

MANCHESTER: A CERTAIN FUTURE

Annual Report 2015



Key facts

In 2014 Manchester's population was

516,000



There are

18,280*

BUSINESSES
in Manchester

Manchester's energy consumption in 2012 was

9,168 GWh



Manchester covers an area of

11,564

HECTARES



There were

314,500

PEOPLE WORKING
in Manchester in 2013

On average

72%



of journeys into the city centre were by PUBLIC TRANSPORT, WALKING OR BIKE IN 2014



Manchester has

32

ELECTORAL WARDS

split into



NEIGHBOURHOODS

in the north, south and centre of the city

There are

176**

schools in Manchester

87%

are ECO-SCHOOLS



Manchester RECYCLED

34.9%

of its household waste in 2014

Approximately

20%



of Manchester is COVERED BY TREES

1,616

citizens are certified as CARBON LITERATE



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* VAT / PAYE registered businesses.

** Includes state-funded primary, high and special schools, Pupil Referral Units (PRU) and academies.

*** Morning peak 73% and afternoon peak 71%.

INTRODUCTION FROM THE CHAIR OF THE MACF STEERING GROUP

On 2nd November 2014 the Intergovernmental Panel on Climate Change (IPCC) published its fifth Assessment Synthesis Report which summarised the findings of three assessment reports involving more than 550 authors from across the globe.

The report showed unequivocal scientific evidence that the Earth's climate is changing, that these changes are occurring faster than anticipated, and that they are a direct result of human activity – primarily the combustion of fossil fuels.

The IPCC report is very clear on the options we have: we can continue with the current carbon intensive pathway and the route to greater than 2°C global temperature rises, or transition to a low-carbon energy path with a 2°C future, and the value-added benefits of energy efficiency savings, stronger economic growth and improvements to public health.

When MACF was written in 2009, it set out how a joined-up way of addressing climate change would be critical to the plan's success; not only should Manchester make its fair contribution to global action on climate change, but it should do so in a way that delivers a range of social, environmental and economic benefits within the city and beyond. In this report you will see many examples of these types of actions taking place across the city. There are more than in last year's Annual Report but, as our analysis shows, still not enough to ensure that we can meet our 2020 targets.

This doesn't mean to say what is already happening isn't important. It is. It's rather that one of the key issues is that of 'scale'. Our 'bottom-up' stakeholder-led approach is a key

part of ensuring that action happens at scale; empowering and encouraging all individuals and organisations to take action on climate change.

As we look towards the 21st meeting of the Conference of the Parties (COP21) in Paris in December 2015, the devolution of powers to Greater Manchester and other significant developments, it is timely that we also reconsider the importance of actions at other levels; the critical role that they can play in helping to scale up activity on the ground, and how Manchester might best influence them to support the delivery of MACF.

One of my priorities over the last six months has been to shape the developing Manchester Strategy for 2015-25, working as part of the Manchester Leaders Forum. This will continue as we finalise the strategy and move to overseeing its delivery. If we get it right the strategy will be about more than just the next phase of the city's growth, it will be about green growth that delivers a net benefit in terms of climate change and environmental improvement.

From the local to the global scale and onto Paris in December: the science is clear – it is imperative that a deal is reached that requires all nations to act and limit global average temperature rises to 2°C. There is no other option. The outcome in Paris will shape our

action on climate change not only to 2020 but well beyond.

This is my outlook as we produce this report for 2015. Looking to 2020, we are making some progress against our targets but with more work needed by all in the city to ensure we reach them. The MACF plan for 2016-20, setting out the action needed to meet our 2020 targets, is now in the early stages of development, and will be published in 2016. We will be working with stakeholders from across the city to help develop the plan and we will publish details when we have a clear timetable for the plan's production. It is also important that we now start to look past 2020, to ensure that the work we deliver over the next five years will provide a firm platform for ongoing action to 2030 and beyond.

With that in mind, this year's Annual Report also introduces, for the first time, a carbon budget-based approach to monitoring our carbon emissions. Some will find this challenging, provocative, and perhaps even ill-timed given the challenge of achieving our current 41% absolute CO₂ reduction target. But it's important to recognise that it's not just about how much CO₂ we emit in 2020; the key measure is how much we've emitted in total since 2005. After all, we only have a limited amount, or 'budget' we can emit if we are to avoid a 2°C+ temperature increase.


In our role to report honestly and transparently on how the city is doing on its climate change commitments and what more is needed, and to help ensure that we have the right approach now and into the future, it's important that the MACF Steering Group introduces this important new approach in city level carbon measurement. Halfway through the delivery of the original MACF plan for 2010-20, I am fortunate to be joined by a growing number of stakeholders who share this view; those who I work with on the Steering Group, the partners we work with closely through our sub-groups, and importantly those across the city who are already taking action on climate change.

Whether you are already part of this group, or engaging in this agenda for the first time, the key message is that we are making progress, but with more still to do. This report provides many examples of the good work already underway and the opportunities for more. I hope you will read it with this in mind and find the encouragement to continue with the hard work you are already undertaking, or choose to get involved for the first time.

Gavin Elliott, Chair
Manchester: A Certain Future
Steering Group



Gavin Elliott, Chair of MACF Steering Group
Image courtesy of Andy Haslam



“The science is clear;
it is imperative that a
deal is reached that
requires all nations
to act and limit global
average temperature
rises to 2°C.

“There is no other option.”

PART 1

MACF STEERING GROUP ACTION IN 2014/15

The first MACF Annual Report in 2014 set out the Steering Group's commitment to providing an honest report of both the city's activities against MACF (Part 2 of this report), and those of the Group itself in championing and supporting its delivery. This part of the report covers the actions of the Steering Group over the last 12 months and in particular, progress against the priority actions that were set out in the MACF Annual Report 2014. It describes what went well during 2014/15 and where more work is needed over the coming year.



DEVELOP A COMMUNICATIONS PLAN

Based on scoping work undertaken by the MACF Communications Group following the 2014 AGM, the Steering Group agreed a new communications plan for 2015/16 in February 2015. It is made up of the following key areas of focus to support the Group in championing the delivery of MACF and builds on work delivered during 2014.

- **Website:** further development and ongoing maintenance of manchesterclimate.com, which has been hosted on the Greater Manchester sustainability website 'Platform' since 2013.
- **Web-based articles and case studies:** a target of two per month to provide up-to-date news on activities contributing towards MACF; 22 articles were published in 2014/15.
- **Newsletter:** a new bi-monthly newsletter will start in summer 2015 circulated to those subscribed through the MACF website.¹
- **Social Media:** to maintain the existing MACF LinkedIn group and MACF Twitter accounts, and expand to establish a new MACF Facebook group in 2015.
- **Media:** engage with media outlets to increase coverage of MACF and climate change activity in Manchester.
- **Events:** identify key target audiences and build events around these.



DEVELOP A NEW PROGRAMME OF EVENTS AND ENGAGEMENT ACTIVITIES

The Annual Report 2014 committed the Steering Group to delivering:

- Two new 'Broadcast' events, where the Steering Group would update on their activities, tell the city what's been happening, champion success and importantly inspire continued action for people and organisations. The AGM for 2014 was the first Broadcast event (attended by over 100 people) with the following AGM arranged for 7th July 2015. One further event is needed for the 2015 events calendar, possibly linked to the development of the MACF plan for 2016-20.
- Two new 'Tell Us' events for the Steering Group to engage with stakeholders across the city and find out what's happening on the ground. The first two events were held at BDP in December 2014 and with Manchester Metropolitan University in March 2015, as part of Climate Week. The fast-paced format has been well-received by those attending to date and provides a blueprint for future events over the coming year, including events to the target audiences identified.



DEVELOP AN APPROACH TO MAKING MACF RELEVANT TO AND DELIVERABLE IN ALL OF THE CITY'S DIVERSE COMMUNITIES

The Steering Group has been working with the Manchester Green Leaders partnership and the Council to establish a new 'Eco Neighbourhoods' programme to engage with residents and communities and build their capacity to take action on climate change. Starting with workshop sessions in February and March 2015, action plans have been developed for five pilot Eco Neighbourhoods, with support and funding identified to take them forward during 2015/16. The Green Leaders and Steering Group are also working to roll the programme out across the city.

Bespoke programmes to support the city's businesses, schools and colleges are also currently in development. The University of Manchester and Manchester Metropolitan University continue to roll out staff and student awareness-raising and education programmes with links to MACF.



¹ Visit manchesterclimate.com/user/register



DEVELOP A 'SMARTER' PLAN FOR 2015-20, TAKING INTO ACCOUNT THE GREATER MANCHESTER CLIMATE CHANGE STRATEGY IMPLEMENTATION PLAN FOR 2015-20

The Greater Manchester Low Carbon Hub has been undertaking a study of 'low carbon wedges' to better understand progress to date against the Greater Manchester Climate Change Strategy CO₂ reduction target and further action needed during 2015-20.²

The Steering Group has been engaged with this work through a workshop session in December 2014 and through analysis of the 'wedges' methodology by the MACF CO₂ Monitoring Group. With this in mind, the Steering Group has agreed it would make sense to develop the next MACF plan for the period 2016-20, rather than 2015-20, as planned last year. The next steps are to assess whether we can use the wedges approach as the basis of developing the MACF plan for 2016-20. The process for its production will be published by early 2016, including opportunities for stakeholders to get involved.



INVITING, RECEIVING AND RESPONDING TO FEEDBACK

From the feedback forms for the 2014 AGM and 'Tell Us' events, we are making progress in raising awareness of MACF, providing a useful forum for sharing best practice and connecting stakeholders. We will continue with these events and publishing reports and news stories on the MACF website. Feedback is important to ensure that the Steering Group's activities can best support the city's stakeholders in sharing their activities with each other and inspiring others to take action.



EXPLORE NEW ORGANISATIONAL AND FUNDING MODELS TO ENABLE THE STEERING GROUP TO EMPLOY STAFF

From 2015 the Steering Group will see one of the most significant developments since its establishment in 2010. From July 2015 the Steering Group will be establishing a new MACF Community Interest Company (CIC) to provide further capacity to support it in taking forward its priorities and enable it to more fully deliver its role in championing the delivery of MACF, taking it significantly beyond its level of capacity to date, as a body of committed but resource-limited volunteers.

The aim of the MACF CIC over the coming year is to champion the delivery of the city's climate change action plan, put in place a programme of activity that will support its delivery in 2015/16, and prepare for the successful delivery of MACF 2016-20.

CASE STUDY 'TELL US' MMU MARCH 2015

Food fanatics, enthusiastic entrepreneurs and celebrity chefs were among the presenters at the MACF/MMU 'Tell Us' event in March 2015. Presentations on topics ranging from biodiversity in the Mersey Valley, the MetMUnch healthy food revolution and the creation of a new sensory garden for children at Central Manchester Hospital were among ten inspiring examples of local action on climate change and sustainability over the last year.

manchesterclimate.com/article/macf-mmunion-mmuetellusevent



The 'pecha kucha' style of mini presentations worked well on its second outing since being piloted at BDP the previous December.

"These are all great examples of what people can achieve when they choose to make a positive change in their local area. I hope others here will now want to do the same. After all, this is your city, it's up to you to make it the place you want it to be!"

DRAFT OBJECTIVES OF THE MACF CIC

- 1 **PROMOTE THE CITY'S PROGRESS TOWARDS THE DELIVERY OF MACF AND ENGAGE FURTHER STAKEHOLDERS TO TAKE ACTION.**
- 2 **INFLUENCE KEY STAKEHOLDERS AND DECISION-MAKERS TO TAKE ACTION THAT WILL CONTRIBUTE TOWARDS MACF AND CREATE THE RIGHT CONDITIONS FOR OTHERS TO TAKE ACTION.**
- 3 **CREATE NETWORKS AND SPACES FOR GENERATING IDEAS AND DISCUSSION, AND TO SUPPORT SCALING UP EXISTING GOOD PRACTICE.**
- 4 **IDENTIFY AND INITIATE PROJECT AND FUNDING OPPORTUNITIES.**
- 5 **RESEARCH, ANALYSIS, HORIZON SCANNING, AND NETWORKING, TO ENABLE MACF TO MAINTAIN AN OVERVIEW OF PROGRESS, KEY FORTHCOMING POLICY, PROJECT AND FUNDING DEVELOPMENTS AND TO POSITION MACF TO INFLUENCE AND TAKE ADVANTAGE OF WIDER OPPORTUNITIES.**
- 6 **ESTABLISH MECHANISM(S) FOR FUNDING THAT CAN SUPPORT THE MACF STEERING GROUP TO DELIVER ITS AIMS AND OBJECTIVES TO 2020.**

Over the next two years Manchester City Council will provide designated seconded staff as an interim resource and to help establish the new organisation, with a view to the Steering Group putting in place a financially self-sustaining, independent model for post-2017. This commitment by the City Council is part of its own Climate Change Action Plan for 2015-18, setting out how it will contribute towards the delivery of MACF³.

³Available from manchester.gov.uk/climatechange

SUMMARY

This section is intended to provide an honest review of the Steering Group's activities over the last 12 months. Following the appointment of the Group's new chair in September 2013, this Annual Report marks the completion of a transitional period for the Steering Group: one which has seen a comprehensive review of the Group, reprioritisation of its activities, restructuring, recruitment of new members, and the first steps toward establishing a new formally constituted MACF organisation.

While there are still some gaps in delivery, they are significantly fewer than they were 12 months ago. With a firm platform now in place, the new MACF CIC will provide a much greater level of resource to support the city's activities over the coming years. Further information on next steps is provided in Part 3.

²Visit enworks.com/ESTA-project-outcomes





PART 2

REVIEW OF PROGRESS AGAINST MACF IN 2014/15






The MACF Update in 2013 set out the actions to be delivered by the city and its stakeholders during 2013-15. These actions would build on the progress achieved in the first three years of delivering MACF and provide a transition from the pilots and smaller scale activities delivered over this period, to the delivery of larger scale, more transformational activities in the second half of the decade.

This part of the report provides a review of progress in 2014/15 against MACF's **four headline objectives** and the actions designed to achieve them, under the plan's **five themes**.

MACF HEADLINE OBJECTIVES

- 1 41% CO₂ Reduction by 2020 
- 2 Low Carbon Culture Change 
- 3 Climate Change Adaptation 
- 4 Transition to a Low Carbon Economy 

MACF THEMATIC AREAS OF ACTION

- 1 Buildings 
- 2 Energy 
- 3 Transport 
- 4 Sustainable Consumption and Production 
- 5 Green and Blue Infrastructure 



MEETING OUR OBJECTIVES



Reduce the city's CO₂ emissions by 41% by 2020, from 2005 levels

In 2009, the Tyndall Centre for Climate Change Research calculated Manchester's fair contribution towards the UK's emission reduction targets.

They concluded that the city's carbon dioxide (CO₂) emissions would need to fall by 41% from 3.3 million tonnes in 2005 to 1.9 million tonnes in 2020.

However, we know that it's not just about how much is emitted in 2020 but also the cumulative emissions - the total emitted between 2005 and 2020.

So this year we've also translated the 41% target into a carbon budget and calculated what our cumulative emissions to date mean for the remaining five years of the plan.

This section sets out our Manchester's progress in relation to both the original 41% absolute reduction target and a carbon budget-based approach.

Ali Abbas
Manchester: A Certain Future
CO₂ Monitoring Group, Chair

Manchester is responsible for

18% OF GREATER MANCHESTER'S CO₂ EMISSIONS AND

0.7% OF UK CO₂ EMISSIONS

46% of direct emissions come from the INDUSTRIAL AND COMMERCIAL SECTOR

30% from our HOMES 

24% from TRANSPORT 

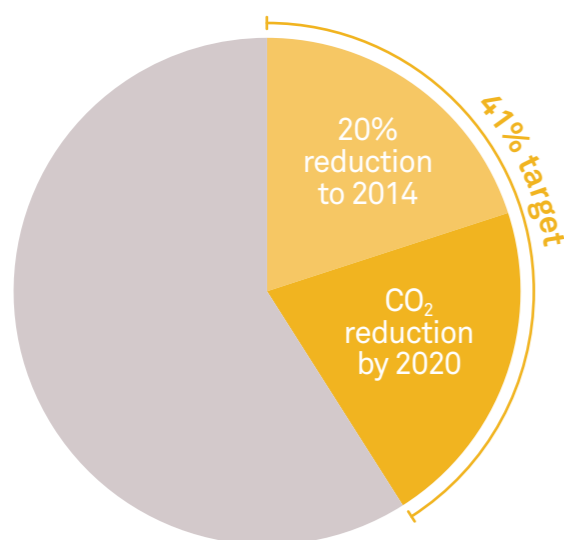
Our analysis of the latest Government figures indicates MANCHESTER'S ANNUAL CO₂ EMISSIONS HAVE FALLEN from 3.3 million tonnes in 2005 to an estimated 2.6 million tonnes in 2014⁴

THAT'S A CO₂ REDUCTION OF

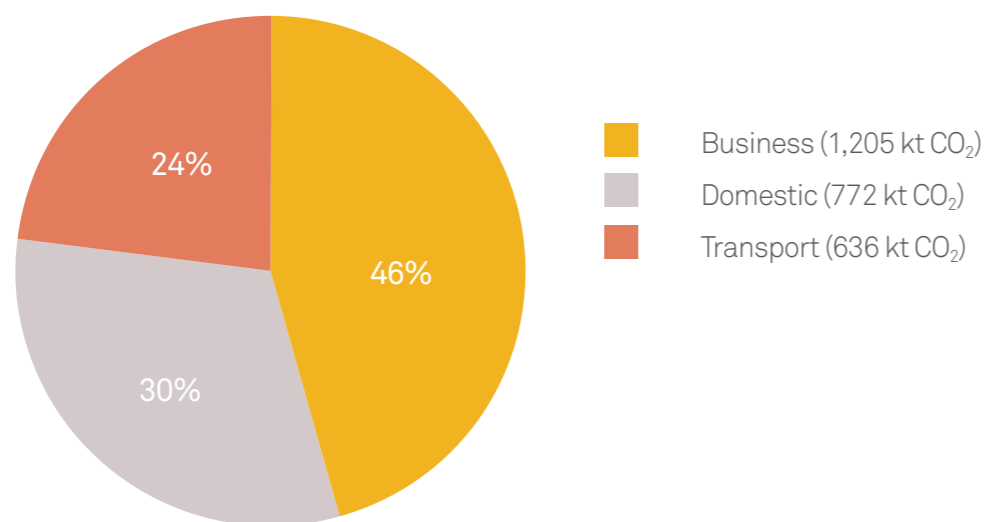
20% 

⁴ Local authority level CO₂ data is only currently available up until 2012, national data from gov.uk has been used to extrapolate statistics for 2013 and 2014.

Estimated reduction in Manchester's direct carbon emissions from 2005 to 2014



Manchester's direct emissions by sector in 2014 (estimated)

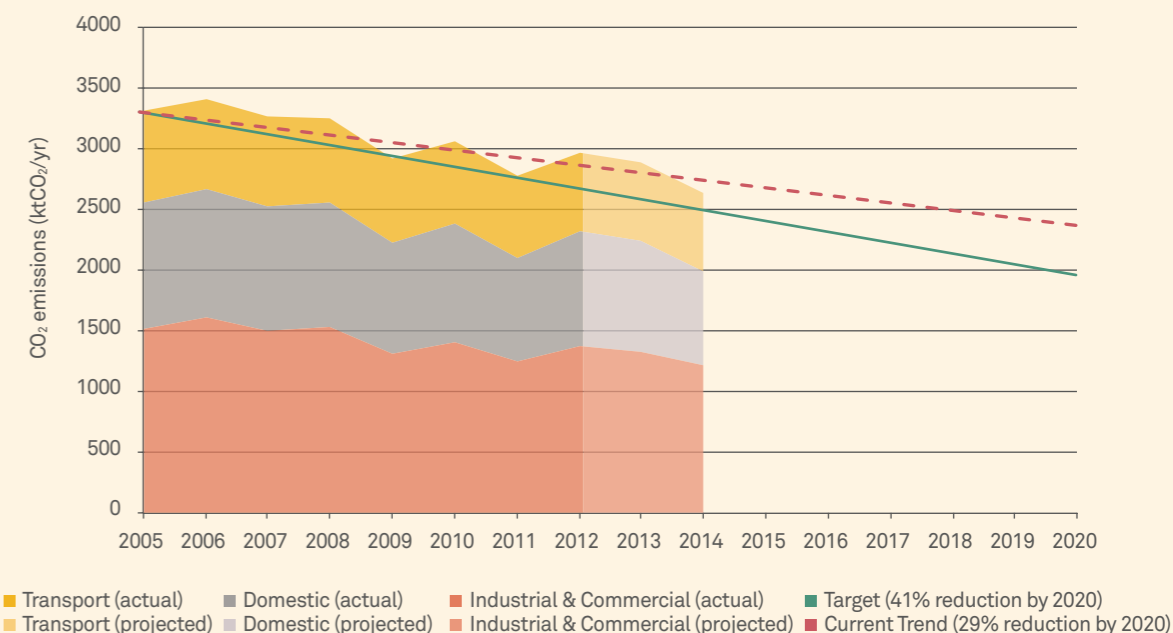


A switch away from coal to gas since 2012 and an increase in renewable generation in the national energy system has had a positive influence on the city's emissions by decarbonising the electricity that we use.

This highlights the importance of national energy policy and that Government must prioritise renewable and low carbon energy generation. It also throws into sharper focus the actions that we can take as a city. We are already starting to see other UK cities generating sizeable amounts of their own heat and electricity through local renewable sources. Introducing a similar approach in Manchester, building on the progress we've seen to date, could play a critical part in achieving our local CO₂ targets.

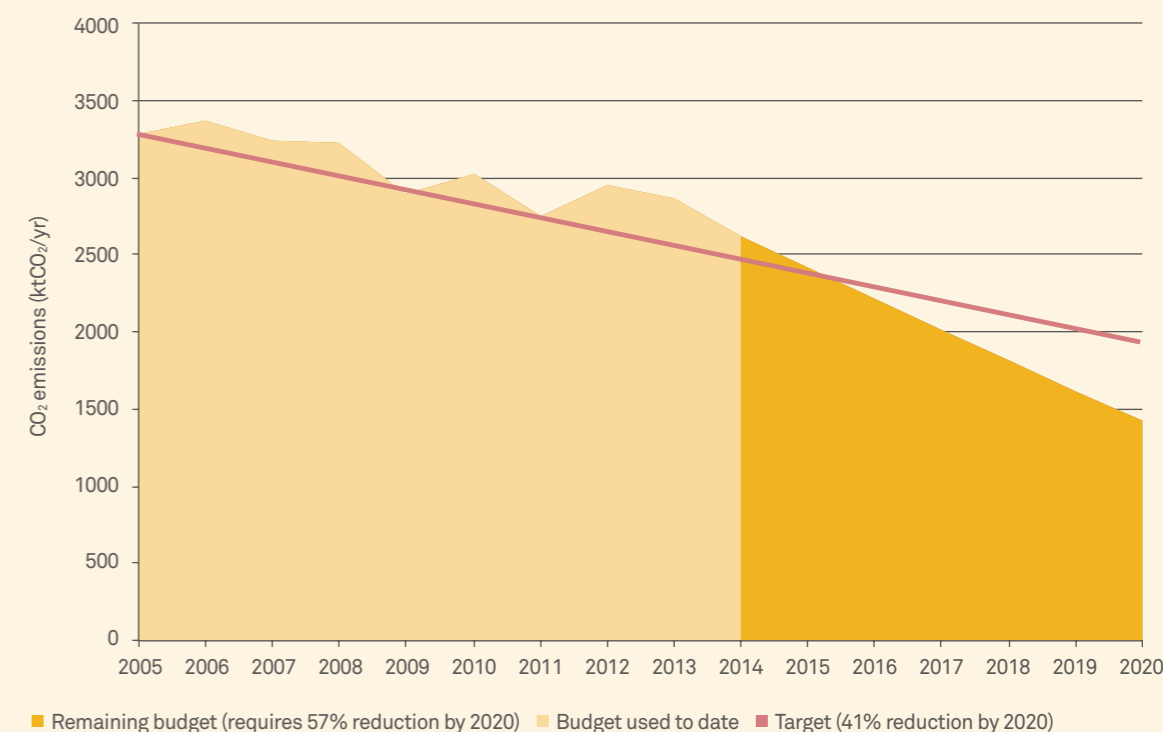
INDICATOR 1: % reduction in CO₂ from the 2005 baseline

If we continue to consume the same amount of energy without making further additional reductions, and if the electricity sector's emissions continue to fall at the same general rate as they have since 2005, we are projected to achieve a 29% CO₂ reduction by 2020. The outlook has improved slightly since 2014, when we projected that a 27% reduction would be achieved, but is still a way off the 41% target.



INDICATOR 2: Manchester's emissions reductions and target from a carbon budget perspective

As we emitted more than we should have in the period from 2005 to 2014, we would need to make steeper cuts from 2014 to 2020 to stay within our carbon budget.



TO HIT OUR TARGETS, THE OVERALL CARBON BUDGET FOR MANCHESTER IS JUST UNDER **42M TONNES OF EMISSIONS** BETWEEN 2005 AND 2020.⁵

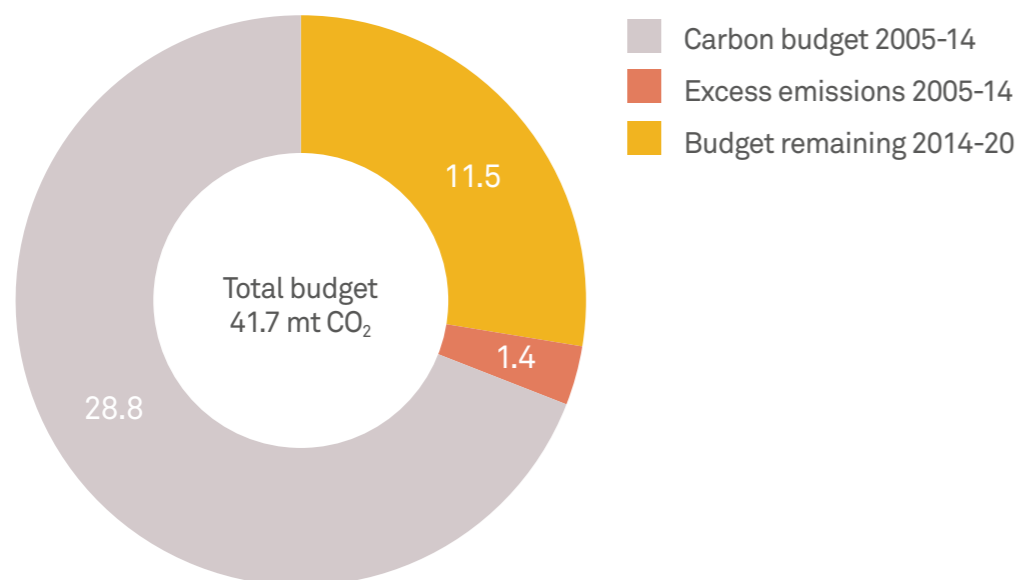
TEN YEARS INTO OUR PLAN, WE HAVE EMITTED **30.2M TONNES OF CO₂, 1.4M TONNES MORE** THAN WE SHOULD HAVE DONE SO FAR.

THAT MEANS WE HAVE **11.5M TONNES LEFT IN OUR 'BUDGET'** BETWEEN NOW AND 2020.

AS A RESULT EMISSIONS NEED TO **REDUCE BY A FURTHER 250K TONNES PER ANNUM** TO STAY ON TRACK.

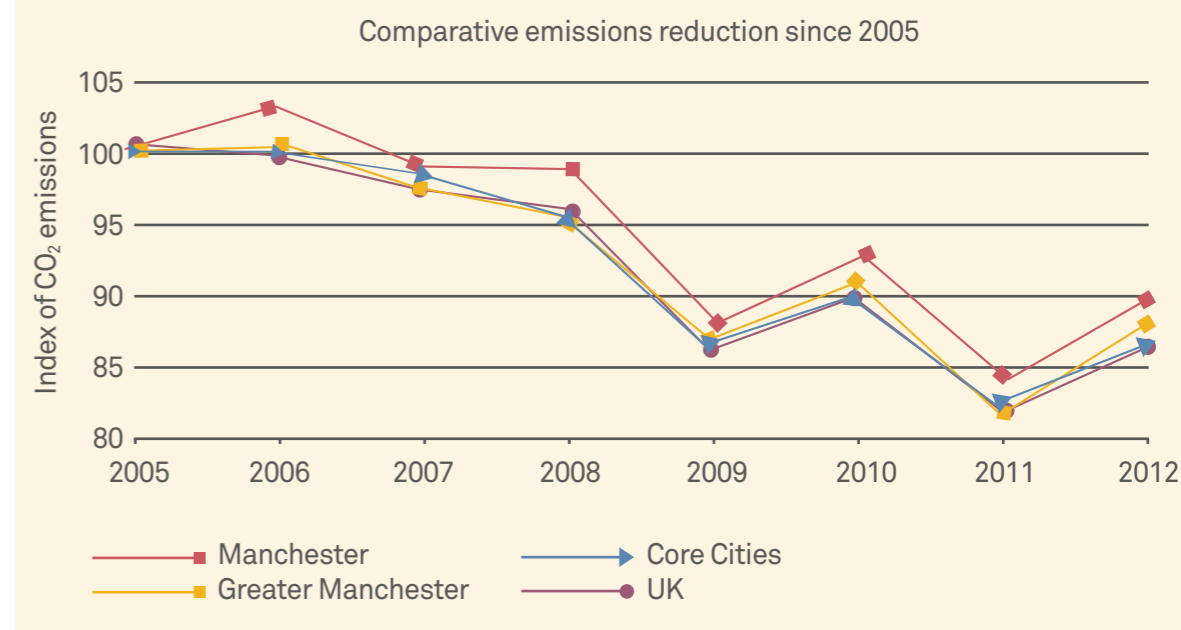
THAT'S A RATE OF **EMISSIONS REDUCTION THREE TIMES FASTER THAN THE AVERAGE** WE'VE MANAGED SO FAR - QUITE A CHALLENGE!

THE GOOD NEWS IS THAT **BETWEEN 2013 AND 2014 EMISSIONS ARE ESTIMATED TO HAVE FALLEN BY 245K TONNES**, WHICH SHOWS IT CAN BE DONE.



⁵ National policy uses carbon budgets for this reason. The Government's advisors, the Committee on Climate Change, explain more here: theccc.org.uk/tackling-climate-change/reducing-carbon-emissions/carbon-budgets-and-targets

INDICATOR 3: Comparison with others; absolute CO₂ emissions for Manchester, Greater Manchester, Core Cities and UK to 2012, indexed to 2005



In 2012, the last year for which Government has released data at a local authority level, the UK's emissions rose by 5% due in most part to a switch from gas to coal for the generation of electricity.

Manchester's emissions increased by 7.3% in 2012. This was slightly lower than the 8.1% average across Greater Manchester, but noticeably higher than the Core Cities⁶ average of 5.3%.

Analysis of energy usage data by sector shows that the main factor was gas use in the industrial and commercial sector – this increased by 4% in Manchester against a 1% decrease nationally.

⁶The Core Cities are ten of the largest cities in the UK and provide a helpful group to compare progress corecities.com



MACF CO₂ MONITORING PRIORITIES FOR 2015/16

1. Continue to develop CO₂ analysis and understanding of the available datasets and gaps for the MACF 2016-20 Plan (see Part 3 for further information).
2. Undertake a review of emissions in different sectors and the expected impact of planned activities.
3. Work with data providers such as Electricity North West to establish timely, robust and relevant data (recognising that there is an 18 month delay in data being released by the Government).
4. Identify additional areas that could be monitored as part of an Extended Carbon Footprint; initial ideas include waste, water and aviation.





Low Carbon Culture Change – embedding ‘low carbon thinking’ into the lifestyles and operations of the city



The development of a Low Carbon Culture is a key part of achieving our 41% CO₂ reduction target. Without an instinctive understanding of carbon, and the knowledge and motivation to take action on an individual, organisational and community basis; citizens, businesses and organisations are unlikely to make the choices we need to meet our 2020 targets.

Measuring the immediate “hard” impacts of someone’s decision is relatively easy. If someone chooses to insulate a building, there is a physical change and changes in temperature and energy use can be physically measured.

However, understanding the motivation behind the decision to insulate is more complex. Was a householder’s motivation to address climate change? To reduce their fuel bills? Or merely keep up with the neighbours? These are all valid motivations, but some signal the development of a low carbon culture, and some do not, and in reality most decisions are the result of a complex blend of motivations.

One of this year’s priorities for the Low Carbon Culture Monitoring Group has been to work with some of the city’s best academic institutions and experts to investigate if there are ways we could measure and track culture change. The consensus is that whilst other cities are doing excellent low carbon behaviour projects that we can learn from, no other city is attempting to do what Manchester is in terms of scale or ambition. Equally, culture change is relatively easy to recognise in retrospect, but hard to measure at the time, and its subset, low carbon culture change, even more so. This is a new field, but we are attempting to monitor progress by developing a basket of indicators and tracking how these change over time, and this work will continue in the coming year. For now though, the early indicators appear to show that some slow progress is being made.

Dave Coleman
Manchester: A Certain Future
Change Monitoring Group, Chair

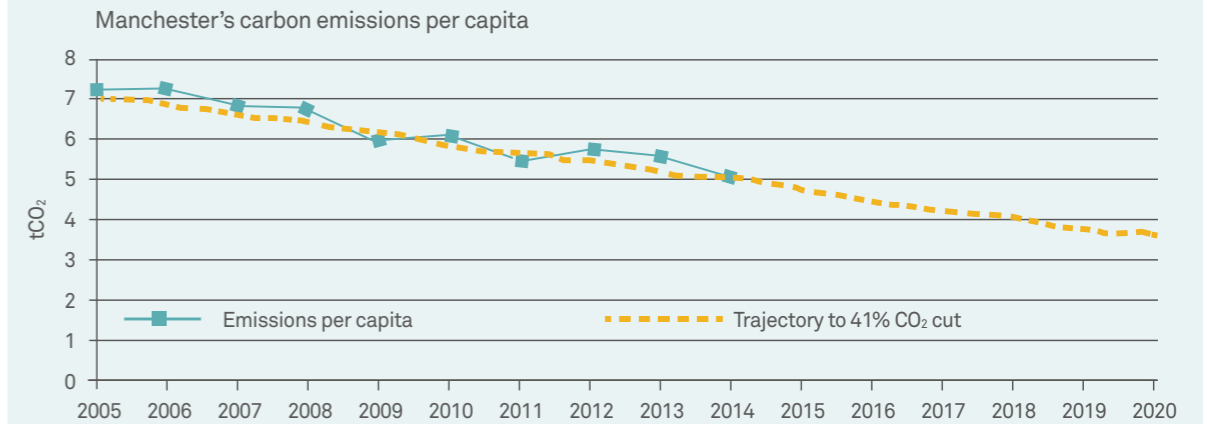
In November 2014 the Low Carbon Culture Monitoring Group met with academics from Manchester, Manchester Metropolitan and Salford Universities, the Tyndall Centre for Climate Change Research and the Sustainable Consumption Institute to move forward work to measure and track the city’s change in low carbon culture. This work will continue in 2015/16 and while it continues to develop, the same indicators from 2014 are used in this report, enabling comparison of progress since last year.

INDICATOR 1: CO₂ emissions per capita

Between 2005 and 2014 Manchester’s per capita emissions reduced from 7.19 tonnes to an estimated 5.04 tonnes. Over the last year per capita emissions have fallen by an estimated 9%.

The city’s population grew by over 12% between 2005 and 2012; yet over the same period household electricity consumption increased by only 2%, and gas consumption (weather normalised) has fallen by almost 30%.

This data indicates that the culture of the city *may* be changing. It tells us that people living in Manchester are generating less CO₂ per head of population. This may be because they are actively working to reduce their contribution to climate change or because rising energy bills mean that they can’t afford to use as much electricity and gas as in previous years, or other external factors. Further research in 2015/16 and beyond will attempt to understand this further.



INDICATOR 2: Eco-Schools

Eco-Schools is an international programme to provide support and information for schools to educate pupils and staff on environmental issues and improve their performance. The number of Manchester schools registered on the programme has increased over the last year, although the number of Green Flag schools has decreased.

Of the 153 schools registered as of 2014 (this does not include independent schools) 46 have achieved Bronze, 52 are at Silver,

and 13 have the prestigious Green Flag award for excellent environmental performance.

The overall figures paint a promising picture for our schools’ commitment to take action on environment and climate change. It is important for MACF that this level of commitment remains high but also translates into schools progressing through the Bronze, Silver and Green Flag awards and delivering real progress on the ground.

INDICATOR	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Percentage of Eco-Schools	82%	83%	85%	82%	88%	87%
Number of Eco-Schools	136	137	142	137	147	153
Green Flag schools	5	9	14	15	15	13

INDICATOR 3: The Business Growth Hub's Green Growth service

In 2013 the Manchester Environmental Business Pledge had over 1,800 businesses pledging to take action to improve their environmental performance and resource efficiency. The scheme came to an end in 2013 as business support services moved over to (Greater) Manchester programmes and the new Greater Manchester Growth Company. Since then the scheme has been merged with the new Greater Manchester Green Growth programme, which provides support and information to businesses looking to improve their resource efficiency and, for those in the low carbon sector, looking to grow their business activities.

From June 2014 to May 2015, 47 Manchester businesses received support from the Business Growth Hub Green Growth service, totalling cost savings of £649,000 and 1,720 tonnes CO₂e saved over this time.

Work is needed in 2015/16 to make sure the 1,800 businesses signed up to the old pledge scheme are now encouraged to continue their low carbon journey and access the new support and information available.

green-growth.org.uk/manchester

INDICATOR 4: Carbon Literacy

The Carbon Literacy Project was established at the end of 2012 to help stakeholders across the city develop their understanding of climate change, what this means in daily life, and what they can do to take action. Created by Cooler Projects, in 2014 the Project was established as an independent registered charity The Carbon Literacy Trust, whose board of trustees are now responsible for the Project, on behalf of the people of Manchester and beyond.

There are now 1,616 Carbon Literate citizens across the city, each having completed one of the many and growing numbers of ways of undertaking Carbon Literacy learning.

KEY CARBON LITERACY ACTIONS IN 2014/15 INCLUDED:

Carbon Active

In its second year, the Carbon Active! event was held in Manchester Arndale shopping centre in June 2014. Over 1,500 citizens directly engaged in conversations and well over 100,000 saw activities aimed at getting people understanding and thinking about what practical, easy steps they can take towards tackling climate change.



Carbon Literacy for Registered Providers (CL4RPs)

CL4RPs is a consortium of 20 housing associations (registered providers of social housing) across Greater Manchester, established by the Project and collaborating to roll out Carbon Literacy, initially to a target group of 6,000 staff, and then to further staff, residents, suppliers and partners. In support of this, in 2015, 35 housing association and community trainers took part in a four-day train the trainer process to enhance their skills, before they began to roll out their own Carbon Literacy courses in each of their own organisations.

Carbon Literacy: Knowledge e-learning framework

Over the last year an e-learning framework to deliver the knowledge requirement of the Carbon Literacy standard has been developed by the Project, to support the roll-out of Carbon Literacy to large organisations. With the first course based on the framework and aimed at social housing providers already launched, further courses aimed at specific sectors and an independent citizen course are in preparation.



CASE STUDY LEADERS IN LOW CARBON CULTURE


In 2014 the MACF Low Carbon Culture Monitoring Group brought together the chief executives of 29 of Manchester's largest organisations.

The breakfast meeting, organised by Cooler Projects, provided an opportunity to discuss informally how climate change impacts them. With contributors from the public, private, cultural and faith sectors, it demonstrated the logical, financial and moral imperative for action and the potential benefits of generating a low carbon culture within their organisations.

The meeting revealed that the individuals in the room were directly responsible for over **a quarter of a million staff and workers with an audience of millions** for their services, emphasising both the scale of opportunity and the potential cascade effect of simply embedding low carbon thinking in these 29 organisations.

At the meeting, the leaders each made a written commitment to act directly inside their organisations, and report back to the Low Carbon Culture Monitoring Group at regular intervals, to help us plot the growth of low carbon culture across the city.

1,616 
CARBON LITERATE
CITIZENS IN MANCHESTER

87% 
OF SCHOOLS
ARE ECO-SCHOOLS

64% 
OF MANCHESTER BUSINESSES ARE ACTIVELY
TRYING TO IMPROVE THEIR ENERGY EFFICIENCY*



MACF CULTURE CHANGE MONITORING GROUP PRIORITIES FOR 2015/16:

1. Establish a set of indicators to measure 'low carbon culture' in Manchester.
2. Promote the continued roll out of the Carbon Literacy Project.

*(down from 84% in 2013) (Source Manchester business Survey 2014)

3



Adaptation – preparing for and actively adapting to a rapidly changing climate

We now have unequivocal evidence that the global climate is changing. We may be seeing some of the impacts of this in Manchester in the form of warmer, wetter winters and more intense downpours across the year. The major changes in the climate projected for the coming decades, coupled with the observed impacts of ongoing extreme weather events, mean that adaptation to climate change will remain a priority issue for Manchester.

It is crucial that Manchester's capacity to respond is enhanced and that actions are taken to build the resilience of the city to hazards including flooding and heat stress. This is essential in order to meet the city's aspirations to build a strong economy and to provide a safe and healthy environment for its citizens.

Adapting to the changing climate should not be separated from delivering these headline objectives; it lies at the centre of positive visions for the future of the city.

This year we have undertaken work to understand more about Manchester's response to the changing climate. It's clear that while some good work is underway, there is still much to do to move towards a more resilient and better adapted Manchester that can stand up to the challenges posed by climate change.

Dr Jeremy Carter
Manchester: A Certain Future
Adaptation Monitoring Group, Chair

The MACF Adaptation Monitoring group was formed in March 2014 following the addition of the new adaptation objective in the MACF 2013 Update. The objective and the indicators for measuring progress are taken from the Greater Manchester Climate Change Strategy to ensure consistency and because Manchester's approach will often be part of a broader city region programme, recognising that climate change does not stop at the boundaries of different geographical areas.

INDICATOR 1: The number and quality of resilience plans and adaptation strategies

Achieving our adaptation objective will depend significantly on the existence of a strong framework of local strategies and policies that address risks connected to the changing climate. They are a crucial element of the city's adaptation response and provide a platform for taking action and building Manchester's weather and climate resilience.

Work has recently been undertaken to assess 37 business plans and strategies from key bodies working across Manchester, including the City Council, United Utilities, Electricity North West, the Environment Agency, and the Greater Manchester Fire and Rescue Service. These documents, a number of which were targeted at climate change, environmental and sustainability issues, were reviewed to discover the extent to which they contained:

1. Details of extreme weather and climate impacts/risks.
2. Climate change adaptation policies and strategies.
3. Recommended adaptation actions.

Of the 37 documents reviewed, seven contained no reference to these issues, and only eight covered these themes comprehensively. Of the total sample of documents, 59% identified some impacts and risks linked to extreme weather and

climate change; 51% of the documents contained adaptation policies or strategies; and adaptation actions were referenced more frequently in 68% of cases. This review provides a methodology that can be expanded to include other plans and strategies as well as baseline that can be used to monitor progress over time.

Importantly, it also provides the basis from which targeted action can be taken to improve the approach to adaptation in key plans and strategies. This is particularly important given that investment decisions being made today, guided and driven by these documents, will create buildings and infrastructure that will be with us for the next 30+ years – the period over which we expect to see the city's climate changing.

Although there are exceptions, existing strategy and planning documents often pay limited attention to the impacts of the changing climate and options to build resilience to related risks. If the strategies driving this investment do not address extreme weather and climate change, the risk of future disruption increases. A framework to support and encourage actions to respond to the changing climate is needed, as well as practical examples of what good, climate-adapted investment looks like on the ground.

INDICATOR 2: The extent, quality and productivity of green spaces and tree cover

Over the last two years the City Council has been working with the MACF Green and Blue Infrastructure Group and other partners and stakeholders to put in place a Green and Blue Infrastructure (GI) Strategy for the city. The strategy, and its accompanying stakeholder implementation plan, will set out, for the first time, the importance of the city's GI in terms of not just the environmental but also the broad range of social and economic benefits it provides. The strategy is focussed on ten benefits that were originally identified as part of the Natural Economy Northwest programme in 2008, including climate change adaptation.

We have a good body of research looking at what GI we have, a broad understanding of its importance in terms of adaptation, and the role it could and should play in the future growth of the city. We know that 58% of the city is made up of green spaces and waterways, and that a total of 20% is covered by tree canopy. More work is now needed to further understand what this GI is doing in adapting the city. We also need to generate the detailed evidence that can be used to inform future investment decisions and bids for project funding.

CASE STUDY

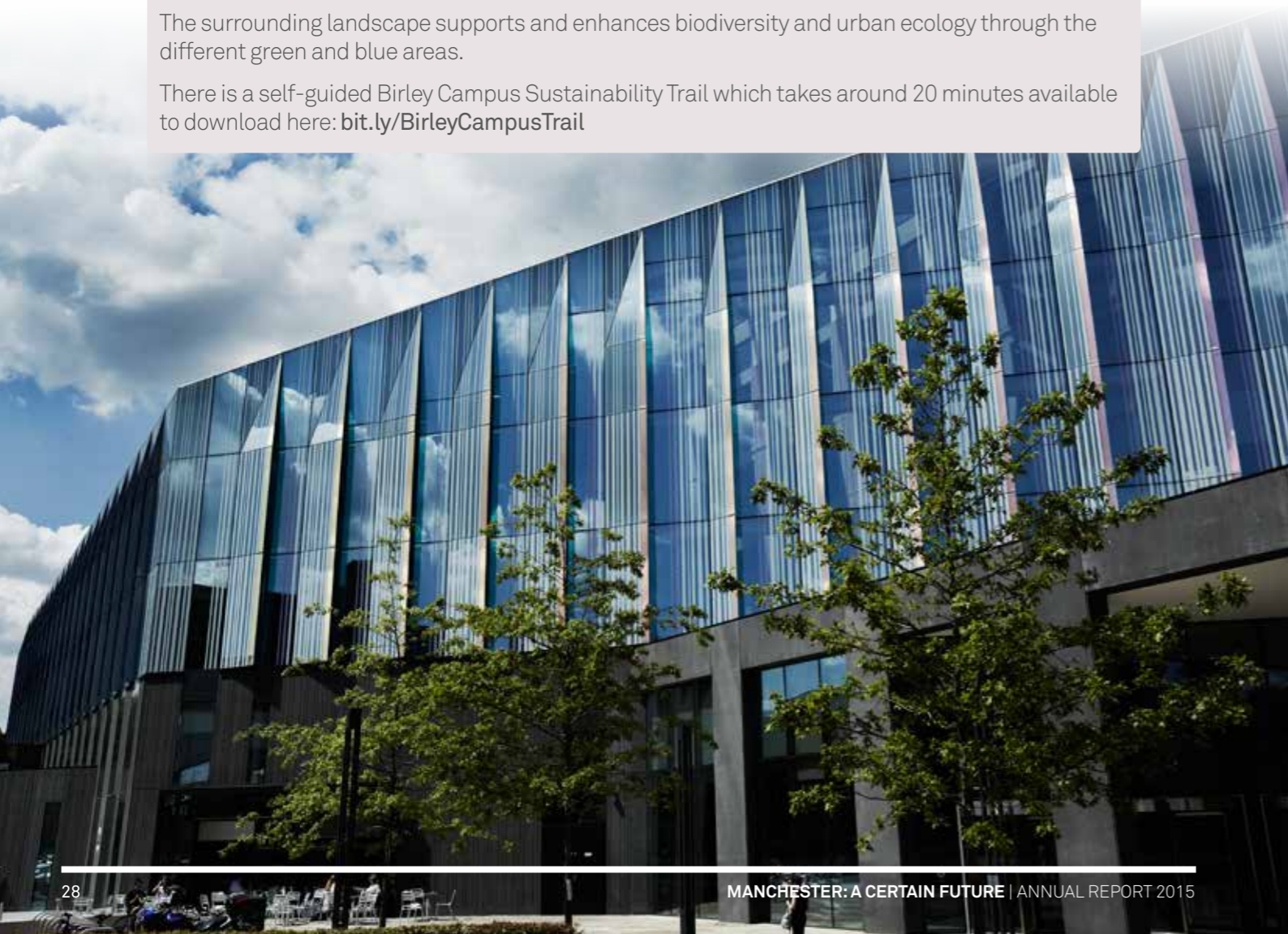
BIRLEY CAMPUS SUSTAINABILITY TRAIL

Manchester Metropolitan University is ranked as the Number One Greenest University in the UK in 2015. The Birley Fields Campus is a vital part of the University's ambition towards becoming 'Zero Carbon, Zero Waste and Zero Water' and Maximum Biodiversity. As part of its wider Environmental Sustainability Strategy, Birley Campus features:

- **Zero Water**
A range of water supply, collection and sustainable drainage systems help reduce the University's water consumption including rainwater harvesting, grey water re-use and boreholes.
- **Wetland Area**
The wetland area including bog, reed bed and marginal planting provides rich areas for wildlife and plants as well as filtering and storing water and providing a natural way to reduce flood risk.
- **Community Orchard**
The Birley Community Orchard is made up of 19 varieties of apple, pear, cherry and plum trees providing habitats for wildlife, a place to relax and try some locally grown fruit.
- **Wildflower Area**
Providing a rich habitat for wildlife, the mix of 25 different hay meadow and grassland plants in this area have been specially chosen to attract wildlife.
- **Sensory Garden**
Aromatic and edible herbs and plants provide plants to smell and touch, and for use in the freshly prepared meals at Birley Kitchen.
- **Sir Robert Angus Smith Energy Centre**
The CHP (Combined Heat and Power) Plant provides hot water, heat and electricity to the campus including 100% of the Energy Centre's power needs.

The surrounding landscape supports and enhances biodiversity and urban ecology through the different green and blue areas.

There is a self-guided Birley Campus Sustainability Trail which takes around 20 minutes available to download here: bit.ly/BirleyCampusTrail



CASE STUDY RESIN PROJECT

The University of Manchester has recently become involved in a major new EU-funded project on Climate Resilient Cities and Infrastructures (RESIN). This project involves Greater Manchester as a funded case study alongside ones in Bilbao, Bratislava and Paris. The aim is to help city administrators, urban infrastructure operators and related organisations develop and implement adaptation strategies and actions to strengthen climate resilience.

The RESIN project pays particular attention to critical infrastructure, which includes hard infrastructure (e.g. the transport, electricity and water sectors) and green infrastructure, given its crucial role in shaping quality of life and future prospects in cities. The project runs for 42 months from May 2015.



MACF ADAPTATION MONITORING GROUP PRIORITIES FOR 2015/16:

1. Support priority organisations to improve their business plans and strategies in terms of adaptation and resilience.
2. Establish an evidence base setting out the role that green and blue infrastructure plays in adapting the city to climate change and identify areas where new research is needed.
3. Support and participate in the RESIN project.



Economy – making a rapid transition to a low carbon economy



The MACF Update in 2013 committed the Steering Group to work with stakeholders to consider what the low carbon economy objective from the Greater Manchester Climate Change Strategy means to Manchester and how it could potentially be incorporated within the MACF 2016-20 Plan.

To undertake this work a new MACF Low Carbon Economy Group was established in December 2014. As its first task it agreed to work with the City Council to commission research that would begin to respond to the above questions.

This work, undertaken with the Manchester-based Centre for Local Economic Strategies (CLES), makes it clear that growing city economies like Manchester's can also be low carbon, and in some cases may even choose to place low carbon as a core element of their economic strategy. While good practice exists in other cities, it's clear that there is no one-size-fits-all approach. Individual cities vary

much need to find the approach that works best for them.

The research sets out a broad definition for a low carbon economy for Manchester but recognises that a clear definition and set of indicators is difficult at this stage given the data available. It has, however, been possible to identify an initial set of indicators and areas for further investigation.

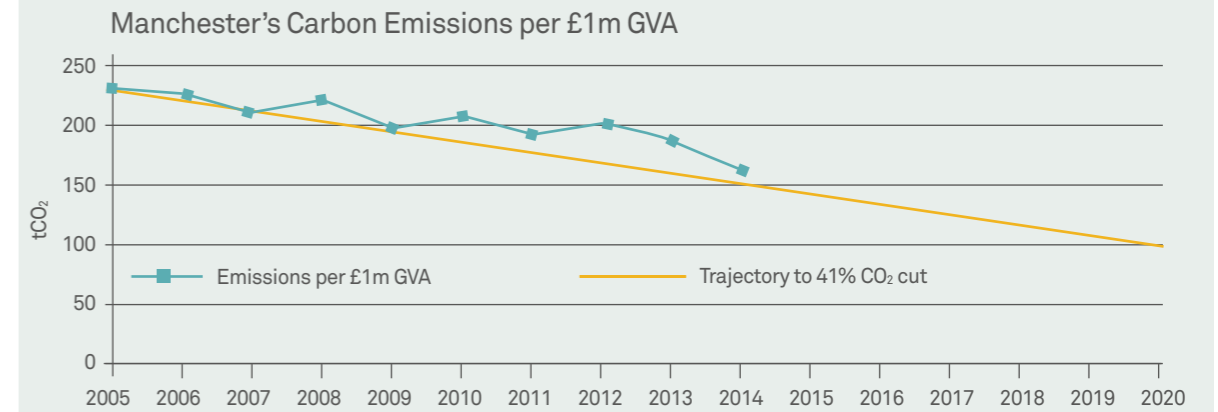
From the data we have on the carbon intensity of the city's economic activity, we can see that progress is being made and that new initiatives like the Green Growth programme are having an impact. As with other areas of MACF the challenge is to now accelerate and expand this activity to put us on track for 2020.

Helen Seagrave
Manchester: A Certain Future
Low Carbon Economy Monitoring Group, Chair

The following indicators are being used as the best measure we have at present to compare economic activity and emissions or low carbon activity, and first started to be reported on in last year's annual report.

INDICATOR 1: Carbon intensity – amount of carbon emitted per unit of economic activity

Latest estimates show that Manchester's economy produced 163 tonnes of CO₂ per £1m GVA (Gross Value Added) in 2014, a reduction of 30% on 2005 levels. The projected growth in the size of Manchester's economy to 2020 means its carbon intensity will need to fall to just under 100 tonnes of CO₂ per £1m GVA, a 57% reduction on 2005 levels, if we are to meet our 41% carbon reduction target.



30% REDUCTION ACHIEVED VERSUS A **57% TARGET BY 2020**

INDICATOR 2: Low Carbon Environmental Goods & Services sector (LCEGS)

The data originally used to show the size of the LCEGS sector in Greater Manchester was produced by Central Government and unfortunately, they have not produced an updated dataset since our last MACF Annual Report. In addition, they have changed their data collection methodology and are therefore unlikely to produce an updated dataset we can use to compare progress against last year's report.



The new method for measuring the sector splits it into two: 'low carbon' and 'environmental' goods and services. Nationally from 2010 to 2013 the newly defined low carbon sector grew by 12% in terms of employment, 24.7% for turnover, and 28.4% GVA, which are encouraging figures considering this was during the time of the recession.

The Low Carbon Economy Group suggests that the aim for the Low Carbon and Environmental Goods and Services sector in Greater Manchester is to achieve better growth rates than the national average and a higher percentage of overall businesses, but as yet, it is unclear how this data will be collected. The Low Carbon Economy Group will look to work with Greater Manchester partners over the coming year to explore this further.



INDICATOR: Business Activity

See the Low Carbon Culture Change section for information on actions by businesses in Manchester.

CASE STUDY GREATER MANCHESTER GREEN GROWTH

The Green Growth service is an independently run programme which is part of the Business Growth Hub of ENWORKS. The service helps businesses to grow by using resources more efficiently and by taking advantage of the transition to a low carbon economy. There are two strands of support available to SMEs in Greater Manchester; resource efficiency and low carbon support.

In Greater Manchester, ENWORKS has already been able to help more than 3,400 businesses to save £41 million and 1,720 tonnes CO₂e, and to secure sales contracts worth over £82 million. A recent example where the Green Growth programme has helped an organisation in Manchester was with the iconic Midland Hotel, achieving cost savings of over £86,300.

The Green Growth service launched two initiatives last year to help develop the low carbon economy:

- A virtual Low Carbon Network to raise the profile of businesses in the low carbon sector and improve the visibility of local supply chains. For details see: green-growth.org.uk
- A Green Growth Pledge to help businesses to take action and communicate to their customers that they are actively becoming greener. For details see: green-growth.org.uk/pledge



The Low Carbon Economy Group is also interested in how procurement can support a low carbon economy, particularly with regard to retaining spend locally. There is currently a lack of data available in order to analyse this further for Manchester, however initiatives like the recently approved Greater Manchester Social Value Policy and Evaluation Framework should start to assist with this.

The Low Carbon Economy Group's future aspiration is to be clearer about what we mean by a low carbon economy and to produce a wider set of indicators to track our progress. The group has embarked on a new piece of work to investigate other existing datasets, such as city sustainability indices which may be used to measure a wider breadth of economic activity and be more in line with our vision of a low carbon economy.



MACF LOW CARBON ECONOMY MONITORING GROUP PRIORITIES FOR 2015/16:

- 1. Refine the definition of a low carbon economy in Manchester, to be included in the MACF 2016-20 plan.**
- 2. Establish a set of indicators to measure progress against this definition.**
- 3. Promote business support services, including the Green Growth service, to businesses across the city.**

ACTIONS BY THEME

Review of progress against MACF 2013-15

The MACF Update in 2013 set out the actions to be delivered during 2013-15, to put us on track towards achieving the four headline objectives by 2020. The actions are structured according to five themes with progress overseen by an MACF Group for each of them. These groups have a role to play in celebrating progress and communicating it to other stakeholders to encourage scaling up, as well as helping to devise new initiatives that can fill gaps in the plan's delivery. As we move towards a new plan for 2016-20, this year's review of action will help to identify those actions where more emphasis is needed to 2020, and areas where new projects and partnerships are required to respond to particular needs and opportunities.

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Image from Flickr user Alex Pepperhill published under a Creative Commons Licence.

Buildings

Manchester's buildings (and the energy they use) are responsible for 76% of the city's direct carbon emissions. Reducing the energy used to heat and power our buildings is therefore crucial in order for us to reach our emissions target.

Based on the data available we look at the city's buildings in terms of 'domestic' and 'industrial and commercial'. Between and within these different building types there are big differences in the level and type of action taking place.

Registered housing providers, for example, are working enthusiastically to build on their Government-funded Decent Homes programmes in 2010 and looking for the next big opportunity to reduce their tenants' fuel bills. At the other end of the spectrum private sector landlords appear to be taking very little action to improve the energy efficiency of the homes they rent out.

Public sector organisations like the City Council, hospitals and the two universities all have commitments to reduce their carbon emissions, but with each at a different stage of their journey in achieving them.

And in commercial buildings, which make up a significant part of the city's carbon footprint, we are still yet to see the right combination of corporate commitments, buyer and tenant expectations, and policy and legislation coming together to drive any substantial progress in this sector.

The following section sets out the action (and in some cases unfortunately the inaction) that we have seen over the last 12 months.

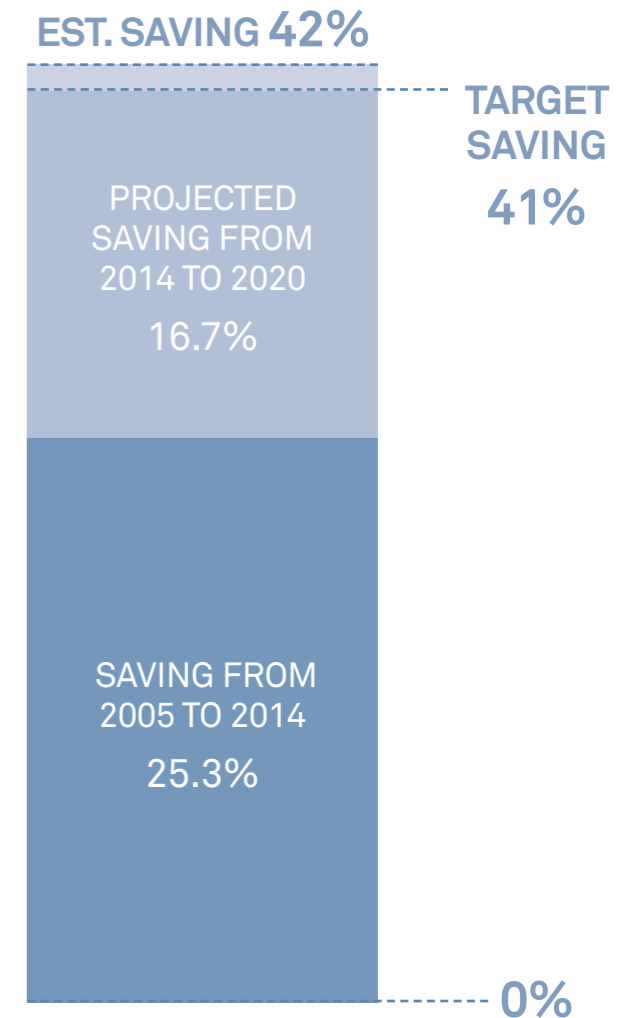
Prof. Will Swan
Manchester: A Certain Future
Buildings Group, Chair

DOMESTIC BUILDINGS

Headline aim: Through physical and cultural measures, to save more than 30,000 tonnes of CO₂ emissions from domestic properties by 2015, creating the capacity to double that target for the period 2016 to 2017.

DOMESTIC EMISSIONS

- In 2014, domestic buildings were responsible for 30% of Manchester's carbon emissions, or 772 kt (kilotonnes) CO₂. This is an estimated 14% reduction on the 2013 figure.
- Since 2005, carbon emissions from domestic buildings have reduced by an estimated 25.3%, 262 kt CO₂.
- A proportional 41% reduction would require saving a further 162 kt CO₂ – equivalent to each household saving of around 700 tonnes CO₂.
- If the current trajectory continues (which includes decarbonisation of the National Grid) then emissions from domestic buildings will reduce by 42% by 2020, from 2005 levels.



INDICATOR	2009	2010	2011	2012	2013	2014
CO ₂ emissions from domestic buildings (kt)	906	961	847	934	903 (estimated)	772 (estimated)
Number of Green Deal Assessments to date (cumulative)	n/a	n/a	n/a	n/a	1,458	3,949
Number of ECO measures installed to date (cumulative)	n/a	n/a	n/a	n/a	7,252	10,145

DOMESTIC RETROFIT SCHEMES

A new Greater Manchester Green Deal and ECO programme was launched in 2014, with planned delivery until 2017. The programme aims to reach 10,000 households in the private, rented and social rented sectors although we are now awaiting news on the future of Green Deal following the election in May 2015.

The Green Deal Communities scheme is the first phase of the programme and will be delivered until December 2015, aiming to retrofit a total of 1,200 properties across Greater Manchester. Exact targets for Manchester aren't in place but the expectation is that at least 10% of these properties will be within the city.

Over the last 12 months 2,893 energy efficiency measures have been installed in Manchester homes through ECO funding, with a particular focus on those homes in fuel poverty. Based on research carried out in 2015, 15.9% of Manchester's homes fall into this category, setting out the scale of the challenge but also the opportunity to dramatically improve people's lives, at the same time as reducing carbon emissions.

Between 2000 and 2014, a total of 887 Manchester residents have benefited from around £2,429,443 worth of Home Energy Loans through a partnership between the Council and Manchester Care and Repair. This has been to improve the energy efficiency of homes through solid wall insulation, new boilers and renewable technologies etc. In addition, a total of 53 Home Improvement Fund vouchers have been paid to Manchester residents.

Improvements are being made to the city's homes, with residents also showing signs of changing their behaviours through becoming more energy aware. The trajectory suggests that domestic buildings are on track to achieve a 42% carbon reduction by 2020. However, in this area in particular it isn't simply about meeting targets, it's about maximising the potential for action, and delivering mutual outcomes for climate change, fuel bills and improved health and wellbeing.

CASE STUDY CARBON CO-OP COMMUNITY GREEN DEAL

Established in 2008, Carbon Co-op is a community benefit society that aims to improve the environmental quality of homes by working with local residents. The Co-op is owned and run by the householders who make up its members, with no external shareholders or owners making profit so all resources are kept within the co-operative.

Housing specialists have also joined the organisation to provide residents with more insight into what more can be done where they live and the changes they can make in their own houses and communities. Before joining the Co-op, Rob's family home in Rusholme was cold and damp. Through the Co-op he was able to invest £35,000 in energy efficiency improvements to reduce fuel bills, improve air quality and generate a warm home for his family to live in.

"Friends and family have visited since and they've all been really impressed by the standard of the work. My mum has commented on the air quality too – she can notice a difference and she said it feels warmer too!"



MACF 2013-15 ACTION PLAN:

DOMESTIC BUILDINGS

PROGRESS IN 2014/15

5,000 homes (1,350 under the Greater Manchester Delivery Partnership) will have been retrofitted through the Green Deal and ECO by 2015, and plans for retrofitting further homes by 2020 will be in place, embedded with our plans for neighbourhood regeneration.

In 2014 a new three year Greater Manchester ECO and Green Deal Framework was established to support approximately 10,000 households in the city across all tenures (privately owned, private and social rented sectors) over three years. The DECC-funded Green Deal Communities ('Little Bill') scheme began in March 2014 with an enhanced financial 'offer' across four chosen areas of the city (Levenshulme, Northenden, Whalley Range, Higher Blackley) to encourage residents to implement home energy efficiency measures via the Green Deal. The scheme has now been extended to Old Moat, Chorlton and parts of Wythenshawe, and is available until December 2015.

All new build housing developments will be guided by energy policies in the Manchester Core Strategy, ensuring that developers are on-track to build zero-carbon housing from 2016.

Manchester's Core Strategy sets out the planning policies for the city and includes specific policies that are being implemented to enable lower carbon domestic new developments. Work by the Council is underway to look at how its planning policies and processes can be updated in order to further contribute to this action, in line with Government policy.

All households will have received energy efficiency advice, with targeted programmes aimed at alleviating fuel poverty in the poorest neighbourhoods.

Greater Manchester Energy Advice (GMEA) offered energy efficiency advice to residents and provided information about current schemes and subsidies to assist in alleviating fuel poverty. The GMEA service closed on 31st March 2015 and customers are now being referred to the Green Deal and ECO delivery partners (Wates and Willmott Dixon) and Manchester Citizens Advice Bureau for information on support available. Welfare Provision Services administered the Fuel Poverty Crisis Fund to Manchester residents in short-term crisis and this has been linked to the ECO Programme and Manchester City Council's Emergency Heating Grant.

Aligned with Carbon Literacy, 500 local people will have been trained in order to contribute to and benefit from a growing retrofit industry in the city. Carbon Literacy will also be delivered to residents through our various retrofitting schemes.

The Carbon Literacy for Registered Providers of Social Housing (CL4RP) programme has now trained 40 trainers in Carbon Literacy across a range of providers. The aim is to provide guidance and advice to residents.

While our social housing providers continue to provide leadership on greening our housing stock, an increasing number of owner-occupiers and private landlords will be taking steps to reduce energy consumption and climate proof their homes.

The Carbon Co-op retrofit programme has saved 950 tonnes CO₂ to date. The Co-op Green Deal Communities scheme targeted owner-occupiers and private rentals and interest in retrofit was further driven through the Government's Home Improvement Fund vouchers.

We will have a system for measuring and recording the energy performance of all housing in the city, ensuring that we can prioritise investment to areas in greatest need, particularly for those living in fuel poverty.

The development of a measurement for fuel poverty is currently being explored by the University of Manchester and will link to an overall Poverty Indicator for Manchester. Manchester City Council and National Energy Action have completed mapping of fuel poor residents across the city, with work now underway to look at how it can be utilised for targeting specific areas.

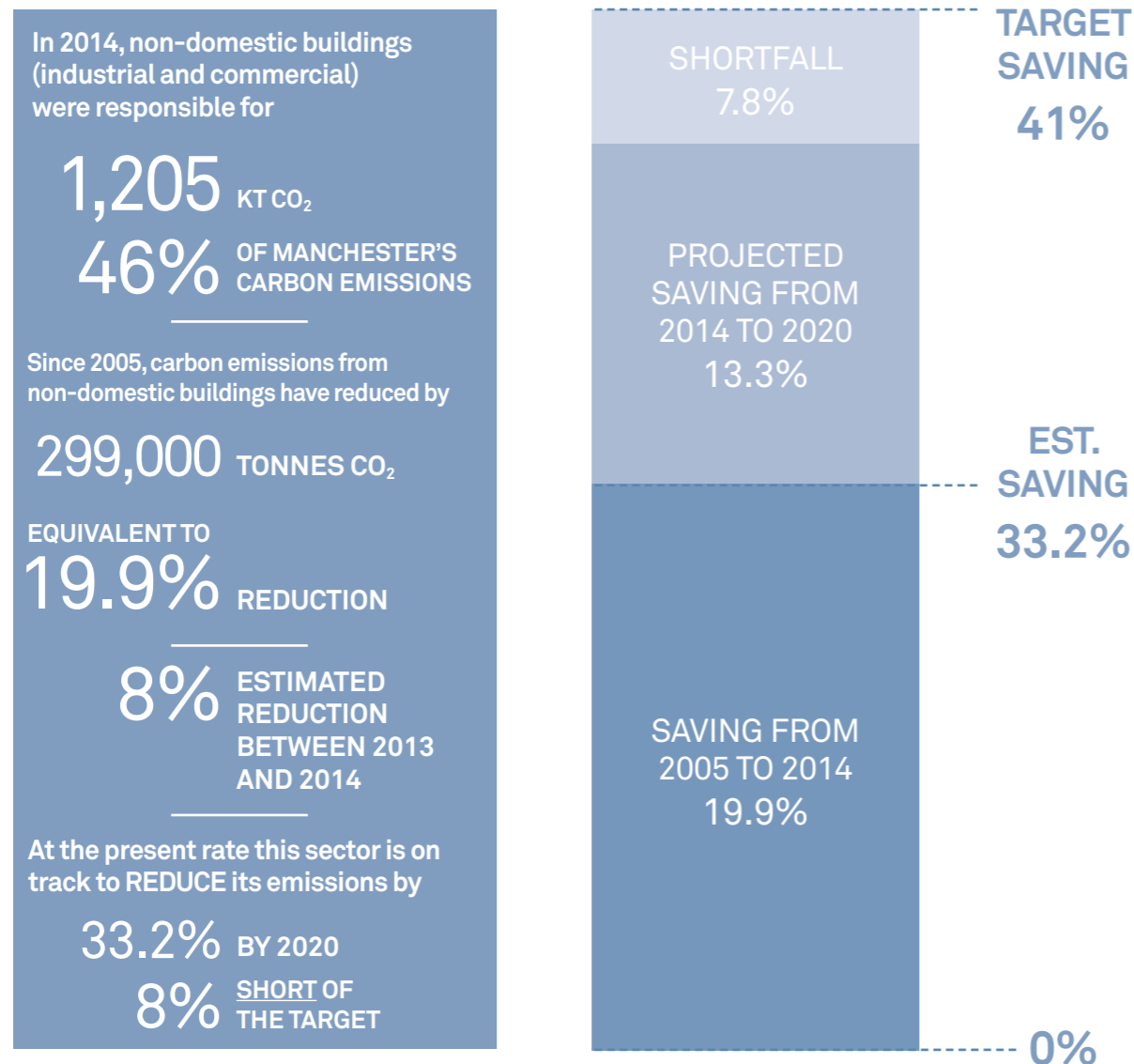
We will have a growing network of low carbon show homes, demonstrating to residents and landlords the practical steps they can take to improve their own properties.

Carbon Co-op's retrofitting project is currently in delivery across a selection of Manchester's homes. There are also six super energy-efficient showhomes being retrofitted through the Green Deal Communities scheme. These will be open to the public and will be real life examples of the financial and carbon-saving benefits of retrofitted homes.

NON-DOMESTIC BUILDINGS

Headline aim: Through physical and cultural measures, and collaboration between building owners, occupants and energy services companies, to reduce emissions from commercial, public and community buildings by 5% per year, from 2012 levels.

NON-DOMESTIC (BUSINESS) EMISSIONS



In the public sector, where most large Manchester organisations have made public carbon reduction commitments, we are continuing to see progress through the retrofit of existing buildings, behaviour change programmes and the replacement of old, inefficient buildings with new low carbon exemplar buildings. If these organisations meet their targets for carbon reduction they will make an important contribution to the MACF objectives. A key challenge will be continuing this work in the face of ongoing financial cuts and structural changes during 2016-20.

Schools ownership and management arrangements, which were previously largely under the control of the local authority or dioceses, are in the process of ongoing change. This means that schools in Manchester operate on an increasingly independent basis, and that, whereas previously large, centrally managed programmes could be designed to deliver improvements, schools are now making their own decisions, including if and how to deal with their carbon emissions. There have been welcome examples of progress from schools in 2014/15 as well as the introduction of a new service from the Greater Manchester Combined Authority that will support schools to improve their energy efficiency and install solar panels. Approximately five Manchester schools are currently looking to reduce their emissions and energy bills through this initiative.

The third sub-sector that we consider under non-domestic buildings is commercial. This represents one of the biggest challenges for MACF, with some examples of success being seen in 2014, but at a rate and scale which is, so far, incompatible with achieving the plan's 2020 targets.

Government has announced that a minimum energy performance standard of 'E' (on the 'A to G' scale) will be required for all non-domestic (and domestic) buildings from 2018. This piece of legislation will go a very small way towards improving action in this sector but not in line with the scale of the CO₂ challenge for Manchester, or the UK. In recognition of this, the Pro-Manchester's Green Economy Group has been progressing the sustainable buildings agenda over the last year, looking to raise awareness of the challenges of carbon reduction but also the commercial opportunities that more marketable, energy efficient buildings present.

INDICATOR	2009	2010	2011	2012	2013	2014
CO ₂ emissions from industry and commercial buildings	1,296kt	1,400kt	1,240kt	1,362kt	1,316kt (estimated)	1,205kt (estimated)



HOME – Photography by Paul Karalius

CASE STUDY WHITWORTH ART GALLERY

Whitworth Art Gallery opened in February 2015 following a 16 month and £15m refurbishment project carried out by MUMA architects.

MUMA worked with the existing building infrastructure to transform the museum - opening up existing galleries to their original high rooflights and creating glass hallways. The brief to MUMA was to connect the Gallery with the external landscape of Whitworth Park, and bring the outside into the South Gallery. The building also changed how the museum

temperature and humidity levels are controlled; art gallery staff worked with engineers BuroHappold to explore how to control temperature and humidity without artificial refrigeration, heating and cooling. Partnership working with other organisations including Manchester Art Gallery and the Tate, ensures they will still be able to borrow exhibits and is an approach now being adopted by many other museums.



CASE STUDY EXEMPLAR LOW CARBON NEW BUILDINGS

In January 2014, Manchester hosted the first ever UK Green Building Council Sustainable Cities Conference, looking at how sustainability can be embedded in the next phase of the city's growth and development. The impact of the event will be seen over the years to come, with a number of completed schemes in 2014/15 providing good momentum on this journey.

Manchester Metropolitan University Birley Fields Campus achieved BREEAM Outstanding for the Student Accommodation and BREEAM Excellent for the Academic building.

HOME Manchester will achieve BREEAM Very Good or Excellent (rating to be confirmed). A significant achievement for this type of building. The BMS (Building Management System) includes remote energy monitoring to check energy consumption on an ongoing basis.

In the recent North West Construction Awards, the Sustainability Award was one of the most closely contested categories with Manchester's Alexandra Park restoration winning the award. The Birley Building at Manchester Metropolitan University also won the Sub-Regional Project of the Year.

MACF 2013-15 ACTION PLAN:

NON-DOMESTIC BUILDINGS

PROGRESS IN 2014/15

We will have a full understanding of the total carbon emissions from commercial, public and community buildings in the city and plans in place for stronger partnerships to secure investment, share and publicise data and good practice so that aggregate emissions can be reduced by 41% by 2020.

Annual top-down carbon emissions data is available from DECC – however, this is published with an 18-month time lag.

Building data is available from Display Energy Certificates (DECs) and Energy Performance Certificates (EPCs), although this does not currently include community and rented buildings.

The EU Energy Savings Opportunities Scheme will provide more detailed energy audits for large organisations in the future.

Development of Greater Manchester's Green Deal will have stimulated access to a range of financial mechanisms to fund low carbon building retrofit for commercial property owners, and initiated training programmes for professionals involved in the retrofitting of buildings.

The disappointing impact of the Green Deal in the domestic sector was compounded in the commercial sector as a viable financial loan product linked to the property has not been brought to market. Whilst there has been some progress in retrofit of commercial properties, this has not been driven by Green Deal finance.

New buildings will comply with the energy policies in the city's Core Strategy, ensuring that developers are on track for new commercial, public and community developments to be zero-carbon from 2019.

New developments in the city are assessed against Manchester's Core Strategy, which contains a number of carbon reduction policies. The forthcoming National Zero Carbon Policy is scheduled to be introduced in 2016 for domestic and 2019 for non-domestic buildings.

The Universities, NHS Hospitals and the Council all have plans to reduce emissions from their estates – mostly in line with the MACF objective – by 2020. All will be making significant progress against these targets by 2015.

Manchester City Council reported in summer 2014 that it had reduced its carbon emissions by 17% since 2009/10. The Council's Climate Change Action Plan 2015-18 sets out how it aims to achieve the 41% reduction by 2020. 2014/5 carbon emissions will be reported in September 2015.

The University of Manchester has begun implementing its Estates Masterplan and are developing a new carbon management plan for 2015. The University's 'Make A Difference: Think Sustainability' tool for students, as well as its Carbon and Natural Resource Literacy training is being rolled out.

Manchester Metropolitan University have reduced their scope 1 and 2 CO₂ emissions by 22.8% since 2013/14 and are on-track for a 50% reduction by 2020. The newly completed Birley Fields Academic building achieved BREEAM Excellent and the Student Accommodation to BREEAM Outstanding.

University Hospital of South Manchester Trust has reduced emissions by over 26% since 2008. In the last 12 months the Trust Operational board has approved its Carbon Management Plan setting out a further 20% reduction by 2019. Initiatives this year include replacement of high voltage transformers, improvements to the heating and air handling systems and further investment in external and internal LED lighting. Improvements to the biomass boilers reduced gas consumption by a further 6%.

The Trust has won a number of awards: 'Most Sustainable Public Sector Organisation in Health/NHS' award and highly commended for 'Best Energy Management' at the Public Sector Sustainability Awards 2014.

Central Manchester University Hospitals (CMUH) have a target of 2% reduction in carbon emissions per annum. This year, energy consumption has reduced by 2% on 2013 levels despite a 4% increase in patient contacts. The hospital undertook their second year of 'Green Impact' staff sustainability behaviour change programme with 40 teams involved. This programme won a Green Apple Award and an NHS Sustainability Day Award. A number of capital energy efficiency measures have been implemented including LED lighting and controls.

Despite reduced levels of capital investment in schools in the period to 2015, a continuing increase in IT activity and rising primary school numbers, the emissions from schools will be 10% lower than in 2012.

Schools emissions in Manchester have reduced in 2014 compared to 2013 data. Manchester state schools reduced their energy use by 9% in 2014, and Manchester academies have reduced their emissions by 4% in the same year. Schools are encouraged to take part in behavioural change programmes such as Eco-Schools and Carbon Literacy, as well as a variety of other initiatives on offer.

We will use iconic public and commercial retrofit and new build projects in the city centre as a centre of excellence for low carbon, climate-adapted buildings to inspire and inform projects across Manchester and make preparations to secure hosting a Low Carbon Buildings World Exhibition in 2017.

Significant low carbon new build and retrofit schemes are now being used to showcase the city's ambition. The Town Hall Extension has hosted visits from the Cabinet Office BIM task group as well as the Estates Team of the Houses of Parliament, as an example of what can be achieved in heritage properties.

Manchester Art Gallery was longlisted for an Ashden Award for Sustainability.

The city hosted the inaugural UK Green Building Council 'City Conference' in August 2014, where over 100 delegates debated the long-term vision of sustainability for Manchester.

We will have developed a range of innovative applications using digital technologies to enable buildings to be better managed and more energy efficient.

Work continues on the EU-funded 'Odysseus' project of energy monitoring in the Town Hall Extension to develop a new energy management decision support aid.

€4.5 million of Smart Cities funding has been secured for Manchester by the Triangulum partnership.



MACF BUILDING GROUP
PRIORITIES FOR 2015/16:

1. Domestic – work with partners to encourage homeowners, registered housing providers and private sector landlords to retrofit their properties to high standards of energy efficiency, including through the Green Deal Communities project, Carbon Co-op and Chorlton Refurb.
2. Commercial – work with Pro-Manchester and other partners to raise awareness and encourage commercial building retrofit, particularly in the city centre.



2



Energy

Manchester’s energy – like almost all towns and cities in the UK – comes from a ‘centralised’ energy system that is structured according to Government energy policy and regulation. It has remained largely unchanged since the oil crisis of the 1970s and is made up of predominantly: electricity production from nuclear power stations and coal, oil and gas power stations, and heat generation within individual buildings through burning gas that is increasingly imported from overseas.

This picture is one that, to most people, is largely unseen, or at best an abstract part of everyday life. Energy arrives through pipes and wires and is available at the flick of a switch. Understanding more about where our energy comes from and what we can do to take more control is to engage in a system that is complex, confusing and often shrouded in the language of engineers, regulators and policy-makers.

But getting to grips with the UK energy system and most importantly what it means for Manchester and its carbon reduction targets is

becoming an area of expertise for growing numbers of stakeholders in the city. From academics at ‘Manchester Energy’, at the University of Manchester, to the new Low Carbon Investment Director, at the Greater Manchester Combined Authority, to the team at Carbon Co-op working with experts from across Europe on a new ‘smart grid’ project, the city is increasing its collective knowledge of low carbon energy and innovative new solutions for the city.

If ‘centralised’ energy was the way of generating and distributing energy in the 20th Century, the 21st Century will be dominated by ‘decentralised’ energy systems, where local stakeholders have an active role to play, and share in the benefits of generating and using locally generated low carbon energy.

Manchester has made good progress towards this in 2014, and identified several new opportunities for further investigation in the coming years.

Headline aim: To increase knowledge, research and delivery of renewable energy technologies; understanding and planning of the city’s energy needs and opportunities; and the application of digital technologies for energy management.

GMCR

We have seen ongoing interest and uptake of low and zero carbon technologies in 2014/15. At a community scale the ‘Powering Up North’ community energy conference held in Friends Meeting House was attended by over 200 people from across the energy sector, local authorities, third sector, community organisations, and Government bodies.

This will hopefully provide a powerful springboard for new projects to come forward, including Manchester becoming home to at least one of the 500 community energy companies that the Government’s Community Energy Strategy wants to see by 2020; generating a total of around 3GWh of wind, solar and hydro.

The establishment of the Greater Manchester Community Renewables and ongoing increases in solar panel installations are positive signs that this could be achieved.

In heat networks, the City Council, Greater Manchester Combined Authority and partners are making good progress in taking forward an ambitious programme that could potentially see Manchester city centre, east Manchester and parts of Salford and Trafford served with low cost, low carbon heat. Government funding has been secured to map a network across this area, as well as identifying discrete ‘clusters’ that will be developed as the start of the network. Five of these clusters are currently being investigated in detail, with the City Council now preparing to procure a delivery partner for the first at the Civic Quarter.

INDICATOR	2009	2010	2011	2012	2013	2014
Energy consumption (GWh)	9,722	9,579	9,162	9,169	Available Autumn 2015	Available Autumn 2016
Amount of generation capacity registered for the Feed-in Tariff (MW) (annual)	n/a	0.153	0.615	5.61	1.019	1.36
No. of renewable installations registered for the Feed-in Tariff (cumulative)	n/a	29	234	2,258	2,635	2,962
Generation capacity registered for the Feed-in Tariff (MW) (cumulative)	n/a	0.15	0.77	6.38	7.40	8.76

MACF 2013-15 ACTION PLAN:

ENERGY	PROGRESS IN 2014/15
Integrating policies from the Core Strategy with the framework of the Greater Manchester Energy Plan, we will have developed a city wide energy plan that sets out the major opportunities for renewable energy generation, embedded within the city's plans for neighbourhood regeneration.	Although a city wide energy plan has not yet been developed, Manchester's Core Strategy energy policies continue to be implemented through the planning system. Heat network mapping has identified 17 opportunities for further development, five of which are currently being taken forward.
Awareness and understanding of the sources of energy will be increased for organisations and residents and programmes such as Greater Manchester's Energy Switching scheme will have increased local demand for energy from renewable sources.	A third Greater Manchester energy switching campaign was held helping to raise awareness of the costs of energy and the importance of energy efficiency. 10,000 Greater Manchester households registered and 15% of those switched suppliers as a result.
We will have progressed understanding and practice of smart energy management in the city through programmes including Electricity North West's Capacity to Customers and CLASP projects, and outputs from Manchester Energy.	Carbon Co-op is developing innovative community smart energy grids. Electricity North West are delivering cutting-edge projects on demand management including Capacity to Customers and CLASP, and undertaking pioneering research to improve the local grid.
Large-scale energy generation and distribution systems will have begun to serve a small number of key areas of the city, establishing the basis for developing city wide heat networks in the future.	Of the 56 projects/opportunity areas for heat networks identified across Greater Manchester, 17 are in Manchester. A business case has been completed for the Civic Quarter Heat Network, as well as for an anaerobic digestion/heat network project at Smithfield Market. A number of feasibility schemes have secured funding from DECC's Heat Network Delivery Unit. These include Oxford Road Corridor detailed feasibility, NOMA detailed feasibility, Piccadilly master planning, and a wider strategic study considering connection options for heat network proposals within the 'Regional Centre' across Manchester, Salford and Trafford.
We will have increased the installation of building-scale renewable and low carbon heat and power technologies including solar PV, geothermal, solar thermal, hydropower and heat pumps.	2,962 renewable energy installations (mainly solar PV) are now registered for the feed-in tariff in Manchester, offering 8.76 MW of generation capacity.
Partnerships including our universities and Manchester Science Park will have developed Manchester-dedicated research and demonstrator programmes that develop digital energy data, closed-loop fuel recycling, new applications such as hydrogen technology, and an understanding of the potential for locally produced biofuels.	The Greater Manchester Hydrogen Partnership led by MMU has identified 14 projects, is developing 2 EU proposals, and is working with Government to develop a policy standard. Manchester is part of Triangulum Smart City Project (see case study overleaf).
We will have developed innovative demonstrators using open data and sensor networks to monitor energy use and help stimulate cultural change.	Open source energy monitors continue to be developed by Carbon Co-op and partners. In the Town Hall Extension the Odysseus energy management project is being developed; energy experiments and research opportunities will be explored over the coming year.

CASE STUDY TRIANGULUM

Manchester is part of a European consortium called Triangulum that has secured €24 million in a five year project to install intelligent energy management systems that drive smart city developments across three 'lighthouse' cities, working with Eindhoven and Stavanger. Manchester's project will be based along the Corridor and is led by Manchester City Council, The University of Manchester and Manchester Metropolitan University.

The aim is to transform the buildings and transport along Manchester's Corridor with low carbon alternatives.

The latest energy management technologies will develop an autonomous energy grid demonstrating how the entire district could be supplied with heat and electricity, along with encouraging greater use of electric vehicles, bicycles and the Metrolink.



MACF ENERGY GROUP PRIORITIES FOR 2015/16:

1. Appoint a new chair for the Group.
2. Support the delivery of community renewable energy projects through promotion, awareness-raising and bids for funding, including through the Greater Manchester Community Renewables Co-operative.
3. Promote Manchester's heat network programme to help establish the city as a leader in the UK and raise awareness of the schemes to potential customers.

3



Transport

How we move ourselves, our goods and services around Manchester and the city region is important when we consider that transportation makes up 24% of Manchester's direct emissions.

Increasing cycling in Manchester is one of a number of ways in which we are seeking to deliver on our carbon emissions targets in relation to transport. The objective is for 10% of journeys in Manchester to be by bike by 2025. The growing interest in cycling combined with major funding and transport infrastructure announcements during 2014 means that we have a good chance of meeting this goal.

However, encouraging people to cycle and use public transport is only part of the story. Analysis of Greater Manchester carbon emissions in 2014 suggests that the transport sector is unlikely to keep pace with other areas of carbon reduction activity and so unlikely to see a 41% reduction against 2005 levels.

As well as further shifts in travel behaviours (where 73% of city centre commuters already travel by public and active travel), it is clear that a major step change is needed in the types of vehicles that are used for the remaining private journeys, away from those using fossil fuels, to ultra low emission vehicles, including electric vehicles.

Major changes in transport infrastructure, vehicle technologies and behaviours take time. As we move into the second half of the original MACF plan our efforts will need to be focussed on continuing to make as much progress as possible by 2020 with the infrastructure and technologies that we have, as well as undertaking the planning work and securing funding for the next phase of major infrastructure and technology investments that will deliver savings post-2020.

Simon Warburton
Manchester: A Certain Future
MACF Transport Group, Chair

INDICATOR	2009	2010	2011	2012	2013	2014
Transport CO ₂ emissions (000 tonnes)	681	663	656	645	640 (estimated)	636 (estimated)
Cycling levels	13.4	15.6	16.9	16.3	17.9	Available July 2016
Modal share of non-car trips into the key centre (Manchester)*	69.7%	69.4%	70.2%	71.7%	72.7%	73.2%

*Morning peak (07:30-09:30) figures for Manchester regional centre.

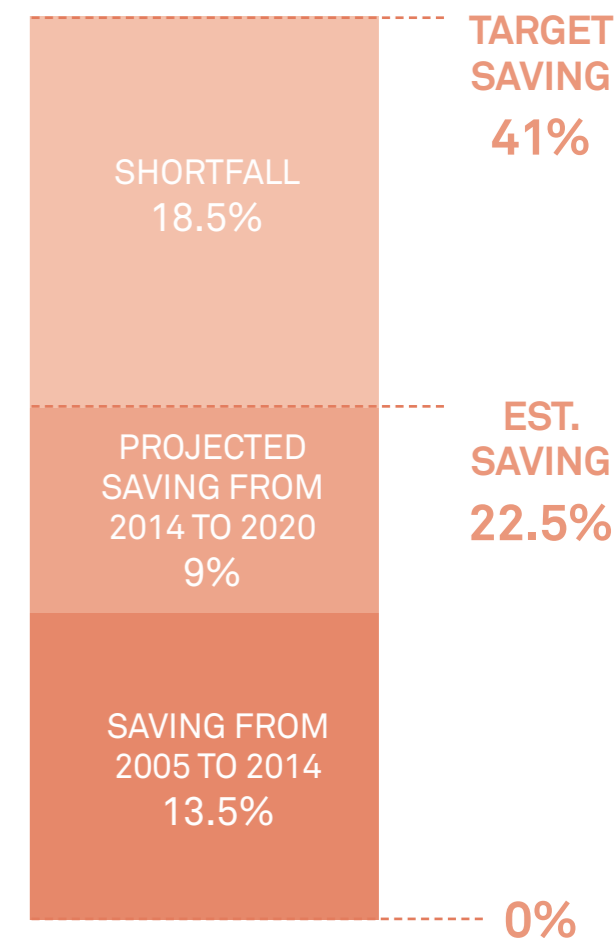
Headline aim: To deliver modal shift to sustainable transport (getting people out of cars and taking public transport, walking or cycling); continue the improvement of sustainable public transport services within and to and from the city, and create a platform for substantial increases in journeys on foot, by bike and by electric vehicle in the period 2016 to 2020.

TRANSPORT EMISSIONS

Manchester's transport story is, in many ways, very impressive. The 2014 chapter of this story is one of yet further progress in terms of new funding and the delivery of important infrastructure that will further enable people to travel by public and active travel.

Activity included:

- The Metrolink line to Manchester Airport opened in November 2014;
- Work to deliver the second Metrolink line through the city centre – the Second City Crossing (2CC) – got underway;
- The 'Get me there' smartcard travel cards initiative was launched;
- The Bus Priority package to develop an improved Greater Manchester bus network with over 25 miles being created or improved, moved closer to becoming operational (in 2016);
- There was continued rail electrification;
- Expansion of cycling provision through the Velocity 2025 project;
- The Wilmslow Road Cycleway programme started with a view to being completed in 2015;
- The Greater Manchester 'Walking Works' 12 month funded programme to provide increase walking opportunities;
- The number of cyclists coming into the city centre during the morning peak increased by 6%; and;
- More than 1,000 streets covering 111 miles have become 20 mph safer zones from August 2014.



It is therefore clear that progress is being made in terms of enabling residents, workers and visitors to move around the city through sustainable means. However, we are not yet seeing this progress translate into CO₂ savings at the rate needed to help achieve our 2020 targets.

In 2014, transport was responsible for

636,000 TONNES CO₂,
24% OF MANCHESTER'S
CARBON EMISSIONS

SINCE 2005 CARBON EMISSIONS
FROM TRANSPORT HAVE REDUCED BY

13.5%
100,000 TONNES CO₂
0.6% ESTIMATED
REDUCTION
SINCE 2013

On the current CO₂ trajectory, it is
estimated that transport will achieve a

22.5% REDUCTION BY 2020,
FROM 2005 LEVELS

The challenge is not dissimilar to that faced by other growing cities; attracting increasing numbers of residents, workers, businesses and visitors – all of whom need to move around. Even with ongoing investment in public and active transport to 2020, analysis by Transport for Greater Manchester (TfGM) in 2014 suggests that we will need to see a paradigm shift if transport emissions are going to be able to fall at the rate required.

This shift will come through ongoing increases in the numbers of people choosing to travel by sustainable means, with ongoing investment in Metrolink, buses, trains, walking and cycling routes to meet this demand, and ongoing densification of the city to make new routes viable. There will, however, be those who still choose or need to travel by private vehicle.

For these travellers, ultra low emissions vehicles (ULEVs) are the way forward, including electric vehicles that can be powered by zero carbon electricity generated locally or through a decarbonised National Grid. There is a long way to go in achieving the levels of ULEV use we need to see but some small-scale investment has already been delivered, including a network of over 300 Electric Vehicle fast charging bays across the city region.

IN 2014 INBOUND CITY TRANSPORT WAS

CAR 

27% MORNING PEAK
29% OFF-PEAK

NON-CAR 

73% MORNING PEAK
71% OFF-PEAK

FROM 2005 TO 2014
PEDESTRIANS COMING
INTO THE CITY CENTRE HAS
INCREASED BY



67% MORNING PEAK
50% OFF-PEAK

FROM 2005 TO 2014
CYCLISTS COMING INTO
THE CITY CENTRE HAS
INCREASED BY



291% MORNING PEAK
175% OFF-PEAK

MACF 2013-15 ACTION PLAN:

TRANSPORT

PROGRESS IN 2014/15

More of us will have access to greener public transport – Metrolink lines to Didsbury, Droylsden, Wythenshawe and Rochdale will be operational and Quality Bus Partnerships will be further developed: SMART ticketing for the whole network will be in the process of being introduced.

Metrolink usage is up by 64% in the morning peak hours compared to 2005 levels. New Metrolink lines are operational with additional capacity. More lines being developed with the Second City Crossing programmed for completion in 2016. A new Metrolink line to the Trafford Centre is planned to be operational by 2020.

An improving framework for increasing commuter cycling will be in place – cycle centres, training programmes, employer user groups, new cycle lanes and signage, improved integration with Metrolink – and plans for expansion will be in development as part of a new Greater Manchester cycle strategy.

The infrastructure for cycling is being delivered with the Wilmslow Road Cycleway programmed for completion in 2015.

Through an increase in active travel programmes and Manchester Carbon Literacy schemes, more residents and pupils will be aware of the health and climate change impacts of their transport choices.

The Cycle City Ambition Grant – Velocity 2025 – aims to increase cycling levels by 300% by 2025 across Greater Manchester; funding includes six Manchester schools and colleges to encourage cycling as a travel choice, linking to Carbon Literacy Programmes in schools where available.

Many large and medium-sized employers, including the Universities, the NHS Hospitals, the Co-operative and the Council, will be delivering green travel plans, and inspiring others to follow.

TfGM continues to offer an extensive Travel Choices Programme for residents, businesses and jobseekers which has given advice to 170 businesses in Manchester who are members of the Business Travel Network, employing an estimated 123,000 people. 72 of these businesses have been helped to develop bespoke Sustainable Transport Action Plans.

We will see more widespread 20mph zones in residential areas, helping to make walking and cycling a safer and more attractive option, and improving the wellbeing in our neighbourhoods.

One third of Manchester streets covering 111 miles in three pilot areas have become 20mph zones from August 2014.

An initial network of electric vehicle charging points will be operational across Greater Manchester, including in Manchester, and use of the City Car Club will have increased by 50% with more cars available.

The Greater Manchester Electric Vehicle (GMEV) network includes over 300 fast charging bays and four rapid chargers, 75% are accessible by the public – in car parks and 25% for fleet and private car parks. City Car Club in Manchester has offered vehicles for hire since 2005; there are now 38 cars in 23 locations, the majority within the city centre, with approximately 45% of clients being corporate members.

The development of Quality Bus Partnerships and cycling promotion in the south of the city centre will have begun to transform the Oxford Road Corridor into a centre of excellence for sustainable transport.

A Quality Bus Partnership Scheme is being developed for the routes improved through the Bus Priority Package, building upon the work done on the A6. The routes covered include Oxford Road/Wilmslow Road and Rochdale Road.

We will have begun to research and develop new ways of moving freight around in the city, exploring partnerships that include retailers, electric vehicles and new businesses.

Workshops are being held to engage with key actors and stakeholders for the Greater Manchester freight strategy and supporting package of interventions. An example of this is the Smart City project to develop and implement innovative ways of moving parcels and post along the Oxford Road Corridor with the aim of developing a model for adoption in other areas of the city.



MACF TRANSPORT GROUP PRIORITIES FOR 2015/16:

1. Encourage businesses to develop sustainable transport plans, including promoting support available through TfGM's Business Travel Network.
2. Work with TfGM and other partners to encourage residents to choose walking, cycling and public transport, including through supporting existing campaigns.

CASE STUDY

WILMSLOW ROAD CYCLEWAY

The Wilmslow Road Cycleway will run 7km from Didsbury into the heart of the city centre and link the student residential area of Fallowfield with the two universities and Central Manchester University Hospitals along the Oxford Road Corridor.

The Wilmslow Road Cycleway is the flagship route in Greater Manchester's Cycle City programme and will provide a segregated cycle route, including bus stop bypasses, to enable cyclists to have their own route away from the general traffic. Once completed, the Cycleway will make an important contribution towards Manchester's vision of becoming a cycling city and it is also a step in the right direction towards reducing carbon emissions.



Sustainable Consumption and Production

The previous three thematic areas (energy, buildings and transport) make up the 'direct' CO₂ emissions for Manchester. The 41% CO₂ reduction target relates to these emissions, but there are also other CO₂ emissions that Manchester is 'indirectly' responsible for. They are 'hidden' or 'embedded' in the products and services that we use and dispose of. For example, products that are manufactured outside of the city and the UK and are then transported here through flights and shipping.

To understand the full CO₂ impact of Manchester's activities we need to calculate our 'Total Carbon Footprint' (TCF). This is a commitment in MACF and is something that the MACF CO₂ Group has been looking at this year, with helpful input from the People's Environmental Scrutiny Team. We are yet to calculate the TCF for Manchester alone, but a study of Greater Manchester in 2011 gives us a reasonably good understanding of the main areas where action is needed. These areas include waste, food and the purchasing/procurement of goods and services.

When we look at these three areas in some detail we see that looking to make changes based only on CO₂ reduction targets risks undermining other broader sustainability objectives. Reducing CO₂ from the goods

and services we produce and consume therefore needs to be seen in the context of these other objectives. For example, local food production may only deliver relatively small CO₂ savings but could create new businesses and jobs, build community cohesion, create attractive green neighbourhoods and benefit biodiversity; all good reasons to take action.

The actions we are taking on our indirect CO₂ emissions are set out in the Sustainable Consumption and Production section of the plan and require us to consider this wider view. In simple terms, this section of the plan is about minimising the amount of products and services that we consume and dispose of, and for those we still need, selecting only those that meet a range of sustainability criteria, including CO₂ reduction.

As I hand over my role as chair of the SCP Group to Kate Chappell I am confident there is now a good basis from which SCP work can continue to grow across the city over the next five years.

Gudrun Cartwright, Outgoing Chair
Manchester: A Certain Future
SCP Group

THE MACF PLAN FOR 2013-15 SETS OUT THREE SEPARATE BUT LINKED AREAS OF ACTIVITY WITHIN SUSTAINABLE CONSUMPTION AND PRODUCTION: WASTE, FOOD AND BUSINESS PROCUREMENT.



SUSTAINABLE CONSUMPTION AND PRODUCTION: WASTE

Headline aim: To develop a sustainable approach to waste management, ensure maximum use of waste as a resource, and move from waste management to resource recovery.

The amount of waste recycled in Manchester has steadily increased over the past seven years, however this trend was interrupted because certain materials could no longer be recycled or composted due to levels of contaminants exceeding those permitted in composted material.

Food waste as a resource

The strong partnership developed between FareShare Greater Manchester, Manchester City Council and a range of voluntary sector organisations has made the project at New Smithfield Market a success.

FareShare Greater Manchester is identifying different ways to use surplus food, including working with LifeShare, Cracking Good Food, the Rainbow Christian Centre and the Compassion Food Bank to distribute more food to those who cannot afford it.

The volume of waste food diverted back into the human food chain is five times greater than when the partnership began more than three years ago.



INDICATOR	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15
Amount of household residual waste per household (kg)	701	631	518	481	485	506
Percentage of household waste recycled or composted*	18.8	25.8	34.0	36.8	34.9	32.4
Food wastage (tonnes) from New Smithfield Market diverted back into food chain	n/a	n/a	n/a	23	75	135

* These are provisional figures and may be subject to change. The final figures for these indicators will be verified in November 2015.

MACF 2013-15 ACTION PLAN:

SCP: WASTE	PROGRESS IN 2014/15
At least ten large organisations will be committed to sending zero waste to landfill by 2020.	There are a number of large organisations with zero waste to landfill aspirations including the Birley Fields campus at Manchester Metropolitan University. The MACF Resources Group is seeking to commit organisations to adopt the waste hierarchy (reduce, reuse, recycle).
The city will have a growing number of businesses repairing and reusing goods, otherwise destined to become waste.	Reuse is one of the four key projects being taken on by the MACF Resources Group, including working with The Furniture Reuse Network across the city.
We will have a full understanding of the city's commercial and industrial waste and will explore options for increasing recycling and reducing the amount to landfill.	The MACF Resources Group has committed to engaging researchers around this issue; a brief will be written once the potential research capacity amongst the universities is known.
All new developments will be designed to facilitate best practice waste management and maximise the amount of material sent for recycling.	Currently a Waste Management Plan is requested at the planning application stage for each new development. This is then evaluated by the Council's Environmental Health team. The effectiveness of this strategy needs to be monitored and appraised.

CASE STUDY MACF RESOURCES GROUP

In 2014 the MACF SCP Group established a new MACF Resources Group to increase its capacity, participated in the Manchester Food Board, and helped to establish a Sustainable Visitor Economy project.

The MACF Resources Group has prioritised action in four project areas:

1. University of Manchester internship: the Chair of the MACF Resources Group has sponsored a student for one year from February 2015 to provide support and co-ordinate projects.
2. Research project to understand the size and scope of the reuse sector in Manchester and identify opportunities to increase this.
3. Development of a project within the reuse sector, making use of goods, including furniture, that would otherwise be thrown away.
4. Research project to undertake food waste research in Manchester for the domestic, industrial and commercial sectors.

SUSTAINABLE CONSUMPTION AND PRODUCTION: FOOD

Headline aim: To build a better understanding of the food systems that support Manchester, create strong links between healthy diets and sustainability, develop opportunities to build local supply chains that support local businesses and reduce risks to future food security.

As with our energy system, the UK food system has become increasingly centralised over the last 50 years. It is dominated by large companies, providing a vast array of food (healthy and not) at all times of the year, day and night. As this industry has expanded, our 'connection' with the food it provides has become ever weaker.

Food has become a product much like the other items we consume, always available whatever the season, and without much understanding of how it was produced and where it came from. It comes as no surprise that this paradigm shift has also been accompanied by another trend: ever increasing food waste generated by consumers that don't fully understand its value and the efforts involved in its production.

In a number of ways this is a food system that is incompatible with the vision for a sustainable city of the future. It is also the reason why 2014 has seen Manchester increase its efforts to better understand this current system, what we actually want our food system to do for us, and practical action to make it happen.

The Biospheric Foundation, based in Salford, continues to champion the move to a 'hyper-local' food system made up of local production, employment, distribution and consumption. In May 2015, it launched a new five-year plan to develop 50 ecological projects across Greater Manchester with the aim of 'creating a new agricultural model that sits on the old industrial model of the city'.

The Sustainable Consumption Institute at the University of Manchester completed its 'Households, Retailers and Food Waste Transitions' research project in June 2015, to understand how we can progress towards the establishment of a sustainable food system.

At a community level, interest and action in food growing continues to develop. Projects supporting people, schools and students to grow food include:

- The 65 organisations supported through the Public Health Manchester funded 'Growing Manchester' scheme
- The University of Manchester's Incredible Edible Manchester, and Incredible Edible Levenshulme projects;
- Nine growing projects through the Real Food Wythenshawe project, now in its third year, and;
- Community engagement training at Hulme Community Garden Centre and Debdale Eco Centre.

INDICATOR	2010	2011	2012	2012/13	2013/14	2014/15
Number of organisations supported through the Growing Manchester Programme	n/a	n/a	n/a	12	34	58

MACF 2013-15 ACTION PLAN:

SCP: FOOD	PROGRESS 2014/15
By making land available and providing support, community food growing projects will have sprung up all over the city, including schemes delivered as part of neighbourhood regeneration schemes and new developments.	The Growing Manchester Programme supported over 65 organisations to grow food, doubling the number of supported groups from 2013. Real Food Wythenshawe is currently delivering nine growing projects. A number of temporary 'meanwhile' sites were established across the city including The Moss Side Community Allotment and McDonalds site in Wythenshawe.
Community growing, local food production and consumption, and reducing food waste will have a higher public profile through exemplar projects like Wythenshawe Real Food and FareShare.	FareShare Greater Manchester project to redistribute usable surplus food has increased year on year – from 23 tonnes to 135 tonnes over three years.
There will be an increase in Manchester-based businesses growing and processing food commercially for sale within the city.	Following a motion to the Council in January 2014, this action was adopted as part of the Manchester Food Board's remit.
Further progress will have been made in reducing and recycling domestic food waste and initiatives that reduce and recycle commercial food waste will be increasing in scope and scale.	The University of Manchester has appointed a student intern to develop initiatives to reduce food waste. The aim is to establish a baseline of the size and scope of commercial food waste and current company practices, to develop future action with this sector.
Manchester will have begun to build a reputation as a destination for sustainable food through large events and festivals as well as neighbourhood food markets and projects.	Manchester Food and Drink Festival has a low carbon theme running through the festival; promoting locally sourced food and low carbon menus. The Christmas Markets have continued to expand and improve the proportion of waste material recycled as well as reducing energy consumption relative to footfall. Of the general waste collected from the 2014 Christmas Markets, 41.6 tonnes was recycled with a total recovery rate of 51% and 12.5% less waste sent to landfill than the previous year.

CASE STUDY OLD MOAT GREENIES (OMG)

Old Moat Greenies (OMG) is a voluntary organisation of around 50 people based on the Old Moat estate in Withington. OMG bring together the local community through residents and families growing their own fruit and vegetables on a local temporary growing plot.

Members share their knowledge and skills and support each other in growing their own food, becoming more sustainable, encouraging wildlife and reducing their carbon footprint.

They have found that using social media such as Facebook has really helped get people involved, as have plant and craft days for younger members.

Old Moat Greenies 



SUSTAINABLE CONSUMPTION AND PRODUCTION: PROCUREMENT

The 'procurement' or buying of goods and services has the potential to help deliver a broad range of social, economic and environmental benefits to the city. To that end, the Greater Manchester Combined Authority and the ten local authorities have established a Greater Manchester Social Value Evaluation Framework and Policy to guide their procurement activities.

Manchester City Council has had a sustainable procurement policy since 2009 and has made a

commitment to incorporate the Greater Manchester Social Value Evaluation Framework and Policy in its Sustainable Procurement Policies and Procedures, including how CO₂ reduction can be included.

The University of Manchester and Manchester Metropolitan University have undertaken work in 2014 to understand the CO₂ impact of their procurement activities and to identify opportunities for improvements.



MACF 2013-15 ACTION PLAN:

SCP: PROCUREMENT	PROGRESS IN 2014/15
Sustainable procurement will be improving the environmental performance of our organisations, and creating demand for suppliers to provide low carbon goods and services.	Manchester City Council, along with its Greater Manchester partner authorities, the Low Carbon Hub and GMCA, have developed a Social Value Procurement Evaluation Framework against which each authority will set its own sustainable criteria to reduce carbon emissions and deliver environmental benefits for its residents.
There will be more businesses in the city providing low carbon goods and services.	The ENWORKS Green Growth programme continues to support local businesses operating in the low carbon sector.
Research from the Sustainable Consumption Institute and others will help identify further opportunities for low carbon activity from 2016.	It is a priority for the MACF Resources Group in 2016 to work with the Sustainable Consumption Institute to identify opportunities for low carbon research and activity. This year the MACF SCP Group has worked with Manchester Metropolitan University and Marketing Manchester to baseline the carbon footprint of the visitor economy sector.



MACF SCP GROUP PRIORITIES FOR 2015/16:

1. Help to establish a network of community food growing, including support for groups looking to get involved.
2. Promote the sustainable procurement activities of Manchester organisations and encourage others to incorporate this into their own practices.
3. Work with the CO₂ Group to define the scope of SCP for the MACF 2016-20 plan.

Green and Blue Infrastructure

The city's 'green and blue infrastructure' (GI), our green spaces and waterways, is made up of a range of different resources, from the large-scale river valleys of the Irk, Medlock and Mersey, our parks and canals, through to those at the small scale, like our private gardens and green roofs. All are important, forming an interlinked network across the city, and providing a wide range of benefits to the people, wildlife, and economy of Manchester.

These benefits are critical to creating the attractive, sustainable city that we want to see. To help enable this to happen, the MACF Green and Blue Group has been working with the Council and partners from across the city to put in place a new Manchester Green and Blue Infrastructure Strategy and Stakeholder Implementation Plan.

These documents, and the networks of stakeholders across the city who have a role to play in their delivery, will provide the platform for scaling up the many examples of good practice that we already see across the city. They will also provide the basis for integrating GI as part of the plans and policies that will drive the city's next phase of major growth and development.

They will hit the ground running when the Manchester Green and Blue Infrastructure Strategy and Stakeholder Implementation Plan is published in summer 2015, building on the significant progress made in 2014/15, and providing good momentum to take us into the development, and most importantly the delivery, of MACF 2016-20.

Steve Merridew
Manchester: A Certain Future
Green and Blue Infrastructure Group, Chair

Headline aim: To ensure the city's Green and Blue Infrastructure is providing optimal benefits to the city in terms of quality of life, climate change adaptation, and wider social, economic and environmental benefits.

The city has been developing a broader understanding of the benefits of our Green and Blue Infrastructure over the last 12 months. Research carried out for the city's Green and Blue Infrastructure Strategy estimates that Manchester's parks are responsible for saving the NHS between £6 and £10 million each year through the physical and mental health benefits it provides.

GI helps to enhance the value of commercial and residential properties and provides jobs, such as the new RSPB Education Officer working with schools in south Manchester, the National Trust Curator in Residence appointed last year, the new Grow Wild Project Manager, Southways Housing's Urban Ranger, as well as providing many opportunities for volunteers to enjoy the outdoors and learn new skills.

One of the priorities for next year is to build on this understanding so that the benefits of GI can be shared with an even broader range of businesses and communities to encourage them to play their part in improving our green and blue spaces. And for the city to look at new funding options to deliver the next phase of projects, including the €12m project submitted for European funding to help improve the city's river valleys over the next decade.

2014/15 has been a year of great progress, including:

- The completion of the £4m Alexandra Park restoration project.
- £3.5m has been committed to improving the city's parks and green spaces through the Council's Clean City programme.
- The City Council and the RSPB launched a partnership to set out a new vision for the Mersey Valley.
- One new Site of Biological Importance (SBI) was declared at Painswick Park Meadow in Wythenshawe.
- The River Medlock restoration project won a National Wild Trout Trust Conservation Award.
- The MACF GI Group delivered two high-profile engagement events, looking at European funding opportunities and a Royal Institute of British Architects (RIBA) supported seminar on Health, Cities and Green Infrastructure.

With a three-year pipeline of projects set out in the Stakeholder Implementation Plan for the Green and Blue Infrastructure Strategy, the outlook suggests that good progress will continue to be made in this area of MACF.

INDICATOR	2009	2010	2011	2012	2013	2014
Monitor and maintain the % of sites of biological importance in positive management*	43%	46%	48%	50%	51%	55%
Local Nature Reserves (LNR) numbers and hectares	7 (307ha)	8 (392ha)	8 (392ha)	8 (392ha)	8 (392ha)	8 (392ha)
Number of trees planted per annum**		8,120	10,515	9,400	10,106	12,967

*Target is a minimum 1% annual increase of SBIs in active conservation management
**A combination of trees, hedge plants and fruit trees planted as part of known schemes



MACF 2013-15 ACTION PLAN:

GREEN AND BLUE INFRASTRUCTURE	PROGRESS IN 2014/15
A Green and Blue Infrastructure Strategy will be published and in use in all parts of the city, providing a framework for ensuring that natural environment benefits become and remain embedded in our plans for neighbourhoods and the city centre.	The Strategy and Stakeholder Implementation Plan will be published in July 2015.
A programme of tree planting will have continued in the city, with an increase in street trees, green roofs and green walls delivered or awaiting delivery in the city centre.	Nearly 13,000 trees were planted across the city in 2014/15 on known projects, including approximately 2.6km of hedgerow and seven community orchard/fruit tree planting projects.
Investment in the quality and use of the city's waterways will be better aligned with other priorities so that flood risk management, improved water quality, property values, and recreational and urban cooling benefits, are linked with urban development and refurbishment.	United Utilities continues with its £25 million water quality improvement programme positively impacting on the River Irk. The £150,000 Manchester City Council 'Clean Streams' project will look to improve the aspect of several ordinary watercourses through working with land managers and community groups.
Community and friends groups, businesses and schools will be more actively involved in the city's green and blue spaces, learning about the many benefits they can provide, including health, recreation, and climate change adaptation and mitigation.	A Tale of Two Cities, a joint project between Manchester and Liverpool, won £120,000 from Kew Gardens in their national Grow Wild competition. The project gained nearly 20,000 public votes and beat off stiff competition from London, Sheffield, Plymouth and Bristol. The funding will go towards wildflower planting in Hulme and Moss Side.
Data held on all the city's green and blue infrastructure will have been improved and updated and made publicly available, growing a shared understanding of its value for climate change adaptation, biodiversity, health and wellbeing, education and recreation.	Running parallel to the publication of the Green and Blue Infrastructure strategy, a portfolio of case studies will be available online in Summer 2015. The local universities are establishing new research projects to continue to develop this understanding, including a new 'ecosystems@Manchester' research group at the University of Manchester.



CASE STUDY SNOWDROP CITY

As part of its growing presence in the city, the National Trust continues to use innovative approaches to engage and inspire the communities of Manchester, using green spaces as the backdrop.

To mark the centenary of the First World War, National Trust Gardener in Residence, Sean Harkin, worked with local volunteers, community groups and schools to plant 100,000 snowdrop bulbs in green spaces across Manchester in September 2014.

A symbol of hope and peace during the conflict, the commemorative flowers have now bloomed across the city. They will leave a lasting legacy when they flower each year and should produce even more spectacular displays as they multiply for the enjoyment of people who visit, work and live in Manchester. "Every year famous outdoor sites in Manchester will turn a sea of white as the carpets of snowdrops bloom," said Sean Harkin.

A war-themed installation featuring snowdrops growing out of an imitation First World War bunker was also created outside the entrance and inside the foyer of Manchester Art Gallery to showcase the snowdrop planting project in February 2015.



Photography by Emma Williams – supplied by the National Trust



MACF GREEN & BLUE GROUP PRIORITIES FOR 2015/16:

1. Champion the Manchester Green and Blue Infrastructure Strategy and Stakeholder Implementation Plan, and encourage stakeholders to contribute towards its delivery.
2. Support funding bids for the medium and large-scale projects in the Stakeholder Implementation Plan.
3. Work with the City Council and the UK Green Building Council to deliver training and events for planners and developers to support them in designing and delivering high quality green and blue spaces as part of new developments.
4. Work with the local universities to commission research to further develop our understanding of the benefits of GI.



Photography by Emma Williams – supplied by the National Trust

PART 3

PRIORITY ACTIONS FOR 2015/16

STEERING GROUP PRIORITIES

2014 has been a landmark year for the MACF Steering Group; completing an 18-month period of transition that has seen it begin to more clearly communicate with and encourage stakeholders across the city to contribute to MACF, and begin to establish a new organisation to provide the resources it needs to deliver yet further activity over the years to 2020. The Steering Group has two headline priorities for the coming twelve months.

MACF COMMUNITY INTEREST COMPANY

The new Community Interest Company (CIC) will continue to deliver the activities that the Steering Group has been delivering since it was first established, for example, communications and events, as well as new opportunities that it has been unable to address due to resource levels, in particular developing new projects and bids for funding with partners.

The CIC will be governed by a board of directors with a committee responsible for the day-to-day running of the organisation, and staff to deliver activities on behalf of the directors. The directors will be taken from the existing Steering Group members with staff to be made up of secondees from the City Council.

The key priority for the Steering Group/CIC directors is to formally establish the organisation over summer 2015 and to put in place a robust and transparent business plan for the coming year, setting out specific actions that will support the delivery of MACF. Once finalised, the Plan will be published on the MACF website and progress against it provided in next year's MACF Annual Report.

Critically, the new organisation will be embedded as part of the existing network of citywide activity so that it can add value, help to celebrate success, and work with partners and funders to fill gaps in the delivery of MACF.

The draft objectives of the new organisation are set out in Part 1 of this report.

SMART(ER) ACTION PLAN FOR 2016-20

The purpose of the MACF 2016-20 plan is to develop a set of actions that will enable Manchester to meet the four headline objectives; in particular the 41% carbon reduction target. By allocating a carbon reduction figure to projects and interventions that relate directly to the objective, and by committing organisations and people to deliver specific actions, the plan is more likely to succeed.

Building on the Greater Manchester carbon 'wedges' work and Greater Manchester Climate Change Strategy Implementation Plan 2015-20, the approach for Manchester will give the plan an evidence base to prioritise action, and to track and evaluate progress.

This approach will also help Manchester activity to benefit from the opportunities for faster, more resource-efficient activity as part of wider Greater Manchester programmes. Further information on the wedges work is provided on the next page.

The following principles will be applied to the production and delivery of the plan:

- **Analyse:** The MACF CO₂ Monitoring Group and Thematic Sub Groups will assist with analysis of the wedges data.
- **Prioritise:** SMART (Specific, Measurable, Actionable, Realistic, Timely) actions and interventions prioritised by level of contribution to the four MACF headline objectives and ability to be delivered by 2020.
- **Engage:** Targeted stakeholder engagement, based on the analysis will ensure effective and enthusiastic ownership of actions.
- **Act:** Leadership of the actions is vital. The target reduction will not be achieved through a set of actions, but through the ability of individuals and organisations to deliver them.
- **Measure and review:** A monitoring system through an Annual Report and MACF Steering Group AGM is required to measure progress.

THE GREATER MANCHESTER CARBON WEDGES STABILISATION APPROACH

The carbon wedges ‘stabilisation’ approach is a modelling tool that allows for the assessment that different activities (or wedges) will have on reducing carbon emissions from a ‘business as usual’ scenario.

The Greater Manchester approach is based on emissions reductions from four key areas:

- Emissions reductions that **national policy** will deliver (approximately 53% of the Greater Manchester target; including decarbonisation of National Grid electricity).
- Emissions reductions that **national policy with local influence** will deliver.
- Emissions reductions that **local** initiatives need to deliver including **planned and potential projects**.
- The gap between total known deliverable emissions reductions and the 2020 target; **action by private individuals and businesses**.

What this means for Manchester

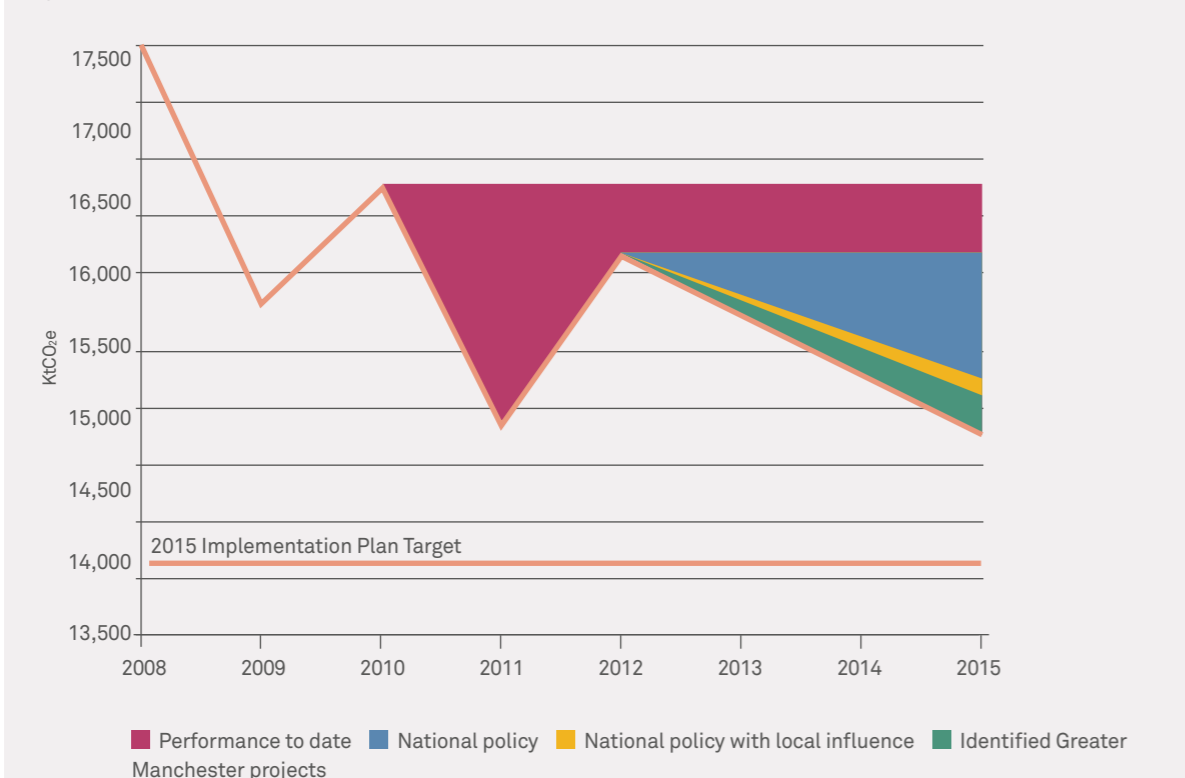
To translate the carbon wedges stabilisation approach to Manchester, and to understand how Manchester’s data breaks down into the four key areas, further analysis of the data is required. The approach is being considered by the MACF CO₂ Monitoring Group which will assess how to configure the data for Manchester. However, if we assume a similar outlook as Greater Manchester, and wish to adopt the wedges approach, we need to understand what will be delivered at a national level, what at a Greater Manchester level, what through current and future projects, and what is, and could be, within the gap wedge.

The carbon wedges data shows that Greater Manchester is likely to miss its 2015 emissions reduction target, and will not achieve the 2020 target without considerable scaling up and acceleration of all the known pipeline projects, plus delivery of potential and additional pipeline projects.

This will require:

- **Continued investment in:**
 - Commercial heat networks
 - Domestic and building energy efficiency
 - Private sector resource efficiency
 - Smart travel choices.
- **Investigation and potential investment in:**
 - Commercial wind
 - Photovoltaic (PV)
 - Energy from waste
 - Geothermal
 - Electric vehicles.
- **Influencing policy including decarbonisation of the National Grid.**
- **Actions outside of local authority control such as energy efficiency in commercial buildings, plus additional measures from transport.**

Figure 3.5: Greater Manchester Wedges up to 2015: Impact by Area



Work is currently underway to develop a timetable for the production of MACF 2016-20, including opportunities for stakeholders to get involved. Further information will be published on the MACF website by early 2016.

CITYWIDE PRIORITIES – 2015 CALL TO ACTION

	INDIVIDUALS	SCHOOLS AND COLLEGES	BUSINESSES
1 Buildings	Improve your home energy efficiency and reduce your fuel bills by taking part in the Green Deal Communities project, Carbon Co-op, Chorlton Refurb or designing your own home improvement. Loans are available through free HELP (Homes Energy Loan Plan) loans are available through the City Council. For more details contact Manchester Care and Repair on 0161 872 5500.	Be part of the Greater Manchester Schools Energy Efficiency Programme (GMSEEP): This Greater Manchester wide programme is available for all Greater Manchester schools and offers 100% interest free loans for energy efficient measures paid back over 8 years. Parrs Wood High School has used this fund to install highly efficient LED lighting. A useful help pack developed by Parrs wood High School is available here bit.ly/ParrsWoodHelpPack	If you own your premises, invest in energy efficiency improvements to cut energy bills and carbon emissions – for advice, contact the Green Growth Hub: green-growth.org.uk If you rent, contact your landlord and ask them what they're doing to improve the efficiency of the building.
2 Energy	Switch to a green energy tariff. Invest in a community energy scheme, such as Greater Manchester Community Renewables gmcr.co.uk Install solar panels on your roof – Government incentives will pay you for the energy you generate.	Install solar panels; MCC is embarking on a demonstration project with a large high school, which will provide other schools with a delivery model that can be followed. Manchester City Council is now accepting expressions of interest from suitable schools.	<ul style="list-style-type: none"> • Switch to a green energy tariff • Invest in renewable energy • Install LED lighting
3 Transport	Get on your bike, walk or use public transport for at least one journey a week that you would normally do in the car – support is available from TfGM: tfgm.com/travelchoices Take your next holiday in the UK instead of overseas and support the British visitor economy.	Produce a green travel plan – support is available from TfGM: tfgm.com/travelchoices	Produce a green travel plan – support is available from TfGM: tfgm.com/travelchoices
4 Sustainable Consumption and Production	Eat SMART: S – Smaller amounts of meat, fish and dairy M – More plants, beans and pulses A – Avoid processed and junk food R – Reduce food waste T – Think about where your food is from Grow your own food, in your own garden or balcony, your neighbours' garden, an allotment or as part of a community food growing project, one that you could even start yourself.	Grow your own food at school – for advice, visit: growingschools.org.uk	Adopt a low carbon procurement policy – contact the Green Growth Hub for advice: green-growth.org.uk
5 Green and Blue	Plant up your garden, back yard or balcony with bee-friendly plants and flowers. foe.co.uk/bees	Plant a Bee World in your school grounds to provide a food source for bees and other pollinators. foe.co.uk/bees	Plant a Bee World in your grounds to provide a food source for bees and other pollinators. foe.co.uk/bees
Low Carbon Culture	Tell your friends and neighbours what you're doing to reduce your carbon footprint Get active – join a campaign group such as Manchester Friends of the Earth Write to your MP to tell them why climate change matters to you, and ask what they're doing to help cut carbon emissions: writetothem.com Move your money out of banks and financial institutions that invest in fossil fuels – see moveyourmoney.org.uk and greenlightcampaign.org.uk	Share best practice with other schools in your local area. Take part in the Eco-Schools project and progress from Bronze to Silver to Green Flag status: eco-schools.org.uk Get involved in the Carbon Literacy for schools project: carbonliteracy.com Write to your MP to tell them why climate change matters to you, and ask what they're doing to help schools cut carbon emissions: writetothem.com	Share best practice with other businesses in your local area or sector. Run a Carbon Literacy training programme for your staff: carbonliteracy.com Write to your MP to tell them why climate change matters to you, and ask what they're doing to help businesses cut carbon emissions: writetothem.com

For further information on these – and other – activities, visit manchesterclimate.com or email manchesteracf@gmail.com

SUMMARY

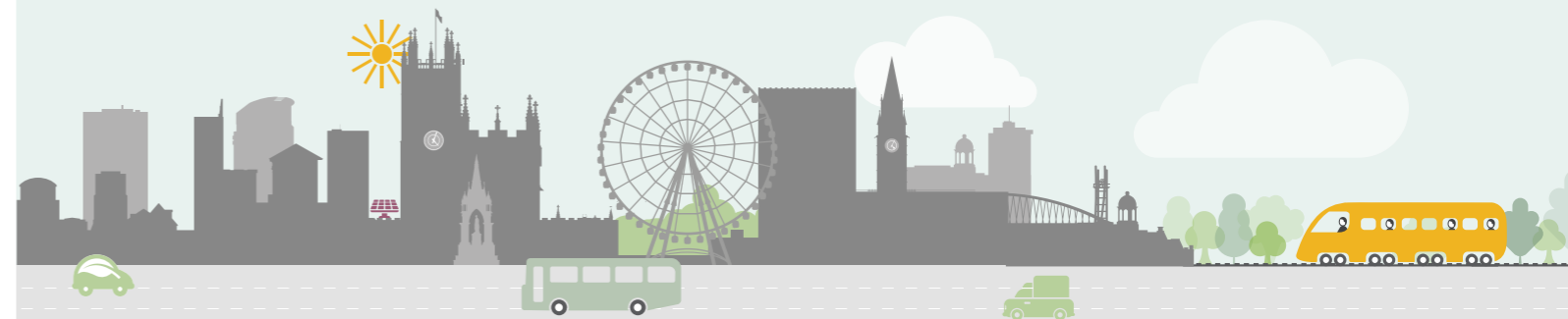
This is the second Annual Report by the MACF Steering Group and marks the halfway point in the delivery of the city's 10-year action plan. Looking back over the last five years we see that progress is being made, growing numbers of residents and businesses are taking action, and that there are many examples of innovative and exciting new projects. However, we also see that this progress is not happening at the rate or scale needed.

The data shows that if the city continues on the current trajectory we will have reached a 29% CO₂ reduction by 2020, not the 41% target required by our plan. If a carbon budget approach is applied the target becomes yet more challenging; requiring a 57% reduction by 2020.

As we now look to the next five years, the lessons from the last five are clear: the progress achieved is positive and worthy of recognition, but we now need to see these many examples of good practice significantly scaled up so that all stakeholders in the city are making their contribution to MACF and, in the process, improving their health, quality of life and saving money.

Key to the success of MACF is having the right environment and a culture that supports, encourages and inspires people to take action. This will be a big part of the MACF Steering Group's activities over the next 12 months – working to secure the right level of political action on climate change, helping to build stakeholder networks and share information, and promoting the many examples of good practice that exist in the city.

Looking outside of the city, all eyes will be on Paris this December. Reaching an agreement at COP21 is critical if global average temperature rises are going to be limited to 2°C. Over the coming months, the Steering Group and partners will be looking at ways to contribute to the negotiations. They will work to add weight to the overwhelming demand for a global agreement, provide inspiring examples of local action, and help to ensure that Manchester and the planet both have a certain future.



Details of all of MACF's activities will be published on the MACF website:

manchesterclimate.com

E-mail MACF:

manchesteracf@gmail.com

Get the latest news to your inbox:

manchesterclimate.com/user/register

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MANCHESTER: A CERTAIN FUTURE

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