PLAYING OUR FULL PART

How Manchester's Residents and Businesses Can Benefit from Ambitious Action on Climate Change







Contents

Executive Summary

- 1. Introduction
- 2. Our Manchester and Updating our Climate Change Commitments
- 3. How Residents Will Benefit and How They Can Get Involved
- 4. How Businesses Will Benefit and How They Can Get Involved
- 5. Key Partners
- 6. Working with Other Cities and International Partners
- 7. Next Steps
- 8. Further Information

Commitment to Act

Executive Summary

The *Our Manchester* Strategy sets out the vision for Manchester to 'be in the top flight of world-class cities by 2025' and commits the city to 'playing our full part in limiting the impacts of climate change'.

This document has been produced by Manchester Climate Change Board to make four proposals to Manchester City Council and the city more widely:

- Proposal one: Manchester adopts the Tyndall Centre's proposed targets and definition of zero carbon and includes them formally in the *Our Manchester* and Manchester City Council policy framework. Namely: a limited carbon budget of 15m tonnes CO₂ for 2018-2100; 13% year-onyear reductions in CO₂ from 2018; zero carbon by 2038.
- Proposal two: Manchester recognises that action on climate change is a fundamental part of achieving the city's 2025 vision and objectives. And by taking urgent action to become a zero carbon city, starting in 2018, we will achieve more benefits for Manchester's residents and businesses up to 2025 and beyond.
- Proposal three: Manchester accelerates its efforts to mobilise all residents, businesses and other stakeholders to take action on climate change, starting in 2018.
- Proposal four: Manchester puts in place an action plan and the resources needed to stay within the proposed carbon budget, starting in 2018.

We are publishing this document in October 2018 with the aim that Manchester City Council endorses it during November 2018 and formally includes it as part of the *Our Manchester* and Manchester City Council policy framework. We hope it will also help support the development of a Greater Manchester commitment to zero carbon 2038, in time for the next Greater Manchester Green Summit in March 2019.

The Board are also inviting all organisations that work in the city to commit to be part of Manchester's collective action on climate change.



1. Introduction

In March 2016 the *Our Manchester* Strategy was launched, setting out the vision for Manchester to 'be in the top flight of world-class cities by 2025' and committing the city to 'playing our full part in limiting the impacts of climate change'.

The strategy is underpinned by the comments of residents, businesses and stakeholders who commented on the draft strategy, with around one-third stating that climate change action and environmental improvement needed to be core parts of Manchester's further development.

Over two and a half years since the launch of Our Manchester, the climate science and political landscape has continued to evolve. 2018 has provided us with further impetus for urgent action on climate change. Extreme weather linked to climate change has wrought devastation around the world over the last 12 months. From Athens to the Arctic Circle, tinderbox dry conditions set Europe on fire this summer, including the moorlands on our own doorstop. Hurricane Michael left 'unimaginable destruction' in Florida, adding to the 385 billion dollars' worth of damage from hurricanes in 2017. Flash floods in Majorca claimed the lives of UK tourists in October 2018. All on top of the floods and droughts that continues to plaque countries where many of Manchester's residents have family and friends, including Bangladesh, India, and Pakistan. There is now no corner of the planet that is not affected by the impacts of climate change, Manchester included.

However, there is some room for hope. The latest report by the Intergovernmental Panel on Climate Change report sets out that it is not too late to limit global warming to 1.5°C – but only if urgent action is taken now.

This year Manchester Climate Change Board has been working with the Tyndall Centre for Climate Change Research at the University of Manchester to understand what action Manchester needs to take. As a starting point Tyndall have recommended that Manchester should adopt new targets: a limited carbon budget of 15m tonnes CO_2 for the period 2018-2100, 13% year-on-year reductions in citywide CO_2 emissions, starting from 2018, and for the city to be zero carbon by 2038.

This document has been produced by the Manchester Climate Change Board and Agency to take forward these recommendations.

We are publishing this document in October 2018 with the aim that Manchester City Council endorses it during November 2018 and includes it as part of the *Our Manchester* and Manchester City Council policy framework. We hope it will also help support the development of a Greater Manchester commitment to zero carbon 2038, in time for the next Greater Manchester Green Summit in March 2019.

Manchester is a city well-known for leading change that benefits its residents and businesses and providing inspiration for others to follow. We have the opportunity to do that again, on the one subject that is already and will increasingly define the quality of life for everyone on the planet, throughout the 21st century and beyond. We look forward to working with Manchester City Council and partners to make this opportunity a reality.

Gavin Elliott

Chair, Manchester Climate Change Board Member of the *Our Manchester* Forum

2. Our Manchester and Updating Our Climate Change Commitments

2.1 The Board's Commitment to the Our Manchester Vision and Objectives

The *Our Manchester* Strategy for 2016-25 sets out the vision for Manchester to 'be in the top flight of world-class cities by 2025' and commits the city to achieve five headline objectives:

- A thriving and sustainable city: supporting a diverse and distinctive economy that creates jobs and opportunities;
- A highly skilled city: world-class and homegrown talent sustaining the city's economic success:
- A progressive and equitable city: making a positive contribution by unlocking the potential of our communities;
- A liveable and low-carbon city: a destination of choice to live, visit and work;
- A connected city: world-class infrastructure and connectivity to drive growth.

The chair of the Manchester Climate Change Board is part of the *Our Manchester* Forum, working with partners to drive forward the city's climate change agenda as an integrated and mutually supportive part of the city's wider strategy.

Manchester Climate
Change Board supports
the Our Manchester
vision and objectives
and is committed to
working with partners
to help achieve them.

2.2 Updating Our Climate Change Commitments

When *Our Manchester* was published in 2016 'playing our full part' included in its definition that Manchester 'will be on a path to being a zero carbon city by 2050'. During 2018, the Manchester Climate Change Board has been working with the Tyndall Centre for Climate Change Research at the University of Manchester to ensure the city's commitments are up-to-date.

The Tyndall Centre's analysis recommends that, in order to make a fair contribution to the Paris Agreement Manchester should adopt the following targets:

- Adopt the carbon budget and only emit a maximum of 15m tonnes CO₂ during the period 2018-2100 (our 'carbon budget'),
- Which means reduce CO₂ emissions by 13%-year-on-year, starting from 2018, and
- Become a zero carbon city by 2038.

Our proposed definition of zero carbon is based on the Tyndall Centre's recommendation: the point beyond which Greater Manchester's average annual carbon emissions fall to below 0.6MtCO₂/yr (i.e. over 97% lower than 1990 levels). This includes carbon dioxide emissions from the energy system only, i.e. the gas, electricity and liquid fuels used to power and heat our homes and businesses and to transport us around the city.

Some scenario modelling was then undertaken using the SCATTER¹ tool, covering the following activities on a GPC² aligned emissions inventory:

- Low carbon energy supply Protecting Manchester's residents and businesses against future energy price shocks while accelerating grid decarbonisation.
- Domestic buildings Reducing energy demand and shifting to lower carbon heat sources, lifting families out of fuel poverty, saving residents money on their energy bills as well as reducing greenhouse gas emissions.
- Commercial buildings Reducing energy demand for heating, cooling, hot water and appliances, along with shifting away from gas heating.
- Transport Shifting to Ultra Low Emissions Vehicles (ULEVs) in addition to reducing travelling distances and shifting to healthier (active travel such as cycling and walking) modes of transport.
- Waste Reducing waste while maximising recycling and enhancing the circular economy as well as recovering resources to support bioenergy opportunities.

Within each area, there are emissions reduction activities that are easier to measure and influence than others, for example, buildings which the city or city stakeholders have direct control over. The Board also recognises there are areas of the city's activities that generate CO_2 indirectly and, whilst currently difficult to measure, the city still needs to address these emissions. We expect it will be possible to include them in future definitions of zero carbon when data and monitoring processes improve. In the meantime, the Board proposes Manchester's carbon reduction plans (see Section 7) still

include activity in these indirect areas, but acknowledge that the impacts and monitoring of such initiatives will be more challenging. This includes (and is not limited to):

- Construction materials (supply chain impacts);
- Food (supply chain impacts);
- Consumer products and goods (supply chain impacts);
- Transport emissions (for journeys originating within, but ending outside of, Manchester).

Emissions from flights from Manchester Airport are not included in our definition of zero carbon. This is because the Tyndall Centre analysis allocates aviation emissions to a UK-wide aviation carbon budget, rather than allocating emissions to specific local authority areas. The implication for Manchester and Manchester Airport is that the city needs to contribute to work with UK Government to develop a national plan for managing aviation emissions, as part of a wider UK strategy for reducing emissions in line with the Paris Agreement. However if the UK aviation budget is exceeded Manchester's carbon budget will need to be reduced.

UK Government provide data at local authority level for CO₂ but not for other types of greenhouse gases. These other gases are emitted in the UK from land use, agriculture, waste and industrial process sectors. Manchester does not therefore emit very significant levels of non-CO₂ greenhouses gases. But they do still make a contribution to global climate change, however small. On that basis, if non-CO₂ emission datasets become available in the future, Manchester's targets and the precise definition of zero carbon will need to be reviewed.

Proposal one:

Manchester adopts the Tyndall Centre's proposed targets and definition of zero carbon and includes them formally in the Our Manchester and Manchester City Council policy framework. Namely: a limited carbon budget of 15m tonnes CO_2 for 2018-2100; 13% year-on-year reductions in CO_2 from 2018; zero carbon by 2038.

2.3 How Climate Change Action Can Contribute to Our Manchester Objectives

As well as contributing to global efforts on climate change, the Board believes that meeting these targets will also enable the city to deliver the wider vision and objectives of *Our Manchester*, bringing about more benefits for residents and businesses over the short, medium and long-term.

If the city does not become zero carbon by 2038, the Board believes that this will delay, and may even prevent the realisation of the *Our Manchester* vision and objectives. However, by embedding science-based action on climate change as part of the city's growth and development, the Board believes that this will help Manchester to be:

- A world-class city: Adelaide, Berlin, Copenhagen, Melbourne, New York, Oslo, Portland, Seattle, Stockholm, Vancouver and others are among a rapidly growing group of cities committing to zero carbon and realising the benefits that come as a result.
- A thriving and sustainable city: businesses and investors are seeking forward-looking cities that recognise the challenges and opportunities of the 21st century and can provide a resilient economy to support their long-term ambitions and success.
- Highly skilled city: today's school leavers and graduates are increasingly looking for cities and businesses that share their ambitions to make a positive contribution to society and the natural environment.

- A progressive and equitable city: action on climate change goes hand-in-hand with improving air quality, lifting people out of fuel poverty, addressing low levels of physical activity and embracing other city priorities, particularly those affecting more deprived areas of the city. By contributing to the global effort on climate change this will also help to limit the impacts in communities around the world, including those in emerging economies who are being disproportionately affected as a result of CO₂ emitted historically by those in more developed countries.
- A liveable and zero carbon city: locally generated renewable energy that creates revenue for local communities and public services, safe walking and cycling routes, homes with low energy bills are all potential options to help us become a zero carbon city.
- A connected city: integrated and wideranging networks of zero carbon public transport and active travel routes are more effective ways to move around cities, avoiding the congestion and pollution that comes from our current modes. Digital infrastructure and teleconferencing can reduce the need for travel.

Proposal two:

Manchester recognises that action on climate change is a fundamental part of achieving the city's 2025 vision and objectives. And by taking urgent action to become a zero carbon city, starting in 2018, we will achieve more benefits for Manchester's residents and businesses up to 2025 and beyond.

2.4 A Collective Effort

Since the development of the city's first climate change strategy in 2009, Manchester: A Certain Future, climate action has been a collective, citywide effort. This approach has resulted in an estimated 34% reduction in CO₂ during 2005-17. It has come about from the actions of local residents, private sector businesses, local charities and not-for-profit organisations, universities, schools and colleges, Manchester City Council, Greater Manchester Combined Authority, other local public sector organisations and decarbonisation of the National Grid through Government policy.



Proposal three:

Manchester accelerates its efforts to mobilise all residents, businesses and other stakeholders to take action on climate change, starting in 2018.

3. How Residents Will Benefit and How They Can Get Involved

Our homes

Our home and our community are at the heart of our lives, providing a place of warmth, security and rest. However, over 34,000 low-income households in Manchester live in fuel poverty, in poorly insulated homes which cost more to heat and are hard to retrofit. The Greater Manchester Business Case estimates that for every 2,000 households supported out of fuel poverty, the potential benefits to the NHS alone (due to reduced winter ill-health and mortality) stand at £1m per year.

Ask any resident would they like to live in a warm and healthy home and save money on their energy bills and the answer would be a resounding yes! Action on our homes needs to support Manchester's most vulnerable residents out of fuel poverty and provide the most energy efficient, low and carbon neutral homes possible. The solution is to reduce energy demand in our homes and put in place systems that allow us to meet this reduced energy demand with renewable and zero carbon fuels. This can be achieved through building new homes to zero carbon homes standard and by retrofitting existing properties to a minimum low carbon standard.

Energiesprong have completed the UK's whole house retrofit trial in Nottingham which has seen over an 80% improvement in the fabric thermal performance of homes.

Longsight, Manchester. The UK's first 'Passive House Plus' retrofit at Erneley Close in Longsight has recently been achieved in Manchester, the learnings from which have the potential to be exploited for the wider benefit of the city.

Manchester Carbon Co-op's whole house retrofit programme

Manchester's Carbon Co-op Carbon Community Green Deal programme has worked with 12 owner occupiers around Greater Manchester to transform their homes to achieve savings in energy bills of between £200 and £600 with one household eliminating their energy bills and generating income from selling energy back to the grid.

http://carbon.coop/content/whole-house-retrofit-community-green-deal



What can we all do now?

See what actions you can do to cut your bills, make your home warmer and more sustainable at **www.eachhomecountsadvice.org.uk**

Things you can do now are:

- Save energy by fitting LED and low energy lighting, turning off appliances when not in use, which could save you £45-£80 a year, install cavity wall insulation, saving around £145 a year and double glaze your home, which could save you up to £120 a year.
- Switch to a renewable energy supplier with the Big Clean Switch and save up to £304 per year

https://bigcleanswitch.org/gm /

 You may be eligible for a Trained Home Energy Advisor to visit your home and provide advice through Local Energy Advice Partnership (LEAP). Check your eligibility at https://applyforleap.org.uk/ Manchester residents and private landlords can take advantage of a Home Energy Loan Plan (HELP) of up to £10,000 to help pay for energy efficiency improvements and installation

http://www.careandrepair-manchester. org.uk/wp-content/uploads/2014/04/Help-Leaflet-web.pdf

You can also generate your own energy and
 / or heat water for your own use through
 installing renewable technologies such as
 Solar Photovoltaics (PV) and Solar water
 heating and there may be a financial incentive
 to help you paid from Government. Other low
 carbon options include heat pumps, micro
 Combined Heat and Power (CHP), heat
 pumps and wood heating.

https://www.eachhomecountsadvice.org. uk/pages/low-carbon-heating-options

Transport and travelling

Manchester has some of the highest levels of air pollution in Britain, resulting from diesel engines from cars, buses, vans and Heavy Goods Vehicles (HGV's). This is estimated to cause over 1,000 premature deaths every year with central Manchester amongst the highest rate of hospital admissions for asthma in the country. The region has just less than 2 years to cut its illegally high nitrogen dioxide levels which are linked to diseases such as stroke, heart disease, lung cancer, and respiratory infections. With congestion costing businesses in Greater Manchester £1.3 billion annually, we cannot afford to go on with business as usual.

As with housing the solution is to reduce energy demand from transport and provide low and zero carbon infrastructure and transport systems. Infrastructure changes such as bus priority and segregated cycle lanes along Oxford Road provide a safer and more pleasant experience for those who can travel by cycle, walk and take public transport.

All of the city's transport can become emission free by switching to very efficient electric transport including electric cars and by electrification of the rail system. The city's Metrolink trams already run on around 70% renewable energy. For essential car journeys, taxis, business fleet, vans and some light freight vehicles switching to Electric Vehicles (EV) and Ultra Low Emission Vehicles (ULEV) can provide a cheaper, lower maintenance and environmentally friendly. For more information visit:

www.goultralow.com/why-switch/benefits-of-electric-cars/.

Copenhagen has invested in infrastructure to make cycling easier, faster and safer, and has introduced policies that set requirements for bike space per employee for commercial buildings, and bike parking space for residential developments. They have also closed large areas of the city centre for motor vehicles.

Paris is using a sticker system to restrict vehicle access into city centres whereby the most polluting have been banned from the city and other categories may be refused entry to the city on a given day, if air quality is particularly poor.

In Manchester in 2017 Chris Boardman unveiled his vision for "Bee Lines" a fully joined up cycling and walking network of over 1,000 miles connecting communities across Greater Manchester. The network will provide infrastructure for active travel as well as saving the NHS money; evidence suggests that switching to active travel for short motor vehicle trips could save £17bn in NHS costs over a 20-year period, with benefits being accrued within 2 years for some conditions. The largest cost savings would come through reductions in the expected number of cases of type 2 diabetes (annual cost to NHS from diabetes is £9bn).

What can we all do now?

- Walking and cycling more and using the car less is top of the "To do" list for cheap and healthy travel www.tfgm.com/made-tomove/beelines
- The Travel Choices Team can provide details of schemes such as Bike to Work, discounted travel schemes and work and journey planning. Residents and students have their own pages here: http://archive.tfgm.com/ travelchoices/Pages/residents-home.html and http://archive.tfgm.com/travelchoices/ Pages/students.html
- Download the "Get me there" App and plan your journey on the go with real time travel updates.
- For journeys to work find out if you can share a regular journey with another driver at https://www.carsharegm.com/register.aspx





The food we eat, things we buy and waste.

The Manchester zero carbon ambition does not at the moment include embedded (Scope 3) emissions, such as those produced in the growing, production, processing and distribution of crops, livestock and food. However, analysis of the total carbon footprint of Greater Manchester calculated that around 20% of a Mancunians' personal carbon footprint results from food they purchase and consume. The type of food we eat contributes enormously to our carbon footprint; meat and dairy are the most carbon intensive. There is now a perceivable shift in public attitudes towards vegetarian and vegan diets – which is good news for the planet and can lead to added health benefits too.

The other recent lifestyle trend has been the drive to reduce plastic waste. Dubbed "the Blue Planet" effect the accompanying media storm has highlighted the devastating effects of plastics on the environment and in our oceans. Greater Manchester has followed suite with a 'Plastic Free Greater Manchester' campaign which was announced at the Greater Manchester Green Summit in March 2018. This aims to reduce and eventually eradicate singleuse plastics by 2020, supported by 43 hospitality businesses.

More recently there has been a focus on "throwaway" and fast fashion. Landfill sites are now 20% full of throwaway clothes worn a couple of times before being binned. The fashion industry has a devastating environmental effect in countries such as Indonesia and we as consumers are now demanding that being fashionable doesn't need to cost the earth.

What can we all do now?

There are simple everyday actions we can all do now that will help us to eat better, buy smart and produce less waste. As there is a "carbon footprint" attributed to every item we buy there is always a lower carbon way of doing things, such as:

- Choose more plant based foods and eat less meat and dairy; for example by having a Meat Free Monday www.meatfreemondays.com
- Buy local, in season foods and from schemes such as certified Organic, local veg boxes and fish from sustainable sources https:// vegboxpeople.org.uk/
- Choose sustainable products such as Fairtrade, Rainforest Alliance,
- Select items such as food and liquids in minimum packaging, buy in bulk or buy loose from your local grocer or butcher and use your own bag or container,
- Avoid single use items by re-using plastics such as refillable drinks and food containers, re-using carrier bags and having milk delivered by a milk round,
- Choose the most energy efficient electric appliances you can,
- Repair, reduce, reuse, and recycle things wherever possible – from clothes to electric goods.

Ask your politicians to commit to zero carbon

Our politicians have the responsibility to put in place the right policies to help make positive change happen. We can all act now and ask our politicians to commit to helping to create a healthy, prosperous future for all of us. Write to your local councillor and MP and ask them to commit to Zero Carbon Manchester 2038.

www.writetothem.com





4. How Businesses Will Benefit and How They Can Get Involved

The Low Carbon and Environmental Good and Services Sector (LCEGS) is worth £5.4 billion to the Greater Manchester economy and is growing at a rate of 6% per year, employing 38,000 people across over 2,000 businesses. However, all businesses have significant opportunities to reduce their emissions and costs through increasing energy efficiency, reducing wasted energy and resource efficiency.

Greater Manchester's green technologies sector (which includes environmental industries such as renewable energy, water and wastewater treatment, waste management, recovery and recycling) is now performing better than many other global cities of comparable GDP (Gross Domestic Product), such as Berlin, Rome and Copenhagen. Total sales of green technologies and services reached £6.7 billion in 2015/16, which is also comparable with cities of much larger GDP like Toronto, Milan, Seattle and Rotterdam.

Your business can make a commitment today to take action on climate change by signing the Pledge (at the end of this document) and thinking about how you could reduce the energy waste of your building and operations, carry out an energy audit in your workplace and improve the resource efficiency of your business.



By assisting local organisations and companies including some of the city's largest employers to align their strategies with the goals of the Paris Agreement, our carbon budget based approach can help accelerate the transition to a low carbon economy and avoid the worst effects of climate change. There are a number of benefits that a company can expect to see from setting a science-based carbon budget:

- Increased brand reputation: As consumers become increasingly aware of the effects their choices have on the environment, and ethical consumption continues to grow, a brand's reputation for sustainability is of utmost importance.
- Corporate Social Responsibility (CSR): For many companies adopting a carbon budget approach offers a way to deliver the level of corporate responsibility their customers expect of them.
- Investor confidence: Investors are increasingly taking interest in businesses' environmental policies and reporting, as they look to shore up their investments for the future, especially as the "divestment" campaign out of fossil fuel investment gathers pace.
- For multinational retailer Tesco, setting a carbon budget target (net zero by 2050) allowed them to 'demonstrate their seriousness in tackling climate change both to investors and other stakeholders' showing themselves to be a forwardthinking, sustainably-minded company to a new generation of ethical consumers and investors.

- Resilience against regulation and first mover advantage: as national governments continue to work to implement the Paris agreement – and to ratchet up the ambition of their country-level pledges – companies can expect to see more regulation to curb emissions intensive activities. Aligning early with the Paris Agreement early could also future proof your business model.
- Increased innovation: With the transition to a low-carbon economy underway and growing in momentum through the UK Government's "Clean Growth Strategy" companies that are aligning their strategies with this step-change are opening themselves up to a world of opportunity.
- Triple bottom line savings: While a frequently heard argument is that low carbon business models comes at too high a cost, companies find that by setting such a target and investing in new low carbon technologies they are ensuring their operations remain lean and efficient, and are building resilience against a future where resources especially those derived from fossil fuels will become increasingly expensive.

Get started now!

If you are wondering where to start there is help available:

The Greater Manchester Growth Company and Green Growth Hub

The Growth Company Business Hub provides tailored support to help small and medium sized businesses in Greater Manchester to boost profitability, cut carbon emissions, improve energy efficiency, and improve products and processes. The Hub provides specialist advisors and services including a virtual Low Carbon Network to help find local suppliers, a fortnightly Green Intelligence e-bulletin and the Green Growth Pledge, which helps companies to celebrate their green commitments and create action plans to reduce their impact.

www.green-growth.org.uk

Green City Business Consortium

A Green City Business Consortium will bring together Greater Manchester businesses looking to make the change from single-use plastics to reusable, recyclable plastics and other alternative materials.

Circular Economy Club Manchester

Manchester's Circular Economy Club hosted by Manchester Metropolitan University provides academic expertise, research and practical experience to help businesses transition to zero waste by embedding the principles of Circular Economy.

Other things you can do now include:

- Switch to a renewable energy tariff http://www.greenintelligence.org.uk/article/ clean-powered-firms-are-more-profitabletheir-peers
- Procurement help LCEGS sector development and job creation by purchasing from local companies http://www.greenintelligence.org.uk/article/ green-tech-greater-manchester
- Switch your Business Fleet to Electric
 Vehicles and save money:
 http://www.greenintelligence.org.uk/article/manchester-could-lead-electric-charge-says-survey
- Become a Carbon Literate Organisation and equip your staff with the knowledge and support they need to transform your business.

www.carbonliteracy.com

Ask your politicians to commit to zero carbon

Our politicians have the responsibility to put in place the right policies to help make positive change happen. We can all act now and ask our politicians to commit to helping to create a healthy, prosperous future for all of us. Write to your local councillor and MP and ask them to commit to Zero Carbon Manchester 2038. The "Write to Them" website provides a free service to help you contact your local politicians https://www.writetothem.com/.

5. Key Partners

Manchester

To meet our climate change targets Manchester has been involving and will need to continue to involve key partners that can directly reduce emissions from their own operations, as well as supporting influencing and enabling other organisations and communities to act.

The Manchester Climate Change Board brings together a number of these key partners, based on their commitment to be part of the city's zero carbon journey. The Board will continue to work on engaging an ever-wider network of partners in the city's climate change efforts, including through the recruitment of Manchester Climate Change Ambassadors. The organisations, sectors and partnerships currently represented on the Board are as follows:

- Commercial property and developers: Chris Oglesby, Chief Executive, Bruntwood
- Electricity North West: Helen Seagrave, Community Energy Manager
- Faith: Dean Rogers Govender, Manchester Cathedral / Chair, Our Faith Our Planet
- Federation of Small Businesses: Holly Bonfield
- Manchester Climate Change Youth Board: Amelia Gilchrist, Ash Farrah, Dan Walsh, Hannah Mitchell, Jonathan Keen, Tudor Baker
- Manchester City Football Club: Pete Bradshaw, Director of Infrastructure and Estates
- Manchester Cultural Leaders Group: Simon Curtis, Chair, Manchester Arts Sustainability Team / Head of Production, Royal Exchange

- Manchester Housing Providers
 Partnership: Ian Thomson, Executive
 Director, Johnnie Johnson Housing
- Manchester Metropolitan University: Prof. Liz Price, Head of School of Science and the Environment
- Media: Steve Connor, Chief Executive, Creative Concern
- University of Manchester: Prof. James Evans, Sustainability Lead and Manchester Urban Institute

Greater Manchester

In addition to city-based partners, Manchester will need to work with Greater Manchester (GM) colleagues and their stakeholders in the other nine local authorities and the GM Combined Authority. This will be particularly important when we need to secure additional powers and funding through Devolution, new national Government policies, as well as establishing city-region programmes that can attract investment, expertise and supply chains more readily than on a district-by-district basis.

UK Government

On 15th October 2018 the Government formally instructed the Committee on Climate Change (CCC) to advise on a Paris aligned carbon budget for the UK. The Board would expect that the UK Government adopts the Committee's recommendations and gives UK cities the powers and funding they will need to make their full contribution to a zero carbon UK.

6. Working with Other Cities and International Partners

Through its membership of the Global Covenant of Mayors, Eurocities and other partnerships Manchester is already part of a global effort on climate change. If we are to realise our aim to be a 'world-class' city we should participate actively in these networks, sharing knowledge and experiences that can help both our own efforts and those of our partner cities. We should also look to strengthen and expand our relationships with cities and other key partners.

A summary of potential opportunities currently known to the Board include:

UK

• UK Core Cities - www.corecities.com

Europe

- Eurocities www.eurocities.eu
- Maintaining links with EU cities and the European Commission, including through Eurocities and existing EU-funded projects

International

- Global Covenant of Mayors and the Edmonton Declaration – https://www. globalcovenantofmayors.org/press/signedmonton-declaration/
- C40 www.c40.org
- Carbon Neutral Cities Alliance http:// carbonneutralcities.org
- ICLEI www.iclei.org
- ICLEI LGMA (Local Governments and Municipal Authorities) initiative for coordinating the input of local authorities as part of the United Nations climate change processes
- United Nations Framework Convention on Climate Change (UNFCCC) – building on the city's engagement to date and looking at the potential for Manchester organisations to participate as 'Observer Organisations' – https://unfccc.int/







7. Next Steps

Manchester's climate change journey started with the production of our first plan in 2009. The proposals in this document build on our work to date and are designed to help accelerate action across the city. It is informed by the C40's 'Deadline 2020' report, which sets out that, if

they are serious about making a full contribution to global action on climate change, the end of 2020 is the absolute latest date for cities to have a Paris-aligned plan in place and be working towards its delivery.

Proposal four:

Manchester puts in place an action plan and the resources needed to stay within the proposed carbon budget, starting in 2018.

The Board's proposed timetable is:

	City-level	Organisations and sectors	
November 2018	This document endorsed by MCC, on behalf of the city		
November 2018 to February 2019	Citywide action plan drafted with partners	Pledge to get involved and start to develop bespoke plans	
March 2019	Draft citywide plan adopted by MCC, on behalf of the city		
April 2019 to February 2020	Final citywide plan produced with partners	Continue to pledge and develop bespoke plans	
		Support provided to help plan development and preparations for delivery	
March 2020	Final plan adopted by MCC, on behalf of the city		
April 2020 to December 2038	Staying within our carbon budget and becoming a world-class zero carbon city		

8. Further Information and Appendices

This proposal should be read along with the **Technical Appendix 1** which has been produced by Anthesis Group and covers:

- Why act:
 - Health and quality of life
 - Economy and jobs
 - Climate Change
- Policy context
- · How to become zero carbon:
 - Current citywide emissions
 - Proposed citywide carbon budget
 - Potential citywide carbon reduction pathway / SCATTER
- What can organisations and sectors do:
 - CO₂ by sector
 - Actions

Appendix 2

The accompanying report of Manchester's recommended Carbon Budget *Quantifying* the *Implications of the Paris Agreement* to *Manchester* by the Tyndall Centre for Climate Change Research at the University of Manchester.

Appendix 3

The Tyndall Centre for Climate Change Research at the University of Manchester has issued a statement about the rationale behind Manchester's carbon budget in the wake of the recent special report from the IPCC.

http://ipcc.ch/report/sr15/

This report and the Appendixes can be found on the **www.manchesterclimate.com** website.

To get involved

There are many ways that you can get involved. You can follow MCCA on social media at:

- Facebook: www.facebook.com/McrClimate
- Twitter: www.twitter.com/McrClimate #ZeroCarbonMCR
- Instagram: www.instagram.com/mcrclimate

For further information visit: www.manchesterclimate.com/involved

Feedback on this report

We welcome your feedback. If you have any comments or thoughts on this report please email MCCA at:

info@manchesterclimate.com



Zero Carbon Manchester

Introduction

Manchester has committed to play its full part in limiting the impacts of climate change. According to the latest expert analysis that means emitting a maximum of 15 million tonnes of CO₂ between 2018 and 2100 (our 'carbon budget'), reducing our CO₂ emissions by 13% year-on-year, and becoming a zero carbon city by 2038.

Meeting these targets will make Manchester one of the world's leading cities for action on climate change, bringing us full circle from the industrial revolution to a new zero carbon revolution. It will also mean creating a dynamic and resilient economy where our businesses can thrive and where our residents will have access to good, secure jobs and the highest quality of life.

Manchester Climate Change Board wants all organisations in the city to help realise this vision.

Our Commitment to Act

[Sector/organisation] believes that Manchester should stay within a science-based carbon budget that is aligned with the Paris Agreement and set 2038 as the target date to become a zero carbon city.

[Sector/organisation] believes that all organisations and residents in Manchester need to be part of a collective effort to meet our targets and commits to contribute by:

- Acting now, including accelerating our existing decarbonisation activities, wherever possible,
- Taking responsibility for the CO₂ emissions from our business activities and working to reduce them to zero by 2038,
- Supporting and influencing our customers, residents, suppliers and other stakeholders to take action.
- Defining the support we need and proactively asking for it, including asking politicians for policy changes wherever relevant.

Signed		
Position		
Organisation		





