

Gloucester City Council

Meeting:	Cabinet Council	Date:	7 February 2024 21 March 2024
Subject:	Climate Change Strategy and Action Plan		
Report Of:	Cabinet Member for Environment		
Wards Affected:	All		
Key Decision:	No	Budget/Policy Framework:	No
Contact Officer:	Jon Burke – Climate Change and Decarbonisation Lead		
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Appendices:	1. Climate Change Strategy and Action Plan		

FOR GENERAL RELEASE

1.0 Purpose of Report

1.1 To agree a Climate Change Strategy and Action Plan.

2.1 Recommendations

2.1 Cabinet is asked to **RECOMMEND** to Council that the Gloucester City Council Climate Change Strategy and Action Plan at Appendix 1 be adopted and issued for public and key stakeholder consultation.

2.2 Council is asked to **RESOLVE** that the Gloucester City Council Climate Change Strategy and Action Plan at Appendix 1 be adopted and issued for public and key stakeholder consultation.

3.0 Background

3.1 In 2019, against the backdrop of growing concern about the climate crisis, Gloucester City Council (GCC) declared a climate emergency. In doing so the council committed to reaching net zero emissions across its own functions by 2030 and working towards net zero emissions across the wider district by 2050; this target was subsequently brought forward to 2045 in November 2021 in line with the higher confidence thresholds of the Intergovernmental Panel on Climate Change's (IPCC) 1.5°C report.

3.2 Since 2019, the council has developed a range of sustainability and climate change policy documents. These included the 2022 Green Travel Plan and a 2020 Carbon Baseline for its own functions and the Gloucestershire airport estate, incorporating actions to reduce emissions.

3.3 In 2020, GCC set out in a report called Tackling Climate Change Roadmap, the actions that the council, its partners and Gloucester citizens can take to achieve the

objectives of the Climate Change Emergency resolution as adopted in July 2019. The roadmap provided a broad overview of how the council could achieve its ambition. Climate change is also a key feature in the Gloucester City (Local) Plan 2011-2031 which engages with issues such as nature recovery, biodiversity, adaptation to flooding, renewable energy, sustainable neighbourhoods, air quality and transport. Further sustainability commitments can be found within the Council's 2022-2024 Council Plan 'Building a greener, fairer, better Gloucester', including the aim of ensuring that all capital projects funded by the council are net zero in operation alongside the ambition to be net carbon zero in construction.

- 3.4 However, following the Coronavirus pandemic – which radically reshaped the Council's emissions profile – it was deemed prudent to undertake the production of a new Climate Change Strategy and Action Plan that incorporated both of the Council's decarbonisation targets, established a more rigorous emissions baseline, and brought a greater degree of strategic focus to the Council's work in this area.
- 3.5 Additionally – for reasons of both good practice and as a condition of the Council's membership of the Global Covenant of Mayors for Energy and Climate – the Council undertook to deliver its first comprehensive Climate Risk and Vulnerability Assessment (CRVA), with the aim of understanding and reducing the district's exposure to climatic risks from global warming that are now regarded as inevitable by the UK Climate Change Committee and the IPCC.
- 3.6 To this end, and following a rigorous procurement process, [WSP consultants were appointed in March 2023 to deliver both a Climate Change Action Plan and a CRVA.](#)
- 3.7 WSP subsequently met with the Council's Climate Change Member Working Group on 17 April 2023 to introduce the company, its approach to drafting the required documents, and to take questions.
- 3.8 Following project initiation, WSP met weekly with the Climate Change and Decarbonisation Lead and regularly with the City Council Leader and Managing Director. The first draft of the Action Plan was shared with the Council Leader, Managing Director, and Climate Change Member Working Group on 6 August 2023. The second draft was shared with the Council Leader, Managing Director, Climate Change Member Working, and – informally – with Members of Overview and Scrutiny on 30 October 2023.
- 3.9 Gloucester City Councillors and internal stakeholders participated in two workshops on 13 June and 29 September 2023 to provide information and validate the analysis and results provided by the team at WSP.
- 3.10 The final draft of the Climate Change Action Plan and CRVA are now deemed ready for adoption by the Council and to be put out to consultation to Gloucester residents and other key stakeholders.

4.0 Key Findings and Recommendations

Gloucester District Emissions Baseline

- 4.1 To achieve the goal of net zero emissions across the Gloucester District by 2045, the City Council Climate Action Plan has identified a set of actions and the stakeholders

responsible for their delivery. A base year, 2019¹, has been identified to measure, monitor, and report the progress towards net zero emissions by 2045. Actions have been identified by estimating baseline carbon emissions for the district for 2019 that considers historical trends since 2005.

4.2 Overall, the district's carbon dioxide equivalent emissions reduced 26% from 2005 to 2019. In 2019, emissions accounted for 495 KtCO₂e. The trends observed in Gloucester District historic carbon emissions from 2005 to 2019 include:

- Emissions from gas consumption (43%) are the highest of all fuels, followed by electricity (28%) and petroleum (28%). However, the decarbonisation of the electricity grid has meant that emissions from electricity consumption have declined rapidly, a trend that the Department for Energy Security and Net Zero predicts will continue.
- In Gloucester, the domestic sector is the dominant energy end use (34%), closely followed by industry (29%), and then transport (24%).
- Fuel consumption Gloucester is aligned with UK trends. In 2019, in the UK 41% of emissions came from gas, used for heating homes, while petroleum is mostly used in road vehicles similar to Gloucester. While domestic emissions are the highest emitting sector in Gloucester, transport is the highest emitting sector in the UK (27%), followed by energy supply (21%), businesses (17%) and residential sector (15%). Similarly, Gloucester transport and commercial are also a key source of emissions.

Gloucester City Council Emissions Baseline

4.3 Gloucester City Council (GCC) is working towards net zero for its own operations by 2030. This target is aligned with its net zero target by 2045 for Gloucester District.

4.4 GCC emissions have been estimated by establishing an organisational boundary based upon operational control.

4.5 Assets owned by the council but leased to tenants or operated by third parties, have been excluded from the GHG baseline. Emissions from the operation of Gloucestershire Airport, partially owned by GCC, are referenced in section 4.7 of the GCAP.

4.6 The baseline year of 2021 was identified as the most recent year for which data was available covering the calendar period from January to December. Total carbon dioxide equivalents (CO₂e) emissions in 2021 accounted for 3,381 tCO₂e.

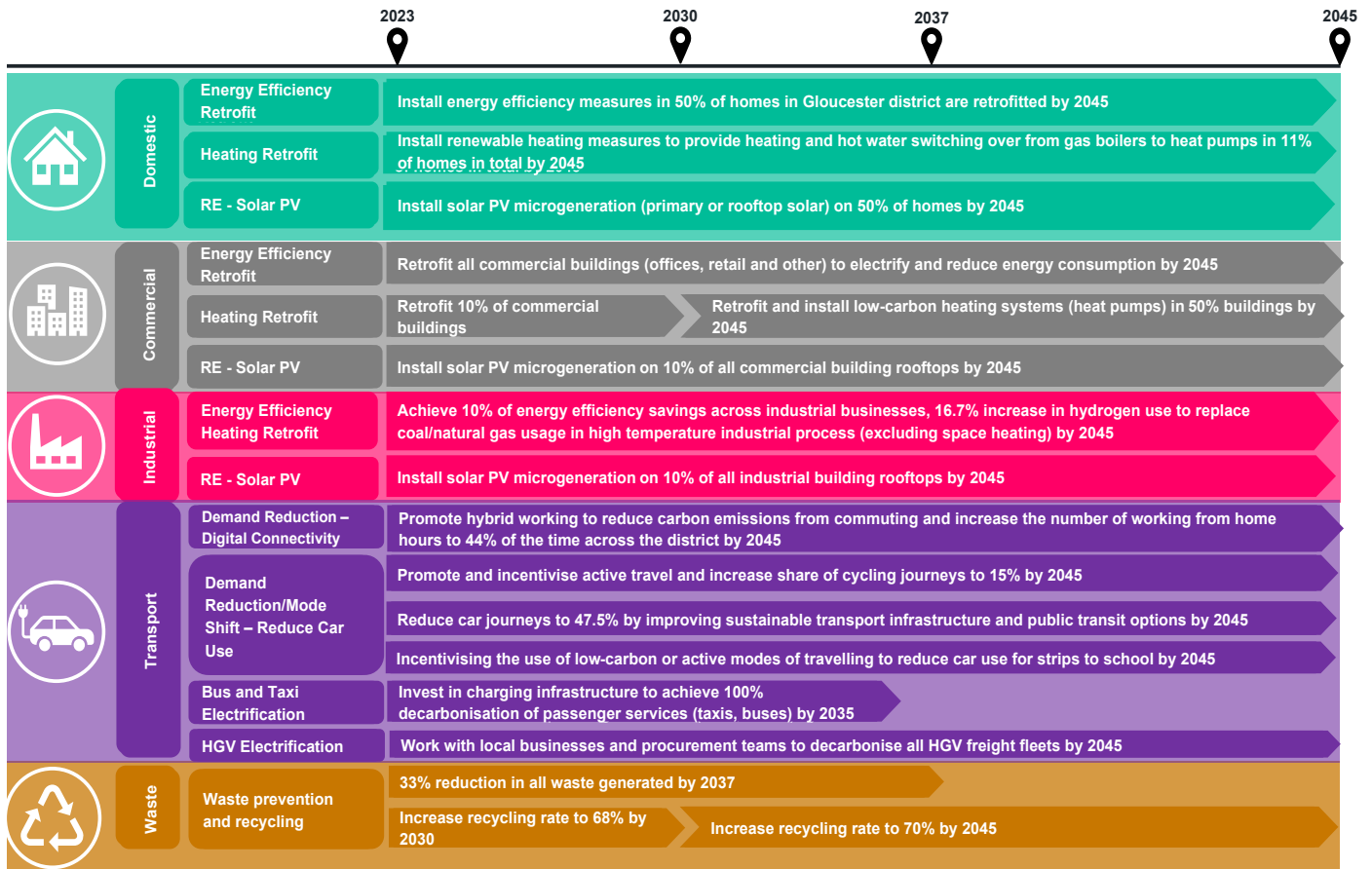
4.7 Scope 1 emissions accounted for 1,816 tCO₂e and represent more than half of all GHG emissions, followed by scope 3 with 28% and scope 2 with 18.3%. The biggest source of emissions is the consumption of gas in non-domestic buildings (37.7%), followed by electricity consumption in non-domestic buildings (18.3%) and fuel consumption by the council's vehicle fleet depot (16%). For scope 3 emissions, well-to-tank emissions (WTT) are from the extraction, refining and transportation of the fuel consumed by the council's operations, this will be reduced as electricity, gas, and fuel consumption decreases.

¹ 2019 has been selected as the base year instead of 2020, the last year of data available, recognising the impact and disruption caused by the COVID pandemic.

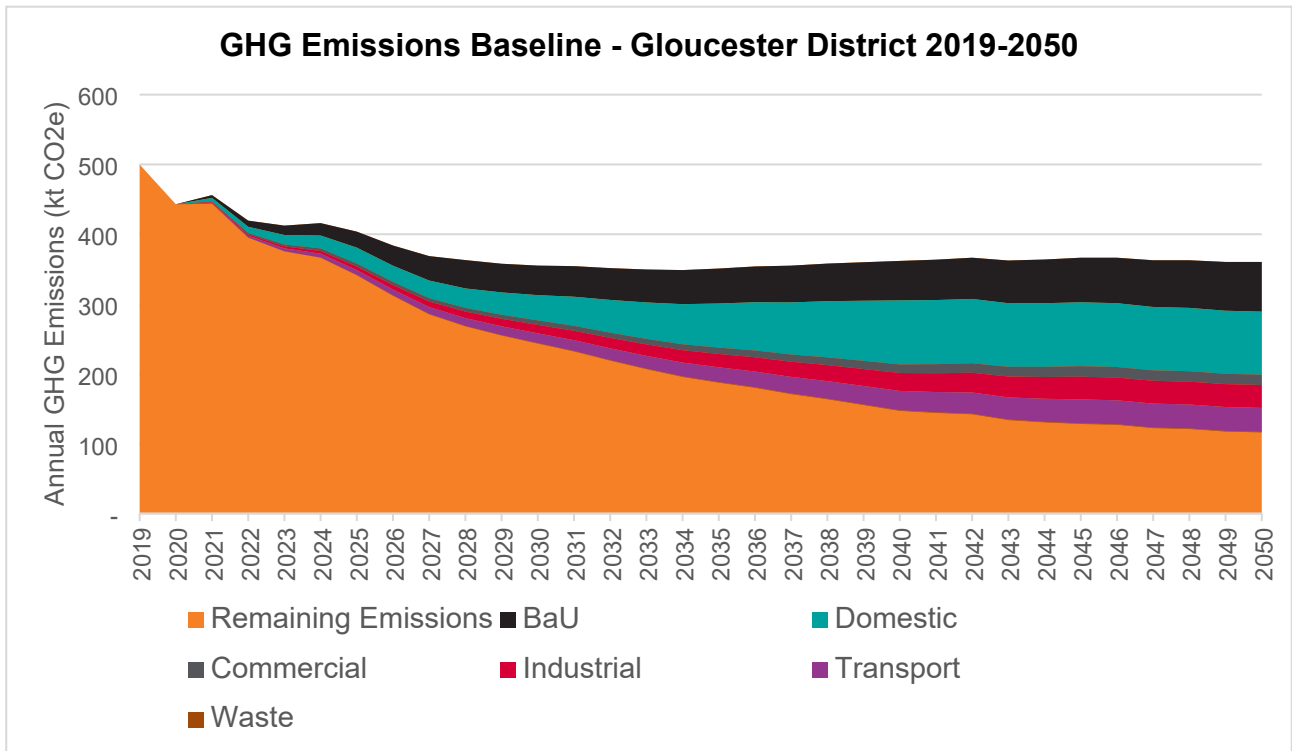
4.8 Decarbonisation of the electricity grid by 2030 (and further by 2050) means that emissions will reduce on their own as has already occurred in recent years. However, energy efficiency measures will need to continue to achieve net zero by 2030.

Gloucester District Pathway to Net Zero by 2045

4.9 To identify a pathway to net zero by 2045 for Gloucester District, the GHG reduction analysis was divided into five areas of opportunities: Domestic, Commercial, Industrial, Transport, Waste.

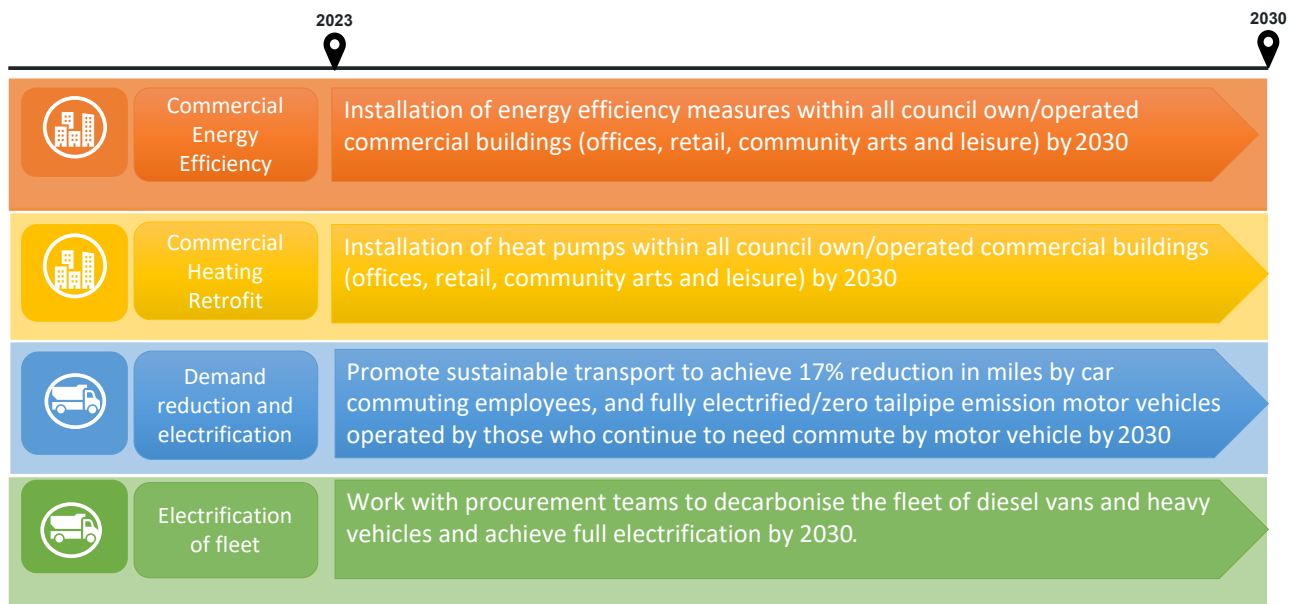


4.10 The contribution each theme can make to district decarbonisation has been modelled by the Climate Action Plan as follows:

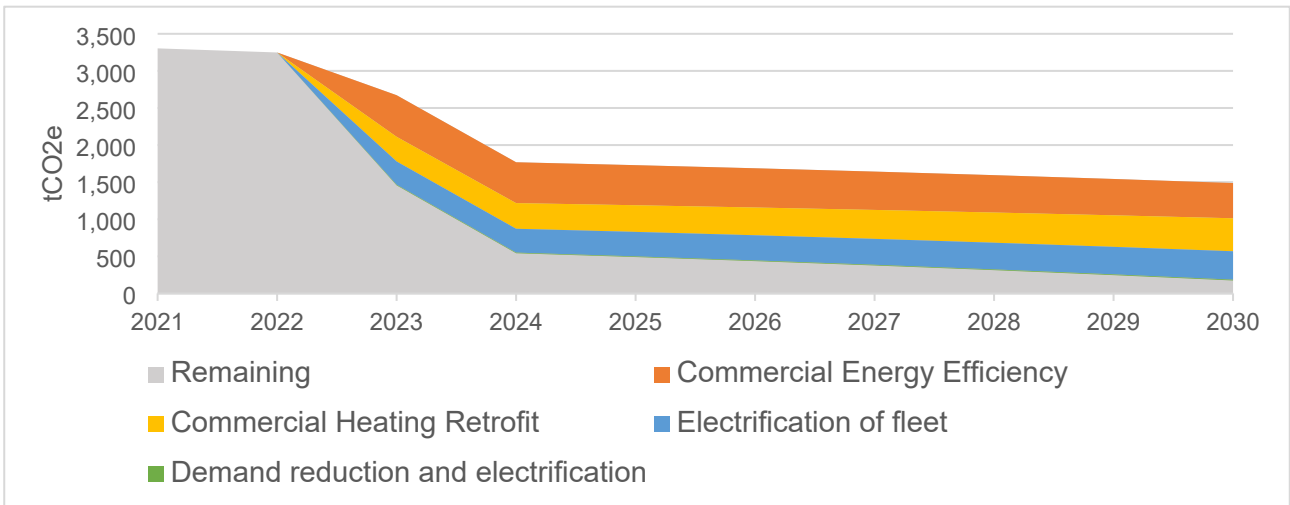


Delivering a Net Zero Carbon Gloucester City Council by 2030

4.11 To identify a pathway to net zero by 2030 for Gloucester City Council, the GHG reduction analysis was divided into five areas of opportunities: Commercial Energy Efficiency; Commercial Heating Retrofit; Demand Reduction and Electrification; Electrification of Fleet:




4.12 The contribution each theme can make to City Council decarbonisation has been modelled by the Climate Change Action Plan as follows:




5.0 Climate Risk and Vulnerability Assessment (CRVA)

5.1 The nature and extent of potential climate change risks and areas of vulnerability for Gloucester have been identified in a Climate Risk and Vulnerability Assessment (CRVA). The assessment was undertaken using the latest UK Climate Projections information and indicators (Met Office, 2022) (Arnell, 2021). The risks and opportunities were rated as low, medium, high and very high; in line with the corporate risk matrix and GCoM reporting standards. This was assessed based on the likelihood of the climate hazard occurring and, should the climate hazard occur, what would the impact or disruption look like.


5.2 WSP has used the latest UK Climate projections (UKCP18) and related tools to identify projected changes in climate for Gloucester. Based on these projections, by the 2080s, Gloucester will experience:




The **average summer day** could be up to **5°C warmer**




A shift in the **growing season**




Increased winter rainfall by **over 20%**




An increased likelihood of **surface water and river flooding**, influenced by tides and extreme rainfall




An **increase** in the number and severity of **wildfires**




Heatwaves occurring **six times** more often



Three times less frost days and a reduction in snowfall



Reduced summer rainfall by **over 35%**



An increase in the **frequency and intensity of storms**

5.3 As part of the CRVA, WSP were tasked with identifying priority risks to district and council arising from modelled climatic changes:

Theme	Priority Risks
Community Wellbeing	<ul style="list-style-type: none"> ■ Unsafe working conditions and reduced employee productivity. ■ Pressure on emergency, education, and health services. ■ Risks to physical and mental health. ■ Risk to the homeless. ■ Inability to travel, leading to isolation, missed medical appointments etc. ■ Increase in antisocial behaviour and crime. ■ Issues with deliveries of supplies such as food or medicine. ■ Forced migration and civil conflict.
Infrastructure (IT, transport, energy)	<ul style="list-style-type: none"> ■ Damage to infrastructure, such as IT equipment. ■ Road / rail accidents. ■ Disruption of transport, including congestion and delays. ■ Loss of power.
Biodiversity and Environment	<ul style="list-style-type: none"> ■ Damage to and/or loss of crops. ■ Increase pressure on water supply. ■ Damage to young trees, impacting establishment. ■ Increased tide levels, due to wind and sea level rise, leading to increased risk of flooding. ■ Increased tree and branch fall. ■ Increase in pests, pathogens, and invasive species. ■ Decline in species populations and habitats.
Housing and Buildings	<ul style="list-style-type: none"> ■ Damage to / flooding of vulnerable assets, such as schools, care homes, children's homes, health centre's etc. ■ Flooding of homes and businesses. ■ Increase in risk of subsidence or landslides. ■ Destruction of homes and businesses due to wildfire or storms. ■ Displacement of residents. ■ Risk of mould.
Waste and Water	<ul style="list-style-type: none"> ■ Introductions of water restrictions ■ Contamination of water supplies ■ Reduced efficiency of burning waste ■ Water supply interruptions ■ Asset flooding ■ Strain on street cleaning services
Culture Leisure and Tourism	<ul style="list-style-type: none"> ■ Increase in public safety concerns regarding health. ■ Loss of business. ■ Overheating of outdoor sports facilities. ■ Increased risk of fire.

- 5.4 Having identified key risks to the district arising from global warming and associated climatic changes, the CRVA also provides extensive examples of how local authorities and key stakeholders within the municipal boundary can reduce localised impacts of climate change risks.

6.0 Social Value Considerations

- 6.1 WSP have prepared an educational tool for third parties and key stakeholders in the district for the purposes of fulfilling their social value obligations under the contract with the Council. This tool comprises a recording that has now been provided by WSP and will be made available to private and third sector stakeholders in January 2024.

7.0 Environmental Implications

- 7.1 The environmental implications of the Climate Action Plan and Climate Risk and Vulnerability Assessment are both local and global. In terms of climate impact, reductions in Gloucester City Council and the wider district's greenhouse gas emissions will contribute to the U.K's Nationally Determined Contribution to international efforts to limit human-induced global warming to 1.5C above pre-industrial levels. Doing so will limit the extreme weather and climate-related risks associated with global warming (see section 5.0).
- 7.2 The Climate Risk and Vulnerability Assessment reflects the need to plan for the mitigation of global warming-induced extreme weather that is likely at current and future levels of global warming that are now unavoidable. By taking a rigorous, strategic approach to climate risk in the district as early as possible, we can reduce risks to human life and public service continuity.
- 7.3 The Climate Action Plan's focus on the necessity for capital investment in building fabric, the energy system, and surface transport decarbonisation presents a range of commercial and employment opportunities for the residents of Gloucester, helping to sustain and enhance economic prosperity in the district. The fiscal multiplier associated with such economic activity will also have cascading effects for the wider local economy.

8.0 Alternative Options Considered

- 8.1 The alternative option would be for the City Council to have not undertaken delivery of the Climate Action Plan and CRVA. However, this would not have been conducive to the delivery of an orderly approach to decarbonisation at the level of either the district or council. Furthermore, both a comprehensive Climate Action Plan and CRVA are conditions of membership of the Global Covenant of Mayors for Energy and Climate.

9.0 Reasons for Recommendations

- 9.1 In 2019, Gloucester City Council (GCC) declared a climate emergency. In doing so the council committed to reaching net zero emissions across its own functions by 2030 and working towards net zero emissions across the wider district by 2050; this target was subsequently brought forward to 2045 in November 2021 in line with the higher confidence thresholds of the Intergovernmental Panel on Climate Change's (IPCC) 1.5°C report.

- 9.2 In approving the recommendations of this report, Council will be supporting further progress towards the achievement of its stated decarbonisation goals in consultation with key stakeholders and residents of Gloucester.

10.0 Future Work and Conclusions

- 10.1 Subject to adoption by Council, the Climate Change Strategy and Action Plan should be put out for public consultation.
- 10.2 Subject to any final amendments, the Climate Action Plan should, using all best endeavours, be actioned by relevant officers under the direction of relevant Cabinet Member, Managing Director, Climate Change and Decarbonisation Lead.
- 10.3 In compliance with members of the Global Covenant of Mayors for Energy and Climate, biennial monitoring of progress should be undertaken and made publicly available.

11.0 Financial Implications

- 11.1 This strategy highlights areas which will need to be considered to achieve our climate goals. This will involve significant capital projects to improve our estate and revenue funds to highlight and promote the strategy with our partners. Individual business plans for projects will be required for future projects, highlighting financial implications through the development of business plans which show investment and payback timeframes.

12.0 Legal Implications

- 12.1 The overarching legislative context of the Gloucester Climate Action Plan is the Climate Change Act 2008. This Act places a legal duty on central government to set legally binding targets to reduce UK greenhouse gas emissions to net-zero by 2050.
- 12.2 Where specific projects or actions are required going forward to support the Gloucester Climate Action Plan further legal advice and support will be sought from One Legal.
- 12.3 The Council must ensure that any decisions taken must be in accordance with the Council's Constitution and Financial Rules, particularly in regard to decision making, implementation of strategy/action plans and any funding requirements.

13.0 Risk & Opportunity Management Implications

- 13.1 The Climate Action Plan and Climate Risk and Vulnerability Assessment represents an active attempt at managing local risks associated with global warming in a rational, strategic, and progressive manner. In identifying risks and opportunities for decarbonisation in the district, officers will be able to deliver projects with more robust business cases and target areas for greatest decarbonisation potential.

14.0 People Impact Assessment (PIA) and Safeguarding:

- 14.1 Supplied. The initial screening indicated that the implementation of this climate action plan will have largely positive impacts on those with protected characteristics, as those people tend to be more affected by climate change and risk. However, individual projects arising from the Plan will require their own People Impact Assessments as and when they come forward.

15.0 Community Safety Implications

- 15.1 By reducing the potential for social disruption presented by global warming-induced extreme weather, the Climate Action Plan and Climate Risk and Vulnerability Assessment will deliver long-term benefits in respect of Community Safety.

16.0 Staffing & Trade Union Implications

- 16.1 None.

Background Documents: Gloucester City Council Climate Action Plan.