^

Year target was established

2018

Covered emissions in year target was established (metric tonnes CO2e)

2.094

Base year^

Covered emissions in base year (metric tonnes CO2e)^

Emissions intensity figure in base year (metric tonnes CO2e per capita or GDP)^

Target year^

2025

Estimated business as usual emissions in target year (metric tonnes CO2e)^

Percentage of emissions reduction (including offsets and carbon dioxide removal)^

Net emissions in target year (after offsets and carbon dioxide removal) [auto-calculated]

Net emissions in target year (after offsets and carbon dioxide removal) (metric tonnes CO2e)^

0.745

Projected population in target year

563,323

Specify if target is considered a science-based target (SBT) and the SBT methodology it aligns to

Yes, our jurisdiction considers the target to be science-based (select applicable methodology)
Tyndall Centre

Covered emissions in most recent inventory (metric tonnes CO2e)

1.808

Is this target the jurisdiction's most ambitious target?

No, but it is a mid-term target for the most ambitious target

Alignment with Nationally Determined Contribution

This target is more ambitious than the Nationally Determined Contribution

Select the conditional components of your emissions reduction target

Target is conditional on mitigation in emissions sources that are controlled by private entity outside of direct control of jurisdiction administration
Target is conditional on complete implementation of legislation, regulation and/or policy set by a higher level of government

Target is conditional on the decarbonization of the electricity grid that is outside the direct control of jurisdiction administration
Target is conditional on a reduction in emissions from air travel that is outside the direct control of jurisdiction administration

Please explain^

1. The target requires national aviation emissions to stay within a given carbon budget which assumes emissions don't continue increasing through to 2030 and start to reduce after this. If national aviation emissions were to keep growing at pre 2020 levels the carbon budget for Manchester would shrink.
2. National grid decarbonisation. The UK National Grid has stated that full grid decarbonisation is possible before 2038 and this being achieved will help meet the climate goals of the city.
3. National transport strategy. As well as other powers and resources to help decarbonise building energy emissions, Manchester needs a national transport strategy to remove diesel trains in the city and ban fossil fuel vehicles from sale so that travel into the city from outside is primarily public transport or EV.
4. Target requires all stakeholders to take urgent action to reduce their own emissions to reach a target more ambitious than the NDC and therefore national policy developments and interventions

6. Sector Targets

(6.1) Provide details of your jurisdiction's energy-related targets active in the reporting year. In addition, you can report other climate-related targets active in the reporting year.

Target type

Renewable energy installed capacity target
Increase installed capacity of renewable electricity

Target description

Increase local renewable electricity generation, adding at least a further 45MW by 2024

Boundary of target relative to jurisdiction boundary

Larger - covers the whole jurisdiction and adjoining areas, please explain additions
Covers Greater Manchester City Region the City of Manchester is a borough within the Greater Manchester City Region so the target applies

Year target was established

2,019

Base year

2019

Metric used to measure target (renewable energy or energy efficiency target)

MW

Metric used to measure target

Additional renewable capacity (MW)

Metric value in base year

0

Target year

2024

Metric value in target year

45

Metric value in most recent year data is available

21.47

Percentage of total energy that is renewable in target year

45

Is this target publicly available?

Yes, provide link/attachment

https://www.greatermanchester-ca.gov.uk/media/1986/5-year-plan-branded_3.pdf

Comment

Manchester is 1 of 10 local authorities that make up Greater Manchester (GM) any target set by GM is a target of Manchester.

GM's specific target around renewable energy is to increase local renewable energy generation adding at least a further 45MW by 2024 (reflected in the numbers above) - at least 21.47MW has been added since 2019 including what is in construction, reflecting progression toward the 45MW target.

(This is sourced from MCS database (not published), BEIS Renewable Energy Planning Database (published), and programme level data from our own programmes of work, ensuring this is not replicated in the MCS or BEIS REPD data).

Note: This does not include renewable energy generated by the National Grid and its feed-in, which is significantly greater in magnitude and not captured in the above data. GM's estimated energy consumption is 10,770,000 MW for reference.

The % of total energy is renewable in target year is calculated through a projection of trends observed in the BEIS Renewable Electricity by Local Authority 2014 to 2020 dataset. Again, this does not account for renewable energy generation by the National Grid.

Target type

Transport target

Modal share targets

Target description

Phasing out of fossil-fuelled private vehicles and replacing them with zero emission (tailpipe) alternatives and implementing a charging infrastructure to support expansion of 200,000 EV vehicles in our city-region by 2024.

Boundary of target relative to jurisdiction boundary

Larger - covers the whole jurisdiction and adjoining areas, please explain additions

Covers Greater Manchester City Region the City of Manchester is a borough within the Greater Manchester City Region so the target applies

Year target was established

2,019

Base year

2019

Metric used to measure target (renewable energy or energy efficiency target)

Metric used to measure target

No of plug-in vehicles registered licensed in GM (Source: DfT vehicle statistics)

Metric value in base year

3,908

Target year

2024

Metric value in target year

2,000,000

Metric value in most recent year data is available

62,397

Percentage of total energy that is renewable in target year

Is this target publicly available?

Yes, provide link/attachment

https://www.greatermanchester-ca.gov.uk/media/1986/5-year-plan-branded_3.pdf

Comment

62,397 plug-in cars and light goods vehicles registered at end Q4 2021 Sharp increase in 2020 (620% increase) due to a leasing company registering a large number of its vehicles in one SK postcode, artificially raising the figures. Private plug-in ownership increased from 2,589 in base year to 8,336 at end of Q4 2021 (most recent data).

As of March 2022, 473 publically available charging point were installed within GM, of which 107 are rapid charging devices (Department for Transport data).

Target type

Building specific emissions reduction target
Residential buildings emissions reduction target

Target description

Complete the zero-carbon retrofitting of a minimum of 1/3rd of the 68,000 homes managed by Manchester Housing Providers Partnership partners by 2032 & reduce energy use acrossthe estate so that all homes achieve an EPC rating of B or above.

Boundary of target relative to jurisdiction boundary

Same - covers entire jurisdiction and nothing else

Year target was established

2,022

Base year

2022

Metric used to measure target (renewable energy or energy efficiency target)

Metric used to measure target

Number of social house retrofitted

Metric value in base year

0

Target year

2032

Metric value in target year

22,666

Metric value in most recent year data is available

0

Percentage of total energy that is renewable in target year

Is this target publicly available?

Yes, provide link/attachment
https://democracy.manchester.gov.uk/documents/s34228/Appendix%201%20%20Manchester%20Housing%20Strategy%202022-2032.pdf

Comment

https://www.manchester.gov.uk/news/article/9038/new_housing_strategy_looks_to_deliver_10000_new_affordable_homes_in_the_next_10_years#:~:text=As%20Manchester

%27s%20population%20continues%20to,be%20social%20and%20affordable%20housing.

Target type

Transport target

Modal share targets

Target description

Reduce car journeys to 10% by 2040, compared to 21%

Boundary of target relative to jurisdiction boundary

Same - covers entire jurisdiction and nothing else

Year target was established

2,021

Base year

2019

Metric used to measure target (renewable energy or energy efficiency target)

Metric used to measure target

analysis of our cordon count data – the locations for these counts are on the inbound approaches to the city centre across the Manchester-Salford Inner Relief Route to achieve a % of journeys taken.

Metric value in base year

21

Target year

2040

Metric value in target year

10

Metric value in most recent year data is available

21

Percentage of total energy that is renewable in target year

Is this target publicly available?

Yes, provide link/attachment

https://www.manchester.gov.uk/downloads/download/1871/transport_strategy_for_manchester_city_centre

Comment

To support our vision, our aim is for 90% of all morning peak trips into the city centre to be made on foot, by cycle or public transport before 2040. This means fewer cars in the

city centre so we can have cleaner air, support our carbon reduction targets and rebalance Investments in HS2 and NPR into the city centre are estimated to support a doubling of the economic output of Greater Manchester to circa £132 billion by 2050. treet space enabling us to make walking the main mode of travel for getting around. Future travel growth predictions are underpinned by expected jobs and housing growth across the region and within the city centre. How people travel in the future will continue to change, not just as a result of the Covid-19 pandemic, and this strategy aims to help support this modal shift. The 90% target will be assessed through analysis of our cordon count data – the locations for these counts are on the inbound approaches to the city centre across the Manchester-Salford Inner Relief Route

Planning

7. Planning

Climate Action Planning

(7.1) Does your jurisdiction have a climate action plan or strategy?

Yes, our jurisdiction has a climate action plan or strategy

(7.1a) Report details on the climate action plan or strategy that addresses climate mitigation and/or climate adaptation (resilience) in your jurisdiction.

Climate action plan type^

Integrated climate plan (addressing mitigation and adaptation)

Attachment/link and name of plan^

https://www.manchesterclimate.com/framework-2020-25

Confirm attachment/link provided to plan

The plan can be accessed (unrestricted) on the link provided

Boundary of plan relative to jurisdiction boundary^

Same (jurisdiction-wide) covers entire jurisdiction and nothing else

Processes for monitoring evaluation and updates of plan^

Monitoring: Information on progress of plan is monitored and publicly reported annually
Evaluation: Evaluation of plan takes place at least every 3 years
Update: Updates to the plan are published at least every 3 years

Funding sources and financial instruments to finance plan

Jurisdiction's own resources
Regional funds and programmes
National funds and programmes
International (including ODA)
Private

Public-private partnerships
Private partnerships (e.g., a combination of private investments)

Stakeholders engaged^

State/regional government(s) and/or agencies
Local government (s) and/or agencies
Citizens
Vulnerable population groups
Academia
Business and private sector
Non-governmental organisations

Describe if and how climate-related scenarios have informed the plan

This document was developed to be in line with the pairs agreement and 1.5 degrees following the recommendations from the Tyndall Centre for Climate Change Research

Primary author(s) of plan^

Dedicated team within jurisdiction
Relevant department within jurisdiction
Consultant

Assessment of co-benefits, trade-offs, and synergies of actions included in plan^

Plan assesses co-benefits of actions

Year of formal approval of plan^

2020

End year of plan

2,025

Total cost of implementation of plan (in currency specified in 0.1)

Sectors covered by action plan

Electricity, gas, steam and air conditioning supply
Waste management
Conservation
Transportation and storage
Accommodation and food service activities

Comment

Developed by: Manchester Climate Change Agency (lead), Manchester City Council, Greater Manchester Combined Authority, Consultants

The Manchester Climate Change Framework 2020-25 is the city's high-level strategy for tackling climate change. It sets out how Manchester will 'play its full part in limiting the impacts of climate change', a commitment in the Our Manchester Strategy 2016-25. It has been produced by the Manchester Climate Change Partnership and Agency and

sets out:

Our aim: Manchester will play its full part in limiting the impacts of climate change and create a healthy, green, socially just city where everyone can thrive.

Our objectives and targets:
Staying within our carbon budgets
Climate adaptation and resilience
Health and wellbeing
Inclusive, zero carbon and climate resilient economy

Seven areas for action to meet our objectives and targets:
Buildings
Renewable energy
Transport and flying
Food
The things we buy and throw away
Green infrastructure and nature-based solutions
Supporting and enabling residents and organisations to act

Why a framework?
Manchester has adopted a different approach to most other cities. We don't have a single plan setting out how we will meet our climate change targets. Our approach is based on every resident and every organisation in the city making and delivering their own commitments and action plans. The Framework provides our overarching structure for everyone in the city to 'plug in' their plans. To help people and organisations we've developed a list of 15 actions we need everyone to take.

The Framework is currently undergoing a refresh, expected to be published in September 2022. The refresh is currently in its second round of consultation with Manchester's residents and organisations.

Climate action plan type^

Integrated climate plan (addressing mitigation and adaptation)

Attachment/link and name of plan^

https://www.manchester.gov.uk/downloads/download/6033/mcc_climate_change_action_plan

Final_MCC_Climate_Change_Action_Plan_2020_25.pdf

Confirm attachment/link provided to plan

The plan has been attached and can be accessed (unrestricted) on the link provided

Boundary of plan relative to jurisdiction boundary^

Same (jurisdiction-wide) covers entire jurisdiction and nothing else

Processes for monitoring evaluation and updates of plan^

Monitoring: Information on progress of plan is monitored and publicly reported annually
Evaluation: Evaluation of plan takes place at least every 3 years
Update: Updates to the plan are published at least every 3 years

Funding sources and financial instruments to finance plan

Jurisdiction's own resources
Regional funds and programmes
National funds and programmes

Stakeholders engaged^

State/regional government(s) and/or agencies
Local government (s) and/or agencies
Citizens
Vulnerable population groups
Business and private sector
Non-governmental organisations

Describe if and how climate-related scenarios have informed the plan

This document sets out Manchester City Council's commitments to tackling climate change over the period 2020-25. The Council, alongside a number of other strategic partners in the city produced this plan to support the delivery of the citywide Manchester Climate Change Framework 2020-25 which has been produced by the Manchester Climate Change Partnership and Agency (http://www.manchesterclimate.com/plan). It summarises the specific actions which are required to ensure that the Council reduces its direct emissions by at least 50% by 2025 whilst also playing our full part in supporting and influencing the city to do the same. It also covers the Council's plans for adapting to the expected impacts of climate change and supporting and influencing others, including through the implementation of the Manchester Green and Blue Infrastructure Strategy 2015-25.

This document was developed to be in line with the pairs agreement and 1.5 degrees following the recommendations from the Tyndall Centre for Climate Change Research

Primary author(s) of plan^

Relevant department within jurisdiction

Assessment of co-benefits, trade-offs, and synergies of actions included in plan^

Do not know

Year of formal approval of plan^

2020

End year of plan

2,025

Total cost of implementation of plan (in currency specified in 0.1)

Sectors covered by action plan

Electricity, gas, steam and air conditioning supply
Waste management
Administrative and support service activities
Public administration and defence; compulsory social security
Construction
Wholesale and retail trade; repair of motor vehicles and motorcycles
Transportation and storage
Information and communication
Arts, entertainment and recreation

Comment

Appendix 1 sets out all of the individual actions resulting from this Action Plan. These are split into actions that will reduce our own direct emissions and those that will enable others to play a full role in decarbonising the city.
Appendix 1 can be found here:
https://www.manchester.gov.uk/info/500002/council_policies_and_strategies/8225/climate_change_action_plan_2020-25_appendix_1_actions

Sector Action Planning

(7.2) Report details on the other climate-related plans, policies and/or strategies in your jurisdiction.

Area of plan and/or strategy

Energy

Attachment/ link and name of plan

Local Area energy Plan

Current status of plan

In implementation

Boundary of plan relative to jurisdiction boundary

Same – covers entire jurisdiction and nothing else

Year of formal approval of plan

2,022

End of year plan

2,038

Comment

Greater Manchester is the first in the country to provide geo-spatial local area energy plans which set out where to place generation and storage retrofit, EV infrastructure, heat networks, low carbon heating, associate costs and network impacts. Each of the 10 Local authorites within the region including the city of Manchester have developed a plan however this has not been publically released.

Area of plan and/or strategy

Food policy

Attachment/ link and name of plan

Manchester Food Board Policy Statement and Action Plan

https://cityco.com/cms/wp-content/uploads/2021/02/MFB-Policy-Statement.pdf
https://cityco.com/cms/wp-content/uploads/2022/01/MFB-Action-Plan_Jan-2022.pdf

Current status of plan

In implementation

Boundary of plan relative to jurisdiction boundary

Same – covers entire jurisdiction and nothing else

Year of formal approval of plan

2,022

End of year plan

2,025

Comment

The Manchester Food Board will support a sustainable and equitable recovery for the city to help 'build back better'. Given the current challenges we are facing, the MFB aims to:
Secure access to sustainable, appropriate and nutritious food for all people
Promote a vibrant food culture and helps create a dynamic and robust hospitality sector
Create more resilient supply chains
Reduce the environmental impacts of the food system
Facilitate collaboration, research and innovation in the food system

Finance

(7.4) Describe any planned climate-related projects within your jurisdiction for which you hope to attract financing.

Project area

Other, please specify

Community outreach and engagement

Project title

In Our Nature

Stage of project development

Transaction preparation

Status of financing

Project partially funded and seeking additional funding

Identified financing model

Grants

Project description and attach project proposal

See attachment

MCCA - In Our Nature - full award proposal 27-04-2022 with appendices.docx

Total cost of project (in currency specified in 0.1)

2,500,000

Total investment cost needed if relevant (in currency specified in 0.1)

0

Project area

Other, please specify

Climate communications

Project title

Building a Climate Movement in Manchester

Stage of project development

Project structuring

Status of financing

Project not funded and seeking full funding

Identified financing model

Grants

Project description and attach project proposal

See attachment

Minor Foundation Large grant. Stage 1 Application_ Submitted.docx

Total cost of project (in currency specified in 0.1)

250,000

Total investment cost needed if relevant (in currency specified in 0.1)

0

Actions

8. Adaptation Actions

GCoM Common Reporting Framework Reporting Requirements for European Cities

(8.1) Describe the outcomes of the most significant adaptation actions your jurisdiction is currently undertaking. Note that this can include those in the planning and/or implementation phase.

Action^

Ecosystem-based actions
Green infrastructure

Climate hazard(s) that action addresses^

Extreme heat
Urban flooding
River flooding
Heavy precipitation

Action description and web link to further information^

The €4.5 million IGNITION project, funded by EU's Urban Innovation Actions initiative recently closed in June 2022. The project developed findings on innovative financing solutions for investment in Greater Manchester's natural environment and compiled evidence, developed business cases and ran pilots to provide a robust case for nature based solutions (NBS). Greater. This included solutions like green walls and roofs, sustainable drainage systems and street trees which have the potential to provide around 30% of the adaptation needed to protect from increased rainfall, flooding and heatwaves by 2030. They can also improve air quality, capture carbon and enhance health and well- being. As part of this project a Living Lab has been set up in partnership with the University of Salford and comprises of a rain garden, green/blue roof, green wall, SuDS trees which aim to highlight the benefit of NBS.

Its 12 partners worked to develop pipelines of nature based projects and associated financing mechanisms to allow their investment/delivery. With a headline ambition to identify enough nature based solutions to represent a 10% uplift in Greater Manchester's urban green infrastructure by 2038, the project is focused on a number of initial funding streams, including Sustainable Drainage retrofit on public sector sites which aims to pay for the capital and operational installation costs through ongoing reductions in water utility charges.

More information can be found through the following link
https://gmgreencity.com/projects-and-campaigns/ignition/

Activities of the project include mapping the ‘baseline’ of Green Infrastructure in Greater Manchester; mapping the overlay of historic flood events with the Council’s capital and highways programmes and the capital programmes of United Utilities and Environment Agency; and exploring potential business models for parks including partial disconnection from mains drainage. Within this project, the Council has secured an additional allocation of £15k to provide further detail around a business case for installing exemplar Sustainable Urban Drainage on Deansgate.

In partnership with the GrowGreen project (see below) IGNITION has led on the implementation of pilot 'Eco Streets' in Manchester; small-scale community-led action which has successfully embedded adaptation features in different areas of Manchester. Sustainable urban drainage features in a park in Longsight, raingarden planters along a residential street in Moss Side, and an alleyway greening project in Cheetham. Case studies and 'how to' resources are being produced for each site to share learning from these pilot models and scale up across the city, as well as sharing findings with partner cities across Europe and Wuhan. Manchester City Council is a key partner in this, proactively engaging the communities with the least access to funding resources and most at risk from climate change impacts.

https://www.greatermanchester-ca.gov.uk/media/3239/headline_findings_report_ignition_nbs_evidence_base_july_2020.pdf
More information can be found through the following link
https://gmgreencity.com/projects-and-campaigns/ignition/

Sectors adaptation action applies to^

Construction
Financial and insurance activities
Professional, scientific and technical activities

Co-benefits realised^

Increased water security
Improved education and public awareness on climate issues
Improved air quality
Reduced GHG emissions
Increased/improved green space
Protected/improved biodiversity and ecosystem services

Timeframe for which increased resilience is expected to last

Medium-term (2026-2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action

<10%

Hectares (ha) of natural systems with increased resilience due to adaptation action

2

Funding source(s)

International (including ODA)

Status of action in the reporting year^

Implementation complete in the reporting year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

3,800,000

Action^

Ecosystem-based actions
Green infrastructure

Climate hazard(s) that action addresses^

Extreme heat
Urban flooding
Heavy precipitation

Action description and web link to further information^

GrowGreen is an €11.2m EU-funded Horizon project running from 2017-22 coordinated by Manchester City Council and Manchester Climate Change Agency to support cities to develop and implement plans to become greener and better adapted to climate change. The project has provided two key outputs for Manchester: a demonstration project in West Gorton, and; a refreshed Manchester Green and Blue Infrastructure Strategy. By working with the five EU partner cities (Wroclaw, Valencia, Brest, Modena, Zadar), Wuhan in China and the project's expert partners, GrowGreen has helped Manchester to take on-board the latest best practice and provide a catalyst to embed green infrastructure throughout the city's planning, development and regeneration, as well as cascade our own learning to other cities.

The West Gorton Community Park demonstration project is a £1.4m, 14,000 sq. metre "sponge" park funded by GrowGreen which opened in July 2020. This is a new, accessible, multi-functional neighbourhood green space designed to help the climate resilience of the local area. It follows "sponge principles", incorporating sustainable urban drainage (SuDS) to allow rainwater run-off from nearby roads to be channelled and filtered through natural drainage systems, slowing and reducing the flow into the normal drainage system. The development of the community park included co-designing with the local community in West Gorton to ensure local ideas could be incorporated into the final design. It has also provided a real-life experience of the procurement and installation process of NBS features to inform future projects and provides a showcase location to demonstrate 'Seeing is believing' live NBS in action and the potential wider business cases for future financing of such developments. Monitoring and evaluation is

currently ongoing at the park to quantify the benefits. A report is expected in late 2022

The project also funded the refresh of Manchester's Green and Blue Strategy including the commission of 'Our Rivers Our City' which gathered citizen and stakeholder views on the future of the city's river valleys. Based on this strategy, partner organisations Groundwork were successful in securing £1million to carry out a 'Resilient River Valleys' project which is carrying out important community engagement, conservation and restoration work along Manchester's rivers.

Sectors adaptation action applies to^

Real estate activities
Human health and social work activities
Arts, entertainment and recreation

Co-benefits realised^

Improved education and public awareness on climate issues
Improved mental wellbeing/quality of life
Improved air quality
Reduced health impacts from extreme heat or cold weather
Increased/improved green space
Protected/improved biodiversity and ecosystem services

Timeframe for which increased resilience is expected to last

Medium-term (2026-2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action

<10%

Hectares (ha) of natural systems with increased resilience due to adaptation action

1.6

Funding source(s)

International (including ODA)

Status of action in the reporting year^

Implementation underway with completion expected in less than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

9,700,000

Action^

Engineered and built environment actions
Other, please specify

Area re-development including restoration brownfield site, creation of new city centre park, de-culverting local river and building of low carbon homes and office space

Climate hazard(s) that action addresses^

Extreme heat
River flooding

Action description and web link to further information^

Mayfield development is a transformational mixed-use city centre regeneration project reviving a former industrial heartland into a modern innovation quarter, next to Piccadilly Station.

Mayfield is a 24-acre brownfield site packed with heritage and the River Medlock flowing through its core. The site has an industrial history of innovation spanning back to the 1700's with previous lives as a parcel depot, relief railway station and textile mill. The site was left derelict for over 30 years before the next phase of its revival began.

Mayfield Partnership, a public private joint venture between Manchester City Council, Transport for Greater Manchester, LCR and regeneration specialists U+I – formed in 2016 with a shared vision to deliver a modern neighbourhood at the heart of Manchester. Overall, the brownfield site will provide over 2.3m sq ft GIA office space facilitating 16,000 new jobs, 1,500 homes, 56,000 sq ft of retail and leisure, a new 300-bed hotel and 13-acres of public realm, including Mayfield Park – the city's first new park in over 100 years.

Consent for phase one of the £1.4bn scheme was granted in February 2020, which will see the creation of a 6.5-acre park, office buildings, a multi-storey car park and significant public realm. In August 2020, Mayfield secured £23 million in grant funding from the Government's 'Getting Building' Fund which allowed construction to commence, with the first buildings and Park estimated to complete in 2022.

The key urban design principles of the Mayfield SRF are to: create a distinctive sense of place; enhance connectivity to surrounding communities; maximise regeneration benefit (including new jobs and homes); optimise sustainability; incorporate a new major urban park for Manchester, focused around the River Medlock and provide a neighbourhood for all.

Mayfield has the opportunity to be most sustainable district in Manchester. The rejuvenation of brownfield and the ability to create new landscape will educate and inspire. Bringing back to life once derelict area, including Mayfield Depot, in close proximity to a major transport hub, with associated public realm improvements, gives the scheme a highly sustainable foundation which will be built upon with a holistic approach to building design to minimise energy use and emissions of CO2 and to have a positive impact on the wellbeing of all who experience Mayfield.

This ethos of low embodied energy will extend to use of new components for the

development, with materials selected to minimise embodied energy, maximise recycled content as far as practicable, and consideration of responsible sourcing. Construction practices which minimise waste generation during construction (e.g. off-site prefabrication and matching design sizes to standard sizes) will be considered from the outset. All buildings will at least achieve an excellent, if not outstanding, BREEAM rating. The trial of an innovative new material ""concretene"" (a new low0emissions concrete) was pioneered at Mayfield to create a new roller skating rink.

The park will bring multiple benefits. It has been designed around the pattern of the river's flooding, protecting habitable zones from the adverse effects and improve ecological and pedestrian connections along the Medlock Valley. It will provide sustainable drainage strategies, flood mitigation and optimise air quality. It will provide open spaces to promote health and wellbeing, for example, health, fitness and play facilities are integrated into the park, which will provide a place for people to come together, relax and spend time. Ecological value will be increased, along with rejuvenating a tired industrial landscape.

The remaining phases of Mayfield will be developed over the next decade, and are expected to generate in the region of £7bn of socio-economic gain – creating a thriving and exciting neighbourhood for all Mancunians to enjoy.
https://mayfieldmanchester.co.uk/
"

Sectors adaptation action applies to^

Construction
Real estate activities

Co-benefits realised^

Job creation
Revenue generation
Improved mobility and access
Increased social inclusion, equality and justice
Improved mental wellbeing/quality of life
Improved air quality
Reduced disaster/disease/contamination-related health impacts
Increased/improved green space

Timeframe for which increased resilience is expected to last

Medium-term (2026-2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action

<10%

Hectares (ha) of natural systems with increased resilience due to adaptation action

9.7

Funding source(s)

National funds and programmes

Status of action in the reporting year^

Implementation underway with completion expected in more than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

1,400,000,000

Action^

Ecosystem-based actions
Green infrastructure

Climate hazard(s) that action addresses^

Extreme heat
Urban flooding
Heavy precipitation

Action description and web link to further information^

Based on the successful tree planting work over the last thirteen years where over 100,000 have been planted, a new £1m 3-year programme of city-wide tree planting was launched in 2020 including the development of a Tree Action Plan. The Action Plan is structured around four objectives:
1. Managing trees sustainably
2. Planting trees appropriately
3. Protecting trees strongly and
4. Involving creatively

£1million was allocated to the plan in 2020 and the current projections are that this budget will be spent over three financial years.
In the October 2021 – May 2022 planting season 4401 Trees were planted, 2620 Small hedge trees were planted, and 8 Community Orchard were planted. An additional £150k funding was secured and a 10% increase in the numbers of MCC-managed street and highway trees.

In August 2020, the Council committed an additional £50k and commissioned City of Trees and TEP to deliver a piece of work ‘Managing Manchester’s Trees’ (MMT) which will help provide a better understanding of the cities tree resource and identify further opportunities for planting and management. The ‘i-Trees’ assessment of our tree stock aims to demonstrate the value of our existing 1.2 million trees to carbon storage, sequestration, climate resilience air quality and many other benefits. The tree mapping will conclued in March 2021 and will focuses on the following:
• A retrospective look back at the composition, change and evolution of the City’s treescape over the last 100 years.

• A sustainable and innovative plan for managing the City's existing tree resource.
• Ward specific opportunity maps indicating priorities for new tree planting, including species suitability options.
• The means to identify a ward-specific location for new Beacon Trees (mature) tree planting.

Locations have been identified for planting more than 1,200 trees in phase 2 of Tree Action MCR. A bid for Urban Tree Challenge funding for 2022-23 is being developed between the Council and City of Trees.

Sectors adaptation action applies to^

Human health and social work activities

Co-benefits realised^

Improved mental wellbeing/quality of life
Improved air quality
Reduced noise/light pollution
Increased/improved green space

Timeframe for which increased resilience is expected to last

Medium-term (2026-2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action

20-30%

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)

Jurisdiction's own resources

Status of action in the reporting year^

Implementation underway with completion expected in more than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

1,150,000

Action^

Engineered and built environment actions
Increase resilience of and/or diversify power/energy supply

Climate hazard(s) that action addresses^

Extreme cold
Urban flooding

River flooding
Heavy precipitation

Action description and web link to further information^

Across 2023-2028, Electricity North West LTD (ENW) are increasing their resilience across their operations, including improving flood defences to their highest voltage substations serving more than 10,000 customers, in line with the recommendations of the National Flood Resilience Review. This means implementing defences at sites identified as vulnerable through new data and by continuing their programme to improve flood defences to high voltage transformers.
This programme will increase flood protection to 21 substation sites serving 345,000 customers at a forecast cost of £4.2m. Its completion means that all of ENW's major substations will be protected to at least 1/100 year flood risk, including assumptions on future climate change impacts. Target delivery date is 31st March 2028

Sectors adaptation action applies to^

Electricity, gas, steam and air conditioning supply

Co-benefits realised^

Reduced disruption of energy, transport, water or communications networks
Improved preparedness for health service delivery

Timeframe for which increased resilience is expected to last

Long-term (after 2050)

Proportion of the total jurisdiction population with increased resilience due to adaptation action

I do not have this data

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)

Private partnerships (e.g., a combination of private investments)

Status of action in the reporting year^

Implementation underway with completion expected in more than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is not included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

4,200,000

Action^

Ecosystem-based actions
Adaptive land-use management

Climate hazard(s) that action addresses^

Extreme wind

Action description and web link to further information^

On average, 70,000 ENW customers are currently affected by large storms every winter. Storms mainly affect the rural areas of the network which have long lengths of overhead power lines.
ENW are improving the resilience of the network reducing the number of customers affected by large storms by increasing their tree-management programme, rolling out overhead line monitoring and delivering other reliability programmes (e.g. worst served customers) to improve performance. This will see fewer customers affected by power cuts caused by storms by 2028

For example, high winds during Storm Ciara in 2020 caused tree damage the ENW network, resulting in power cuts to 27,000 customers.
Their teams of trained tree cutters and surveyors will increase inspections of vegetation near overhead lines in ED2, and work collaboratively with landowners to prune, fell and dismantle more trees at risk of damaging the network.
They will also address the impacts of diseased trees, particularly Ash Dieback – a highly destructive disease caused by a fungus – which is rapidly spreading through the country. Ash Dieback causes ash trees to weaken and pose a greater risk of falling onto overhead lines with consequent impacts on power cuts and safety. To mitigate these impacts, ENW (together with the other network operators and bodies such as local authorities and highways agencies) will to start proactively removing these trees before they pose a danger. The management of trees near overhead lines and addressing Ash Dieback will cost around £6,000.000 per annum.

ENW have investigated potential specific network resilience programmes for areas persistently impacted by storms but analysis shows that the impacts are relatively widespread and sufficiently rare in any particular location to make a targeted programme uneconomic.

Sectors adaptation action applies to^

Electricity, gas, steam and air conditioning supply

Co-benefits realised^

Reduced disruption of energy, transport, water or communications networks
Improved road safety
Improved preparedness for health service delivery
Increased/improved green space

Timeframe for which increased resilience is expected to last

Do not know

Proportion of the total jurisdiction population with increased resilience due to adaptation action

I do not have this data

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)

Private partnerships (e.g., a combination of private investments)

Status of action in the reporting year^

Implementation underway with completion expected in more than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is not included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

6,000,000

Action^

Ecosystem-based actions
Adaptive land-use management

Climate hazard(s) that action addresses^

River flooding

Action description and web link to further information^

Groundwork Greater Manchester awarded funding under the Green Recovery Challenge Fund for the Resilient River Valleys project. The £1,024,000 project is a partnership between Groundwork Greater Manchester, City of Trees and Mersey Rivers Trust - focusing on delivering nature based solutions for climate mitigation and adaptation in Manchester's 3 river valleys and urban green spaces (e.g. leaky dams and tiny forests), with the involvement of 3 local authorities, 4 housing providers and 1 private sector landowner.

The project also contributes to:
• Nature Conversation and Restoration by inclusion of biodiverse, native species; control of INNS; creating urban stepping stones for wildlife
• Connecting People with Nature, particularly disadvantaged communities, through river and woodland nature based activities, training and volunteering.

In addition to delivering programme of physical works across a network of sites, they will be:
- Creating a number of new jobs (41 new jobs – 32 paid placements for young people aged 16-24 and 9 other jobs (8.8 FTE) at Groundwork and City of Trees and safeguard a further 12 jobs (8.6FTE) in their partnership
- Delivering a programme of community engagement work to connect people with nature based activity within the river valleys and involvement in volunteering and maintenance of urban green space
- Developing and delivering new training modules relating to nature based solutions for

staff, people on employment programmes and community members, as well as specific training courses and activities relating to managing green infrastructure for community and friends of groups

They have also included a new legacy role to focus on building pipeline of work in river valleys to undertake site surveys, establish land ownership and develop work plans for priority sites identified by partners and the Our Rivers Our City Action Plans.

To complement this, Groundwork have also yesterday submitted a WEIF funding bid focused on the main river of the Irk (Source to Wince) to enable delivery of further capital measures between 2022 and 2025 and with a view to leverage of further future funding to keep momentum going.

Two further WEIF submissions – one focusing on Bradshaw Brook, and one focussed on Middlebrook have also been submitted, to align with current sub catchment planning activity which, if successful, have the potential to bring further investment into the Croal system.

https://www.groundwork.org.uk/projects/resilient-river-valleys/

Sectors adaptation action applies to^

Forestry
Water supply
Conservation
Real estate activities
Human health and social work activities
Arts, entertainment and recreation

Co-benefits realised^

Increased social inclusion, equality and justice
Improved education and public awareness on climate issues
Improved air quality
Increased/improved green space
Protected/improved biodiversity and ecosystem services

Timeframe for which increased resilience is expected to last

Do not know

Proportion of the total jurisdiction population with increased resilience due to adaptation action

I do not have this data

Hectares (ha) of natural systems with increased resilience due to adaptation action

Funding source(s)

National funds and programmes

Status of action in the reporting year^

Implementation underway with completion expected in more than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is not included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

1,024,000

9. Mitigation Actions

GCoM Common Reporting Framework Reporting Requirements for European Cities

(9.1) Describe the outcomes of the most significant mitigation actions your jurisdiction is currently undertaking. Note that this can include those in the planning and/or implementation phases.

Primary emissions sector addressed and action type^

Stationary energy
LED / CFL / other luminaire technologies

Action description and web link to further information^

The £32.8 million investment programme led by Manchester City Council to replace 56,000 street lights with LED lamps was completed in September 2020 and is projected to save over 8,400 tonnes CO2 and resulting in over 70% less energy being consumed. Around 220 tonnes of carbon will be saved per annum.

The Council has worked with Salix Finance to fund this scheme, who provide loans to the public sector to improve energy efficiency, reduce carbon emissions and lower energy bills.

Start year of action

2017

Year for which mitigation is expected to last

2025

Impact indicators measured^

Estimated annual emissions reductions due to action
Estimated annual energy savings due to action
Estimated annual renewable energy generated due to action

Estimated annual emissions reductions (metric tons CO2e/year)^

220

Estimated annual energy savings (MWh/year)^

18,699.74

Estimated annual renewable energy generation (MWh/year)^

0

Co-benefits realised^

Reduced costs

Funding source(s)

Jurisdiction's own resources

Status of action in the reporting year^

Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

32,800,000

Primary emissions sector addressed and action type^

Stationary energy

Domestic and/or commercial heat network

Action description and web link to further information^

Manchester City Council (MCC) is working in partnership with Vital Energi to create the Manchester Civic Quarter Heat Network. The network will provide a highly efficient, environmentally-friendly heat and power solution for some of Manchester's most iconic buildings, making significant carbon reductions.
The scheme has been part-funded by a £2.87m grant from the Government's Heat Network Investment Project (HNIP), with MCC being one of the first local authorities to receive this funding. The total cost of the project coming to an estimated £24 million.

As of June 2022, Civic Quarter Heat Network is nearing completion with the 40 metre 'Tower of Light' installed in August 2020. and the project has installed a 2km network of insulated pipework and cables, to distribute the electricity, heat and hot water to connected buildings . It will initially serve 7 buildings including, Town Hall, Town Hall Extension and Central Library, Manchester Central Convention Centre, The Bridgewater Hall and Heron House. Civic and private buildings

The 3.3MW Combined Heat & Power (CHP) unit will initially run on gas, where a proportion of which will be 'green gas' and has the potential to introduce hydrogen into the mix in future to further reduce it's carbon footprint. Work will be required to identify options for a zero carbon fuel source. The network has an expected operational life in excess of 50 years.

There have been some delays caused by Covid-19 including the transformation of the Manchester Convention Centre into the Nightingale Centre. The Town Hall had

equipment installed in September 2021 with power supply commencing in June 2022 and heat supply in November 2022. The CQHN is forecast to reduce annual carbon emissions by 1,600 tCO2.

Start year of action

2019

Year for which mitigation is expected to last

2051 or later

Impact indicators measured^

Estimated annual emissions reductions due to action
Estimated annual renewable energy generated due to action

Estimated annual emissions reductions (metric tons CO2e/year)^

1,600

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

3.3

Co-benefits realised^

Increased energy security
Business/technological innovation

Funding source(s)

Jurisdiction's own resources
Public-private partnerships

Status of action in the reporting year^

Implementation underway with completion expected in less than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

24,000,000

Primary emissions sector addressed and action type^

Stationary energy
Energy efficiency/ retrofit measures addressing existing commercial, residential and/or municipal buildings

Action description and web link to further information^

The MCC Estates Carbon Reduction Programme is a programme to significantly improve the energy efficiency of 13 key Manchester City Council (MCC) buildings.

Buildings in MCC's operational estate represented 68.9% of MCC's direct carbon dioxide emissions in 2018/19. The Carbon Reduction Programme will invest in schemes such as combined heat and power, solar photovoltaic panels, and the use of LED lighting within MCC's estate.

The programme has secured £29million to date and is expected to deliver 1815tCO2 per annum and install 2.5m.w of renewable capacity . The works are approximately 90% complete .

A range of different measures have been installed across the buildings, based on the findings of detailed energy audits. They include 9,000 LED light fittings, building management systems, pipework insulation and a pool cover. Nine buildings have also had renewable energy generation capacity installed via solar panels.

Leisure centres are some of MCC's most energy intensive buildings and eight been upgraded with energy conservation measures this year: Wythenshawe Forum; East Manchester Leisure Centre; Hough End Leisure Centre; Arcadia Sports Centre; Moss Side Leisure Centre; North City Family and Fitness Centre; Belle Vue Sports Centre; and Manchester Tennis and Football Centre.

In addition to the leisure estate, the lighting in the Town Hall Extension, MCC's largest building, has been upgraded to LED, and new controls installed. The large buildings at the Space Project and Sharp Project are also being improved, the former with a large solar panel installation which is underway; the later with solar panels, lighting and building management systems, which will be completed the first quarter of next the financial year. Alexandra House (the largest office outside the Town Hall Complex) has been comprehensively refurbished and re-opened in February 2021, with fabric improvements, improved mechanical and electrical systems and LED lighting which will reduce carbon emissions by 70%. Electric vehicle charging points have also been installed at the Hooper St, Hammerstone and Longley Lane Depots, to support the increasing electrification of the Council's vehicle fleet.

The improvements also include installing variable speed drives, as well as solar panel installations at seven of the sites, and an energy-efficient combined heat and power plant at the Wythenshawe Forum.

In addition to these measures, work continues on the delivery of longer-term projects and also on seeking additional funding where possible to support an increase in activity. In a new opportunity, the Council is piloting novel heating and hot water technology with HydroZero, a UK company. This pilot uses hydrogen and plasma to produce heat via an electrochemical reaction and has significant potential to provide a viable alternative to gas going forwards.

To date a pipeline of additional projects of around £6.6m have been identified for delivery from 2022/23 onwards,

https://democracy.manchester.gov.uk/documents/s22754/MCC%20Climate%20Change%20Action%20Plan%202020-25.pdf
https://democracy.manchester.gov.uk/documents/g3976/Public%20reports%20pack%2011th-Nov-2021%2010.00%20Environment%20and%20Climate%20Change%20Scrutiny%20Committee.pdf?T=10

Start year of action

2019

Year for which mitigation is expected to last

2038

Impact indicators measured^

Estimated annual emissions reductions due to action
Estimated annual energy savings due to action
Estimated annual renewable energy generated due to action

Estimated annual emissions reductions (metric tons CO2e/year)^

1,815

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

2.5

Co-benefits realised^

Reduced costs
Increased energy security
Reduced natural resource depletion

Funding source(s)

Jurisdiction's own resources

Status of action in the reporting year^

Implementation underway with completion expected in less than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

9,200,000

Primary emissions sector addressed and action type^

Waste
Improve the efficiency of waste collection

Action description and web link to further information^

In summer 2015, Biffa took over the running of the Council's household refuse collection service from Enterprise and also began running the Council's Street Cleansing services. This resulted in 28 sweepers and 40 tippers, transferring from the Council to Biffa.

This contributed to an increase in emissions from the Biffa waste fleet and a decrease in the Council fleet vehicle emissions. Since the 2009/10 baseline, emissions from the waste fleet have increased by 23.2% from 2,496 tCO_2 to 3,076 tCO_2. Since the 2015/16 contract change, emissions have increased by 19.3%. This increase has been due to additional vehicles being added to the fleet, longer collection rounds and the use of vehicles with engines that reduce NO2 emissions to improve air quality but which use more fuel, therefore, increasing CO2 emissions.

In 2019, Biffa started to trial the first fully electric Refuse Collection Vehicle in Manchester and the success of this trial has led to the purchase of 27 Electric Refuse Collection Vehicles due to arrive in Autumn 2020. The trial is the first step in the effort to ultimately end the CO_2 emissions released from diesel fuels during waste collections and to help improve the city's air quality.

As of April 2022, all the 27 Electric Refuse Collection Vehicles (ERCVs) (50% of the total fleet) have been delivered and represent a £9.8 million investment. Fully deployment is expected in Q3 21-22 and once operational they will save approximately 900 tonnes of CO2 per annum.

Start year of action

2019

Year for which mitigation is expected to last

2032

Impact indicators measured^

Estimated annual emissions reductions due to action

Estimated annual emissions reductions (metric tons CO2e/year)^

900

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Improved air quality

Funding source(s)

Jurisdiction's own resources

Status of action in the reporting year^

Implementation underway with completion expected in less than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

9,780,000

Primary emissions sector addressed and action type^

Transportation

Procurement of electric vehicles for government fleet

Action description and web link to further information^

Manchester City Council is running a rolling replacement of current fleet vehicles with electric vehicles. The Council's operational fleet comprises around 220 vehicles (numbers fluctuate over time as leases expire and are renewed) and work began several years ago to move away from traditional fuels. As of March 2022 Manchester City Council's fleet is 37 fully electric vehicles and 3 hybrid - Progress has been slow due to supply chain issues. It is predicted that this will produce an annual saving of 400tCO2

Since the 2009/10 baseline, emissions from the Council fleet have decreased by 72.2% from 2,863 tCO_2 to 797 tCO_2. Since the 2015/16 contract change, emissions have decreased by 30.3%. A number of fleet vehicles are coming up for replacement this year and will be replaced with electric vehicles.

Work is currently underway to assess the level of charging infrastructure required across the Council's fleet and estates.

Other activities to reduce emissions from the fleet include information for drivers on fuel-efficient driving techniques, reducing fuel consumption and reducing the impact on the environment.

Start year of action

2020

Year for which mitigation is expected to last

2038

Impact indicators measured^

Estimated annual emissions reductions due to action

Estimated annual emissions reductions (metric tons CO2e/year)^

400

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Improved preparedness for health service delivery

Funding source(s)

Jurisdiction's own resources

Status of action in the reporting year^

Implementation underway with completion expected in more than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Stationary energy
Purchase of low-carbon electricity, heat, steam or cooling (i.e., power purchase agreement, supply agreement, renewable energy credit or other sourcing method)

Action description and web link to further information^

A feasibility study on the potential for large-scale renewable energy generation schemes, including solar PV, onshore or offshore wind, to support the Council's transition to zero carbon began in October 2020. The objective of the study is to identify options to save: 7,000 tonnes of CO2 per year by 2025. The study assesses options to deploy renewables at scale on Council buildings and land, on assets owned by third parties and via different business models. The key findings are likely to set out two options: either invest directly in a large-scale solar generation scheme or enter into a Power Purchase Agreement (PPA) with an energy provider to purchase the energy directly from such a scheme. Each has different financial, risk and carbon impacts which will be considered in detail as options are taken forward for further analysis.

Findings currently being reviewed to identify next steps.

Start year of action

2020

Year for which mitigation is expected to last

End year not known/not applicable

Impact indicators measured^

None of the above impacts associated with this action have been measured

Estimated annual emissions reductions (metric tons CO2e/year)^

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Do not know

Funding source(s)

Jurisdiction's own resources

Status of action in the reporting year^

Scoping

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Transportation
Improve walking, cycling and integrated transit access

Action description and web link to further information^

The Princess Road and Medlock Street roundabout scheme is now open.

The new scheme brings many benefits, including, creating a safer environment for cyclists and pedestrians and improving traffic flow.
This was achieved by:
- widening slip roads on and off the Mancunian Way
- replacing the roundabout with two branching (spur) roads, allowing traffic from Princess Parkway into the city centre
- creating a new road to provide direct access onto the Mancunian Way from Princess Road
- replacing the existing network of underpasses with new, safer access for cyclists and pedestrians
- landscaping, tree planting and providing a more pleasant environment for everyone.

As a result of this:
- Medlock Street and River Street are linked by cycle routes
- The section of footpath between the toucan crossing on Mancunian Way and the entrance/exit into the subway on Medlock Street is shared use for both cyclists and pedestrians
- There are shared use road signs installed along this section of footway to inform both pedestrians and cyclists
- Just after the entrance/exit to the subway on Medlock Street the footway is segregated for pedestrians and southbound cyclists
- The segregated southbound cycle lane on the footway now begins from the junction of

Medlock Street and River Street, and provides a link for southbound cyclists to use the toucan crossing on Mancunian Way
- Cyclists travelling in a northbound direction are directed on the carriageway and a 2m wide dedicated cycle lane is provided. This cycle lane is protected by a build-out from the pavement, which keeps vehicles away from cyclists
- The northbound on-road cycle lane continues up Medlock Street and links with the existing cycle lane just north of the junction of Medlock Street and River Street

The scheme was partly funded by the Department for Transport's National Productivity Investment Fund (NPIF) and the Greater Manchester Mayor's Cycling and Walking Challenge Fund. This is the first of the Mayor's Challenge Fund walking and cycling route whole schemes to be completed.

Start year of action

2019

Year for which mitigation is expected to last

End year not known/not applicable

Impact indicators measured^

None of the above impacts associated with this action have been measured

Estimated annual emissions reductions (metric tons CO2e/year)^

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Improved mobility and access
Improved road safety
Enhanced climate change adaptation
Increased/improved green space
Protected/improved biodiversity and ecosystem services

Funding source(s)

Jurisdiction's own resources

Status of action in the reporting year^

Action in operation (targeted to sector/location)

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

9,100,000

Primary emissions sector addressed and action type^

Other sectoral action

Finance and Economic Development > Instruments to fund low carbon projects

Action description and web link to further information^

MCCA along with the Council have engaged with the UK Cities Climate Investment Commission (UK CCIC) as part of a research study to understand the ways in which local authorities identify funds and deliver net zero projects.

The project aims to

- Support UK cities in achieving their carbon reduction targets, whilst developing a deeper understanding of the low carbon investment opportunities and challenges faced by UK cities.
- Create increased confidence within the investment community in low carbon projects by leveraging the benefits of the scale offered through networks of cities rather than individual ones.
- Provide the basis for engaging with industry on the opportunities for the supply and deployment of low carbon technologies into the marketplace.
- https://cp.catapult.org.uk/project/uk-cities-climate-investment-commission/

Start year of action

2022

Year for which mitigation is expected to last

End year not known/not applicable

Impact indicators measured^

None of the above impacts associated with this action have been measured

Estimated annual emissions reductions (metric tons CO2e/year)^

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Funding source(s)

National funds and programmes

Status of action in the reporting year^

Implementation underway with completion expected in less than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is not included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Transportation

Public-use bicycles/Bike share schemes

Action description and web link to further information^

In January 2022 the eCargo Bike Local Authority Scheme funded by Department of Transport, was launched. The scheme provides 13 eCargo bikes and 3 trailers for Manchester City Council's fleet, with additional equipment for a public hire scheme, Manchester's universities and 3 voluntary community and social enterprise (VCSE) groups. For public use the bikes start at £12 per day, up to 14 days of usage. The scheme was made possible due to a £173,000 grant from the Energy Savings Trust.

https://www.manchester.gov.uk/news/article/8931/ebikes_come_to_manchester_as_ambitious_city-wide_scheme_launches

Start year of action

2022

Year for which mitigation is expected to last

End year not known/not applicable

Impact indicators measured^

None of the above impacts associated with this action have been measured

Estimated annual emissions reductions (metric tons CO2e/year)^

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Improved physical health

Improved air quality

Funding source(s)

National funds and programmes

Status of action in the reporting year^

Action in operation (jurisdiction-wide)

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

173,000

Primary emissions sector addressed and action type^

Other sectoral action

Other, please specify

Zero Carbon Community Engagement Programme

Action description and web link to further information^

In Our Nature Programme (ION) is a development stage community led engagement programme coordinated by Manchester Climate Change Agency and funded by the National Lottery's Climate Action Fund. The aim of the programme is to communicate to people about climate change and why acting now is so important to the future of our city and ourselves. Key elements of the programme include both citywide and local initiatives as described below. The ION programme is a partnership supported by a specialist team of organisations in climate change and community engagement including Manchester City Council, Hubbub, Tyndall Centre, Commonplace and Amity.

The programme has partnered up with communities in Moss Side, Hulme, Rusholme, Miles Platting & Newton Heath, the Northern Quarter (Piccadilly) and Levenshulme to bring people together to develop community climate action projects. Each area-based pilot is being provided with a range of support to develop projects including:
 A dedicated person from the Tyndall Centre to support the community group to develop their own plans, prioritise actions and learn how best to reduce an areas carbon footprint
 A tailored support programme provided by Amity for 6 months, for up to 12 people to come together to actively engage with each other and with the
wider community for climate action.
 A Commonplace community portal consisting of an interactive map, and space to engage the community through various interactive tools and surveys.
The Neighbourhood Teams will work with the groups to connect their activities to the relevant ward climate action plan. For Miles Platting and Newton Heath the focus will be on a youth project and will be linked to active travel.

Details about the programme can be found on the following link:
https://zerocarbonmanchester.commonplace.is/
A funding bid for £2.5million has been submitted to upscale the initiative in to a 3 year programme.

Start year of action

2021

Year for which mitigation is expected to last

End year not known/not applicable

Impact indicators measured^

None of the above impacts associated with this action have been measured

Estimated annual emissions reductions (metric tons CO2e/year)^

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Increased social inclusion, equality and justice
Improved education and public awareness
Enhanced climate change adaptation
Improved mental wellbeing/quality of life
Increased/improved green space

Funding source(s)

Jurisdiction's own resources
National funds and programmes
Private partnerships (e.g., a combination of private investments)

Status of action in the reporting year^

Implementation underway with completion expected in less than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

206,000

Primary emissions sector addressed and action type^

Transportation
Development of 15/30-minute neighborhoods (complete neighborhoods)

Action description and web link to further information^

The Ancoats Mobility Hub is an innovative project which seeks to meet a number of neighbourhood aspirations:
Embedding sustainable transport choices, smart logistics and other shared neighbourhood services into the heart of an emerging neighbourhood.
Delivering on Manchester’s climate, transport and clean air commitments.
Supporting the parking and logistics requirements of the proposed eventual 1,500 new homes in the Poland Street Zone.
Creating a shared platform that can embrace emerging solutions and technologies to enhance the quality of life and community across the wider neighbourhood.
The Ancoats Mobility Hub site is currently occupied by the low-rise, multi-tenanted Poland Street Industrial Estate and hard standing. The site is adjacent to two other existing industrial estates and Ancoats Green. Access is currently taken from Poland Street Priorities shaping the design of the hub include:
Providing access, facilities and connections to sustainable modes including cycling and

walking, public transport and car sharing clubs.
Reducing vehicle numbers and activity in the neighbourhood by enabling spaces to be removed from future residential and commercial schemes and providing a hub for parcel deliveries and smart parcel lockers, with last mile deliveries via electric vehicles (EV) or cargo bikes.
Encouraging a modal shift from petrol and diesel cars by providing EV facilities and secure cycle storage and cycle hub facilities to encourage cycling as a primary mode of transport.
Deploying app based digital technology to help customers plan how they use transport through interactive systems to book car clubs, EV charging and cycle facilities.
Integrating with enhanced cycling and walking routes, including the canal towpaths and the route towards New Islington Metrolink stop.

The Ancoats Mobility Hub seeks to challenge the conventions of parking, street usage, mobility, and logistics in a city centre environment. This centralised approach avoids the proliferation of car parking and congestion caused by inefficient and fragmented freight distribution and neighbourhood servicing arrangements. The concept was approved by Manchester City Council's Executive (November 2020). The design and operation of the Hub integrates into the existing fabric of Ancoats and also respond to the vision within the NDF. It will integrate with strategic transport and climate initiatives driven by the Local Authority and its partners. The Ancoats Mobility Hub will include car parking spaces that, in the short term, can be utilised by the public, reducing the negative impact of widespread on-street parking. In the longer term, as the neighbourhood continues to grow, it will be used by private residents living in developments across Ancoats. Increased take-up of Electric Vehicles (EVs) will be facilitated by providing charging infrastructure where private car use is still required; secure cycle storage and cycle hub facilities will be provided to encourage cycling as a primary mode of mobility. Space will be allocated to support car clubs which encourages flexible car sharing and rentals over car ownership. A logistics hub will centralise parcel deliveries including smart parcel lockers with last mile deliveries to be serviced through EVs and e-cargo bikes. The scheme borders the existing Ancoats Green and recognises that there is a need for any future design to allow for a positive connection into this important local green space. Integrating the Ancoats Mobility Hub with Ancoats Green in a sensitive manner through high quality landscaping will be an important factor in achieving this.We believe that this type of pioneering initiative in the UK will become an exemplar for neighbourhood regeneration; and a necessary platform for influencing and accelerating changes in travel behaviours as well as the delivery of local and national priorities.

https://mcrlife.co.uk/the-hub/

Start year of action

2020

Year for which mitigation is expected to last

2038

Impact indicators measured^

None of the above impacts associated with this action have been measured

Estimated annual emissions reductions (metric tons CO2e/year)^

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Increased social inclusion, equality and justice
Improved education and public awareness
Improved physical health
Improved air quality
Reduced noise/light pollution

Funding source(s)

Jurisdiction's own resources
Public-private partnerships

Status of action in the reporting year^

Feasibility finalized, and finance fully secured

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

Primary emissions sector addressed and action type^

Transportation
Improve walking, cycling and integrated transit access

Action description and web link to further information^

Greater Manchester has launched it's Bee Network Project., with a vision for an integrated London-style transport system which will join together buses, trams, rail as well as cycling and walking.
As part of this plan, we are delivering the UK's largest cycling and walking network. We're connecting up every area and community in Greater Manchester, making it easy, safe and attractive for people to travel on foot or by bike for everyday trips.

The original vision for the Bee Network was unveiled in 2018 by Cycling and Walking Commissioner Chris Boardman as a 10-year, £1.5 billion plan to create 1,800 miles of routes and 2,400 new crossings connecting every neighbourhood, school, high street and public transport hub in the city-region. Since then, the Bee Network has evolved and it now represents a vision for a fully integrated London-style transport system which will join together buses, trams, cycling, walking and rail. Our plan is to revolutionise travel across the city-region, making active travel the number one choice for travelling to

work, to school and to the shops. But we can only do this if trips by foot or by bike are a safe and pleasant experience.

All the activity happening within the city of Manchester due to this can be found here: https://beeactive.tfgm.com/schemes/manchester/
Examples of action taking place:
Greater Manchester has been awarded £15.97 million of this funding to deliver 24 miles of cycling and walking routes and dozens of new neighbourhood interventions.
The funding will be used to deliver measures including: 'School Streets', where streets around schools are closed to motorists at school timesLow-traffic neighbourhoods (LTNs), where residential side streets are closed to through traffic to stop rat-running, Segregated cycle lanes, Pedestrian improvements

Manchester received £5.5 million of funding via the Government Active Travel Fund. £4 million has been spent on the City Centre Triangle which will see improved cycling and walking links created between the city centre's three major train stations - Deansgate, Piccadilly and Victoria, plus bus hubs at Piccadilly, Shudehill and the coach station. A further £1.5 million will be spent on cycling and walking improvements between Wythenshawe town centre, Wythenshawe Hospital and the city centre.

Funding from the Active Travel Fund (ATF) and the Mayor's Challenge Fund is supporting work on several Bee Network schemes: Consultation on the Levenshulme and Burnage scheme is complete and detailed designs are being progressed. Designs also progressing on the Fallowfield Loop/Manchester Cycleway with a tender package being compiled. Consultation on Wythenshawe has taken place with the decision made to withdraw the scheme due to lack of buy in. In May Manchester City Council was awarded a total of £3.95m under ATF Round 3 to support delivery of the Alan Turing Way and Fountain Street/High Street active travel schemes. A consultant to help produce an Active Travel Strategy and Investment Plan is expected to be appointed in June 2022.

Start year of action

2018

Year for which mitigation is expected to last

End year not known/not applicable

Impact indicators measured^

None of the above impacts associated with this action have been measured

Estimated annual emissions reductions (metric tons CO2e/year)^

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Reduced congestion
Improved mobility and access
Improved road safety
Enhanced climate change adaptation
Improved physical health
Improved air quality
Increased/improved green space
Protected/improved biodiversity and ecosystem services

Funding source(s)

Jurisdiction's own resources
Regional funds and programmes
National funds and programmes

Status of action in the reporting year^

Implementation underway with completion expected in more than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

8,950,000

Primary emissions sector addressed and action type^

Other sectoral action
Community-Scale Development > Brownfield redevelopment programs

Action description and web link to further information^

Victoria North is the North of England's biggest urban regeneration project. Jointly developed and funded by FEC and Manchester City Council, Victoria North is set to create 15,000 new homes across 155 hectares and seven neighbourhoods (40,000 people) over the next 20 years, helping with the shortfall in housing in Manchester. The redevelopment project will create better-connected public spaces, new and improved transport links, and more homes, parks and retail spaces for the city’s growing population. The project has over £4B Gross development value.
At the heart of the regeneration is the City River Park which covers 46 ha of new and improved parkland, it will become one of Manchester’s largest city centre green spaces. The park will vary in character providing a diverse and active new recreational corridor for the community including parks and smaller amenity spaces.(£51.6 Million)
City River Park will enhance existing habitats and create new habitats for wildlife and be guided by climate positive design to create results which as carbon neutral as possible. Connectivity and accessibility are also key ensuring high quality pedestrian and cycle movement within luscious green spaces for active lifestyles and well-being.

Victoria North is a core part of MCC's economic plans, accounting for over 30% of the city’s workforce growth and contributing an estimated £1.2 billion to the local economy

by 2039. With an estimated 6,900 jobs supported during construction,
Access to public transport, including Manchester's tram system which runs directly through the area, will be improved by a new tram station and an expanded bus network, strengthening links across the city
The diverse range of new homes will appeal to people of various ages and incomes, with a minimum of 3,000 affordable homes and programme such as social rent, shared ownership and rent to buy - ultimately creating a new community that reflects modern Manchester.

The scheme has been designed to deliver high sustainability credentials based on a 'fabric first' approach incorporating Passivhaus principles. To contribute towards the Council's target of zero carbon by 2038, energy supply to the properties will be100% electric.
Integral to creating a carbon neutral neighbourhood is the landscape design which provides both local amenity and delivers environmental benefits. Green streets will characterise the new neighbourhood and the planting scheme will include for Sustainable Urban Drainage Systems (SuDS) planting and rain gardens linked to the proposed Collyhurst Park where additional water storage capacity will be provided.
Design Principles Used to Deliver Climate Change Objectives include:
Optimised sustainable low carbon design parameters (U-values, air permeability, thermal bridges).
Standard Charge" electric vehicle car charging connections will be provided to 100% of the proposed houses and 10% of the apartment parking spaces.
Efficient Mechanical Ventilation with Heat Recovery systems are being proposed to each dwelling to provide a continuous source of filtered fresh air and maintain a healthy indoor environment.
Waste minimisation will be targeted throughout the construction and occupational phase.
Prioritising reusing existing materials and locally sourced materials for construction to reduce waste and transportation to landfill in addition and promote a low embodied carbon development.
Cycle storage provided for houses and apartments.
Collyhurst Village will also feature a separate strategic SUDS infrastructure within the proposed new park
Maximising Use of Renewables
o Site-wide PV array implemented onto the roofs of the apartment blocks. This contribution has provided a 1.6% reduction in CO2 following an extensive fabric first low carbon sustainable design.
o In line with the 5 year operational energy plan for Greater Manchester all energy used on site by prospective residents will initially be provided by a 100% renew
https://victorianorth.co.uk/"

Start year of action

2020

Year for which mitigation is expected to last

2051 or later

Impact indicators measured^

None of the above impacts associated with this action have been measured

Estimated annual emissions reductions (metric tons CO2e/year)^

Estimated annual energy savings (MWh/year)^

Estimated annual renewable energy generation (MWh/year)^

Co-benefits realised^

Job creation
Revenue generation
Improved mobility and access
Increased security/protection for poor/vulnerable populations
Increased social inclusion, equality and justice
Enhanced climate change adaptation
Increased/improved green space
Protected/improved biodiversity and ecosystem services

Funding source(s)

Jurisdiction's own resources
Regional funds and programmes
Public-private partnerships

Status of action in the reporting year^

Implementation underway with completion expected in more than one year

Inclusion in climate action plan and/or jurisdiction development/master plan^

Action is included in climate action plan and/or development/master plan

Total cost of action (in currency specified in 0.1)

3,800,000,000

Further Information

(10.1) Use this field to provide any additional information or context that you feel is relevant to your jurisdiction's response. Please note that this field is optional and is not scored/assessed.

Submit your response

Please provide the following details about the amendments you have made to your response.

Question number

5.1a

Reason for change

There was a typing error in the data reported

Updated response

Futher information added to the justification of target vs inventory boundaries due to feeback from GCOM

Question number

2.1

Reason for change

There was a typing error in the data reported

Updated response

Change the use of 0 to NO as recomended by GCoM feeback

What language are you submitting your response in?

English

Please read and accept our Terms and Conditions

I have read and accept the Terms and Conditions

Please confirm how your response should be handled by CDP.

	Public or non-public submission
I am submitting my response	Publicly (recommended)