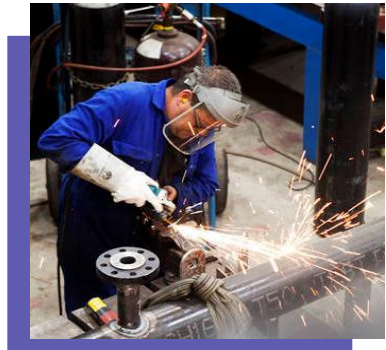




Greater Manchester Environment Report 2016

Cutting carbon emissions by 48% between 1990 and 2020



Growing a low carbon economy

Rapidly adapting to a changing climate



Embedding low carbon behaviours

Achieving air quality thresholds



Governance

A new style of local government has brought together GM's 10 local authorities to become the UK's first Combined Authority. With more local control comes the enhanced ability to deliver positive air quality and low carbon impacts.

The LCH Board:

- Provides strategic guidance on low carbon, waste and environmental issues
- Oversees project development and delivery, ensuring transparency
- Establishes and maintains external links within the sector
- Is GMCA's advocate and champion for low carbon, environment and waste.

The LCH Board comprises:

- A GM local Authority Leader and Chief Executive
- Board representatives from TfGM, GM Waste Disposal Authority, New Economy, the Growth Company and Core Investment Team.
- Business, third sector and academic thought leaders.

The Board meets quarterly. It establishes and oversees a wide range of public and private sector initiatives, task groups and project groups. It reports into the GMCA's Executive via its Chair, Salford City Mayor, Paul Dennett.

Small teams within GM the delivery organisations support the policy, research and programme work of the Low Carbon Hub.

Policy

- Greater Manchester's Climate Change Strategy 2010-20 shapes the work of the Low Carbon Hub. Priority interventions are summarised in **GM's Climate Change Strategy Implementation Plan 2016-20**.
- Northern Cities are critical to the UK's carbon reduction and low carbon economic challenge. The **Northern Powerhouse** concept, new governance and delivery arrangements provide the building blocks for GM to deliver a powerful transition to a low carbon and low emissions economy. Such a transition requires decreasing fossil fuel consumption, improving system-wide energy efficiency and increasing energy generation.
- Greater Manchester are proud to have been selected as **DEFRA's Urban Pioneer**, identifying good practice and innovative solutions as Defra begin to implement their 25 Year Environment Plan.
- GM have recently agreed with the Government a **GM Devolution Energy Deal** - to work together on reducing UK emissions in line with carbon budgets and tackling the impacts of unavoidable climate change.
- Consultation phase complete of the **GM Spatial Framework**, comprehensive review for Spring 2017 – ensuring we protect our environmental assets and plan for a clean, green infrastructure.
- Carbon reduction features as a key theme for the Greater Manchester Strategy consultation.
- Bolton Council published Supplementary Planning Documents (SPDs) to increase uptake of sustainable building and development solutions.
- Manchester Climate Change Agency launched their Climate Change Strategy 2050.

Finance

Greater Manchester has created a strong funding platform for future project delivery:

- £21m ERDF funding established for Sustainable Urban Development to be focused on smart energy innovation and a further £15m ERDF funding secured for a Low carbon investment Fund.
- £6m Government Green Deal Communities funding bolstered by additional funds from customer contributions, Local Authorities and energy company obligation funds (ECO), making the net worth of the project c£9
- £1.3m funding secured for continuation of business support activities to develop and grow the local LCEGS sector.
- Over £110m of energy and low carbon research income is in place across GM's academic institutions.
- Investment pipeline of £200m in heat networks, energy efficiency and generation projects identified.
- Secured a proportion of £14m through EU Life Integrated Project to provide capacity for Natural Capital activity and improve water quality in GM through the project – Natural Course.
- £67k additional funding secured to undertake next stage of work for Bolton Raikes Lane, additional funding also identified for Manchester Piccadilly and Salford Charlestown heat networks. Three funding applications submitted to pilot of the Heat Network Investment Programme - if successful, secures £12m capital funding for the St Johns, Trafford City Gateway and Civic Quarter Heat Networks. This will in turn leverage a further £40m private and public investment.
- MOU proposed with Salix Finance to provide £10m of 0% finance over 3 years. Two demonstrators include a £3m investment in the 1st wave of school retrofit programmes, and a circa £1m RE:FIT corporate buildings programme
- Oldham Council (on behalf of GM) secured €1.2m funds for Community Energy Sector project and a further £200K to support sustainable food supply chains.

ACHIEVEMENTS 2016:

Climate Change Adaptation and Resilience

Partnership working has helped to focus research and progress essential work on adaptation and resilience.

- RESIN: investigating climate change resilience in European cities, £1.1m funded by Horizon 2020. It combines existing approaches to climate change and disaster risk assessment to develop guidelines that can be used and ultimately shared widely.
- £12m work now completed on Salford Flood Defence basin on land north of the Castle Irwell Student Village to increase protection for 1400 homes and 500 businesses in Lower Broughton and Lower Kersal. Partners include University of Salford, the Environment Agency and Salford City Council.
- Bury Council incorporating Climate Change mitigation into Health and Well Being strategy.



Energy

- Smart Systems and Heat – An ETI and Energy System Catapult Energy master-plan funded to create a GM evidence base .
- Three year £20m NEDO funded programme due to complete February 2017. Over 550 ICT linked air source heat pumps, testing demand side response in ‘smart communities’ in Bury, Manchester & Wigan.
- ‘The District Energy Procurement Agency’ (DEPA) a proposed municipal not-for-profit procurement cooperative specialising in goods and services in the district energy market. The PDU have supported the Phase 1 works. This includes developing a business case and drafting legal documents relating to company formation.
- Completion of EU funded research: District Information Modelling and Management of Energy Reduction (DIMMER) programme.
- District Heat Masterplanning and mapping completed for Trafford Park and Manchester Piccadilly, with feasibility studies also completed for MediaCityUK, NOMA, Oxford Road Corridor, Ashton Town Centre, Bury Town Centre and Bolton.
- £60K secured from DECC to run a community energy innovation project.



Buildings

- Award winning Green Deal for Communities project, completed on time, exceeded targets and within budget - over 900 fuel poor households received external wall insulation and over 400 households received other retrofit measures.
- £2M ECO funds ring-fenced for GM fuel poor residents, via OJUE procured GM GD and ECO Framework . Agreement signed with E.ON.
- Business cases developed for 379 LA buildings including schools, across 5 local authorities, totalling £19m investment opportunity.
- £6m Wigan Town Hall refurbishment completed following a green ‘deep dive’ report, in conjunction with agile working principals, delivering 38% reduction in gas consumption and only a 20% increase in electricity consumption despite increasing occupancy from circa 250 to 517 staff. Case study to be produced to assist other GM civic refurbishments.
- Parrs Wood High School solar roof completed, hosting 1K solar panels, generating more than 200,000 kWh of power per year.



Transport

- Delivery of Metrolink line to Rochdale Town Centre 2 months ahead of schedule and to the Airport 12 months ahead of schedule
- 167 electric vehicle charging infrastructure stations delivered, and over 2,500 GM registered e-vehicles.
- GM awarded £42 million to fund the development of the City Region’s cycling strategy, Velocity 2025.
- Through LSTF funding, four cycle hubs opened in Rochdale, Ashton-under-Lyne, Bury and the Regional Centre
- Converting 41 yellow school buses out of a fleet of 93, to green, delivering significant environmental benefits and reducing children’s exposure to harmful air pollutants
- Trafford Council making £XXK improvements to cycling routes including Transpennine Trail. Stockport Council invest £500K on walking and cycling route improvements.



Natural Capital

- GM selected as a national ‘Urban Pioneer’ Defra’s 25 year environment plan: sharing good practice and innovation over the next 3 years.
- Commencement of ‘Natural Course’ a £14m, 10 year project funded by EU Life IP to implement the Water Framework Directive (WFD) in the North West River Basin District, improving water quality.
- City of Trees: planting 55,780 trees, creating 30 community orchards, planting 846 fruit trees and inspiring 2,412 schoolchildren to love trees.
- Manchester City Council awarded £11.5m Grow Green funding to provide nature based infrastructure solutions.



Sustainable Production & Consumption

- £3.5 million secured for carbon reduction and eco-innovation business support through the Business Growth Hub. The project will provide 540 businesses with intensive one-to-one support and achieve 6,000 tonnes of annual CO2e savings by December 2018.
- The Green Growth project supported 50 businesses in 2016 with 12 jobs created, and over 2,000 tonnes CO2e and nearly £1 million annual cost savings in the pipeline.
- Continuation of light touch online services: 80 companies have now logged environmental business pledges and 500+ are receiving fortnightly tailored news and advice e-bulletins.
- Love Food Hate Waste, 10 cities campaign (year 2); Supported WRAP to deliver, with R4GM, via events that encouraged food waste prevention.
- Production and sale of Revive Compost – continue to increase base level sales by promotion of Revive. 2015/16 – 442,290 litres of compost sold.



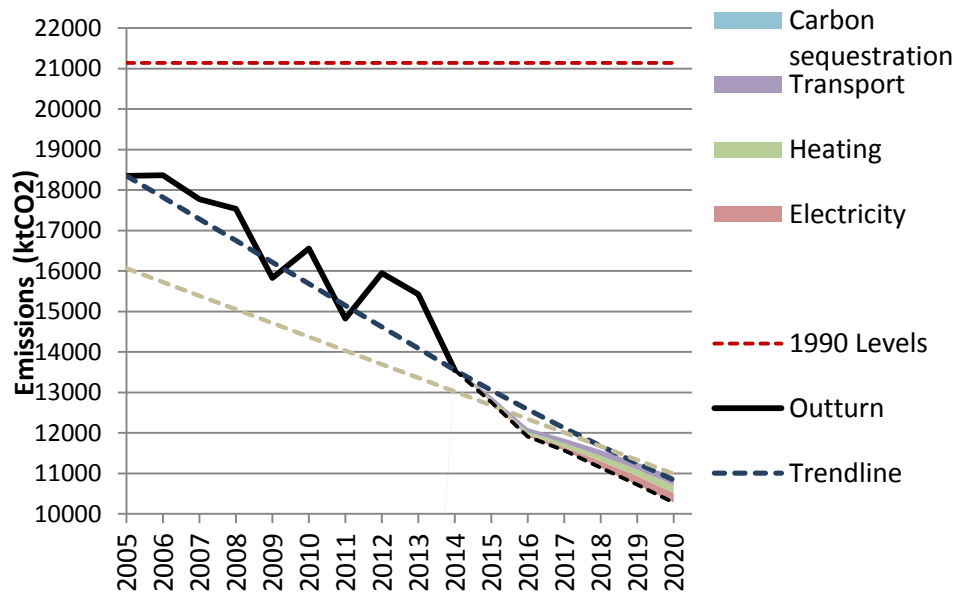
Sector & Skills

- £1.3 million secured for Business Growth Hub support to develop and grow the LCEGS sector to December 2018. The project will provide 200 businesses with intensive one-to-one support and create 50 jobs over its lifetime, running in parallel with the carbon reduction and eco-innovation services. 60 businesses were assisted in 2016, creating 7 jobs and £500K in new sales.
- Nearly 200 GM businesses in the LCEGS sector have joined the online Low Carbon Network, giving GM a visible and easy-access means to identify local suppliers.



PERFORMANCE 2016

Key Performance and operational Indicators :	Available data	2020 Targets (unless stated)
CO ₂ emissions (mt CO ₂)	13.551 (2014)	11 mtCO ₂ e
Tonnes CO ₂ /£m GVA (Production approach in current basic prices)	224 (2014)	Na
GM Renewable Electricity Generation	0.38 TWh (2015)	0.68 TWh
GM Renewable Heat Generation	0.12 TWh (2015)	0.54 TWh
Energy Consumption (Electricity)	11.75 TWh (2014)	Non set
Energy Consumption (Gas)	21.64 TWh (2014)	Non set
Tonnes Domestic CO ₂ per capita	5.0 Tonnes (2014)	2.0 Tonnes (by 2050)
GM Installed Photovoltaic capacity	95.67 MW (2015)	238 MW
Properties in flood warning areas	30,000 (2012)	
Proportion of journeys to work by GM residents made by non-car modes.	26% (2010/11)	26% (2016/7)
Index of cycle use, from up to 60 automatic cycle counters	107 (2010/11)	118 (2016/7)
Percentage of people travelling other than by car	225% (2012)	35% (2018)
Waste diverted from Landfill	83.76% (2015/2016)	
Overall waste recycled	41.04% (2015/2016)	
District waste recycled	44.1% (2015/2016)	
% Households in fuel poverty	14.5 (2014)	Non set
LCEGS Sector:		
Number of companies	2013 = 2000	Non set
Number of employees	2013 = 38000	Non set
Value of sales	2013 = £5bn	Non set
Annual growth rate	2013 = 4.9%	Non set



Greater Manchester is:

- A 'role model' city to UNISDR's resilient Cities campaign
- Awarded membership of Rockefeller funded '100 Resilient Cities'.
- 'Fully Compliant' to the Compact of Mayors commitment, newly merged with the Mayor's Adapt commitment, now the Global Covenant of Mayors for Climate and Energy
- A signatory to 'Under 2MOU' and Core Cities climate change commitments
- Part of the Carbon Disclosure Project

GM's businesses and organisations can make their own Pledge at: www.green-growth.org.uk

The Future

The Climate Change and Low Emission Strategies Whole Place Implementation Plan for Greater Manchester, details the following Key Actions for 2017:

- Commence design of a large-scale demonstrator of smart heat systems within Greater Manchester to test and explore the viability of the Energy System Catapult's Smart Systems and Heat master-planning work in Bury
- Completion of GM Smart Communities, heat pump and demand aggregation project and assess options for continued monitoring.
- Initiate a Civic Quarter District Heat Network
- Progress solar roof installations across GM, particularly on Birley Fields and with MMU and UoM estates as part of Triangulum.
- Establishment of a District Energy Procurement Agency (DEPA) specialising exclusively in the goods and services necessary for the development, construction and operation of heat networks.
- Continue to strengthen GMs knowledge and evidence base on cost benefit analysis and long term carbon pathways with academia.
- Complete feasibility study on establishing a Clean Air Zone and, if appropriate, commence implementation
- Commence commercialisation of the GM Electric Vehicle charging infrastructure to support increased adoption
- Establish a Non Domestic Energy Efficiency programme for GM and continue ECO energy efficiency on domestic properties.

Links: www.gmlowcarbonhub.com www.greatermanchester-ca.gov.uk www.tfgm.com

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