

# Policy and Sustainability Committee

10.00am, Thursday, 17 November 2022

## Climate Change Adaptation Update – Response to Motions by Councillors Macinnes and Parker

Executive/routine

Wards

Council Commitments 18

### 1. Recommendations

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That Committee

- 1.1 Notes the work being undertaken by the Council and partners on adapting Edinburgh to the impacts of climate change, including the appointment of a new Chair of Edinburgh Adapts and its widened membership.
- 1.2 Notes that a new Climate Ready Edinburgh adaptation plan is in development, informed by an updated climate change risk assessment commissioned by the Council. The plan will set out the short, medium and long term actions that need to be taken in the city.
- 1.3 Notes that the Climate Ready Edinburgh Plan 2023-2030 consultation draft and final risk assessment will be brought to Committee in early 2023. Notes that a business case is being developed for undertaking a city region climate change risk assessment under the Edinburgh and East of Scotland City Region Deal's Shared Prosperity Framework.

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## Climate Change Adaptation Update – Response to Motions by Councillors Macinnes and Parker

### 2. Executive Summary

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- 2.1 Edinburgh's 2030 Climate Strategy placed a renewed focus on adaptation. This report outlines the work being done by the Council and its partners to adapt Edinburgh to the impacts of climate change. A new Chair has been appointed to the Edinburgh Adapts partnership, membership has been widened and a new Climate Ready Edinburgh plan is in development. A consultation draft of the new plan and updated risk assessment will be brought to Committee in early 2023 with preparatory briefings being offered to elected members in advance of that.
- 2.2 At regional level, a business case is in development on undertaking a regional climate change risk assessment under the Edinburgh and East of Scotland City Region Deal's Shared Prosperity Framework. This risk assessment will help identify cross-border and shared climate risks and impacts across the ESEC region.
- 2.3 This report has been written in response to motions by Cllr Macinnes (on 18 August 2022, see Motions and Amendments Item 9.2) and by Cllr Parker (on 25 August, Motions and Amendments Item 8.20).

### 3. Background

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- 3.1 The City of Edinburgh Council has a statutory duty under the terms of the Climate Change (Scotland) Act 2009 Public Bodies Climate Change Duties to adapt the city to the impacts of climate change. The effects of climate change are already being felt in Edinburgh. Adapting and enhancing resilience will also provide many other economic, social, and environmental benefits and opportunities for the city.
- 3.2 The City of Edinburgh Council declared a climate emergency in 2019, established an independent Climate Commission, and set a target for the city to be a Net Zero, climate resilient city by 2030. Edinburgh's *2030 Climate Strategy: Delivering a Net Zero, Climate Ready Edinburgh* sets out how the city will enable, support, and deliver action to achieve net zero, renew the focus on climate resilience and accelerate adaptation action across the city.
- 3.3 An initial climate change risk assessment was undertaken as part of the development of the Resilient Edinburgh Climate Change Adaptation Framework 2014-2020 which provided a foundation for adaptation action across the city. In

2016 this work was taken forward through the development of the *Edinburgh Adapts* initiative, and cross sector adaptation action plan. Much progress has been made to enhance resilience across the city through the Edinburgh Adapts partnership and Plan, but the need for further action remains, including actions to manage risks and realise opportunities which have emerged in recent times.

- 3.4 To build momentum and focus around adaptation activity the council has worked with partners to refresh the Edinburgh Adapts partnership, appointing a new chair from Scottish Water who will ensure connectivity with wider flood risk activity, widened the membership of the partnership and begun the development of the Climate Ready Edinburgh plan which is being informed by an updated climate change risk assessment commissioned by the Council.

## 4. Main report

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### **Council Adaptation Work**

- 4.1 The Council's approach to adaptation spans a number of services and directorates

### **Risk and resilience**

- 4.2 The Council's Resilience Management Programme ensures the Council complies with its statutory emergency planning and business continuity obligations. The Council's resilience risk register (which includes those risks related to climate change) is reviewed on a quarterly basis, aligned with the Council's risk strategy. In addition, the Resilience service oversees and supports community resilience initiatives. Externally, the Resilience Service represents the Council on the Multi-Agency Risk Group established by the Lothian and Borders Local Resilience Partnership, which feeds into the risk assessment processes of the East of Scotland Regional Resilience Partnership. The range of risks addressed includes extreme weather related emergencies.

### **Planning and development**

- 4.3 Edinburgh's Local Development Plan (LDP) aims to promote development in sustainable locations and enhance the city's green network by encouraging land management practices which capture, store and retain carbon, and prevent and manage flood risk. The Council's next local development plan, 'City Plan 2030', sets out new policies to support climate resilient place-based approaches to development and infrastructure, including utilising green and blue infrastructure to reduce flood risk, improve human health, water quality and enhance biodiversity. A Strategic Flood Risk Assessment was carried out as part of the development of City Plan 2030. The Edinburgh Design Guidance (updated 2020) includes guidance on green and blue infrastructure requirements in new developments.

### **Flooding and water management**

- 4.4 The Council works in partnership with neighbouring local authorities, SEPA and Scottish Water on delivery of the Local Flood Risk Management Plan (LFRMP) for

the Forth Estuary Catchment (published June 2016). An [interim report](#) (published 2019) details progress made in delivering the actions in the plan. A revised Local Flood Risk Management Plan is in development. Objectives Target Areas (OTA's) have been introduced to further identify and review specific areas at risk of flooding and flood studies have been undertaken to provide better knowledge and understanding of flood risk from watercourses throughout the city. In accordance with SEPA climate change guidance, the Council has raised the climate change allowance to 40% for peak river flow and 35% for peak rainfall intensity for all new planning applications to further future proof Edinburgh from flooding.

- 4.5 Delivery of a long term and sustainable approach to water management is being co-ordinated by the Edinburgh and Lothians Strategic Drainage Partnership, comprising the Council, SEPA and Scottish Water. A Water Management Vision has been produced to identify the risks and co-ordinate action to alleviate impacts from all sources of flooding in the city. Sustainable Rainwater Guidance and factsheets for Edinburgh were completed in autumn 2021. These provide consistent guidance for developments across the council and city for adapting to climate change with respect to water and with biodiversity benefits.
- 4.6 The Council has been working with the University of Glasgow's coastal research team to identify and raise awareness of the risks to Edinburgh's coast from climate change and ways to alleviate them. This has resulted in the creation of a coastal park as part of the Granton Waterfront Masterplan to help manage the risks from sea level rise and coastal erosion.

#### **Blue Green networks, green space and biodiversity**

- 4.7 A Green Blue Network for Edinburgh is being developed, aiming to integrate nature-based solutions throughout the city, in order to reduce urban heating, provide sustainable water management and create attractive environments to work and live. Feasibility studies and concept masterplans for priority areas of the network are being developed, subject to funding, incorporating the Council's 20 minute neighbourhood work.
- 4.8 Edinburgh's Thriving Green Spaces Strategy will shape a new vision for Edinburgh's parks and green spaces. Adaptation measures within the strategy include development of an Edinburgh Nature Network, support for Edinburgh's One Million Tree programme and development of a Natural Capital Account for Edinburgh that will put a financial value on the benefits we receive from green spaces and provide an evidence-based analysis of the economic and social benefits of investing in them. Edinburgh's Nature Network has been mapped and opportunity areas identified. These have been embedded into the Green Blue Network project. An action plan is being developed to implement the opportunities identified by the mapping.
- 4.9 Edinburgh's Local Biodiversity Action Plan includes a number of climate related risks and actions. Edinburgh Living Landscapes, led by the Council's Parks and Greenspace service in partnership with the Scottish Wildlife Trust, Royal Botanic

Garden Edinburgh, Edinburgh and Lothian Greenspace Trust and Green Surge aims to create resilient green networks to deliver a healthy, accessible and attractive environment.

### **Climate Ready Edinburgh: Climate Risk and Adaptation Assessment**

- 4.10 The Council commissioned a climate change risk and adaptation assessment (CCRA) for Edinburgh, identifying and updating the key risks and impacts to the city from climate change and incorporating previous work done through the Resilient Edinburgh Climate Change Adaptation Framework and Edinburgh Adapts Climate Change Adaptation Plan 2016-2020.
- 4.11 The risk assessment incorporates key findings from the citywide Strategic Flood Risk Assessment undertaken as part of the development of City Plan 2030, mapping done as part of the development of Edinburgh's Green Blue network and flood risk datasets provided by SEPA and Scottish Water. A climate change risk assessment of Edinburgh's World Heritage Site has also been completed. Risks and impacts identified, and actions to alleviate them are being incorporated into the wider risk assessment for the city.
- 4.12 The risk assessment uses the latest climate projection data (UKCP18) under a high emissions scenario to identify how Edinburgh's climate is changing and the key risks to the city from these changes. Time frames for these projected changes in climate and their associated risks and impacts range from by 2050 to 2070 to the latter half of the 21<sup>st</sup> century, although the climate is already changing and some of these impacts are already being felt.
- 4.13 The key risks identified are from flooding, storms and coastal erosion, with new emerging risks from heatwaves, drought and sea level rise, as well as changes in habitat and species ranges and behaviour.
- 4.14 The risk assessment considered these risks by sector, looking at how our changing climate and the risks from this would impact on Edinburgh's built and nature environments, transport system and health sector. Climate risk mapping to spatially demonstrate exposure to these climate risks has been produced, showing key areas and hotspots of the city.
- 4.15 Officers are organising a cross party elected member briefing session to take place before the end of the year and the full risk analysis will be published alongside the draft adaptation plan when it comes to committee early in the new year to support and inform the consultation process.
- 4.16 In the meantime, elected members should note that key findings from the risk assessment include:
  - 4.16.1 The location, building type and age of Edinburgh's developments affect their vulnerability to climate change. Flooding of ground floor and particularly basement properties a particular issue in the city.

- 4.16.2 Areas with limited green and blue space most at risk from surface water and river flooding, and the urban heat effect. Development and increasing urban creep key drivers for increasing risk.
- 4.16.3 Flooding causes the greatest disruption to transport and travel in the city. Key rail and road routes have suffered past disruption from flooding. Parts of the tram network are at risk from surface water flooding.
- 4.16.4 There is a significant risk to Edinburgh's 27km coastline from flooding and coastal erosion especially during storm surges and high tides. Sea level rise will increase the risk from storm surges.
- 4.16.5 Over-heating is currently an under-appreciated risk in Edinburgh. Historic buildings, with thick walls and high ceilings are better equipped to deal with heat than more modern buildings with limited ventilation and no air conditioning. Temperature increases are likely to cause disruption to road, tram, and rail transport and pose a risk to elderly and vulnerable passengers in particular
- 4.16.6 Climate hazards will place increasing pressure on already sensitive habitats and species, especially those susceptible to other pressures

### **Climate Ready Edinburgh Plan**

- 4.17 A new Climate Ready Edinburgh plan to 2030 is in development as the next phase of Edinburgh Adapts activity, informed by the outcomes of the citywide and Edinburgh's World Heritage risk assessments, coastal work undertaken in collaboration with the University of Glasgow and new actions being identified by the adaptation partnership and key stakeholders.
- 4.18 This includes moving from an incremental action to a transformational change approach, identifying the short, medium and long-term actions that need to be delivered to ensure Edinburgh adapts to the impacts of climate change.
- 4.19 A number of key actions have been identified to take forward through the Climate Ready plan. These will be further developed as the plan progresses. From this, a pipeline of priority investment proposals will be developed which respond to the key climate impacts identified in the risk assessment.
- 4.20 A Climate Ready Plan 2023-2030 consultation draft will be brought to Committee in early 2023. If approved, a citywide public consultation on the draft Plan will be launched to run for a 12-week period. The Plan will be reviewed taking into account feedback from the consultation. A final version of the Plan will be brought to Committee for approval by Spring 2023.

## **5. Financial impact**

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- 5.1 In addition to resources already allocated for adaptation, potential sources of funding to take forward aspects of this work are being identified. This includes to

implement projects identified through the Green Blue Network, Water Management Vision and related green and blue infrastructure projects.

## **6. Stakeholder/Community Impact**

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- 6.1 Consultation has taken place with a range of key stakeholders across the city to develop Edinburgh's new climate change risk assessment. This includes the following Council services: Planning, Flood Prevention, Parks, Thriving Green Spaces, Corporate Property and Resilience.
- 6.2 This report has been assessed in respect of the three elements of the Climate Change (Scotland) Act 2009 Public Bodies Duties. In summary, the proposals in this report will help the city mitigate and adapt to the impacts of climate change, improve social justice, economic wellbeing and environmental good stewardship.
- 6.3 Equality and rights are a key component of adapting Edinburgh to the impacts of climate change. The Climate Ready Edinburgh plan will have actions that are underpinned by principles including being inclusive, engaging and sustainable.

## **7. Background reading/external references**

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- 7.1 Motion by Cllr Macinnes on 18 August 2022, see [Motions and Amendments Item 9.2](#)
- 7.2 Motion by Cllr Parker on 25 August, see [Motions and Amendments Item 8.20](#)
- 7.3 [2030 Climate Strategy: Delivering a Net Zero, Climate Ready Edinburgh](#)
- 7.4 [Edinburgh Adapts](#)
- 7.5 [City Plan 2030](#)
- 7.6 [Vision for Management of Water in Edinburgh](#)