

CEM Briefing for C&YPSC 12 January 2022 *Lead Author: Mike Franks*

Introduction

This briefing is intended to welcome and inform discussion of the [Climate Emergency and the Education Sector](#) agenda item. It attempts to determine the relevance for Manchester of recent publications and considers what if any activities of the Core Cities, the C40 and other comparators might usefully be adopted locally. Additionally, it seeks to review resources available that may complement work already under way in Manchester and provides a list of possibly pertinent weblinks. It is aimed at both councillors and the wider public.

Key Recommendations

1. Recognising its impact on young people, Children and Young People Scrutiny Committee should receive **at least two updates annually** on progress in tackling the climate emergency.
2. Manchester City Council should **co-ordinate a coherent response to retrofitting and installation of low-carbon energy for heating and electricity supply in schools**, and help to maximise learning opportunities therefrom.

Climate Education

“Education is critical to fighting climate change” so says Nadhim Zahawi MP in his foreword to **Sustainability and Climate Change draft strategy** published by the DfE in November 2021¹. The draft strategy recognises that the enthusiasm of young people “presents huge opportunities for society” in this “crucial decade for the planet”². The DfE’s vision for the UK to be the world-leading education sector in sustainability and climate change by 2030³ is to be lauded if the ambition is backed with action. Italy for instance, instigated climate change education in primary and secondary schools back in 2020⁴.

Although many high-quality educational resources are already freely available to schools about climate change, the DfE will only provide clearly signposted and approved platforms by 2023⁵. MEEN⁶ (Manchester Environmental Education Network) has expertise, worked with schools and run workshops across Greater Manchester offering support and training for teachers and students over many years. Fairtrade⁷ produced an action pack, UNICEF⁸ and UNESCO⁹ have provided support for schools, and the British Council has developed an interactive climate change challenge for young people with activities in the home and classroom¹⁰.

From an activist’s point of view, seeing the climate emergency taken seriously by staff and councillors across council departments and structures would be a success. Turning ambition into action, encouraging participation of children and young people and indeed citizens of all ages would be another measure. It is worth noting the openness of Salford City Council in posting the action of young people on their website ahead of COP26¹¹. Looking beyond education for young people, Core Cities such as Bristol, Glasgow and Leeds show a greater level of ambition than Manchester in seeking to be carbon neutral by 2030. Possibly leading in Greater Manchester, Oldham aims to power all its building and streetlighting from renewable sources by 2025, having established its community energy support programme in 2013.

¹ https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1031454/SCC_DRAFT_Strategy.pdf

² ibid p6

³ ibid p8

⁴ <https://www.bbc.co.uk/newsround/50318843>

⁵ op cit p13

⁶ <https://www.meen.org.uk>

⁷ <https://schools.fairtrade.org.uk/our-climate-our-future-schools-action-pack-launched-for-cop26/>

⁸ <https://www.unicef.org/environment-and-climate-change>

⁹ <https://unesdoc.unesco.org/ark:/48223/pf0000379591>

¹⁰ <https://www.britishcouncil.org/school-resources/find/classroom/climate-change-challenge>

¹¹ <https://www.salford.gov.uk/your-council/news/news-archive/news-from-november-2021/schoolchildren-call-for-action-at-salford-climate-emergency-event/>

Green Skills and Jobs

The DfE's draft strategy claims that new programmes will help "not only young people, but people of all ages to train, retrain or upskill into green careers"². "It is critical young people not only have the ability to think and live sustainably, but also have the green skills that allow them to build careers ..."¹². Meanwhile, GMCA have agreed with Octopus Energy to create 300 high-skilled green energy jobs which include roles for data scientists and heat pump engineers¹³. Schools and the National Careers Service need to be made aware of these and other opportunities for 'green' jobs.

With many young people extremely anxious about climate change¹⁴, it is timely that mental health and wellbeing are at the heart of the RSA's recent study of urban design¹⁵ in cities around the globe. "Mental health for young people was a particular concern before the pandemic and has deteriorated during it." So claims **Build Back Fairer in Greater Manchester** published in 2021 by the Institute of Health Equity¹⁶ which also states "The direct and indirect impacts of climate change are a threat to health and health inequalities in GM ..." and "Fuel poverty is highly damaging to health and the social determinants of health. The most recent data on fuel poverty show that before COVID-19, around 12 percent of households were in fuel poverty from 2018 in Greater Manchester. There is a need to retrofit older homes to improve their energy efficiency which as well as having health benefits will also reduce carbon emissions."¹⁷ With the recent steep rise in gas prices, more households will suffer from fuel poverty.

However, GMCA has received £500k funding from the DfE for a Low Carbon Academy which will enable career changers and unemployed people to gain retrofit skills. It is to be hoped, compared to London's spend of £98bn that Manchester's commitment of £1.7bn towards retrofitting some 68,000 homes¹⁸ will be just a start, and that initiatives such as the award-winning People Powered Retrofit scheme¹⁹ will be supported and expanded locally. Liverpool is developing a shared carbon reduction plan with residents and employers, expanding green jobs and maximising clean energy sources²⁰.

The Education Estate

It is reassuring to note the DfE draft strategy recognises "climate adaptation and decarbonisation activity in nurseries, schools, colleges and universities can provide powerful learning opportunities" and perhaps a little surprising to see that "schools and universities represent 36% of total UK public sector building emissions". Even more so, that **education settings account for half of the carbon emissions from public buildings in Manchester**²¹. Additionally, nearly half of UK schools (over 10k) are currently at significant risk of flooding²². The DfE claims all new school buildings it delivers will be net zero in operation by 2023 (excluding those already contracted)²³.

Energy efficient school buildings were promoted in Bath and NE Somerset back in 2013, with supporting documents for their school's carbon reduction programme still available²⁴. In Ireland, as part of their government's Climate Action Plan 2021 **Securing Our Future**, there is a commitment to reduce carbon emissions in buildings by 44-56% by 2030 with significant associated public funding²⁵. In Wales, all new school and college buildings must meet net zero carbon targets from January 2022²⁶.

¹² op cit p15

¹³ <https://greatermanchester-ca.gov.uk/news/carbon-neutral-drive-boosted-by-new-greater-manchester-and-octopus-energy-partnership/>

¹⁴ <https://www.bbc.co.uk/news/world-58549373>

¹⁵ <https://www.thersa.org/events/2021/11/urban-wellbeing-by-design>

¹⁶ <https://www.instituteofhealthequity.org/resources-reports/build-back-fairer-in-greater-manchester-health-equity-and-dignified-lives/build-back-fairer-in-greater-manchester-executive-summary.pdf>

¹⁷ Ibid p41

¹⁸ <https://www.lgcplus.com/finance/the-month-in-numbers-investing-in-climate-action-07-12-2021/>

¹⁹ <https://www.itv.com/news/granada/2021-11-04/north-west-based-carbon-co-op-wins-global-climate-prize-at-cop26-climate-summit>

²⁰ <https://cityplanliverpool.co.uk/wp-content/uploads/2020/10/City-Plan-Jan21-update.pdf>

²¹ **Climate Emergency and the Education Sector** (section 1.3 in the paper to C&YPS 12/01/2022)

²² op cit p7

²³ op cit p18

²⁴ <https://www.bathnes.gov.uk/services/environment/sustainability/schools>

²⁵ <https://www.gov.ie/en/press-release/16421-climate-action-plan-2021-securing-our-future/>

²⁶ <https://www.bbc.co.uk/news/uk-wales-59123571>

Why can't the DfE be equally if not more ambitious? Rather than wait until 2023 for BEIS to trial smart meters in schools to reduce energy bills and emissions whilst providing learning opportunities²⁷, until 2025 before best value for money approaches to retrofitting education buildings and to develop applicable standards, and until 2030 before school building design standards seek to minimise barriers to nature²⁸, **perhaps Manchester could encourage such initiatives sooner.**

Meanwhile in Leeds, their **Best Council Plan 2020-2025** claims its engagement with children and young people will help in its response to the climate emergency recognising their valuable roles as agents of change in their families, schools and communities²⁹. There is also recognition that in Leeds, its climate change ambitions could save the city £277m a year if opportunities for cost-effective energy efficiency and low carbon development were embraced. Grants to schools of £805m were given within its £2bn gross revenue spend in 2020/21. As part of its climate strategy, Bristol will retrofit and ensure any new buildings are carbon neutral, whilst decarbonising heat supported by its City Leap Energy Partnership³⁰.

Could Manchester perhaps emulate Oldham's aim to power all its buildings with renewables by 2025?

Supply Chain

DfE claims that sustainability will be embedded across the organisation, decision making and business processes by 2023 and it will work with WRAP to share examples of best practice to avoid food waste³¹. It is somewhat underwhelming that not until 2025 will the DfE mandate suppliers to commit to net zero (and then only by 2050), and to engage with schools to embed sustainable procurement³².

In its evidence base, Bristol recognises that skilling up building trade supply chains to deliver energy upgrades and retrofit of buildings efficiently and to a high standard, will be necessary for the city to achieve its ambitions for net zero by 2030³³ although not specifically related to schools. Manchester based People Powered Retrofit provide such skills, and GMCA with LAs developing a retrofit partnership will work to raise standards in the private rented sector³⁴. In its five-year plan, GMCA also points to the importance of reducing food waste in retail, manufacturing and supply chain, recognising the related issue of food poverty³⁵.

In its 2021 Annual Report, the Manchester Climate Change Agency suggests new investment to establish the city as a centre for green technology and services "would lead to £300m of construction work over the next two years supporting 1200 jobs for three years, with a significant expenditure on the supply chain"³⁶.

Cadent Gas & Electricity North West commissioned a **Decarbonisation Pathway for Greater Manchester**, a study completed in July 2020³⁷. They foresee a transformation and reduction of the demand base by 2038. This will see a phasing out of natural gas and oil use by 2038, decarbonising energy use across all sectors by switching to hydrogen, green electricity and biofuels, with more local generation and distribution of clean energy securing a low-carbon supply. Perhaps an update on this could be the subject of a future report to C&YPSC particularly related to the educational estate in Manchester.

²⁷ op cit p19

²⁸ op cit p20

²⁹ <https://www.leeds.gov.uk/docs/BCP%202020-2025.PDF>

³⁰ <https://www.bristoloncity.com/wp-content/uploads/2020/02/one-city-climate-strategy.pdf>

³¹ op cit p21

³² op cit p22

³³ https://www.cse.org.uk/downloads/reports-and-publications/policy/insulation-and-heating/energy-justice/renewables/behaviour-change/building-performance/Bristol_net_zero_by_2030_study_CSE_26_Feb_2020.pdf

³⁴ https://greatermanchester-ca.gov.uk/media/1986/5-year-plan-branded_3.pdf p45

³⁵ ibid p56

³⁶ <https://www.manchesterclimate.com/sites/default/files/MCCA%20Annual%20Report%202021%20Final.pdf> p54

³⁷ <https://www.enwl.co.uk/globalassets/go-net-zero/net-zero/decarbonisation-pathways/greater-manchester-decarbonisation-pathway-report.pdf>

Data, other available resources and current initiatives

The DfE claims in its draft strategy that it will develop clear measurable objectives, establish a baseline and track progress towards strategic aims, all before the end of 2022³⁸. Yet **no mention is made of how it intends to report back to the education sector** with any of the data it collects and collates. Indeed, no mention is made of the lack of available timely and localised emissions data.

Bradford has created **Energy Heroes**³⁹ a free innovative primary school teaching and learning resource comprising a school energy audit, quiz and letter home. Groundwork has offered 36x £500 grants as part of their Greater Manchester Climate Change Youth Leadership project⁴⁰. WWF have produced a range of curriculum linked climate change resources for primary and secondary students⁴¹. The Financial Times are seeking submissions by the beginning of February 2022 of the best exemplars of climate champions from school student and teacher initiatives to tackle climate change⁴². In New Jersey, student teams have been recognised for innovative approaches to addressing climate change⁴³ as part of efforts to increase climate literacy among young people. Although take up of carbon literacy training by teachers has been slow in Manchester, other regions continue to set ambitious objectives for school staff.

The North of Tyne Combined Authority (NCTA) has pledged that every school in the North Tyne area will have a UN-accredited climate change teacher, a world first, which meets a key UN target for sustainable development and Article 12 of the Paris Agreement on Climate Change.

Whilst the Global Covenant of Mayors for Climate and Energy (which includes Greater Manchester) have agreed a framework⁴⁴ for reporting greenhouse gas emissions from buildings, energy, transport and waste which can be used for assessing risks such as extreme temperatures, floods and severe winds, it is harder to find data gathering and analysis tools relating to climate change and schools. Further resources beyond those already mentioned can be found at CAT's zero carbon hub⁴⁵, webinars produced by the Church of England on achieving net zero buildings⁴⁶, how measuring emissions in real time can help⁴⁷, and how to measure the net zero carbon school⁴⁸. Yet Issues arising from net zero measurements have been raised by CAT⁴⁹, and globally by the WRI⁵⁰ and the WEF⁵¹.

Manchester is to be applauded, seeking in **Our Year 2022**⁵² to be recognised by UNICEF as 'child friendly'. Young people should expect their voices to be heard and that they may participate in and influence decisions and public policies. Newcastle's Youth Councillor with a remit covering climate change and the environment has publicly interviewed her cabinet colleagues. Acting now to tackle the climate emergency is seen as crucial by many scientists and policy makers to hopes of keeping within the target of 1.5°C rise in global temperature. Actions taken in the remaining years of this decade will have considerable impact on the future of people and planet.

Perhaps Manchester's **Youth Climate Wheel**⁵³ will kick start further such initiatives, and ensure climate action across the city picks up speed.

³⁸ op cit p23

³⁹ <https://bso.bradford.gov.uk/userfiles/file/OA/Energy%20Heroes%20Flyer.png>

⁴⁰ <https://www.groundwork.org.uk/hubs/greatermanchester/fund-your-climate-social-action-project/>

⁴¹ <https://www.wwf.org.uk/get-involved/schools/resources/climate-change-resources>

⁴² <https://www.ft.com/content/93faed21-13d2-4781-8604-dcb0ba3c64c9>

⁴³ <https://www.nj.com/south/2021/12/south-jersey-student-teams-recognized-for-innovative-approaches-to-addressing-climate-change.html>

⁴⁴ <https://www.globalcovenantofmayors.org/cities/european-union-and-western-europe/united-kingdom/greater-manchester/>

⁴⁵ <https://cat.org.uk/zcb>

⁴⁶ <https://www.churchofengland.org/about/environment-and-climate-change/webinars-getting-net-zero-carbon>

⁴⁷ <https://climate.to/how-measuring-emissions-in-real-time-can-help-cities-achieve-net-zero/>

⁴⁸ <https://www.innovaresystems.co.uk/blog/how-to-measure-the-net-zero-carbon-school/>

⁴⁹ <https://cat.org.uk/when-net-zero-is-not-zero/>

⁵⁰ <https://www.wri.org/insights/net-zero-ghg-emissions-questions-answered>

⁵¹ <https://www.weforum.org/agenda/2021/09/net-zero-target-measuring-carbon-emissions/>

⁵² Previously known as the 'Year of the Child'

⁵³ <https://www.facebook.com/manchesterlibraries/videos/manchester-youth-council-climate-wheel-challenge/2825457804369922/>



Call for action rally (outside Manchester Central Library) 05 November 2021

Conclusions

It is to be hoped that this paper has been of interest and has informed members of the Children and Young People Scrutiny Committee, and that you will endorse the recommendations at the beginning of this briefing.

Additionally, whilst welcoming the **Climate Emergency and the Education Sector** paper, and the range of actions being taken across Manchester described therein, perhaps there could have been clear timelines with SMART targets alongside activities outlined in the Action Plan and some mention of the forthcoming Ward-level Climate Change Action Plans.

It is also hoped that Manchester City Council will increase its ambition to tackle the climate emergency, recognise the breadth of knowledge in community groups relating to the issues and seek to embrace and work with such groups for the benefit of the city.

Thanks to Hannah Ballard and Abbie Hawkins for contributing to research for this briefing and to Chloe Jeffries for her helpful comments.



Appendix 1: Web links not already cited (accessed December 2021)

UK government webpages:

<https://www.gov.uk/government/news/cop26-launches-environment-education-packs-for-uk-schools-and-students>
<https://www.gov.uk/government/news/education-secretary-puts-climate-change-at-the-heart-of-education--2>
<https://teaching.blog.gov.uk/2021/11/05/get-inspired-schools-responding-to-the-climate-change-challenge/>
<https://www.theccc.org.uk/uk-action-on-climate-change/>

UK local government initiatives and links:

<https://www.edie.net/news/6/Which-UK-cities-are-leading-on-climate-action---and-how-/>
<https://local.gov.uk/sites/default/files/documents/ARUP-Climate-Emergency-What-Next.pdf>

Other Greater Manchester links:

<https://www.instituteofhealthequity.org/resources-reports/build-back-fairer-in-greater-manchester-health-equity-and-dignified-lives/build-back-fairer-in-greater-manchester-main-report.pdf>
<https://www.greatermanchester-ca.gov.uk/what-we-do/environment/>
<https://democracy.manchester.gov.uk/documents/s16275/Final%20MCC%20Climate%20Change%20Action%20Plan%202020-25.pdf>
https://secure.manchester.gov.uk/info/500002/council_policies_and_strategies/8225/climate_change_action_plan_2020-25_appendix_1_actions/15
<https://manchesterartgallery.org/exhibitions-and-events/event/post-cop26-where-can-a-new-climate-justice-gallery-take-us/>
<https://www.meen.org.uk/sustainability-education-research>

<https://www.salford.gov.uk/your-council/climate-change/>
<https://www.salford.gov.uk/your-council/climate-change/salford-s-climate-action-plan/>

<https://www.oldham.gov.uk/news/article/1714/green-oldham-campaign-12-months-on>
<https://committees.oldham.gov.uk/documents/s41290/Oldham%20Climate%20Change%20Strategy%202013-2020%20-%20final%20version%20for%20Cabinet%206-11-13.docx.pdf>
<https://committees.oldham.gov.uk/documents/s107407/Climate%20Change%20and%20Green%20Oldham%20-%20Council%2010-7-19-final%20202.pdf>
<https://northern-roots.uk/>

Other NW links:

https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/YearOneClimate6_compressed.pdf
<https://liverpool.gov.uk/communities-and-safety/action-on-climate-change/>

Links to other councils in England

https://www.bathnes.gov.uk/sites/default/files/siteimages/climate_and_nature_emergency_action_plan.pdf
<https://www.cambridgeshire.gov.uk/residents/climate-change-energy-and-environment>
<https://www.leeds.gov.uk/plans-and-strategies/climate-change>
<https://democracy.leeds.gov.uk/documents/s215379/Climate%20Emergency%20Cover%20Report%20010221.pdf>
<https://www.northyorks.gov.uk/news/article/pupils-pledge-climate-action-after-event-brings-schools-together>
<https://www.sheffield.gov.uk/home/your-city-council/climate-emergency-response>
<https://www.bradford.gov.uk/environment/climate-change/what-is-climate-change-and-how-will-it-affect-the-uk/>
<https://bradford.gov.uk/environment/climate-change/climate-emergency-and-green-economy/>
<https://www.bristolpost.co.uk/news/bristol-news/bristol-councils-1bn-city-leap-5652836>

Glasgow:

<https://www.glasgowlive.co.uk/news/glasgow-news/climate-change-sculpture-measuring-23-22432695>
<https://glasgow.gov.uk/index.aspx?articleid=27200>

Other sites of relevance in UK:

<https://www.irf.org.uk/report/impacts-climate-change-disadvantaged-uk-coastal-communities>
<https://cities-today.com/95-cities-make-the-climate-action-a-list/>
<https://www.bbc.com/future/article/20211115-how-cities-are-going-carbon-neutral>
<https://www.sec-ed.co.uk/best-practice/using-the-dfe-climate-change-strategy-to-develop-your-schools-sustainability-ethos/>
https://www.climate-laws.org/geographies/united-kingdom/litigation_cases/loach-et-al-v-oga-paid-to-pollute-case
<https://www.theguardian.com/environment/ng-interactive/2020/feb/04/claire-oneills-letter-to-boris-johnson-what-it-really-means>

Some more UN webpages:

<https://www.unep.org/explore-topics/sustainable-development-goals/why-do-sustainable-development-goals-matter/goal-13>
<https://www.unep.org/explore-topics/resource-efficiency/what-we-do/cities/cities-and-climate-change>

Some webpages from Europe:

<https://www.barcelona.cat/barcelona-pel-clima/en/climate-shelters-schools>
https://continguts-www.barcelona.cat/barcelona-pel-clima/sites/default/files/plaaccioemergenciaticmatica_2021nov_en.pdf
https://www.barcelona.cat/barcelona-pel-clima/sites/default/files/documents/climate_plan_maig.pdf

<https://www.independent.co.uk/climate-change/sustainable-living/milan-cycle-city-italy-travel-b1867967.html>



<https://www.forbes.com/sites/annalisagirardi/2019/01/10/milan-the-gray-city-is-going-green/>

<https://www.ctvnews.ca/climate-and-environment/young-climate-activists-denounce-youth-washing-in-milan-1.5606419>

<https://abcnews.go.com/International/wireStory/young-climate-activists-denounce-youth-washing-milan-80325244>

<https://www.climate-kic.org/news/madrid-amsterdam-and-milan-three-cities-putting-citizen-participation-at-the-heart-of-climate-action/>

Some more resources for schools:

<https://educationbusinessuk.net/news/11112021/bsa-launches-climate-change-resources-schools>

<https://www.routledge.com/Teaching-Climate-Change-in-Primary-Schools-An-Interdisciplinary-Approach/Dolan/p/book/9780367631680>

Some sites in US and globally including references to climate anxiety

<https://www.livescience.com/humans-first-warned-about-climate-change>

<https://www.nea.org/professional-excellence/student-engagement/tools-tips/climate-change-education-essential>

<https://www.timeout.com/things-to-do/cities-leading-the-fight-against-climate-change>

<https://www.worldbank.org/en/topic/urbandevelopment/brief/the-curb-tool-climate-action-for-urban-sustainability>

<https://www.weforum.org/agenda/2020/04/climate-change-coronavirus-linked/>

<https://www.weforum.org/agenda/2021/10/climate-crisis-eco-anxiety-is-growing-in-young-people/>

<https://www.wri.org/insights/5-ways-cities-climate-action>

<https://www.lse.ac.uk/granthaminstitute/news/domestic-limits-to-fossil-fuel-production-and-expansion-in-the-g20/>



Appendix 2: Comparing Climate Change Action in Cities

	net-zero by	latest measure	website statements	schools and young people
Manchester Core City. https://secure.manchester.gov.uk/info/500002/council_policies_and_strategies/8225/climate_change_action_plan_2020-25_appendix_1_actions/15	2038	£1.7bn for Manchester Housing partnership to retrofit 68k homes.**	https://democracy.manchester.gov.uk/documents/s16275/Final%20MCC%20Climate%20Change%20Action%20Plan%202020-25.pdf	an Environmental Youth Group has been established in Old Moat and Withington wards (soon to include Fallowfield) for school students across the area to discuss how they can tackle issues relating to climate change and sustainability
Salford named most sustainable Council by FoE in 2019	2038	Following the Greater Manchester five year environment plan https://www.greatermanchester-ca.gov.uk/what-we-do/environment/	Climate Action Board meets bi-monthly chair Cllr Mike McCusker. https://www.salford.gov.uk/your-council/climate-change/salford-s-climate-action-plan/	ahead of COP26 school action on website 5/11/21. https://www.salford.gov.uk/your-council/news/news-archive/news-from-november-2021/schoolchildren-call-for-action-at-salford-climate-emergency-event/
Liverpool Core City / City Plan updated January 2021 / Liverpool City Region Climate Action Plan 2020-21 aligned with UN SDGs https://www.liverpoolcityregion-ca.gov.uk/wp-content/uploads/YearOneClimate6_compressed.pdf	2030	Liverpool City Region net zero by 2040 https://liverpool.gov.uk/communities-and-safety/action-on-climate-change/	four key themes: transport and air quality / buildings and the built environment / waste, recycling and energy / low carbon economy	City Plan commitment to listening to children and young people https://cityplanliverpool.co.uk/wp-content/uploads/2020/10/City-Plan-Jan21-update.pdf & participation in UNICEF Child Friendly City programme p3
Leeds Core City. https://democracy.leeds.gov.uk/documents/s215379/Climate%20Emergency%20Cover%20Report%20010221.pdf	2030	to work with residents and businesses to bring our wider communities' emissions to net zero as soon as possible (and by 2045 at the latest).	26 skilled green jobs as part of council's net-zero schemes 28/10/2021.	"We will continue to engage with C&YP to help to respond to the climate emergency" Best Council Plan 2020-25 p18. https://www.leeds.gov.uk/docs/BCP%202020-2025.PDF
Bradford University of Bradford School of Law 'A Red Hot Challenge'. Bradford City Council adaptation. https://www.bradford.gov.uk/environment/climate-change/what-is-climate-change-and-how-will-it-affect-the-uk/	2038 (Leeds City Region coalition)	invested £1m extra revenue as part of £25m to tackle climate change in 2020-21 https://bradford.gov.uk/environment/climate-change/climate-emergency-and-green-economy/	Backing action on UN SDGs Fuel Poverty - framework for action. Exceeded aims of achieving 40% reduction in carbon emissions by 2020.	BSO (Bradford Schools Online) primary schools 'Energy Heroes'
Bristol Core City. Centre for Sustainable Energy paper provides evidence for net-zero by 2030. A-list of global cities includes Nottingham, Leicester, Newcastle and GM 23/11/2021 see https://cities-today.com/95-cities-make-the-climate-action-a-list/	2030	£2.4bn 2020/21 including grants relating to schools. ** Bristol worked with SKANSA from 2007 establishing the UK's first Local Education Partnership and green schools https://www.skanska.co.uk/expertise/projects/57148/Bristol-schools	declared climate emergency November 2018 - links to One City Climate Strategy (2030) and council use of renewables	Bristol Youth Strike 4 Climate 24/09/2021 follows visit by Greta in February 2020 - UWE Bristol will deliver Green Skills for Jobs and Entrepreneurship aimed at helping BAME young adults into green jobs - Bristol City Youth Council calls for child tickets up to age 18
Newcastle Core City. Net Zero 2030 Action Plan https://www.newcastle.gov.uk/sites/default/files/Climate%20Change/Net%20Zero/Net%20Zero%20Newcastle%20-%202030%20Action%20Plan_0.pdf	2030	funding secured phase 1 & 2 low carbon heating and fabric improvements for 15 schools	Newcastle published its Net Zero Newcastle - 2030 Action Plan (NZN) in September 2020 https://www.newcastle.gov.uk/sites/default/files/Climate%20Change/Net%20Zero/Net%20Zero%20Newcastle%20-%202030%20Action%20Plan_0.pdf	NZN encourages students to walk, cycle or take public transport / pledges every school in the North of Tyne area will have a UN accredited climate teacher / and aims to explore opportunities to engage with school age children on climate change issues and solutions through the curriculum providing hands-on project ideas
Sheffield Core City. launched a RIBA competition to redevelop St Ann's School with environmental design at the centre. It's the first building in the UK to use old newspaper and recycled denim as insulation, and has been designed as a community centre with training services, a cycle centre and other facilities.	2030	Sheffield commissioned ARUP to determine ways to achieve zero carbon by 2030 https://www.arup.com/perspectives/publications/research/section/pathways-to-zero-carbon-in-sheffield	South Yorkshire Schools will hold their second Climate Conference in March 2022 and has established a schools' climate network https://www.scesy.org.uk/conference/	schools engaging in sustainability initiatives making their buildings more 'green' with the first sustainable classroom in Yorkshire built in one primary school. Sheffield City College boasts wind turbines and PV on its roofs https://www.eauc.org.uk/sheffield_college
Glasgow Core City. policyscotland.gla.ac.uk how climate change impacts scottish cities 13/12/2021	2030	net zero emissions by 2045. £10bn for 428k home retrofits.**	Glasgow Citizen's Assembly on the climate emergency link stored links to others eg Brighton, Bristol https://glasgow.gov.uk/index.aspx?articleid=27200	"Get Inspired" schools responding to climate change 5/11/2021 - 23m high sculpture unveiled 11/12/2021
BANES (Bath and NE Somerset) https://www.bathnes.gov.uk/sites/default/files/siteimages/climate_and_nature_emergency_action_plan.pdf	2030	established citizen's juries - robust performance framework	energy efficient buildings / transport: active travel / renewable energy / reduce, reuse, recycle	energy efficiency in schools 2013. https://www.bathnes.gov.uk/services/environment/sustainability/schools

Appendix 2: Comparing Climate Change Action in Cities

	net-zero by	latest measure	website statements	schools and young people
Barcelona c40 city / comprehensive action plan: https://continguts-www.barcelona.cat/barcelona-pel-clima/sites/default/files/plaaccioemergenciaclimatica_2021nov_en.pdf	carbon neutral by 2050	closing down nuclear power stations by 2027 (comprehensive action plan p65)	50% renewables by 2030, 100% renewables and zero fossil fuel consumption by 2050, and phasing out air travel for distances < 1000km	"... an opportunity for intergenerational dialogue" https://www.barcelona.cat/barcelona-pel-clima/sites/default/files/documents/climate_plan_maig.pdf p132
Milan c40 city / mentioned in Time Out for leading as an urban forest 10/11/2021 https://www.timeout.com/things-to-do/cities-leading-the-fight-against-climate-change	carbon neutral by 2050	3m trees to be planted by 2030 (one new tree per citizen) to create 'green corridors' connecting to existing forests	involving people / promoting cycling. https://www.climate-kic.org/news/madrid-amsterdam-and-milan-three-cities-putting-citizen-participation-at-the-heart-of-climate-action/	Italy introduced climate studies into schools in September 2020 (G 6/11/2019). https://abcnews.go.com/International/wireStory/young-climate-activists-denounce-youth-washing-milan-80325244
Oldham 2013-2020 version of climate change strategy (found buried) Northern Roots eco park and urban farm (https://northern-roots.uk) https://committees.oldham.gov.uk/documents/s41290/Oldham%20Climate%20Change%20Strategy%202013-2020%20-%20final%20version%20for%20Cabinet%206_11_13.docx.pdf	*	climate change strategy (under revision 2021) 2020 target 48% cut in emissions on 1990 baseline	COALESCE - community owned and led energy for security, climate change and employment July 2019	https://www.oldham.gov.uk/news/article/1714/green-oldham-campaign-12-months-on

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<https://www.edie.net/news/6/Which-UK-cities-are-leading-on-climate-action--and-how-/>

Oldham aims to power its own buildings and street lighting entirely using renewables by 2025

<https://www.lgplus.com/finance/the-month-in-numbers-investing-in-climate-action-07-12-2021/> cf London £98bn for retrofit including £13bn for solar panels