



Glasgow City Council

City Administration Committee

Item 9

22nd June 2022

**Report by Councillor Angus Millar, Convener for Climate,
Glasgow Green Deal, Transport and City Centre Recovery**

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GLASGOW'S CLIMATE ADAPTATION PLAN

Purpose of Report:

To submit the proposed Glasgow Climate Adaptation Plan to Committee for approval.

Recommendations:

It is recommended that the Committee:

- 1) Reviews Glasgow City Council's proposed Climate Adaptation Plan, and;
- 2) Agrees the adoption of the Adaptation Plan.

Ward No(s):

Citywide: ✓

Local member(s) advised: Yes ☐ No ☐ consulted: Yes ☐ No ☐

1 Introduction

- 1.1 Climate change represents a critical threat to the planet. The world has already warmed by over 1.2°C above pre-industrial levels due to human activities and is experiencing the related impacts.
- 1.2 In 2018, the Intergovernmental Panel on Climate Change (IPCC) [Special Report on 1.5°C](#) reinforced the scientific imperative, and in 2021, it called a climate “code red.” It is now clearly understood that we are amidst a climate emergency.
- 1.3 At the 21st UN Conference of Parties (COP21) held in Paris in 2015, all governments made a commitment to return to COP26 with more ambitious action to close the greenhouse gas emissions gap that was already evident.
- 1.4 Glasgow City Council declared a climate and ecological emergency in May 2019.
- 1.5 The [Glasgow Pact](#) recently agreed at COP26, held in Glasgow in November 2021, is a step in the right direction. However, negotiations revealed that there are still significant action, policy, and commitment gaps in achieving the net zero goals. Even with the new Glasgow Pact pledges, it is predicted that global greenhouse gas (carbon) emissions will double by 2030 compared to the reductions required to achieve 1.5°C¹.
- 1.6 In 2022, the latest [IPCC Report](#) states that human actions in heating the climate are causing dangerous and widespread disruption, threatening devastation to the natural world and causing many areas to become uninhabitable. With 40% of the world’s population at risk of climate impacts.
- 1.7 The recent publication of Glasgow’s [Climate Plan](#) was a key step to address the Climate and Ecological Emergency. The Climate Plan sets a new and ambitious target for the city of Glasgow to achieve “*Net zero carbon emissions by 2030*”.
- 1.8 Positive progress is being made regarding climate mitigation at a city wide level. However it must be noted that even if carbon emissions targets are met, major climate impacts are still likely to happen because of the historical carbon emissions already locked into the atmosphere.
- 1.9 Glasgow’s Climate Adaptation Plan, a commitment under action 19 within the Climate Plan, sets the context for citywide adaptation action. This means action to start to prepare or “adapt” to those climate change impacts already observed and those that are projected to come.
- 1.10 The Adaptation Plan prepares the city to become climate ready and resilient towards any further and projected climate impacts. Action taken now will enable

¹ [Climate Action Tracker](#)

the city to minimise or prevent significant disruption to the city through negative health, economic and environmental impacts.

- 1.11 This Plan will sit alongside the Climate Plan to help build capacity of Climate Adaptation and raise the profile of adaptation action in the city. It was informed by extensive stakeholder consultation, the latest UK Climate projections and trends, recommendations from the Climate and Ecological Emergency working groups and associated community consultation.
- 1.12 Climate Adaptation action was highlighted by a recent report produced by the Committee on Climate Change² as being the Cinderella of Climate Change, often overlooked, not appropriately funded, or understood. It is expected that, if the actions proposed under this plan are successful, both responses: Mitigation and Adaptation, will be integrated in the next iteration of the Climate Plan.
- 1.13 This Plan was reviewed by [the Environment Sustainability and Carbon Reduction Committee in March 2022](#) and approved for referral to this Committee.

2.0 Climate Impacts

- 2.1 Scotland has been subject to a period of rapid climate change. Records show that over the last few decades temperatures have increased, with the last decade being the warmest ever recorded, With the average temperature between 2010-2019 around 0.7°C warmer than the 1961-1990 average.
- 2.2 Rainfall patterns have also experienced change with increased rainfall and more heavy downpours. The annual average rainfall in the last decade (2010-2019) was 9% wetter than the 1961-1990 average.
- 2.3 In addition sea-level rise is accelerating; coastal waters around the UK are rising at rates of up to 2mm per year. And there have been fewer days with frost and snow cover, the average rate of change has been 12 days per decade, which has been associated with changes in mean temperature during the winter months.
- 2.4 According to UK Climate Projections (UKCP), the leading source of climate impacts information for the UK, the climate in Scotland is set to get warmer and wetter. There will be an increased risk of storms, flooding, sea level rise and urban heat island effect.
- 2.6 UKCP18, the latest Met Office projections, modelling of low, medium and high greenhouse gas (carbon) emission scenarios show that in every projection, we can expect future changes in climate to be far greater than anything we have seen in the past. Key long-term climate change trends for Scotland include:
 - Increase in average temperatures across all seasons

² [UK Climate Change Risk Assessment](#) (2021)

- Typical summers will be warmer and drier
- Typical winters will be milder and wetter
- Intense, heavy rainfall events will increase in both winter and summer
- Sea levels will rise
- Reduced frost and snowfall
- Weather will remain variable and may become more variable
- Increase in summer heat waves, extreme temperatures, and drought
- Increased frequency and intensity of extreme precipitation events
- Increase in growing season
- Reduced occurrence of frost and snowfall

2.7 It is vital that Glasgow builds its climate resilience and capacity by adapting early and effectively to the impacts of climate change. This must be done whilst also continuing to address the causes of climate change, by continuing to reduce our greenhouse gas (carbon) emissions.

3.0 Climate Adaptation

3.1 The development of Glasgow's Climate Adaptation Plan sits as part of a wider suite of documents which collectively set the path for a climate proof and resilient city of the future.

3.2 Adaptation takes account of both risks and opportunities arising from the impacts of climate change, and the need to plan for them now.

3.3 It is of note that Adaptation is an ongoing, iterative process. There will be considerable local variations in climate impacts and there is no final 'adapted state' but rather a continued process of building adaptive capacity and resilience.

3.4 This Plan has been developed based on analysis of key documents outlining current and projected climate impacts as well as local assessments undertaken in collaboration with a range of city stakeholders.

4.0 Key Risks for the City

4.1 Taking account of key climate trends and projections, and existing assessments, a high-level climate risk assessment for the City and the City Council was undertaken.

4.2 This city-wide risk assessment highlighted a number of potential key risks for the following sectors:

- **Built Environment and Infrastructure:** Climate change impacts have the potential to impact through flood risk, damage, and disruption to the city's built infrastructure. This will have consequential impacts on the design, construction and maintenance of Glasgow's buildings and land.

- **Natural Environment and Assets:** Projected changes in temperature and rainfall have the potential to impact on the city's current natural habitats and species. Key risks include drought, deterioration of habitat, erosion and the potential introduction of new species.
- **Society & Economy:** Weather and climate play a significant role in people's health. Changes in climate affect the average weather conditions that we are accustomed to, with a disproportionate impact on vulnerable groups such as the elderly, individuals with pre-existing illnesses, young people and the economically and socially vulnerable. Hotter days and more frequent and longer heat waves have the potential to increase the number of heat related illnesses and deaths. Local impacts such as flooding and heatwaves can affect retail and consumer behaviour, as well as potentially causing damage to buildings and travel disruption. Wider global events and impacts also have the potential to disrupt our local economy.

5.0 Proposed Adaptation Interventions and Actions

- 5.1 Glasgow's Climate Adaptation Plan proposes 13 key Adaptation Interventions, with a range of supporting sub actions to better understand, or address, the most significant risks identified.
- 5.2 The Adaptation Interventions proposed in this Plan are aligned with the outcomes of the second Scottish Climate Adaptation Plan (SCAP2), published by the Scottish Government at the end of 2019.
- 5.3 The proposed Adaptation Interventions include:
 1. **Governance.** This will include working together to identify new ways of working with council services, including area partnerships, elected members, external partners, and stakeholders to make the best use of available resources and expertise to build a climate resilient future for Glasgow.
 2. **Planning and Housing.** This will include a detailed analysis of the risks posed to the city from the impacts of climate change to identify the most vulnerable buildings, locations, and neighbourhoods, and specific actions to address these.
 3. **Sustainable Transport.** This will include continued monitoring of the impacts of climate change on our transport infrastructure and use of this information to incorporate adaptation into transport planning and development.
 4. **Natural Environment and Assets.** This will include collaboration with Parks, Biodiversity, planning services to review priority species and habitats. This work will enable us to identify those at greatest risk from climate change, utilising open space and ecological services to help mitigate and adapt to future impacts.

5. **Health and Wellbeing.** This will include continued work with Sustainable Glasgow and Climate Ready Clyde to build a better understanding of climate impacts upon the health, and wellbeing of individuals and communities, as well as the inequalities associated with those impacts. We will continue to develop recommendations to address existing and future health and inequality issues linked to a changing climate.
6. **Environment.** This will include collaboration with our partners to develop a fuller understanding of the potential impacts of climate change on air and water quality, pest and disease control, and other environmental health related factors.
7. **Risk Planning.** This will include more robust risk management strategies that give prominence to climate change issues and aid informed climate resilience planning.
8. **Economy.** This will include work with our partners to raise awareness of climate change impacts among Glasgow's business community and to inform future planning of major events and attractions.
9. **Research and Evaluation.** This will include ongoing monitoring, evaluation, and research to inform our decision-making on climate adaptation action.
10. **Climate Justice.** This will include supporting socio economic and geographic areas in the city most vulnerable to the impacts of climate change such as flooding and overheating.
11. **Raising Awareness.** This will include raising awareness and understanding of climate impacts; namely flooding and overheating and solutions to address these. Awareness raising and capacity building across all stakeholders will be essential to securing buy in and support for effective climate adaptation solutions.
12. **Adaptation Maintenance.** This will include proactive consideration of funding to support long term adaptation maintenance which is essential to delivering successful city projects.
13. **Improved Response to Climate Events.** This will include the development of a coordinated and strategic response to climate and weather events which will be essential if the city is to build resilience to current and future climate impacts.

5.4 A full Action Plan detailing all Adaptation Interventions and supporting sub-actions, is found in Appendix A of the Glasgow Climate Adaptation Plan.

6.0 Next Steps

- 6.1 Over the next year Glasgow's Adaptation Plan will be embedded across the city council and partners via a number of delivery mechanisms including the Sustainable Glasgow Partnership.
- 6.2 A Communications strategy will be adopted to raise awareness of the key risks and impacts associated with Climate Change and demonstrate what citizens can do to support local resilience.
- 6.3 An annual update on Glasgow's Adaptation Plan as part of the Climate Plan will be provided to the relevant Committee.

7 Policy and Resource Implications

Resource Implications:

<i>Financial:</i>	There will be financial implications to fund the delivery of the actions proposed in Glasgow's Adaptation Plan. Funding may be required to support studies and research, support action on the ground and communications and capacity building activities.
<i>Legal:</i>	Publication of this plan strongly supports the requirement to fulfil the Public Bodies Duties on Climate Change under Climate Change (Scotland) Act (2009)
<i>Personnel:</i>	There are no resource implications to support the delivery of the actions proposed in the plan.
<i>Procurement:</i>	There are likely to be procurement implications associated with actions proposed both for developing guidance and policy and potentially procuring services such as consultancy from academic institutions.

Equality and Socio-Economic Impacts:

<i>Does the proposal support the Council's Equality Outcomes 2021-25? Please specify.</i>	Yes, Glasgow's Adaptation Plan aims to ensure that those citizens most vulnerable, due to their socio-economic circumstances or geographical location, are not disproportionately affected by climate and weather impacts.
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What are the potential equality impacts as a result of this report?

The action proposed in Glasgow's Adaptation Plan will deliver positive equality impacts. The Plan aims to address the impacts of climate change and ensure that those most vulnerable in our society are not disproportionately disadvantaged by the impacts of climate change. The Plan will continue to work towards meaningful engagement with communities in the city, specifically young people, disability groups, women and residents in geographic areas worst affected by flood or overheating who may at times be disproportionately affected by climate impacts or are likely to bear the costs of interventions disproportionately.

Please highlight if the policy/proposal will help address socio-economic disadvantage.

Glasgow's Adaptation Plan aims to support a green recovery to COVID 19 while also addressing current and future impacts of Climate Change. Place Based Climate Adaptation Action is known to provide multiple wider benefits, it supports action to address environmental loss, improve quality of place, helps to reduce socio economic inequalities, and supporting economic prosperity.

Climate Impacts:

Does the proposal support any Climate Plan actions? Please specify:

Yes, the proposal supports the Climate Plan's ambition to achieve a climate resilient city. In particular it addresses action within Themes 4 and 5, ensuring a green recovery and promoting the use of nature-based solutions to address the climate and ecological emergency. The proposal also helps directly deliver on action 19 of the Climate Plan stating that the city will develop a Climate Risk Assessment.

Will the proposal contribute to Glasgow's net zero carbon target?

The Plan focusses on addressing the impacts of climate change highlighting how this interlinks and supports the Net Zero carbon agenda.

Privacy and Data Protection Impacts:

No data protection or privacy implications.

8 Recommendations

It is recommended that the Committee:

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