

Manchester City Council Climate Change Action Plan 2020-2025

1. What is the purpose of this plan?

This document sets out Manchester City Council's commitments to tackling climate change over the next 5 years and builds on previous action plans over the last decade. The Council, alongside a number of other strategic partners in the city, have 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.

Climate change is something which effects everyone in Manchester and should not be viewed as an issue which is defined by geography, class or age. Our ambition is to ensure that all of Manchester's residents are protected from the impact of climate change, but that equality impact assessments are undertaken on specific projects to ensure that any changes that are made do not have a negative impact on the city's most vulnerable people. The transition to zero carbon must also be a just one which ensures that the social impacts of changes to heating and energy are considered alongside the environmental impact.

Although there are many challenges to delivering these ambitions, we recognise the enormous opportunities of transitioning to a zero carbon, climate resilient city and the importance of Manchester being recognised as a national and global leader in this area.

2. How big is the challenge?

The challenge and crisis of climate change is unprecedented and is the single biggest challenge faced by the world today. We recognise that this challenge can only be overcome by taking urgent, radical action. This crisis is something that will effect us all, and for some the impact of climate change is already being felt. The UK is committed to playing its full part in meeting the international target to limit the global average temperature rise to well below 2°C above pre-industrial levels by the year 2100, and aiming for 1.5°C, known as the Paris Agreement within the United Nations Framework on Climate Change.

The October 2018 *Special Report by the Intergovernmental Panel on Climate Change* (IPCC) found that although meeting a 1.5°C target is still achievable, success is dependent on a much more ambitious international effort and a major upscaling of investment. Exceeding this limit would affect weather patterns, cause sea levels to rise further, create food and water shortages, and affect human security and economic growth. The special report *Global Warming of 1.5°C* (IPCC, 2018. Summary for Policymakers) IPCC shows that 420 million additional people will be exposed to extreme heat and 184–270 million additional people to water scarcity if

global temperatures rise by 2°C, compared with a 1.5°C scenario (Page 4 and page 213: Hoegh-Guldberg et al., 2018. Impacts of 1.5°C global warming on natural and human systems). The world is now clearly in the midst of a climate and ecological emergency and there is now a unanimous consensus from the scientific community on the need for rapid action.

At a more local level residents and businesses are seeing more frequent flash flooding, travel disruption, health impacts from poor air quality and extreme heat episodes in the summer. Councils are well placed to play a key role at local level in responding to the growing public concerns about the environment and issues such as climate change. Councils can help to convene partners and stakeholders to deliver leadership and direction on the specific environmental issues in their localities. We must harness the power of Manchester's communities and ensure that all of our residents and stakeholder are able to take individual and collective action.

But we also recognise that the Council cannot provide all of the solutions, as combating climate change needs system-wide change that involves communities, businesses, individuals and stakeholders across all sectors of the economy, across the country and the wider world. The scale and pace of change needed will require major investments, changes to the way in which we use and interact with energy and changes to how we live our lives and define success. It will also redefine how we manage and interact with our environment. Above all, it will involve a collective leadership and shared ambition to deal with this challenge head on.

The Council takes this challenge seriously and has been acting to tackle climate change for over a decade. In 2009, we played an integral role when residents, businesses and other organisations came together to produce the first ever climate change strategy for the city; Manchester: A Certain Future. In 2010 we produced the first Manchester City Council Climate Change Delivery Plan which set out how the Council would provide citywide leadership on climate change whilst embedding low-carbon thinking and behaviour in our culture, processes and the operation of all our services.

In June 2018, Manchester Climate Change Partnership and Agency commissioned the Tyndall Centre for Climate Change Research at the University of Manchester to advise on targets for the city. The resulting 'Playing Our Full Part' proposal by the Partnership and Agency led to Manchester City Council adopting science-based carbon reduction targets for and on behalf of the city. This made Manchester one of the first cities in the world to adopt targets in line with the Paris Agreement. The targets related to 'direct' CO₂ emissions, from the energy used in buildings and transport. It was also recognised that Manchester would also need to act in relation to its 'indirect' CO₂ emissions, from the products and services consumed in Manchester but originating outside of the city. And that emissions from flights from Manchester Airport would also need to be addressed, as part of a UK and international strategy.

In July 2019, Manchester City Council declared a climate emergency (Manchester City Council Climate Emergency Declaration Text). This declaration recognises the need for the Council and the city as a whole to do more to reduce its carbon emissions and mitigate the negative impacts of climate change and demonstrated the

Council's commitment to be at the forefront of the global response to climate change and to lead by example.

Discussions with the Tyndall Centre for Climate Change Research began in August 2019 and in November 2019 the Agency formally commissioned them to review the city's commitments across four areas of activity:

- Direct / energy-only CO₂ emissions
- Indirect / consumption-based CO₂ emissions
- CO₂ emissions from flights from Manchester Airport
- Target-setting and reporting methodology for organisations and sectors

The recommended targets and objectives are set out in the Manchester Climate Change Framework 2020-25 but the headline recommendations are referenced below:

- To ensure that Manchester plays its full part in helping to meet the Paris Agreement objectives by keeping our direct CO₂ emissions within a limited carbon budget, taking commensurate action on aviation CO₂ emissions and addressing our indirect / consumption-based carbon emissions.
- 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.
- To improve the health and wellbeing of everyone in Manchester through actions that also contribute to our objectives for CO₂ reduction and adaptation and resilience, with particular focus on those most in need.
- To ensure that Manchester establishes an inclusive, zero carbon and climate resilient economy where everyone can benefit from playing an active role in decarbonising and adapting the city to the changing climate.

Now we need to ensure that our public commitments are backed up with ambitious and real action. This action plan builds on a decade of experience in environmental action and aims to make a vital local contribution to meeting the challenges faced by the climate emergency. It sits alongside action plans from other members of the Manchester Climate Change Board who are collectively responsible for over 20% of the city's emissions and have also committed to become zero carbon by 2038 at the latest.

We recognise that limiting CO₂ emissions is not enough. Depending on how successful the world is at reducing emissions, global temperatures by 2100 are likely to rise by between 1.5°C and 4°C above pre-industrial levels. As such, we need to accept that some level of change is inevitable. Climate change is happening now and we need to assess the risks to our communities in order to reduce their vulnerability to these changes. Adopting appropriate mitigation measures will be essential if we are to create resilient communities of the future in Manchester.

The UK Climate Change Risk Assessment (CCRA) is a five-yearly assessment of the major risks and opportunities from climate change to the UK. The most recent evidence report was published by the CCC in 2016. It outlined risks to the UK in six key areas:

- Flooding and coastal change risks to communities, businesses and infrastructure;
- Risks to health, well-being and productivity from higher temperatures;
- Risks of water deficits in public water supply, and for agriculture, energy generation and industry, with impacts on freshwater ecology;
- Risks to natural capital, including soils, coastal, marine and freshwater ecosystems, and biodiversity;
- Risks from climate-related impacts on domestic and international food production and trade;
- New and emerging pests and diseases, and non-native species, affecting people, plants and animals.

3. How large are the Council's emissions and what have we already achieved?

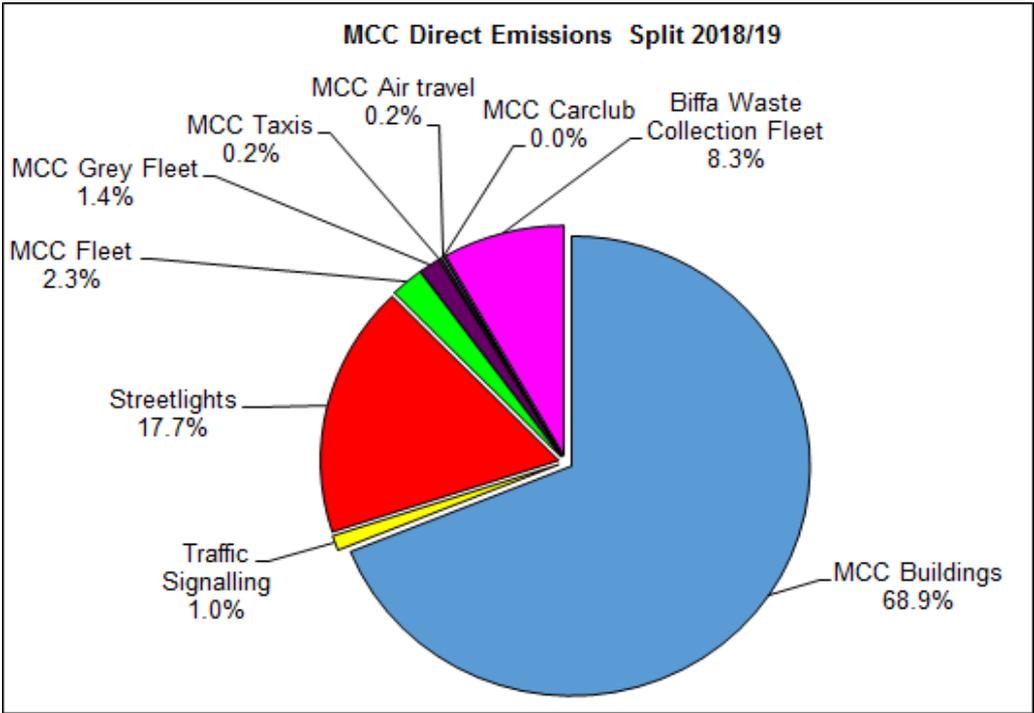
3.1 What is included?

The Council is able to influence behaviour and action across the city through a range of different policy levers and funding powers. This influence is far greater than the Council's actual direct emissions from its operation as an organisation, however, it is critically important to measure and report on our direct emissions and to set ambitious reduction targets.

Direct emissions are those which we can directly control or have financial responsibility for. We have been measuring our direct carbon emissions since 2009/10 and include a range of activities within the scope of our calculations. These activities are:

- Approximately 350 operational buildings, including leisure facilities but excluding schools and Council housing;
- Street lighting;
- Biffa waste collection fleet;
- Our fleet vehicles; and
- Staff travel including staff using their personal cars to carry out council business (grey fleet), rail travel, air travel, taxis and travel by car club.

Figure 1: MCC Direct Carbon Emissions by Activity 2018/19



(N.B. Between 2009/10 and 2019/20 traffic signalling fell within our direct emissions. In 2018/19 traffic signalling accounted for 1% of our total direct emissions. Traffic signalling across Greater Manchester is managed by Transport for Greater Manchester and included in their emissions accounting. As such Manchester City Council will no longer include traffic signalling on our direct emissions from 2020 onwards.)

3.2. What reductions have we already achieved?

Since 2009/10 we have achieved a 48.1% (34,657 tonnes CO₂) reduction in our carbon emissions and exceeded our original target to reduce our emissions by 41% by 2020 as demonstrated in table 1 below.

Table 1: Manchester City Council CO₂ Emissions in Tonnes by Activity 2009/10 to 2018/19

Activity	Baseline 2009/10 tCO ₂	2018/19 tCO ₂	% change from baseline
MCC Buildings	47,764	25,789	-46.0
Traffic Signalling	1,894	392	-79.3
Streetlights	15,726	6,616	-57.9
MCC Fleet	2,863	844	-70.5
MCC Grey Fleet	1,001	540	-46.1

MCC Taxis	136	56	-58.5
MCC Train	110	17	-84.7
MCC Air travel	79	67	-14.5
MCC Carclub	5	8	40.4
Waste Collection Fleet	2,496	3,089	23.7
Total	72,075	37,418	-48.1

A range of activities and programmes have enabled us to do this and these are:

- Delivering a street lighting replacement programme to replace all of our 57,000 street lights with energy efficient LEDs. The project (£32.8m) involves procurement and installation of state-of-the-art, low energy, light emitting diode (LED) street lighting technology and complete in 2020. 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. When completed, this will reduce carbon emissions by around 8,400 tonnes per year and save the Council £2 million.
- The buildings in the Council's operational estate represented 68.9% of the Council's direct carbon dioxide emissions in 2018/19. The Carbon Reduction Programme (£10.2m) will invest in schemes such as combined heat and power, solar photovoltaic panels, and the use of LED lighting within the Council's estate. The first phase of delivery is due to complete by the end of Quarter 2 2020/21. This will involve around £2.6 million invested in energy conservation measures and around £4.3 million invested in energy generation technology at 13 buildings in the Council's operational estate. The investment will generate financial savings of around £716,000 per annum and reduce carbon emissions by circa 1,600 tonnes per annum. The remaining funding has been earmarked to support energy conservation or production measures at buildings where wider refurbishments are being designed. Further stages of investments and improvements are planned.
- Committing to the installation of a Civic Quarter Heat Network which will connect the Town Hall, Town Hall Extension, Art Gallery and Central Library, Manchester Central Convention Centre, The Bridgewater Hall and Heron House. The project is expected to reduce the Council's direct carbon emissions by approximately 1,600 tonnes of CO2 from 2020/21. The network has been designed to enable future expansion, with efficiency and carbon savings increasing as more buildings join.
- Capital projects delivered by the Council are expected to include measures which contribute towards carbon reduction. During 2019/20 examples of spend on areas that will impact energy and carbon performance (typically mechanical and electrical upgrades inc heating, ventilation and lighting, plus insulation, window and roof works, as well as PV) include £7.5m across Hulme District Office, Moss Side Leisure Centre, Alexandra House and within the

Council's Asset Management Programme. There are a number of schemes in development for next financial year that will contribute to carbon reduction activity including: Abraham Moss Leisure Centre and Library rebuild (to be EPC Grade A); Gorton Hub (BREEAM Excellent) and Hammerstone Road (Large PV array and fabric improvements).

- The Council's fleet currently includes one electric car and 14 small electric vans. Plans are being considered to support the roll out of electric vehicles and charging infrastructure across the estate where viable and as required. 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. A number of electric and hybrid vehicles have been introduced to the fleet, as well as initiating a programme to exchange all vehicles Euro 5 or below, with Euro 6 engined ones.
- As part of the waste and street cleaning contract, a loan will continue to be available to the contractor to upgrade vehicles (£3.8), including to make them clean air compliant, on a spend to save basis. Investment is also being made to reduce the level of waste going into landfill with £1.2m planned spend on waste reduction measures in 2020/21, initially seeking to increase recycling rates in apartment blocks across the City.
- A pipeline of £75.9 million of active travel projects have been identified for consideration via the Greater Manchester Mayor's Challenge Fund which meet the funding criteria. In 2020/21 £2.8m is already committed to providing a high-quality network of dedicated cycle routes across Manchester, encouraging people to make short journeys in a healthy and inexpensive way and reduce the environmental impact of private car use.
- Neighbourhood Teams are engaging with residents to develop climate change action in ward plans, deliver events, build capacity and listen to residents. At a neighbourhood level, the Neighbourhood Investment Fund (NIF) is available to support local priorities including environmental projects in wards and also improvements to green and blue infrastructure.

Over 1,000 Council staff have now received Carbon Literacy training which aims to increase their awareness of the carbon dioxide costs and impacts of everyday activities, and the ability and motivation to reduce emissions, on an individual, community and organisational basis. Large scale training sessions are now underway for the top 300 managers in the organisation along with targeted sessions focusing on specific services such as Neighbourhoods and Compliance, and Revenues and Benefits.

We have also played a key role in supporting others in the city to tackle climate change and improve the city's environment. Key actions include:

- Securing investment in the city for environmental projects including tree and hedge planting and community orchards with the planting of an estimated 100,000 trees on known schemes across the city, including 8.75 km of

hedgerow and 108 community orchards over the last 10 years (Source: internal MCC Monitoring).

- Supporting the establishment of the Manchester Climate Change Agency and supporting the Agency through the secondment of two members of staff
- Working with Transport for Greater Manchester on the expansion of the Metrolink tram network
- Improving the city's cycling infrastructure including the Oxford Road and Wilmslow Road 'Dutch Style' cycling lanes

3.3 What have we done since declaring a climate emergency?

Since the Council declared a climate emergency on 10 July 2019, additional resources have been put in place alongside a number of changes to the way in which the Council operates. These include:

- Strengthened capacity within the Council to carry out this work and working with the Climate Change Agency to do the same.
- Through the work of the Zero Carbon Coordination Group, this agenda has been embedded into decision making, policies and practice across the Council, for example the updated Capital Strategy, evaluation within procurement decisions and new staff travel policy.
- Leadership across the city through the work of the Manchester Climate Change Agency and the action plans being developed by partners across the city. External engagement includes with Greater Manchester Combined Authority, Transport for Greater Manchester, development of the Our Manchester Industrial Strategy, consultation on the Manchester Local Plan, and with partners on specific projects such as Triangulum, with the University of Manchester, Manchester Metropolitan University and Siemens UK.
- Clearly embedding Climate Change into the next Capital Strategy for the city so that investment decisions are additionally considered in terms of their contribution to reducing carbon reductions. The Council has already committed significant investments totalling £69 million including the Carbon Reduction Plan for the Council's operational estate, the Civic Quarter Heat Network, and the Street Lighting replacement programme.
- Engagement and awareness raising, including carbon literacy training for Council staff and key partners, sessions at the Council's Leadership Summit which 400 senior officers attended, and the rolling programme of Listening in Action events for staff.
- Commissioned insight among Manchester residents to understand the views of residents from across the city in relation to climate change (see summary in Appendix 2).
- Youth Climate Summit in January 2020 as a follow up to the event in July 2019 (see summary in Appendix 3).
- Written to the Greater Manchester Pension Fund to request that they divest from investing in fossil fuels.
- Provided a formal response to the Government's Future Homes Standards consultation and supplemented this with a letter to the Ministry of Housing

Communities and Local Government from the Executive Member for Environment, Planning and Transport calling for the ability to set higher local standards on Part L of Building Regulations

- Called for Transport for Greater Manchester to develop a decarbonisation plan for transport which was discussed at the Greater Manchester Transport Committee in January 2020.
- Events in wards have identified ways to engage communities and have identified Climate Change priorities to be considered for refreshed Ward Plans from April / May 2020.

4. What are we committing to?

4.1 Direct emissions

The Council is committed to playing its full part in helping the city transition to zero carbon and by helping to deliver the Manchester Climate Change Framework 2020-25 (<http://www.manchesterclimate.com/plan>). This document contains a summary of the actions the city needs to take to stay within our carbon budget and is informed by analysis from the Tyndall Centre for Climate Change Research, including a definition of carbon neutral.

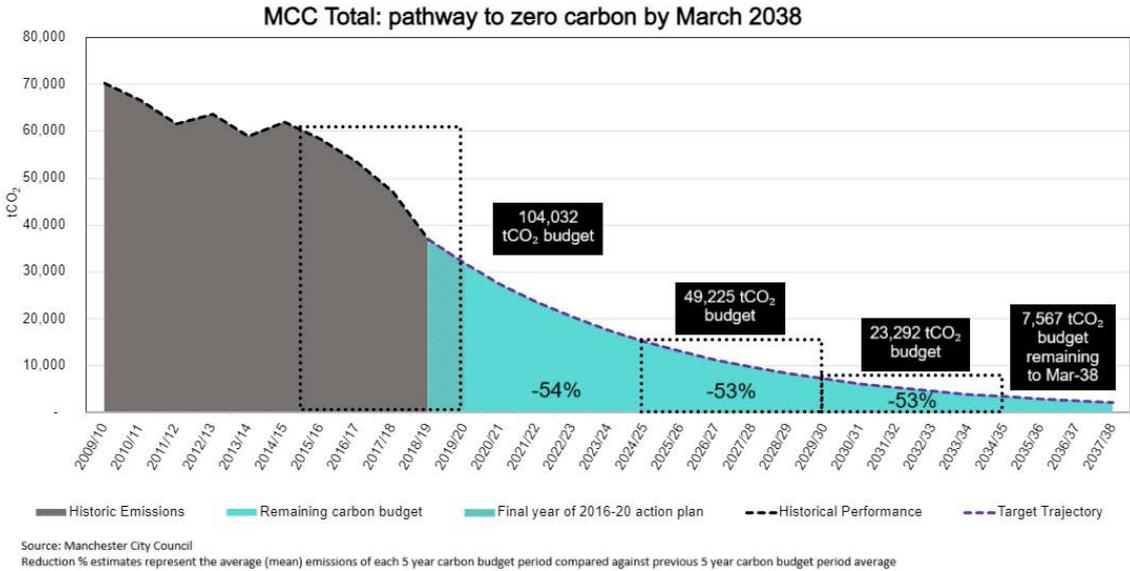
Although our plan includes investment in green and blue infrastructure to increase carbon storage and sequestration, reaching zero carbon will not include offsetting our emissions. Our ambition has been informed by the SCATTER project (Setting City and Area Targets and Trajectories for Emissions Reductions) which is a model that helps cities set zero carbon targets from our buildings, energy and transport which are consistent with delivering the Paris Agreement.

The specific commitments we are making as a Council are:

- Deliver at least a 50% reduction in carbon emissions from our buildings, energy and transport by 2025 (from circa 30-32,000 tonnes in 2019/20 to circa 15-16,000 tonnes in 2024/25) via a 13% year on year reduction.
- Report quarterly on progress against the actions in the plan and provide quantitative reports on data in tonnes of CO₂
- Become zero carbon by 2038 at the latest (based on the Tyndall Centre for Climate Research definition of zero which is at least a 95% reduction i.e. a reduction of 35,547 tonnes CO₂ from the 2018/19 total which would mean that the Council's direct emissions in 2037/38 would be less than 1,871 tonnes CO₂)

The draft analysis below sets out how this pathway might be achieved but will need to be updated once the final 2019/20 annual data is available.

Figure 3: Manchester City Council pathway to zero carbon (draft analysis)



Nb: This chart is a draft and will be updated following the publication of the final Manchester Climate Change Framework 2020-25 and the Council’s 2019/20 annual emissions data.

Appendix 1 details the actions that we will undertake to reduce our direct emissions, however, a summary of the actions that will deliver the required 50% reduction in tonnes CO₂ can be found below:

Table 2: Direct Emissions Actions and Associated Carbon Savings (estimate of 15-16,000 tCO₂ required)

Direct Emissions Action 2020-25	Annual Carbon Saving (tonnes CO ₂)
Completion of Phase 1 Buildings Carbon Reduction Programme	1,400
Completion of Phase 1 (a) Buildings Carbon Reduction Programme - ERDF Supported	400
Phase 2 of Carbon Reduction Programme	3,000
Large scale energy generation scheme	7,000
Completion of the final year of the street lighting LED replacement programme	220
Estimated carbon emissions saving benefit from the decarbonisation of the National Grid	800
Completion of the Civic Quarter Heat Network and	1,600

connection to the Town Hall, Town Hall Extension, Art Gallery and Central Library	
Replacement of half of waste fleet vehicles with Electric Vehicles	900
Reductions to the Council's Fleet through increase in number of Electric Vehicles	400
Reduction in staff travel via car, taxi, air, train	100
Total Estimated Savings	15,820

4.2 Indirect or consumption based emissions

The Council also recognises that the products and services that we purchase directly or that our supply chain procure have a major impact on the environment. The action plan commits us to reducing the impact of carbon emissions from our indirect activity. The Council has developed formal evaluation questions for suppliers that will be used in future procurements. An additional 10% climate change weighting will be applied to the scoring framework in addition to the 20% already used for scoring contributions to social value. These questions will ask suppliers how far they will reduce their carbon emissions, and how this will be monitored and reported. Alongside this will be new guidance for suppliers across the city – including other procuring organisations on the Partnership – that signposts them to sources of advice, guidance and support for reducing their carbon emissions.

4.3 Adaptation to climate change

Despite the increased international efforts to tackle climate change, we recognise that the world's climate is already changing and that adaptation is required to protect the city's people. We are committed to ensuring that climate change adaptation, including green and blue infrastructure, is included in new developments and across Council owned buildings and land.

Further work needs to be done at a local level through ward plans and neighbourhoods to adapt to make communities more resilient to climate change. This will form part of the Council's work through Neighbourhoods Teams, Highways and also through the development of improved communication information and guidance.

4.4 Citywide emissions

The Council also recognises the importance of supporting and influencing our residents and organisations to take action to reduce their direct and indirect CO₂ emissions and to adapt to the changing climate. We are committed to developing the right communications and key information to them, supporting them via funding and projects where appropriate and to ensure that as an organisation we lead by example.

5. What roles does the Council have?

As outlined in section 1, the Council has a variety of different roles to fulfil to ensure that we play our full part in reducing both our direct emissions and supporting and influencing the required reduction in citywide emissions.

5.1 Enabling and Influencing Actions

The Council has a wide range of policy-making and regulatory functions. Many of these already help to incentivise and encourage low carbon behaviours and activities. In order for the Council and the city to meet the targets that have been set we will need to ensure that all key decisions the Council makes and policies and procedures we implement support this ambition. This will include grant, funding and investment decisions, procurement and commissioning, our capital and revenue gateway process, new build and refurbishment standards, design standards, leases or developments on Council owned land, the Manchester Local Plan and staff and member travel policy. These also provide the opportunity to influence how other large and small organisations in the city and beyond operate and to encourage them to work towards the zero carbon target.

Manchester City Council only has direct control over a small percentage of emissions in the city (our direct emissions). It is therefore important that the Council works with and influence others to also play their full part in responding to the climate emergency. This will be vital in the wider city achieving its zero carbon ambitions. We will work with and exert our influence on as many organisations and individuals as possible in the way services are designed, delivered and communicated and create opportunities to encourage and support partners and residents to play a key role in achieving the city's climate change objectives. Different measures can support and influence different groups of stakeholders – residents and customers, visitors to the city, businesses in the supply chain, partner organisations in whose operations the Council has an interest, neighbouring authorities in Greater Manchester and beyond, the Government and international interests.

5.2 Direct Emissions (Scope 1 and 2)

The Council's direct emissions make up approximately 2% of the citywide emissions. Despite this, the Council is one of the largest emitters in the city. Reducing our direct emissions to zero will entail undertaking major programmes of work to our buildings and changing energy supply. Our waste fleets and other ways in which we travel whilst delivering services across the city also needs to change. We will need to focus our limited resources on those activities which produce the greatest CO₂ emissions. In addition to the investment and activity required in-house, we also recognise that we will be able to benefit from national policy via the continued decarbonisation of the National Grid and the continued reduction in the electricity emission factor, alongside other new developments including changes to the way in which domestic and commercial buildings are heated.

5.3 Indirect Emissions (Scope 3)

Indirect emissions are those which we do not have direct control over and are a consequence of our activities. This can include waste, water, food, procurement of goods and services and staff commuting, amongst other activities.

6. What is included in the 2020-25 Action Plan?

We recognise that in order to achieve our ambitions, rapid and unprecedented changes to Council services and operations will need to take place. This action plan details the activity that we will undertake over the next five years but also includes activities that will need to be developed and investigated further in order to ensure that we are on the right path to being zero carbon by 2038. The actions include activities to deliver a reduction in emissions from energy, transport and consumption (mitigation) but also adaptation and promoting investment in nature based solutions and green infrastructure

This action plan will evolve over time and be flexible enough to adapt to opportunities and challenges outside of our control such as national government policy and funding, world energy markets and technological innovations. This will provide us with the option to incorporate new actions to the plan as opportunities become available. Conversely, we may also determine that current actions will no longer deliver us the required saving and as such can be removed. Where changes in the Greater Manchester Combined Authority or government policy are needed to help us meet our objectives and targets we will proactively ask for them, seeking to work as a key partner with the government in helping to meet the UK's zero carbon commitments (see summary in appendix 4).

The plan is a key part of the *Our Manchester Strategy* 10 year vision for the city and should therefore be viewed alongside the city's collective ambitions for a thriving and sustainable city, a highly skilled city, a more progressive and equitable city, a more connected city and a more liveable city. The focus therefore, will be ensuring that the transition to zero carbon is one that is as just and fair as possible for the city's residents, businesses and workers and that the costs do not fall unevenly on those that are least able to afford them.

The action plan is appended below but is divided up into the following sections:

- Buildings and energy;
- Transport and travel;
- Reducing consumption based emissions and influencing suppliers;
- Climate adaptation, carbon storage and carbon sequestration;
- Influencing behaviour and being a catalyst for change.

Not all actions will generate quantifiable CO₂ savings but where data is available for the Council's direct emissions it has been included.

7. How will we measure and report on progress?

The implementation of this action plan will be overseen by a number of different groups:

- Quarterly Monitoring and Update report to Neighbourhoods and Environment Scrutiny Committee including progress against the actions and the latest available Council direct carbon emissions data (This is an elected member led Committee which is open to the public).
- Climate Change Sub-Group (This is an elected member led sub-group of Neighbourhoods and Environment Scrutiny Committee which is open to the public).
- Zero Carbon Coordination Group (This is a group of senior Council officers, chaired by the Deputy Chief Executive and City Treasurer which was established in September 2019).

We will use the Council's website, other communications and Committee reports to provide updates on the implementation of this action plan. The Council's web pages (www.manchester.gov.uk/zerocarbon) will be expanded to include:

- Information on the action plan and progress against delivery
- Overall number of Council staff and members who are carbon literate (no names)
- Information about the Zero Carbon Coordination Group and workstreams including relevant information which can be publicly shared
- Links to relevant Committee reports where climate change is a key focus
- Case studies on projects including street lighting LED upgrade, Civic Quarter Heat Network, specific buildings improvements.
- Quantitative data on the Council's direct emissions.

8. How will we fund the delivery of the plan?

The Council already spends a significant amount of money on improving the environment of the city through physical projects and also in terms of staff time across a range of services. Climate Change considerations will be embedded into decisions about how all resources are used across the Council as well as additional direct resource requirements.

We recognise that transitioning to zero carbon by 2038 and halving the Council's carbon emissions over the next 5 years will require significant additional capital and revenue funding but that delivering this ambition is essential and the cost of not doing so would be far greater. There are also significant opportunities to benefit from becoming a zero carbon city and these are set out in the *Delivering a More Inclusive Economy, Our Manchester Industrial Strategy* and the Mission Based Approach within the *Greater Manchester Local Industrial Strategy*.

Further detailed analysis of the cost of delivering the action plan will be undertaken by the Zero Carbon Coordination Group workstreams. Funding sources will include internal revenue and capital funding, new sources of investment and external funding. A high level summary of some of the key elements are listed below:

Revenue

During 2019/20 funding has already been identified to fund:

- Two additional posts within City Policy
- A full time post to deliver carbon literacy training
- Funding

A further £300k is including in the 2020/21 Revenue Budget which includes:

- Funding for the Climate Change Agency and new Chief Executive position
- Additional programme management resources in City Policy
- Additional external expertise as required
- Tree Opportunity Mapping
- Development of a supplier toolkit for the city to inform procurement and commissioning activity

In order to deliver the commitments within the Carbon Reduction Action Plan further funding will be required. It is recommended that further revenue funding of £1m is made available via the Capital Fund. The use of the funding will be subject to the development of detailed proposals to be agreed with the Executive Members for Environment, Planning and Transport and for Finance and Human Resources and reported back to Executive. This will be to:

- Establish a dedicated team and meet the associated costs to deliver the below:
 - Identify and deliver large scale remote Renewable Energy eg Solar PV generation projects. A small number of large generation projects are essential to remain within our carbon budget whilst the organisation mobilises to deliver the wider change required.
 - Procure a Solar PV partner to deliver a rolling programme of behind the meter generation feasibility studies, business case development and installation, focussing on the Authorities to 50 carbon emitting buildings.
 - Deliver a Zero Carbon whole building retrofit pilot.
 - Develop the next/ongoing pipeline of investments through a series of building audits focussing on the deployment of proven energy efficiency measures.
 - Develop an accelerated boiler replacement programme and commission expert consultancy to validate existing views about the pathway to zero carbon heat, inform business case development and procurement specifications.
 - Agree the Manchester Build Standard / Standards to be used going forward and embed within decision making processes which include consideration of Net Present Value and Asset Management Plan; Whole Life Costing, Internal Carbon Costing, and Energy Intensity Measures.
- Support awareness raising and behaviour change across residents, partners and council staff.

- Provide additional capacity within the Strategic Housing Team to support the work outlined in the Action Plan including to develop the segmentation approach to considering carbon reduction across the domestic house estate which is outlined in the appended action plan.

Additional capacity will also be provided to support the development and funding of neighbourhood schemes and priorities as the schemes are developed.

Capital

Reducing carbon emissions is included within the Capital Strategy as one of the key priorities for future capital spend. The development of all capital schemes and associated investment must consider the effect on carbon and work is taking place to understand how investment can be classified in terms of carbon impact as well as financial.

The costs of new build programmes to higher environmental standards and meeting the needs of the Local Plan and planning requirements will also be considered, running alongside investment in green spaces and places including trees and green walls which will require revenue resources for ongoing maintenance. As schemes are developed the higher cost to meet environmental standards will be included.

As the majority of the Council's carbon emissions are from its existing corporate estate and the Council has a responsibility to reduce emissions across the Northwards and partner managed housing stock, significant investment will be required to bring these buildings up to carbon efficient standards. This represents a major opportunity to both establish Manchester as a centre for green technology and services, and to work with local skills providers to ensure that the city's residents are given the best possible opportunities to access these new careers.

- Retrofit of the Council's operational estate. Energy generation and charging infrastructure including Solar PVs on suitable buildings and sites, Batteries, EV Charging Infrastructure and Heat Pumps. Phase 2 of the Carbon Reduction Plan will require an additional £15m investment. The fund will be further developed through the capture of the associated revenue savings and work to identify external funding. The March 2020 Capital Update report will include a request to establish the budget with its use subject to the approval of the business case.
- Funding for a large scale energy generation scheme dependent on the outcome of the feasibility study. Funding for the feasibility study is included within the revenue funding requirements above.
- Northwards managed Council housing stock retrofit and energy generation. Specific schemes will be developed with Northwards through the capital funding available in the Housing Revenue Account capital programme. Funds are required to maintain the Decent Homes Standard within Manchester's housing stock and, in addition, will support innovative climate change investment; essential health and safety works including the installation of sprinklers in multi storey blocks; and public realm

environmental works. There is limited funding within the HRA to cover all of these priorities and further work will be carried out to identify options to deliver more extensive carbon reduction measures given the constraints in place.

- Purchase of electric vehicles for the Waste and Recycling Fleet, and Council Fleet. A business case for the further electrification of the waste fleet will be included in the March 2020 Capital Update report. Further proposals for the Council's fleet will be considered for funding in future Capital Update reports.
- Investment in planting of beacon trees, mature trees, street trees and hedgerows informed by the Tree Opportunity Mapping exercise. No specific funding has been earmarked for this yet and it is proposed to establish the budget for an initial investment fund of £1m for trees and carbon capture with its use subject to the production of the detailed business case.

Work will also continue to deliver the carbon reduction priorities within:

- Delivery of Northern and Eastern Gateway projects
- Changes to the way Highways projects are designed and delivered
- Investment in public transport and active travel infrastructure such as cycling and walking. This will include progressing the pipeline of schemes for funding via the Greater Manchester Mayor's Challenge Fund.
- Work with the Department for Education on how carbon efficient schools can be delivered given the constraints with the current levels of Department for Education funding and unit cost.

9. How will the whole organisation play its full part?

The Council's Corporate Plan has been amended to include Climate Change as one of the eight priorities. We recognise that delivering the Council and citywide ambition to reduce emissions by at least 50% over the next 5 years will require collective action by all Council departments.

We will ensure that all staff are provided with training and are empowered to 'own' this agenda and embed changes into the delivery of their service. A key objective of the plan is to engage residents and neighbourhoods in a process of cultural change that embeds zero carbon thinking into the lifestyles and operations of the city. Manchester is made up of a diverse range of neighbourhoods, with a wide variety of cultures and interests. The residents and communities that make up the city are critical to our success. Much of the change required will come from residents themselves, but the Council has a key role to play, particularly in those parts of the city where there are significant numbers of people dependent upon our support.

To find out more and view the Council's progress please go to:
www.manchester.gov.uk/zerocarbon