

NEIGHBOURHOODS AND ENVIRONMENT SCRUTINY, 5 FEBRUARY 2020

APPENDIX 2: MCC Climate Change Action Plan 2020-2025

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.

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.

1. 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 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) by the 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.

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 we use here, but which originate 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. 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 and can be summarised as:

Direct [To be added when final framework approved]

Indirect / consumption-based emissions [To be added when final framework approved]

Flights from Manchester Airport [To be added when final framework approved]

Organisation and sector-level targets [To be added when final framework approved]

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 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.

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

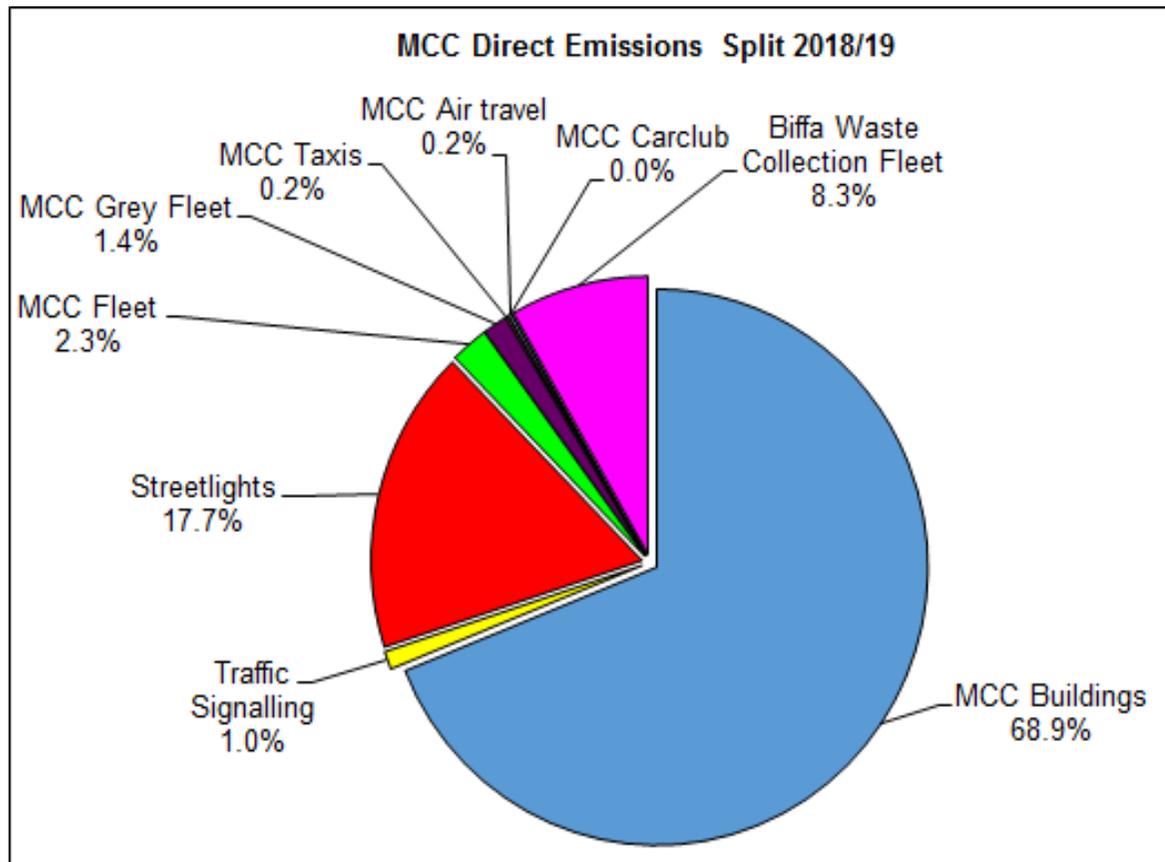
2.1 What is included?

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 these 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 and travel by car club.

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

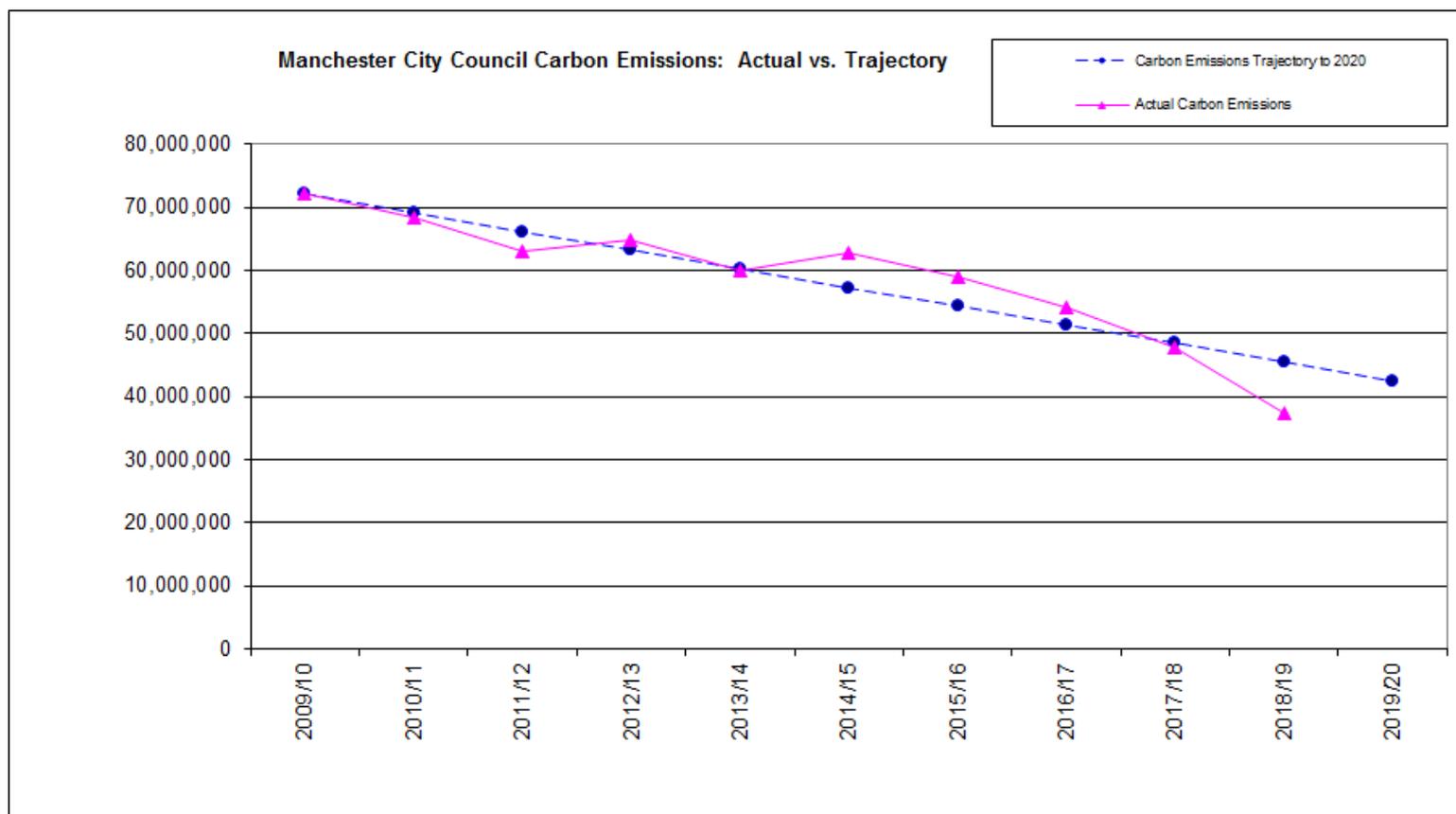


(N.B. Between 2009/10 and 2019/20 traffic signalling fell within our direct emissions. In 2018/19 traffic signalling accounted for 1% of our total direct emissions. Traffic signalling across Greater Manchester is managed by Transport for Greater Manchester and included in their emissions accounting.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

2.2. What reductions have we already achieved?

Since 2009/10 we have achieved a 48.1% reduction in our carbon emissions and exceeded our original target to reduce our emissions by 41% by 2020.

Figure 2: Manchester City Council Direct Carbon Emissions 2009/10-2018/19



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. When completed in 2020 this will save the Council £2m and 8,400 tonnes of carbon per annum.
- The first phase of the Manchester City Council Buildings Carbon Reduction Programme will see £2.6m invested in energy conservation measures and £4.3m of renewable energy production equipment at 13 buildings within the authority's estate. The investment will

generate financial savings of circa £716k per annum and reduce carbon emissions by approx. 1,600 tonnes per annum. 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.
- 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.
- Approximately 700 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 focussing on specific services.

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
- 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

2.3 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 all 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 all staff
- Youth Climate Summit in January 2020 as a follow up to the event in July 2019.
- Written to the Greater Manchester Pension Fund to request that they divest from investing in fossil fuels.
- Called for Transport for Greater Manchester to develop a decarbonisation plan for transport which was discussed at the Greater Manchester Transport Committee.
- 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.

3. What are we committing to?

3.1 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.

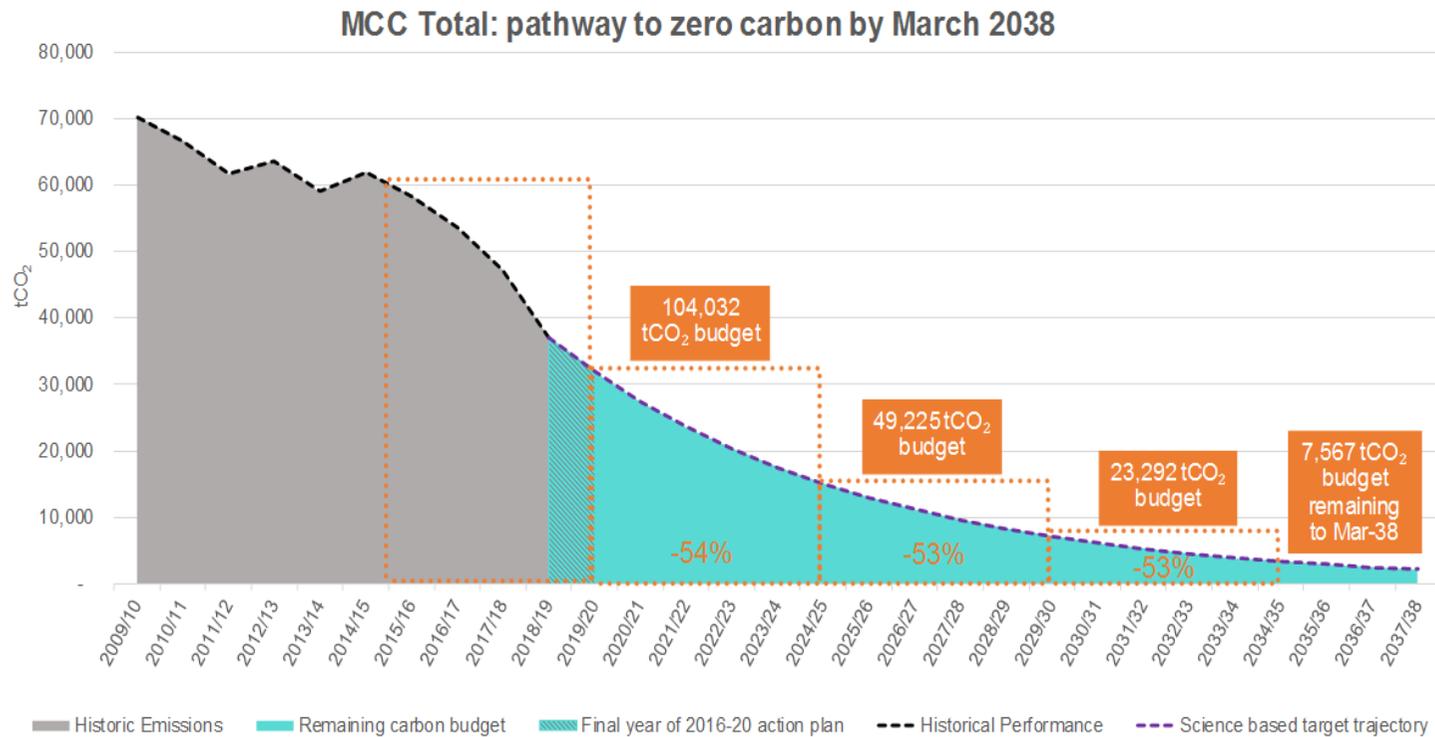
Although our plan includes investment in green and blue infrastructure to increase carbon storage and sequestration, reaching zero carbon will not include offsetting our emissions. Our ambition has been informed by the SCATTER project (Setting City and Area Targets and Trajectories for Emissions Reductions) 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:

- To set our own organisational carbon budget between 2020 and 2100
- Deliver at least a 50% reduction in carbon emissions from our buildings, energy and transport by 2025
- 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)

The draft analysis below sets out how this pathway might be achieved.

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



Source: Manchester City Council

Reduction % estimates represent the average (mean) emissions of each 5 year carbon budget period compared against previous 5 year carbon budget period average

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.

3.2 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.

3.3 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.

3.4 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.

4. 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.

4.1 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 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.

4.2 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 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.

4.3 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, procurement of goods and services and staff commuting, amongst other activities.

5. 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.

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.

A detailed analysis of the total projected CO₂ emissions savings from the Council's commitments in the plan will be undertaken once the analysis underpinning figure 3 is complete. This will help to demonstrate how the total reduction of at least a 50% reduction in direct emissions over the next 5 years will be achieved.

6. How will we measure and report on progress?

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

- Climate Change Sub-Group (This is an elected member led sub-group of Neighbourhoods and Environment Scrutiny Committee which is open to the public)
- Annual Monitoring and Update report to Neighbourhoods and Environment Scrutiny Committee Climate Change every July when annual emissions data is available (This is an elected member led 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 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)
- A table setting out progress against the Climate Emergency Motion
- Information about the Zero Carbon Coordination Group 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.

7. 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 once it is finalised but the draft version includes a recognition of where additional revenue and capital expenditure will be required against each action. A high level summary of some of the key elements are listed below:

Revenue

- Funding for the Climate Change Agency and new Chief Executive position
- Additional programme management resources in City Policy, Corporate Estates and Facilities, and Capital Programmes
- Additional external expertise as required
- Staff training
- Tree Opportunity Mapping
- Supplier toolkit for the city to inform procurement and commissioning activity

Capital

- 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
- Delivery of Northern and Eastern Gateway projects
- Northwards managed Council housing stock retrofit and energy generation
- Purchase of electric vehicles for the Waste and Recycling Fleet, and Council Fleet.
- Changes to way Highways projects are designed and delivered

- Investment in public transport and active travel infrastructure such as cycling and walking

8. 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 from across all Council departments.

We will ensure that all staff are provided with training and 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.

Appendix 1: Manchester City Council Actions 2020-25 (Draft)

1. Buildings and energy

Introduction				
<p>The energy used within buildings made up 69% of the Council's direct CO₂ emissions in 2018/19 and approximately 72% of the citywide CO₂ emissions. The use of fossil fuels (particularly coal) within the National Grid has fallen significantly in recent years as the grid has become decarbonised. Renewable energy such as wind, solar and hydro only represented 2.3% of the UK power supply in 1990 but now contributes 26.5%. Further decarbonisation of the National Grid will deliver significant reductions to the Council's and the city's carbon emissions but local action is needed to reduce the use of energy via the retrofitting and refurbishment of buildings, and generating energy through a variety of renewable sources.</p>				
Commitment				
<p>Reduce the CO₂ emissions from the Council's operational estate and streetlighting by at least 50% by 2025 and put in place plans for a further 50% reduction between 2025 and 2030. Support building retrofit and energy generation across the city's buildings and ensure all future development across the city is as close to zero carbon as possible.</p>				
Council				
Ref	Action	Owner	Capital Investment required	Revenue investment required
1.1	Deliver..... Complete Phase 1 and Phase 2 of the Carbon Reduction Plan and secure funding and delivery mechanism for future phases which will run from 2020-25. The 'reduce, produce, connect' approach will be utilised including the following activities: Phase 3 retrofit programme; a Zero-Carbon Building retrofit (pilot project);	Corporate Estate and Facilities	Yes	Yes

	<p>a Building Management System programme; Solar PV generation programme on buildings; Boiler replacement programme / gas phase out (heat pumps)</p> <p>To achieve.....15,000 tonnes of CO₂ will be saved from across the Council's operational estate between 2020 and 2025. A further scope of work will be developed to deliver a further saving of 7,500 tonnes of CO₂ delivering a combined 22,500 tonnes over the next 10 years.</p> <p>By.....There will be a sequenced approach to delivery across the operational estate, completed in line with the agreed carbon budget. March 2020-2025 and March 2025-2030.</p>			
1.2	<p>Deliver.....A Manchester Build Standard / Standards to be used going forward for new buildings, extensions and refurbishments and embed within decision making processes.</p> <p>To achieve.....Lower carbon construction and more energy efficient end use in buildings.</p> <p>By.....End of 2020</p>	Capital Programmes	Yes	Yes
1.3	<p>Deliver.....A Buildings and Energy Strategy for the Council.</p> <p>To achieve.....An agreed strategy setting out the response to the climate emergency across the Council's operational estate including continued procurement of green energy, infrastructure to support the roll out of electric vehicles, generation and storage.</p> <p>By.....April 2020</p>	Corporate Estate and Facilities; and Energy Management Unit	No	No

1.4	<p>Deliver.....A feasibility and business case for a large scale energy generation scheme from large scale Solar PV and Onshore and Offshore Wind on Council land and buildings, or sites in third party ownership. This will include an assessment of the different business models available in terms of capital cost, commercial risk and speed of deliverability.</p> <p>To achieve.....An understanding of the benefits, viability, costs and risks of investing in large scale energy generation to generate zero carbon energy.</p> <p>By.....December 2020</p>	Corporate Estates and Neighbourhoods	No	Yes
1.5	<p>Deliver.....Complete roll out of Street lighting LED replacement and investigate ways to further reduce consumption and improve efficiency.</p> <p>To achieve.....8,400 tonnes of CO₂ per annum</p> <p>By.....End of 2020</p>	Neighbourhoods	No	Yes
1.6	<p>Deliver.....Complete the Civic Quarter Heat Network (CQHN) and connect to all buildings including the Town Hall in 2023/24.</p> <p>To achieve.....1,600 tonnes CO₂ per annum from 2020/21 and at least 6,400 tonnes CO₂ between 2020-25.</p> <p>By.....First year of operation will be 2021. Town Hall to connect in 2023/24.</p>	CQHN Board	No	No
City				
Ref	Action	Owner		

1.7	<p>Deliver.....Undertake a stock condition survey across the Private Rented Sector and develop a segmentation approach to domestic properties including social housing, owner occupier and private rented sector. Work with Manchester Housing Providers Partnership and their Zero Carbon Working Group to ensure all social housing properties are on a path to zero carbon.</p> <p>To achieve.....A better understanding of the energy efficiency requirements and interventions required across the city's housing stock. To provide intelligence to develop funding proposals for retrofit, energy generation and future heating solutions.</p> <p>By.....Stock condition survey completed 2021.</p>	Housing and Residential Growth	Yes	Yes
1.8	<p>Deliver.....A comprehensive investment programme to deliver energy efficiency, retrofit and energy generation from solar panels and heat pumps across all of the Council owned properties managed by Northwards Housing.</p> <p>To achieve.....A reduction in emissions and energy bills for residents.</p> <p>By.....TBC</p>	Housing and Residential Growth	Yes	Yes
1.9	<p>Deliver.....Funding programmes in partnership with the Greater Manchester Combined Authority and Government to support retrofit and energy generation across commercial and non-residential buildings.</p> <p>To achieve.....A reduction in emissions and energy bills for businesses and organisations.</p> <p>By.....TBC</p>	Housing and Residential Growth, Finance	Yes	Yes
1.10	<p>Deliver.....A Local Energy Plan for Manchester via the Greater Manchester Local Energy Market project.</p>	Corporate Estates and Facilities	No	Yes

	<p>To achieve.....The Plan will identify areas suitable for Solar PV deployment (domestic and non-domestic), battery storage, low carbon heating solutions, electric vehicle deployment.</p> <p>By.....TBC</p>			
1.11	<p>Deliver.....Zero carbon commitments are taken into account when any Council owned buildings or land is disposed of or leased to a third party.</p> <p>To achieve.....Better support for third parties to improve the energy efficiency and condition of the building or the end use of the land.</p> <p>By.....2020</p>	Strategic Development	No	No
1.12	<p>Deliver.....A new Local Plan, utilisation of existing Planning levers and Strategic Regeneration Frameworks to support the city's zero carbon commitments.</p> <p>To achieve.....Use the Council's policy levers and influence to ensure that future development reflects the city's zero carbon commitments and promotes a reduction in carbon emissions, improved green and blue infrastructure, and other associated issues such as the management of grey water.</p> <p>By.....Local Plan completed by 2023. Existing Planning levers and Strategic Regeneration Frameworks immediately.</p>	Strategic Development; Planning and City Policy	No	Yes
1.13	<p>Deliver.....Partnership work with local and national experts including the UK Green Building Council and property developers.</p> <p>To achieve.....Learning from best practice in building design to ensure that we are able to achieve the best possible standards in new design with respect to carbon performance.</p>	Capital Programmes	No	No

	By.....Ongoing			
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2. Transport and travel

Introduction				
<p>Transport is a major contributor to the city's CO₂ emissions with just under 30% of total emissions and also impacts on the cleanliness of the city's air. It is also the sector which has seen the least progress in achieving reductions in carbon emissions over recent years. The Council's direct emissions include the waste and recycling fleet (8.3%) and Manchester City Council fleet (2.3%) and staff travel (1.8%). There is an urgent need to shift to sustainable and active travel for Council staff and the city's residents, workers and visitors to reduce CO₂ emissions, improve air quality and improve the city's liveability.</p>				
Commitment				
<p>Reduce the emissions from the Council's transport related emissions by 50% between 2020 and 2025 by rolling out electric vehicles and charging infrastructure. Support shift to sustainable and active travel through the Council's role in transport planning and work with Transport for Greater Manchester, Greater Manchester Combined Authority and national government to deliver strategic transport infrastructure projects.</p>				
Council				
Ref	Action	Owner	Capital Investment required	Revenue investment required
2.1	<p>Deliver.....Develop business case and funding to replace half the Biffa waste and recycling fleet with Electric Vehicles alongside associated charging infrastructure. Develop a business case to replace the Council's fleet vehicles with Electric Vehicles. .</p>	Neighbourhoods	Yes	Yes

	<p>To achieve....Significant reduction in emissions from diesel fleet vehicles and improved air quality. Ethical procurement of Electric Vehicle batteries to include consideration of environmental and social impact of lithium batteries.</p> <p>By.....Business case for waste fleet early 2020 and funding in 2020/21.</p>			
2.2	<p>Deliver.....A new Business Travel Policy for Council officers and elected members.</p> <p>To achieve.....Influence over travel choices and promoting sustainable and active travel. Clear communication of Council policy and approval process for travel by taxi and air travel.</p> <p>By.....April 2020</p>	Human Resources Occupational Development (HROD)	No	No
City				
Ref	Action	Owner	Capital Investment required	Revenue investment required
2.3	<p>Deliver.....Work with Greater Manchester Combined Authority, Transport for Greater Manchester and Government to implement the Greater Manchester Transport Strategy 2040 and deliver improvements to the city's Strategic Transport Infrastructure.</p> <p>To achieve.....Strategic projects include: preparations for High Speed 2; delivery mechanism and funding for Northern Powerhouse Rail; Metrolink expansion including Tram-Train options; Bus Reform including developing a business case to shift to an entirely electric fleet; Clean Air Zone; infrastructure and signage to support active travel and Beelines.</p> <p>By.....Ongoing</p>	City Policy; Highways	Yes	Yes

2.4	<p>Deliver.....A revised City Centre Transport Strategy with Transport for Greater Manchester and Salford City Council.</p> <p>To achieve..... Improvements to sustainable and active travel and prioritisation of pedestrians and cyclists.</p> <p>By.....2020</p>	City Policy; City Centre Regeneration	No	Yes
2.5	<p>Deliver.....Review and act on the findings of the Tyndall Centre for Climate Research to assess how emissions from Manchester Airport can be managed in line with the Paris Agreement. Work with Manchester Airport Group and other local authorities with airports within their boundaries to lobby government to increase the decarbonisation of air travel.</p> <p>To achieve.....A reduction in aviation emissions from Manchester Airport which is in line with the findings of the Tyndall Centre for Climate Research.</p> <p>By.....Ongoing</p>	City Policy; Manchester Climate Change Agency	No	No

3. Reducing consumption based emissions and influencing suppliers

<p>Introduction</p>
<p>The Council and the city need to reduce consumption of goods and products which have the highest carbon footprint. This requires behaviour change and shifts to what we buy/procure and from where.</p>
<p>Commitment</p>

Reduce the consumption on Council premises of single use plastics and other goods which are unsustainable. Influence city through procurement and commissioning and other levers including licensing

Council

Ref	Action	Owner	Capital Investment required	Revenue investment required
3.1	<p>Deliver.....Roll out the additional 10% social value weighting for the environment to take the total social value to 30%. Suppliers will be scored based on:</p> <ol style="list-style-type: none"> 1. The steps that they are already taking to reduce their carbon emissions and their future plans; 2. How they monitor their carbon emissions and how they plan to monitor them in the future including during the contract period. <p>To achieve.....Influencing supplier behaviour and reducing carbon emissions from the Council's procurement and commissioning.</p> <p>By.....April 2020</p>	Integrated Commissioning and Procurement	No	No
3.2	<p>Deliver.....Act on the findings of the Tyndall Centre for Climate Change Research into the city's consumption emissions and use this intelligence to inform the specification of tenders for goods and services.</p> <p>To achieve.....A reduction in indirect emissions from the Council's procurement and commissioning activity including consideration of food; water, construction materials; furniture; and ICT equipment.</p> <p>By.....December 2020</p>	Integrated Commissioning and Procurement	No	Possibly

3.3	<p>Deliver.....Ensure the Council's operational estate and markets are Single Use Plastic Free and that procurement and commissioning reduce their use alongside other packaging.</p> <p>To achieve.....A reduction in the use of Single Use Plastics.</p> <p>By.....Single Use Plastic Free by 2024</p>	Corporate Estates, Facilities and Neighbourhoods	No	No
City				
Ref	Action	Owner	Capital Investment required	Revenue investment required
3.4	<p>Deliver.....Fund the development of a citywide supplier toolkit focussed on tackling climate change.</p> <p>To achieve.....A shared approach to procurement and commissioning which can be used by stakeholders in the city to provide guidance and support for suppliers.</p> <p>By.....December 2020</p>	Policy, Performance and Reform	No	Yes
3.5	<p>Deliver.....Use other levers available to the Council to reduce the use of Single Use Plastics through licensing and events on Council owned land. Continue to roll out the use of sustainable events guides.</p> <p>To achieve.....A reduction in consumption based emissions across the city and promotion of more sustainable events.</p> <p>By.....Ongoing</p>	Neighbourhoods (Parks, Leisure and Events).	No	No
3.6	<p>Deliver.....Work with Manchester Health and Care Commissioning and FoodSync to deliver the priorities of the Manchester Food Board.</p>	Manchester Health and Care	No	No

	<p>To achieve.....The establishment of a more economically, socially and environmentally sustainable food system for Manchester.</p> <p>By.....Ongoing</p>	Commissioning		
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4. Climate adaptation, carbon storage and carbon sequestration

<p>Introduction</p>
<p>Adaptation to climate change requires changes to the way in which the city’s infrastructure is developed and how we manage issues such as flooding and extreme heat. Manchester has approximately 1.2 million trees and a tree coverage of over 20% which is one of the highest in Greater Manchester. In the last three years alone over 10,500 trees have been planted as well as nearly 3,000 hedge trees and 13 community orchards (bringing the total up to 48). The Manchester i-trees eco assessment undertaken in 2018 by Treeconomics found that Manchester’s existing tree coverage stores 124,330 tonnes of carbon, sequesters 4,980 tonnes of carbon every year and removes 84 tonnes of pollution. The financial benefits of trees are worth over £3million every year. Improving the quality and quantity of trees and hedgerows will increase the volume of carbon that can be stored and ultimately sequestered whilst also improving the environment and helping to reduce flooding.</p>
<p>Commitment</p>
<p>Ensure that the city’s infrastructure is resilient to climate change and that nature based solutions are used to combat issues such as flooding. Develop an intelligence led approach to tree and hedge planting, and nature based solutions will be developed to support the delivery of the Green and Blue Infrastructure Strategy. The quality and quantity of trees and hedges both on Council owned land and across the city will be informed by a Tree Opportunity Mapping assessment which will use the i-Trees Eco Assessment work to identify appropriate locations for additional tree planting to take place. It will link tree planting opportunities with locations that would benefit from increased climate change resilience. The assessment will suggest appropriate tree species and support funding bids to facilitate the delivery of both tree planting and ongoing maintenance.</p>

Council				
Ref	Action	Owner	Capital Investment required	Revenue investment required
4.1	<p>Deliver.....The Manchester Tree Action Plan</p> <p>To achieve.....A target of 1,000 new trees, 1,000 new hedge trees and 4 community orchards a year. Investigate opportunities for planting in parks, Council owned open spaces, highways and the grounds of buildings.</p> <p>By.....Ongoing</p>	City Policy; Neighbourhoods	Yes	Yes
4.2	<p>Deliver.....Complete the Horizon 2020 Grow Green Project and the new 'sponge' park in West Gorton to and use the learning to inform green and blue infrastructure across the city.</p> <p>To achieve.....Encourage nature based solutions to be embedded in open spaces, highways schemes and new residential and commercial developments.</p> <p>By.....Ongoing</p>	City Policy	Yes	Yes
City				
Ref	Action	Owner	Capital Investment required	Revenue investment required
4.3	<p>Deliver.....Fund and commission a Tree Opportunity Mapping assessment of tree planting opportunities within existing woodland (and particularly those affected by Ash Dieback), within parks, along streets and within gardens.</p>	City Policy	No	Yes

	<p>To achieve.....This evidence will underpin work at a neighbourhood level by identifying local opportunities for planting and supporting funding bids. The mapping will include an assessment of which are the most appropriate species for carbon storage and sequestration.</p> <p>By.....December 2020</p>			
4.4	<p>Deliver.....Additional citywide funding for the tree planting to deliver 4.3</p> <p>To achieve.....Maximising the Council's contribution to the City of Trees (https://www.cityoftrees.org.uk/) 3 million trees target as part of the Northern Forest.</p> <p>By.....Funding put in place during 2021</p>	City Policy	Yes	Yes

5. Influencing behaviour and being a catalyst for change

<p>Introduction</p>
<p>Although the Council's direct CO₂ emissions make up approximately 2% of the city's total emissions, the Council has a unique role within the city to lead by example and also influence the behaviour of a range of different cohorts. Influencing positive behaviour change in Manchester's residents, workers and visitors and also influencing behaviours, policies and investments at a city region and national level will support the climate change agenda.</p>
<p>Commitment</p>
<p>To use every opportunity to engage, empower and equip Council staff and elected members with the knowledge and skills to make a positive difference. Influence behaviour change across the city's residents, businesses, public sector organisations, voluntary and community sector and</p>

visitors. Develop clear positions to influence and lobby Greater Manchester and UK Government to take more action to tackle the climate emergency.

Council

Ref	Action	Owner	Capital Investment required	Revenue investment required
5.1	<p>Deliver.....Roll out carbon literacy training across the Council using a pyramid approach with universal introductory e-learning module (or equivalent for staff with ICT access), 1 day equivalent Our Climate, Our City on a targeted basis working with specific services, elected members and the most senior 300 managers in the Council. Utilise internal communications and the Intranet to share information and promote behaviour change and action.</p> <p>To achieve.....A fully informed workforce who are able to support embedding climate change action within the organisation and across the city.</p> <p>By.....Training programme rolled out throughout 2020. E-learning module rolled out universally with 1 day training on a targeted basis.</p>	Human Resources and Occupational Development	No	Yes
5.2	<p>Deliver.....Roll out the additional 10% social value weighting for the environment to take the total social value to 30%. Launch this and update the suppliers and commissioners toolkits.</p> <p>To achieve.....Influence the behaviours and activities of new and existing suppliers through the Council's procurement and commissioning activity.</p> <p>By.....April 2020</p>	Integrated Commissioning and Procurement	No	No

5.3	<p>Deliver.....Continually review the revenue and capital gateway decision making processes and build addressing climate change into the grants to Voluntary and Community Sector organisations and cultural organisations.</p> <p>To achieve.....Use the Council's decision making and instruments to influence change within the Council and across the city.</p> <p>By.....Ongoing</p>	Finance, Governance and Scrutiny	No	No
City, Greater Manchester and National				
Ref	Action	Owner	Capital Investment required	Revenue investment required
5.4	<p>Deliver.....Work with Manchester Climate Change Agency and other partners to establish a citywide programme of community engagement activities. Include development of climate change actions in all 32 Ward Plans and use Neighbourhood Investment Funding and the Our Manchester Challenge Fund to support projects which will affect positive change.</p> <p>To achieve.....Support community groups and residents to engage in the climate change agenda and build their capacity to take positive local action.</p> <p>By.....Ward Plans by April 2020.</p>	Neighbourhoods	No	Yes
5.5	<p>Deliver.....A citywide communications strategy and campaign to raise awareness, promote positive behaviour change and share examples of projects.</p> <p>To achieve.....Promote positive action and behaviour change across the city's residents, workers, businesses and visitors.</p> <p>By.....April 2020</p>	Communications	No	Yes

5.5	<p>Deliver..... Continue to provide existing funding to the Manchester Climate Change Agency, underwrite the funding for a new Chief Executive and working with partners to secure additional funding.</p> <p>To achieve.....A Manchester Climate Change Agency which is fit for purpose to effectively champion and drive forward citywide climate change action.</p> <p>By.....December 2020</p>	City Policy	No	Yes
5.5	<p>Deliver.....A plan for engaging, supporting and influencing key Manchester stakeholders (including businesses) to reduce their carbon footprint and sign up to the zero carbon ambition. This will include anchor institutions such as health partners and universities, and strategic development partners. Use the Council's membership of the Oxford Road Corridor Partnership to fully implement and embed the learning from the Horizon 2020 Triangulum project and work up plans for a zero carbon corridor.</p> <p>To achieve.....Support the work of the Manchester Climate Change Partnership as the city's principal mechanism for engaging, mobilising and supporting organisations across the city. Influencing and supporting key stakeholders to reduce their carbon emissions and identifying Council actions that will unblock barriers to enable them to accelerate action.</p> <p>By.....December 2020</p>	City Policy	No	No
5.6	<p>Deliver.....A large scale event with the city's schools to support them to take action on climate change.</p> <p>To achieve.....Additional knowledge and capacity across the city's schools to develop and implement their own bespoke climate change action plans and improvements to their buildings.</p> <p>By.....July 2020</p>	Education, City Policy	No	Yes

5.7	<p>Deliver.....Use the Council’s representatives and senior officers and elected members to influence the Greater Manchester Pension Fund; Greater Manchester Combined Authority; Greater Manchester Chamber of Commerce; Transport for Greater Manchester and the GM Transport Committee; Health and Social Care Partnership.</p> <p>To achieve.....Influence key Greater Manchester organisations to decarbonise and promote sustainable behaviour, investments and decision making to help deliver the city’s climate change ambitions.</p> <p>By.....Ongoing</p>	City Policy	No	No
5.8	<p>Deliver..... Develop a proposition to government in relation to COP26 being held in Glasgow in November 2020. This will include working through partnerships with other authorities via the Council’s membership of Core Cities UK, with other local authority areas with airports, through the Convention of the North and directly to the government.</p> <p>To achieve....Influence and work in partnership with government to ensure that Manchester (and other UK cities) can meet local climate change objectives and contribute to the UK’s zero carbon commitment.</p> <p>By.....November 2020</p>	City Policy	No	No
5.9	<p>Deliver.....Work with Manchester Climate Change Agency to actively participate in international networks and projects to identify and develop best practice that can be used to accelerate action in Manchester. Including but not limited to:</p> <ul style="list-style-type: none"> ● Covenant of Mayors ● Eurocities ● URBACT Zero Carbon Cities (2020-22) ● C-Change 	City Policy	No	No

	<p>To achieve.....Learning from other cities who are delivering ambitious climate change programmes and use funding to build capacity within the Council and city. Share Manchester's learning to support other cities through programmes such as Zero Carbon Cities.</p> <p>By.....Ongoing</p>			
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