



Welcome to Cities 2019

Introduction

(0.1) Please give a general description and introduction to your city including your city’s reporting boundary in the table below.

	Administrative boundary	Description of city
City boundary	Independent city	<p>Manchester is the UK’s second city after London, and has a population of 558,700 as of 2019. Around 30% of the population is aged under 30 years old and the city is growing at a rate of around 1% per year. The city has a total of 19,995 business in 2016 with 399,600 people working in Manchester in 2016. Manchester’s economy is projected to grow around 3% per annum, with the main sectors are business, finance and professional services, advanced manufacturing, life sciences & healthcare innovation, energy & environment, creative, digital and technology. Manchester covers an area of 11,564 hectares with 32 wards split between 3 strategic regeneration framework areas - North, South and City Centre. Manchester sits within the Greater Manchester conurbation. The ten metropolitan boroughs of Greater Manchester – Bolton, Bury, Manchester, Oldham, Rochdale, Salford, Stockport, Tameside, Trafford, and Wigan – represent the largest city region economy outside London, with a gross value added (GVA) of £62.8 billion. In the decade to 2012, the economy grew by 42% and it has been one of the major UK city-regions driving job growth (84% between 2002-2015*), at twice the rate of jobs growth of the north as a whole.</p> <p>The ten councils– the first statutory “Combined Authority” in the UK outside London – and our Mayor coordinate key issues such as economic development, regeneration and transport. This governance structure has enabled the region to secure greater powers from central government to shape its own future and success.</p>

(0.2) If you have not previously submitted your Letter of Commitment to the Global Covenant of Mayors, either through the relevant regional covenant or through the Global Covenant secretariat, please attach the letter signed by an appropriately mandated official (e.g. Mayor, City Council) to this question.



City Details

(0.3) Please provide information about your city’s Mayor or equivalent legal representative authority in the table below:

	Leader title	Leader name	Current term end month	Current term end year
Please complete	Councillor	Abid Latif Chohan Sir Richard Leese	May	2022 0

(0.4) Please select the currency used for all financial information disclosed throughout your response.

GBP Pound Sterling

(0.5) Please provide details of your city’s current population. Report the population in the year of your reported inventory, if possible.

	Current population	Current population year	Projected population	Projected population year
Please complete	558,700	2019	600,000	2030

(0.6) Please provide further details about the geography of your city.

	Land area of the city boundary as defined in question 0.1 (in square km)
Please complete	115.64

Governance and Data Management

Governance

(1.0) Does your city incorporate sustainability goals and targets (e.g. GHG reductions) into the master planning for the city?

Yes

(1.0a) Please detail which goals and targets are incorporated in your city’s master plan and describe how these goals are addressed in the table below.

Goal type	How are these goals/targets addressed in the city master plan?
Emissions reduction targets	On behalf of the city , Manchester City Council has adopted a Paris-aligned carbon based budget of 15 million tonnes CO ₂ for the period 2018-2100, with a commitment to become zero carbon by 2038. To stay within the city’s carbon budget the city must reduce emissions by at least 13.5% per year, and become zero carbon by no later than 2038.



(1.1) Has the Mayor or city council committed to climate adaptation and/or mitigation across the geographical area of the city?

Yes

(1.1a) Please select any commitments to climate adaptation and/or mitigation your city has signed and attach evidence.

Name of commitment and attach document

Global Covenant of Mayors for Climate & Energy

Type of commitment

Both

Comments

Manchester adopted the Covenant of Mayors in 2009, and later was included in the Global Covenant of Mayors submission for Greater Manchester.

Name of commitment and attach document

Individual city commitment

Type of commitment

Mitigation

Comments

In November 2018 Manchester City Council, along with over 60 organisations adopted and endorsed a Paris-aligned carbon budget based budget of 15 million tonnes CO₂ for the period 2018-2100, with a commitment to become zero carbon by 2038. To stay within the city's carbon budget the city must reduce emissions by at least 13.5% per year, and become zero carbon by no later than 2038.

Climate Hazards & Vulnerability

Risk and Vulnerability Assessment

(2.0) Has a climate change risk and vulnerability assessment been undertaken for the city area?

[Yes but an updated version is required.](#) Intending to undertake in the next 2 years.

Climate Hazards

(2.1) Please list the most significant climate hazards faced by your city and indicate the probability and consequence of these hazards, as well as the expected future change in frequency and intensity. Please also select the most relevant assets or



services that are affected by the climate hazard and provide a description of the impact.

Climate Hazards

Extreme hot temperature > Extreme hot days

Did this hazard significantly impact your city before 2019?

Yes

Current probability of hazard

Medium Low

Current consequence of hazard

Medium

Social impact of hazard overall

Increased demand for public services

Increased risk to already vulnerable populations

Future change in frequency

Increasing

Future change in intensity

Increasing

When do you first expect to experience those changes?

Short-term (by 2025)

Most relevant assets / services affected overall

Transport

Public health

Emergency services

Please identify which vulnerable populations are affected

Children & youth

Elderly

Persons with disabilities

Persons with chronic diseases

Magnitude of expected future impact

Medium

Please describe the impacts experienced so far, and how you expect the hazard to impact in the future



Climate Hazards

Flood and sea level rise > Flash / surface flood

Did this hazard significantly impact your city before 2019?

Yes

Current probability of hazard

Medium

Current consequence of hazard

Medium High

Social impact of hazard overall

Increased demand for healthcare services

Increased risk to already vulnerable populations

Future change in frequency

Increasing

Future change in intensity

Increasing

When do you first expect to experience those changes?

Immediately

Most relevant assets / services affected overall

Energy

Transport

Information & communications technology

Environment, biodiversity, forestry

Tourism

Public health

Emergency services

Please identify which vulnerable populations are affected

Children & youth

Elderly

Persons with disabilities

Persons with chronic diseases

Low-income households

Persons living in sub-standard housing

Magnitude of expected future impact

Please describe the impacts experienced so far, and how you expect the hazard to impact in the future



(2.2) Please identify and describe the factors that most greatly affect your city’s ability to adapt to climate change and indicate how those factors either support or challenge this ability.

Factors that affect ability to adapt	Support / Challenge	Please describe the factor and the degree to which it supports or challenges the adaptive capacity of your city
Infrastructure capacity	Support	Electricity North West has committed to support Manchester and the north to become a zero carbon city by de-carbonising the city’s power to near net zero by 2038.

Adaptation

Adaptation Actions

(3.0) Please describe the main actions you are taking to reduce the risk to, and vulnerability of, your city’s infrastructure, services, citizens, and businesses from climate change as identified in the Climate Hazards section.

Climate hazards

Extreme hot temperature > Extreme hot days

Action

No action currently taken

Action title

Status of action

Co-benefit area

Action description and implementation progress

Finance status

Total cost of the project

Total cost provided by the local government

Primary fund source



Web link

Climate hazards

Flood and sea level rise > Flash / surface flood

Action

Nature based solutions for water

Action title

GROWGREEN project

Status of action

Implementation

Co-benefit area

Enhanced resilience

Action description and implementation progress

GROWGREEN is an EU-funded project running from 2017-2022 to support cities to develop and implement plans to become greener and better adapted to climate change. In Manchester the project includes a demonstration project in West Gorton and a refreshed Manchester Green and Blue Infrastructure Strategy. At West Gorton development and consultation work has been delivered during 2017-18 and on the ground delivery will be during 2019-20.

Finance status

Finance secured

Total cost of the project

Total cost provided by the local government

Primary fund source

Other
EU H2020 Project.

Web link

www.growgreenproject.eu

Adaptation Planning

(3.1) Does your city council have a published plan that addresses climate change adaptation?

Intending to undertake in the next 2 years



Adaptation Goals

(3.2) Please describe the main goals of your city's adaptation efforts and the metrics / KPIs for each goal.

Adaptation goal

The KPI's for adaptation have not currently been set, but will be developed as part of the Manchester Climate Change Framework 2020-2038, in the meantime actions will focus on reducing flood risk and heat stress by increasing the quality and quantity of Manchester's green spaces and waterways.

Target year

Metrics / indicators

Percentage of target achieved so far

Does this target align with a requirement from a higher level of government?

Do not know

City Wide Emissions

City-wide GHG Emissions Data

(4.0) Does your city have a city-wide emissions inventory to report?

Yes

(4.1) Please state the dates of the accounting year or 12-month period for which you are reporting your latest city-wide GHG emissions inventory.

	From	To
Accounting year dates	June 28, 2017	June 26, 2018

(4.2) Please indicate the category that best describes the boundary of your city-wide GHG emissions inventory.

	Boundary of inventory relative to city boundary (reported in 0.1)	Excluded sources / areas	Explanation of boundary choice where the inventory boundary differs from the city boundary (include inventory boundary, GDP and population)
Please explain	Same – covers entire city and nothing else		



(4.3) Please give the name of the primary protocol, standard, or methodology you have used to calculate your city’s city-wide GHG emissions.

	Primary protocol	Comment
Emissions methodology	City specific methodology	Manchester’s carbon budget and emissions reduction target is based upon work undertaken by Tyndall Manchester. The methodology uses National BEIS data for scope 1 and scope 2 emissions only. The methodology does not include aviation and shipping.

(4.4) Which gases are included in your city-wide emissions inventory? Select all that apply.

CO₂

(4.5) Please attach your city-wide inventory in Excel or other spreadsheet format and provide additional details on the inventory calculation methods in the table below.

Emissions inventory format

This inventory is in a format other than the GPC

Document title and attachment

Manchester City Budgets

Manchester city budgets.xlsx

Emissions factors used

Other

From UK Government BEIS data

Global Warming Potential

(select relevant IPCC Assessment Report)

IPCC 5th AR (2013)

Please select which additional sectors are included in the inventory

Industrial process and/or product use

Agriculture, forestry or other land use sectors

Population in inventory year

520,000

Overall Level of confidence

High

Comment on level of confidence

Manchester’s carbon budget and inventory has been calculated and developed by the Tyndall Centre for Climate Research, based upon Manchester making its "fair contribution" to the Paris Agreement . The emissions for Manchester have been apportioned from UK GHG budgets, this is set out in the document "Quantifying the



implications of the Paris Agreement for the city of Manchester" which can be viewed here <http://www.manchesterclimate.com/content/science-based-targets>

(4.6a) The Global Covenant of Mayors requires committed cities to report their inventories in the format of the new Common Reporting Framework, to encourage standard reporting of emissions data. Please provide a breakdown of your city-wide emissions by sector and sub-sector in the table below. Where emissions data is not available, please use the relevant notation keys to explain the reason why.

	Direct emissions / Scope 1 (metric tonnes CO2e)	If you have no direct emissions to report, please select a notation key to explain why	Indirect emissions from the use of grid-supplied electricity, heat, steam and/or cooling / Scope 2 (metric tonnes CO2e)	If you have no indirect emissions to report, please select a notation key to explain why	Emissions occurring outside the city boundary as a result of in-city activities / Scope 3 (metric tonnes CO2e)	If you have no emissions occurring outside the city boundary to report as a result of in-city activities, please select a notation key to explain why	Please explain any excluded sources, identify any emissions covered under an ETS and provide any other comments
Stationary energy > Residential buildings	558,000			Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Stationary energy > Commercial buildings & facilities	793,000			Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Stationary energy > Institutional buildings & facilities		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.



Stationary energy > Industrial buildings & facilities		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Stationary energy > Agriculture		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Stationary energy > Fugitive emissions		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Total Stationary Energy		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Transportation > On-road		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Transportation > Rail		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Transportation > Waterborne navigation		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Transportation > Aviation		Not Estimated		Not Estimated		Not Estimated	We are working on



							a methodology for scope 3 emissions.
Transportation > Off-road		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Total Transport	618,000			Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Waste > Solid waste disposal		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Waste > Biological treatment		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Waste > Incineration and open burning		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Waste > Wastewater		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Total Waste		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology



							y for scope 3 emissions.
IPPU > Industrial process		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
IPPU > Product use		Not Estimated		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Total IPPU		Not Estimated		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
AFOLU > Livestock		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
AFOLU > Land use		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
AFOLU > Other AFOLU		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Total AFOLU		Integrated Elsewhere		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.



Generation of grid-supplied energy > Electricity-only generation		Not Estimated		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Generation of grid-supplied energy > CHP generation		Not Estimated		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Generation of grid-supplied energy > Heat/cold generation		Not Estimated		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Generation of grid-supplied energy > Local renewable generation		Not Estimated		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Total Generation of grid-supplied energy		Not Estimated		Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.
Total Emissions (excluding generation of grid-supplied energy)	1,967,000			Not Estimated		Not Estimated	We are working on a methodology for scope 3 emissions.

(4.8) Please indicate if your city-wide emissions have increased, decreased, or stayed the same since your last emissions inventory, and describe why.

	Change in emissions	Primary reason for change	Please explain and quantify changes in emissions
Please explain	Decreased	Other Move away from coal to	Manchester's scope 1 and 2 emissions are made up of 40% from Business Sector, 31% from transportation and 29% from Domestic. Between 2017 and 2018 domestic



	produce electricity.	emissions fell by 8%, transport emissions by 5% and business emissions by 3%. The move away from burning coal to generate electricity accounts for most of the CO ₂ emissions reductions between 2013 and 2018.
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(4.9) Does your city have a consumption-based inventory to measure emissions from consumption of goods and services by your residents?

	Response	Provide an overview and attach your consumption-based inventory if relevant
Please complete	Intending to undertake in the next 2 years	


City-wide external verification

(4.11) Has the city-wide GHG emissions data you are currently reporting been externally verified or audited in part or in whole?

Yes

(4.11a) Please provide the following information about the city-wide emissions verification.

	Name of verifier and attach verification certificate	Year of verification	Please explain which parts of your inventory are verified
Verification details	Dr Jaise Kuriakose  1	2018	The Manchester budget includes scope 1 and 2 for domestic, industry and commercial and transport emissions.

 1Manchester city carbon budgets final.docx

Historical emissions inventories

(4.12) Please provide details on any historical and base year city-wide emissions inventories your city has, in order to allow assessment of targets in the table below.

Inventory date from

June 28, 2016

Inventory date to

June 28, 2017

Scopes / boundary covered

Scope 1 (direct)

Scope 2 (indirect)

Previous emissions (metric tonnes CO₂e)

2,069,000



Is this inventory used as the base year inventory?


No

Methodology

City specific methodology

File name and attach your inventory

Manchester plots

 MCR CO2 Plots 1 - 2019 report, 2018 inventory.xlsx

Comments

Inventory date from

June 28, 2015

Inventory date to

June 28, 2016

Scopes / boundary covered

Scope 1 (direct)

Scope 2 (indirect)

Previous emissions (metric tonnes CO2e)

2,303,000

Is this inventory used as the base year inventory?

Yes

Methodology

City specific methodology

File name and attach your inventory

Manchester City Budgets

Comments

Re-stating previous emissions inventories

(4.13) Since your last submission, have you needed to recalculate any past city-wide GHG emission inventories previously reported to CDP?

No



Emissions Reduction

Mitigation Target setting

(5.0) Do you have a GHG emissions reduction target in place at the city-wide level?

Select all that apply.

Base year emissions (absolute) target

Fixed level target

(5.0a) Please provide details of your total city-wide base year emissions reduction (absolute) target. In addition, you may add rows to provide details of your sector-specific targets, by providing the base year emissions specific to that target.

Sector

All emissions sources included in city inventory

Where sources differ from the inventory, identify and explain these additions / exclusions

Boundary of target relative to city boundary (reported in 0.1)

Same – covers entire city and nothing else

Base year

2005

Year of target implementation

2018

Base year emissions (metric tonnes CO₂e)

3,269,000

Percentage reduction target

100

Target year

2038

Target year absolute emissions (metric tonnes CO₂e)

0.6

Percentage of target achieved so far

40

Does this target align with the global 1.5 - 2 °C pathway set out in the Paris Agreement?

Yes - 2 °C



Please indicate to which sector(s) the target applies

- Commercial buildings
- Residential buildings
- Transport

Does this target align to a requirement from a higher level of sub-national government

No

Please describe your target. If your country has an NDC and your city's target is less ambitious than the NDC, please explain why.

(5.0b) Please provide details of your total fixed level target.

Sector

All emissions sources included in city inventory

Where sources differ from the inventory, identify and explain these additions / exclusions

Boundary of target relative to city boundary (reported in 0.1)

Same – covers entire city and nothing else

Year of target implementation

2018

Target year

2038

Projected population in target year

623,800

Target year absolute emissions goal (metric tonnes CO₂e)

0.06

Percentage of target achieved

40

Does this target align with the global 1.5-2°C pathway set out in the Paris agreement?

Yes - 2 °C

Please indicate to which sector(s) the target applies

- Commercial buildings
- Residential buildings
- Transport



Does this target align to a requirement from a higher level of government?

Do not know

Please describe your target. If your country has an NDC and your city's target is less ambitious than the NDC, please explain why.

(5.1) Please describe how the target(s) reported above align with the global 1.5 - 2 °C pathway set out in the Paris agreement.

The Tyndall Centre for Climate Change Research calculated Manchester's Paris-aligned budget as 15 MtCO₂, [with](#) an annual reduction of at least 13% per annum [required](#) from 2018 onwards. This work builds upon detailed research (e.g Anderson and Bows 2015) that transposes the 2°C temperature target and equity commitments set by the Paris Agreement to the UK level. The carbon budgets set apply to carbon emissions reductions from the energy system only. The carbon budget was launched in 2018 with a recommended emissions reduction pathway to meet the carbon budget of 15 MtCO₂ of an annual reduction of at least 13% per annum from 2018 onwards. The target is zero carbon by [at least 2038](#) [at the latest](#).

(5.2) Is your city-wide emissions reduction target(s) conditional on the success of an externality or component of policy outside of your control?

Do not know

(5.3) Does your city-wide emissions reduction target(s) account for the use of transferable emissions units?

No

Mitigation Actions

(5.4) Describe the anticipated outcomes of the most impactful mitigation actions your city is currently undertaking; the total cost of the action and how much is being funded by the local government.

Mitigation Planning

(5.5) Does your city have a climate change mitigation or energy access plan for reducing city-wide GHG emissions?

Do not know

Opportunities

Opportunities

(6.0) Please indicate the opportunities your city has identified as a result of addressing climate change and describe how the city is positioning itself to take advantage of these opportunities.



Opportunity	Describe how the city is maximizing this opportunity
Increase in clean technology businesses	The Greater Manchester Growth Hub provides tailored support to SME's . In 2018/19: - 36 Manchester SME's received support through the green technologies services team, -£482,026 of sales generated as a result o the support, -4 jobs created as a result of support, 65 business received environmental business support, 1900 tones CO2 saved through environmental business support, £202,909 financial savings realised as a result of environmental business support.

(6.1) Does your city collaborate in voluntary partnership with businesses in your city on sustainability projects?

Yes

(6.1a) Please provide some key examples of how your city collaborates with business in the table below.

Collaboration area	Description of collaboration
Building and Infrastructure	Manchester has adopted a devolved, partnership-based approach to climate change action. The key mechanism for this approach is the Manchester Climate Change Partnership, currently made up of over 60 organisations, across 10 sectors, with responsibility for c. 20% of Manchester's direct CO₂ emissions. The Partnership is supported by Manchester Climate Change Agency, with work on an ongoing basis to increase the membership.
Building and Infrastructure	MAST (Manchester Arts and Sustainability Team) is a collaboration of over 30 arts and culture organisations across the city working towards a zero carbon Manchester pathway. Manchester was recognised as an URBACT Good Practice city and is now leading an URBACT Transfer Network on best practice in the arts and culture sector to reduce emissions.

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(6.2) List any emission reduction, adaptation, water related or resilience projects you have planned within your city for which you hope to attract financing and provide details on the estimated costs and status of the project. If your city does not have any relevant projects, please select No relevant projects under Project Area.



Local Government Emissions

Local Government Operations GHG Emissions Data

(7.0) Do you have an emissions inventory for your local government operations to report? Reporting a Local Government Operations emissions inventory is optional.

Energy

(8.0) Does your city have a renewable energy or electricity target?

(8.1) Does your city have energy consumption data to report?

(8.6) Does your city have a target to increase energy efficiency?

Transport

(10.0) Do you have mode share information available to report for the following transport types? Select all that apply.

(10.5) Please provide the total fleet size and number of vehicle types for the following modes of transport:

	Number of private cars	Number of buses	Number of municipal fleet (excluding buses)	Number of freight vehicles	Number of taxis	Transport Network Companies (e.g. Uber, Lyft) fleet size	Customer-drive carshares (e.g. Car2Go, Drivenow) fleet size
Total fleet size							
Electric							
Hybrid							
Plug in hybrid							
Hydrogen							

(10.7) Do you have a low or zero-emission zone in your city? (i.e. an area that disincentivises fossil fuel vehicles)



Food

(12.0) How many meals per year are served through programs managed by your city?
(this includes schools, canteens, hospitals etc.)

(12.4) Does your city have any policies relating to food consumption within your city?
If so, please describe the expected outcome of the policy.

	Response	Please describe the expected outcome of the policy
Please complete		

Water Security

Water Supply

(14.0) What are the sources of your city's water supply? Select all that apply.

(14.1) Where does the water used to supply your city come from?

(14.2) What percentage of your city's population has access to potable water supply service?

(14.3) Are you aware of any substantive current or future risks to your city's water supply?

Water Supply Management

(14.5) Does your city have a publicly available Water Resource Management strategy?

Submit your response

What language are you submitting your response in?

English

Please read and accept our Terms and Conditions

I have read and accept the Terms and Conditions

Please confirm how your response should be handled by CDP.



Public or non-public submission	
I am submitting my response	Publicly (recommended)