



Edinburgh Adapts

Climate Change Adaptation Action Plan 2016-2020

Progress Report 2017-18





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Chair's Foreword

Ruth Monfries
Chair of the Edinburgh Adapts Steering Group



As our climate changes, awareness of the need to adapt is growing. We are seeing the impacts of climate change now. This year's heatwave saw Scotland record its highest temperature ever. Severe weather impacts, including heatwaves, are likely to become more common in the future. We need to adapt our buildings, infrastructure and greenspaces to these changes, to protect our citizens, environment and economy.

Edinburgh Adapts held its first annual event in April 2018. Participants made their way through the rain and sleet to the Royal Botanic Garden Edinburgh's Botanic Cottage. An inspiring day ensued, with presentations, planning and discussion all aimed at moving from ambition to action.

The event helped identify both the needs and opportunities to progress adaptation in Edinburgh. Over the latter part of the year, the steering group are working on our strategy to build on early success and increase the pace of change towards achieving the Edinburgh Adapts Vision.

Adaptation is challenging and there is much work to do. However, we have made important first steps towards realising our vision of a climate ready Edinburgh.

A handwritten signature in black ink that reads "Ruth Monfries". The signature is written in a cursive style.

Ruth Monfries, Royal Botanic Garden Edinburgh

Introduction

Edinburgh Adapts, the city's first [climate change adaptation action plan](#) and [Vision for a Climate Ready Edinburgh](#), were launched in December 2016. The Action Plan aims to provide a whole city approach to ensuring the city remains resilient to the impacts of our changing climate. This is the second report on progress of the plan since its launch.

Edinburgh Adapts was developed to meet our obligations under the [Climate Change \(Scotland\) Act 2009](#). The Act put in place requirements to prepare Scotland for climate change and to adapt to its impacts.

The climate in the East of Scotland is set to get warmer and wetter, increasing the risk of storms, flooding and the potential for extended periods of drought. As global average temperatures increase, we will also experience rises in sea level around the East of Scotland coast.

The final impacts of climate change on Edinburgh will vary depending on the success of global mitigation efforts, but even a relatively modest increase in temperature is likely to bring significant changes. From the data, the following changes to Edinburgh's climate are predicted:

- Warmer, drier summers
- Milder, wetter winters
- Greater frequency and intensity of extreme rainfall

- Greater frequency of severe weather events
- Sea level rise

A partnership approach was taken to developing the action plan, with the Edinburgh Sustainable Development Partnership, Adaptation Scotland and other key stakeholders across the city.

The Edinburgh Adapts Action Plan provides a platform for bringing together adaptation activity across the city, helping to maintain the momentum and delivering on the commitments made in the [Resilient Edinburgh Climate Change Adaptation Framework](#).

The Action Plan runs from 2016-2020 and contains over 100 committed adaptation actions contributed by over 50 partner organisations. The Vision looks even further, setting out the project partners' adaptation aims for two key landmark dates, 2025 and 2050.

As well as ensuring overall governance for adaptation in the city, the plan aims to protect and enhance Edinburgh's wildlife and green spaces, providing nature-based solutions to climate-related problems. Planning and development play a key role in ensuring the city adapts, including the use of green infrastructure to offset predicted changes in weather and rainfall and naturalising flood prevention measures when feasible. Actions involving working with communities and raising awareness of the impacts of climate change on local areas are also integral to the plan.

Achievements 2017-2018

This is the second year of Edinburgh Adapts. This report highlights the key activities and outcomes from the last twelve months, delivered by the Edinburgh Adapts partnership.

The following pages highlight some of the achievements made in 2017-18 to take forward the Action Plan and then goes on to provide a summary of progress on all the actions being delivered through the Edinburgh Adapts Action Plan.

The majority of actions in the Plan are progressing well. Two years into the Plan and a number of actions have been completed while work continues to progress the rest. However, a small number have not been progressed due to various partner capacity constraints or because it has not been possible to secure appropriate levels of funding.

Additional to the progress of the Plan, Edinburgh Adapts is one of the case studies which has been featured in the Scottish Government's fourth annual report on progress on [Climate Ready Scotland: Scottish Climate Change Adaptation programme](#), showing

"Edinburgh Adapts is a whole city approach and significant progress has been made but we need to go further"

Scotland's progress towards adapting to climate change. Edinburgh Adapts was also showcased as part of Scotland's approach to adaptation at the UN Climate Change Conference held in Bonn in November 2017.



A high-profile Edinburgh Adapts Seminar was held in April 2018. Speakers included directors and senior managers from the Royal Botanic Garden Edinburgh, Scottish Wildlife Trust, Historic Environment Scotland and the Council. The event was closed by the Special Adviser on Climate Change from the city of Copenhagen who talked about what had been done in the city to adapt following a serious flooding event in the city centre. At the seminar, it was felt that although a lot has been achieved in the first two years of Edinburgh Adapts, a step change was needed to fully turn these ambitions into action in a strategic and co-ordinated way. Ways to do this will be looked at in the coming year.

Governance

There has been continued strong leadership and governance of the Action Plan through the Edinburgh Adapts Steering Group, which was established in March 2016 to govern and oversee delivery of the Plan. The Group includes representatives from the Royal Botanic Garden Edinburgh, Historic Environment Scotland, Edinburgh World Heritage, Edinburgh, Heriot Watt and Napier Universities, Edinburgh College, the Scottish Wildlife Trust, Edinburgh Living Landscapes, the Edinburgh Biodiversity Partnership, Adaptation Scotland and the City of Edinburgh Council.

Integration Joint Boards (IJB) are now required to report on how they are meeting their obligations under the Climate Change (Scotland) Act so an officer representing Edinburgh's IJB has become a member of the Steering Group.

A wider network of organisations is also taking the Edinburgh Adapts Action Plan forward. This has helped to raise awareness of adaptation and embed the action plan across the city.

A number of high profile news reports on the impacts of severe weather and climate change on Edinburgh's World Heritage Site and the work Edinburgh World Heritage and Historic Environment Scotland are doing to combat this has also helped to raise the profile of climate change impacts and what needs to be done to alleviate them.



A number of partnerships have been formed through Edinburgh Adapts. These have been to achieve specific tasks or to look at particular issues surrounding adaptation. They have also helped access funding. This process is ongoing.

At organisation level, the aim is to ensure that adaptation is embedded, and that risk assessment processes and resilience planning incorporate current and emerging climate related risks.

Overleaf is the full list of Governance actions being delivered through the Edinburgh Adapts Action Plan.

Governance

Ref	Summary of Action	Partners	Progress 2017/18	Status
G1	Establish a Steering Group to ensure successful implementation of Edinburgh Adapts	Edinburgh Adapts Steering Group	Steering Group established March 2016. Meets quarterly.	
G2	Develop an evidence base on projected changes in climate in Edinburgh and the impacts on the city.	The City of Edinburgh Council, SEPA, Royal Botanic Garden Edinburgh, Scottish Wildlife Trust, SNH, Met Office, other relevant sources	Discussions have taken place on building the evidence base on biodiversity changes as part of the next Edinburgh Biodiversity Action Plan. The development of a comprehensive evidence base will be progressed in 2018-2019.	
G3	Edinburgh demonstrator project on climate services under Horizon 2020 EU funding bid	University of Edinburgh, Adaptation Scotland, City of Edinburgh Council, Forest Research, UK and EU partners	Bid was unsuccessful and the consortium is now looking at alternative sources of funding to carry out the project.	
G4	Develop Edinburgh Adapts communications strategy	Edinburgh Adapts Steering Group, Edinburgh Sustainable Development Partnership, other city stakeholders	Discussions are underway on the development of a strategy including a dedicated website, where examples of best practice and 'how to adapt' toolkits could be sited.	
G5	Facilitate potential partnerships and/or funding sources to take adaptation projects forward across the city	Edinburgh Adapts Steering Group and/or funding subgroup	A number of partnerships have been formed through Edinburgh Adapts and funding accessed. This process is ongoing.	
G6	As part of risk assessment process, incorporate current and emerging climate change-related risks into resilience planning	Council Resilience Group, Edinburgh Community Resilience Group, CAT1 Responder Partners	The Council's resilience risk register includes those risks related to climate change. It is reviewed by the Council Resilience Group on a quarterly basis as part of the Resilience service's risk management procedure and is aligned with the Council's risk strategy. The Council participates in the preparation and monitoring of a Community Risk Register for the Lothian and Borders area.	
G7	Review Council Risk Register and embed climate-related risks	The City of Edinburgh Council Internal Audit	To be taken forward in 2018/19 including incorporating these risks into the Integration Joint Board risk register.	
G8	Work with EU partners to raise awareness, promote best practice and build up evidence on climate change impacts and adaptation	The City of Edinburgh Council Strategy & Insight Division	Edinburgh Adapts showcased as part of Scotland's approach to adaptation at the UN Climate Change Conference held in Bonn in November 2017.	
G9	Integrating adaptation into Community Planning preparation of Local Outcome Improvement Plan 2016-2020	Edinburgh Partnership, The City of Edinburgh Council Strategy & Insight Division	Subject to the new LOIP being agreed, new opportunities for supporting this action in partnership will be explored.	

Natural Environment and Greenspace

“Nature is not an expensive problem to be fixed. It is an ally and potential solution”

Investing in the natural environment helps to manage and reduce the risks from extreme weather, providing nature-based solutions to climate-related problems. It emphasises the importance of green infrastructure in supporting the city to adapt to the impacts of climate change including flood risk and the need to support nature to adapt.

Edinburgh Adapts works closely with other initiatives in the city to deliver a range of actions that not only deal with the impacts of climate change, but also help protect and enhance the city’s biodiversity and blue and green spaces.

Climate change adaptation was embedded into the Edinburgh Biodiversity Action Plan 2016-18. Work is ongoing on adapting Edinburgh’s environment to the effects of climate change, as weather patterns change, temperatures rise and new species spread to the city. A new iteration of the plan is currently being developed. This will build on the good work already being done, look at ways to improve recording of biodiversity change caused by climate change and ways to help species and habitats adapt.

Work is progressing to create a [new raingarden](#) within the Royal Botanic Garden Edinburgh to help alleviate surface water flooding within the garden and showcase green infrastructure in action. The raingarden is being developed in partnership with Heriot Watt University.



The Edinburgh Biodiversity Action Plan and the Edinburgh Living Landscapes Initiative both promote improvements to green infrastructure in the urban setting. Specific projects relating to greenspace infrastructure such as the square meter for butterflies, and pollinators green roof study, also promote greening of buildings. Living roof requirements are included in the Edinburgh Design Guidance.



Overleaf is the full list of Natural Environment and Greenspace actions being delivered through the Edinburgh Adapts Action Plan.

Natural Environment and Greenspace

Ref	Summary of Action	Partners	Progress 2017/18	Status
GS1	Assess the effects of climate change and their impact on the natural environment and produce guidance to inform adaptation policy and management.	The City of Edinburgh Council, Edinburgh Biodiversity Partnership, Scottish Wildlife Trust	Work is being done to scope options for securing the appropriate level of resource to progress this action.	
GS2	Review conservation strategies, plans and projects to ensure that climate change risks have been identified, assessed and addressed.	The City of Edinburgh Council, Edinburgh Biodiversity Partnership	Being progressed through promotion of habitat networks for ecosystem resilience in the Edinburgh Biodiversity Action Plan, Local Development Plan and Edinburgh Design Guidance. Also through opportunities as they arise, for example through management plans and projects.	
GS3	Promote green infrastructure to help nature to adapt to climate change.	The City of Edinburgh Council, Edinburgh Living Landscapes	Ongoing through planning guidance including Local Development Plan policies, the Edinburgh Biodiversity Action Plan, updated Edinburgh Design Guidance, Open Space 2021 and Edinburgh Living Landscape programmes.	
GS4	Improve climate change resilience through Edinburgh Living Landscapes (ELL) programme	Edinburgh Living Landscapes (ELL)	Ongoing. In 2017/18 ELL maintained 72 annual/perennial meadows across Edinburgh's four localities and naturalised grasslands account for approximately 10% of our amenity grass. The emphasis in 2017/18 is to not increase ELL naturalised grasslands but to ensure that these areas were better maintained/further developed. This has been achieved by successional bulb planting in naturalised grass areas and incorporating ELL into our Landscape Quality Standards monitoring.	
GS5	Innovative methods in urban greenspace planning. Analyse the connectivity of urban green spaces.	Edinburgh Living Landscapes (ELL), Green Surge (Forest Research)	Green Surge mapping completed. This will enable further scrutiny and analysis by the wider ELL partners and stakeholders, resulting in eventual incorporation of appropriate elements into ELL programme going forward.	
GS6	i-Tree Edinburgh	The City of Edinburgh Council Environment, Forest Research	Ongoing. Promotion of ecosystem benefits of trees to encourage buy-in and support at senior level of planting/preservation of trees.	
GS7	Trees in the City – Trees and Woodland Action Plan	The City of Edinburgh Council	Council commitment to plant an additional 1,000 trees in Edinburgh by 2022. Climate change adaptation considerations are embedded into wider land use planning decisions through forest and woodland strategies.	

Natural Environment and Greenspace

Ref	Summary of Action	Partners	Progress 2017/18	Status
GS8	Habitat connectivity and integrated habitat networks	Lothians & Fife Green Network Partnership, Edinburgh & Lothians Greenspace Trust (ELGT), Scottish Natural Heritage	ELGT applied for Little France Woodland Creation in February 2018 and the trees were planted in March 2018. The two previous woodland applications (2016/17) were for WIAT woodland management plans for Bonaly Country Park and Craigmillar Castle Park which were successful.	
GS10	Provide integrated approach to adapting Edinburgh's open spaces to the impacts of climate change through the Open Space Strategy	The City of Edinburgh Council	Climate change adaptation has been embedded in Open Space 2021, the Council's strategy to protect, look after and expand the city's network of green spaces for the next five years.	
GS11	Develop methods for modelling/ mapping 'urban ecosystem services'. Edinburgh is one of the case study cities	Innovate-UK project (Spades), Forest Research, The City of Edinburgh Council	Urban ecosystem services mapping tool developed. For Edinburgh case study key services were analysed across the city, with the results being used to inform Open Space 2021, the Council's open space strategy.	
GS14	Monitor changes in climate change indicator species' distribution and population and take action	RSPB, The City of Edinburgh Council, Historic Environment Edinburgh, Butterfly Conservation Scotland	64 transect surveys were carried out on Council and NHS sites with more on Historic Environment Scotland reserve sites.	
GS15	Raise awareness of biodiversity implications of climate change	Edinburgh Biodiversity Partnership	Partner such as The Wildlife Information Centre and Butterfly Conservation Scotland support this work. Species recording highlights changes in the ranges of mobile species probably caused by climate change, for example an increase in Speckled Wood butterfly records as they spread north into Edinburgh.	
GS16	Scottish Plant Health Strategy	Agriculture and Rural Development Division – Scottish Government	To be progressed in 2018/19. Ways to take this forward need to be looked at, especially at a Edinburgh city level.	
GS17	Citywide INNS (invasive non-native species) project	The City of Edinburgh, Edinburgh Biodiversity Partnership (EBP), Scottish Natural Heritage, RFFTS, SEPA, Edinburgh Living Landscapes	Ongoing. The Council continues to manage INNS where they occur on its land. The EBP will continue to work with partners such as the Water of Leith Conservation Trust to manage INNS along the Water of Leith and seek to work at a catchment scale level through the RBMP area partnerships. Work with volunteers and Friends groups to carry out practical work on eradication of INNS. The Council's Natural Heritage Service had a dedicated officer reviewing INNS work on the 12 Natural Heritage Service sites. No funding yet secured for a city wide programme.	

Natural Environment and Greenspace

Ref	Summary of Action	Partners	Progress 2017/18	Status
GS18	Green Infrastructure Schools Project	The City of Edinburgh, Edinburgh Living Landscapes	From last year meadows persist at both Liberton and Nether Currie Primary Schools. Lack of resource both financial and staff means that direct support through learning resources has not been possible. Re-establishing links with schools is to be reassessed ahead of 2018/19 growing season.	
GS19	Greening of Edinburgh's cycle network	Edinburgh & Lothians Greenspace Trust, The City of Edinburgh Council, Edinburgh Living Landscapes	Ongoing. Greening projects carried out by Edinburgh and Lothians Greenspace Trust. Phase 2 of the Little France Park Cycle Route will be completed in 2018-19. It includes green infrastructure improvements.	
GS20	Adaptation of Holyrood Park	Historic Environment Scotland in partnership with schools, community outreach, RBGE	Climate change risks to Holyrood Park assessed as part of HES new Climate Change Risk Assessment. 2018 Statement of Significance produced for the Park. Activities included guided walks and activities, volunteer ranger and junior ranger programmes and wildlife surveys. Ongoing management of Park.	
GS21	Edinburgh College Outdoor Action Plan	Edinburgh College in partnership with RBGE and others	In progress. A Community Growing and Biodiversity Action Plan is being written with a completion date of end 2018. The Action Plan will take into account adaptation.	

Built Environment and Infrastructure

Land use planning plays a central role in preparing Edinburgh for a changing climate. Effective local planning is essential to minimise future vulnerability and improve resilience to the impacts of climate change.

We are continuing to work with colleagues on embedding climate change adaptation into the planning system. The updated



Edinburgh Design Guidance (March 2017) places greater emphasis on creating places that support the development of a compact, sustainable city, with greater prominence given to landscape, biodiversity and green and blue infrastructure. Integrated

habitat networks and green corridors are encouraged to enhance biodiversity and help mitigate climate change impacts.

Historic organisations are working to manage the impacts of climate change on the city's historic environment. In January 2018, Historic Environment Scotland launched a [Climate Change Risk Assessment](#) of its whole estate. This represents the first step in a comprehensive and ongoing exercise to understand, monitor and manage



environmental risk to all Historic Environment Scotland's buildings, monuments and sites. The risk assessment has informed their new [Asset Management Plan](#) and [Investment Plan](#), which were both launched in March and work is ongoing to incorporate the risk assessment into their new Properties in Care Asset Management System.

The [Edinburgh World Heritage Management Plan 2017-2021](#) was published in March 2018. It takes into consideration the impacts of climate change on the World Heritage Site and responses to alleviate them.

The University of Edinburgh, who own a number of buildings in the city, including historic buildings, are taking a whole institution approach to adaptation and are in the process of finalising their first adaptation strategy, which will be launched in the autumn. They are trialling a bespoke sustainable design standard which has adaptation embedded within it and are working with Historic Environment Scotland on adapting a lecture theatre to the impacts of climate change. Learnings from this will inform the development of the strategy.

Edinburgh Living Landscapes' 'Greening the Gray' project promotes awareness of coastal climate change, raising awareness of the risks to urban coastal areas and encourages naturalisation of sea defences. A [short film](#) was made about the project.

Overleaf is the full list of Built Environment and Infrastructure actions being delivered through the Edinburgh Adapts Action Plan.

Built Environment and Infrastructure

Ref	Summary of Action	Partners	Progress 2017/18	Status
BE1	Assess the likely impacts of climate change and their effect on the built environment and use it to inform adaptation policy.	The City of Edinburgh Council, Edinburgh World Heritage Trust, Scottish Natural Heritage, Royal Botanic Garden Edinburgh (RBGE)	Ongoing. Updated Edinburgh Design Guidance for new developments promotes green and blue infrastructure. Historic Environment Scotland and Edinburgh World Heritage have undertaken assessments of their estates in relation to climate change impacts and the University of Edinburgh is in the process of doing so. Exemplar rain garden demonstration site in creation at RBGE and a Central Scotland Green Network raingarden project is in the early stage of development.	
BE2, BE4 & BE10	Embed climate resilience and naturalised greening measures within Edinburgh's planning processes and guidance	City of Edinburgh Council, Lothian & Fife Green Networks Partnership, SEPA, Edinburgh & Lothians Greenspace Trust, Scottish Wildlife Trust, Scottish Natural Heritage, Historic Environment Scotland, Edinburgh Living Landscapes	Ongoing. Climate change measures are being embedded into planning processes and guidance. The Local Development Plan has specific measures dealing with climate change adaptation. Edinburgh Design Guidance raises awareness of climate change at the outset and in the detailed chapters through promoting green infrastructure and sustainable building design.	
BE3	Ensure new developments in areas with medium to high likelihood of flooding are avoided as per Scottish Planning Policy.	The City of Edinburgh Council	Ongoing. The permanent implementation of a certification process in relation to the flooding impact of new development, supported by an external flood consultation, was approved in March 2017.	
BE5	Strategic Infrastructure Fund and City Deal	City of Edinburgh Council, SESPlan and member councils, Scottish Natural Heritage	The Edinburgh and South East Scotland City Regional Deal was signed off in August 2018. Opportunities for embedding adaptation into Edinburgh specific City Deal projects will be looked into, including the development of business cases.	
BE6	Edinburgh Urban Design Panel sustainability awareness raising	Edinburgh Urban Design Panel	From August 2017 to September 2018 the Panel considered 16 major planning applications/items of planning guidance. Sustainability is a standard item on the agenda. Edinburgh Adapts presentation raised awareness of sustainability issues and this has resulted in sustainability being further embedded in presentations and Panel discussions.	

Built Environment and Infrastructure

Ref	Summary of Action	Partners	Progress 2017/18	Status
BE7	Promote green infrastructure in the built environment to help nature to adapt to climate change	City of Edinburgh Council, Edinburgh Sustainable Development Partnership, Edinburgh Living Landscapes, Scottish Natural Heritage	Green infrastructure in the built environment is included in the Edinburgh Design Guidance and has been promoted at internal Council training events in Planning and Transport. The Edinburgh Biodiversity Action Plan and Edinburgh Living Landscapes Initiative both promote improvements to green infrastructure in the urban setting. Specific projects relating to greenspace infrastructure such as the square meter for butterflies and pollinators green roof study, also promote greening of buildings.	
BE8	Ecosystem Approach to planning	City of Edinburgh Council, Edinburgh Sustainable Development Partnership, Edinburgh Living Landscapes	Progressing. Edinburgh Design Guidance and Local Development Plan policies support delivery of these aims. Production of policy statement on the ecosystem approach and planning in Edinburgh to be progressed.	
BE9	Showcase high quality developments	Scottish Wildlife Trust, Edinburgh Living Landscapes, The City of Edinburgh Council	Finalised text format for the Natural Capital Planning Standard (tool to build in natural features to new developments in a systematic way). Pilot project to test the standard is underway at Edinburgh University's Pollack Halls.	
BE11	Brownfield site habitats	The City of Edinburgh Council, Buglife	Ongoing. Living roof requirements are included in the Edinburgh Design Guidance. Further studies have been undertaken by the Royal Botanic Garden Edinburgh and Buglife for important sites in North Edinburgh. Policy framework to be developed under the second Local Development Plan.	
BE12	Temporary greening of vacant sites	Edinburgh & Lothians Greenspace Trust (ELGT), City of Edinburgh Council, SNH, Edinburgh Living Landscapes, RBGE	Ongoing. Projects include ELGT temporary greening project in Craigmillar. Community growing activity in over 50 urban greenspaces and vacant sites in Edinburgh.	
BE13	Depaving/permeable surfaces promotion	Heriot Watt University, Royal Botanic Garden Edinburgh (RBGE), Edinburgh Living Landscapes	A new demonstration raingarden is under construction at RBGE to help raise awareness of green and sustainable approaches to alleviating urban flood risk. A joint project between RBGE and Heriot-Watt University, funded by Adaptation Scotland as a pilot public engagement project ran between October 2017 and March 2018. The Re-Imagine Your Street project explored new ways of engaging the public with climate change, adaptation, and community resilience.	

Built Environment and Infrastructure

Ref	Summary of Action	Partners	Progress 2017/18	Status
BE14	Edinburgh raingardens audit	Scottish Green Infrastructure Forum, The City of Edinburgh Council	Partially complete. Information on green roof and green walls collated. Information on sustainable urban drainage systems (SUDs) unavailable at present, the Council is to undertake mapping of this.	
BE15	10,000 raingardens Edinburgh	Scottish Green Infrastructure Forum	In progress. A small candidate raingarden site list was produced but most were deemed unfeasible. Contacts with the Council, the Royal Botanic Garden and Edinburgh University have now been made via the Edinburgh Living Landscapes Board and some high profile sites will be identified by end 2018.	
BE16	Raingarden Officer	Scottish Green Infrastructure Forum	Funding secured for a Glasgow project office from Oct 2018 – June 2019. Part of this role will be to seek and secure funding for a roll out to Edinburgh (and wider CSGN) from June 2019 onwards. Glasgow pilot project will develop resources and techniques for a wider CSGN project.	
BE18	Coastal change and risks along Edinburgh's coast	University of Glasgow, Scottish Natural Heritage	Discussion and a funding application with the University of Glasgow is currently being progressed to downscale Scottish Coastal Change Assessment to Edinburgh city level.	
BE19	Coastal adaptation and stakeholder engagement	University of Glasgow, Scottish Natural Heritage	University of Glasgow blog of Edinburgh's coast as part of Edinburgh's City Vision 2050 engagement exercise. Edinburgh Shoreline project is raising community awareness of coastal climate change and adaptation. This includes two key activities involving Royal Botanic Gardens Edinburgh, the universities of Glasgow and Edinburgh, Concrete Scotland, Scottish Wildlife Trust and Autecology: 1) NERC funded public engagement pilot involving school children, a video and public engagement installation at Cramond Beach on 'greening the grey' to reduce coastal habitat loss associated with climate change risks (Jan - March 2017 funding activities into March 2018) and 2) The Shoreline Exhibition running from June - October 2018 at RBGE which presented coastal climate change issues. Co-developed with the team from 1, and Edinburgh Living Landscapes.	
BE20	Edinburgh's Local Transport Strategy (LTS) Review	The City of Edinburgh Council	The LTS is under review. The updated LTS is intended to be reported back to Council Committee by March 2019 for approval.	

Built Environment and Infrastructure

Ref	Summary of Action	Partners	Progress 2017/18	Status
BE21	Embed adaptation into the Road Asset Management Plan	The City of Edinburgh Council	To be progressed in 2018/19. The Council's review of sustainability will aid governance arrangements for embedding adaptation in Council processes and service delivery.	
BE22	Weather Resilience and Climate Change Adaptation Plan for Network Rail Scotland Route	Network Rail	Network Rail's Route Weather Resilience and Climate Change Adaptation Plans Scotland is supported by an evaluation of the resilience of rail infrastructure to historical weather events and an awareness of potential impacts from regional climate change projections.	
BE23	SEStran Regional Transport Strategy	South East Scotland Transport Partnership (SEStran)	Not progressed. Ways to progress this action will be looked at in 2018/19.	
BE24	The University of Edinburgh Climate Change Adaptation Strategy	The University of Edinburgh, Edinburgh Living Landscapes, Edinburgh Adapts Steering Group	The University has delayed launch of the Adaptation Strategy and a related biodiversity strategy to await outcomes from the EAUC Adaptation Task Group, which will feed into the strategy. The Task Group will report in the autumn and the launch date is also planned for then. A University bespoke sustainable design standard is now being trialled and adaptation has been embedded within it. A collaborative project with Historic Environment Scotland is underway to adapt a lecture theatre and this will inform the approach to existing buildings taken in the strategy.	
HS1	Edinburgh World Heritage Management Plan 2017-2021	City of Edinburgh Council, Edinburgh World Heritage (EWH), Historic Environment Scotland, SNH	The EWH Management Plan 2017-2021 was published in March 2018. It takes into consideration the impacts of climate change on the World Heritage Site and responses to alleviate them.	
HS2	Historic buildings - awareness raising through training in traditional repair skills for owners/occupiers and trades people.	Edinburgh World Heritage (EWH), Historic Environment Scotland (HES)	A number of DIY skills workshops were delivered in 2017/18 covering maintenance and energy efficiency. HES provided a speaker for an ESPC Property Maintenance Event aimed at tenement owners in February 2018. EWH has played host to the Traditional Building Festival in the courtyard of Acheson House in August 2018.	

Built Environment and Infrastructure

Ref	Summary of Action	Partners	Progress 2017/18	Status
HS3	Maintaining historic buildings to ensure they are adapted to current and future climate impacts	Edinburgh World Heritage (EWH), Historic Environment Scotland (HES)	EWH manages the Conservation Funding Programme. Through this property owners benefit from funding towards maintenance improvements. EWH is implementing the Basil Spence Canongate Housing Energy Efficiency & Conservation Project , a pilot project aiming at improving energy efficiency of and conserving a post-war B listed complex designed by Sir Basil Spence. The project's objective is to deliver an integrated, replicable approach to energy efficiency in hard-to-treat buildings where community engagement plays a key role.	
HS4	Historic Buildings - easy-read adaptation guidance for owners of historic residential and commercial buildings	Edinburgh World Heritage, Historic Environment Scotland	'Climate Change Adaptation for Traditional Buildings – Short Guide' was published in October 2016. The guide is aimed at homeowners, building professionals and landlords wishing to maintain and improve the buildings in their care.	
HS5	Edinburgh specific historic building maintenance guide	Edinburgh World Heritage, Historic Environment Scotland, VisitScotland	Plans have been developed to deliver a joint EWH-HES maintenance guidance in 2018-19.	
HS6	Historic Environment Scotland's Climate Change Action Plan 2012-17	Historic Environment Scotland	Historic Environment Scotland launched its first Climate Change Risk Assessment of its historic estate in January 2018. A HES Seminar on Climate Change impacts on the historic environment was held in May 2018.	

Flood Prevention

Flooding has a huge impact on all sectors of society. Climate change is likely to exacerbate river and coastal flooding and greater frequency and intensity of extreme rainfall will increase surface water flooding.

The City of Edinburgh Council works in partnership with neighbouring local authorities, the Scottish Environment Protection Agency (SEPA) and Scottish Water on flood prevention. A [Local Flood Risk Management Plan](#) for the Forth Estuary catchment was published in June 2016. This outlines strategies and identifies areas vulnerable to flooding from all sources and potential mitigation measures and actions.

Edinburgh has two flood prevention schemes in place on the Braid Burn and the Water of Leith. Both these schemes are designed for a 1 in 200 year event and include an allowance for climate change. Undeveloped areas of land fulfil an important flood function and should be allowed to flood in order to protect built-up areas from floodwater. These are shown on the Edinburgh Local Development Plan Proposals Map as areas of importance for flood management.

Phase 2 of the Water of Leith Flood Prevention Scheme is now complete and fully functional. Engagement with the community ensured the works took into account the needs of local people. The



new scheme also provides enhanced access to the riverside walkway, disability access and improvements to the environmental and amenity aspects of the area.

Scottish Water have completed an integrated catchment study for Edinburgh. The outcomes and results from this will be used to start preparing surface water management plans for the city. These will assess current and future rainfall flooding risks and suitable solutions.

Other flood prevention actions in the Action Plan are progressing well. Overleaf is the full list of Flood Prevention actions being delivered as part of the Edinburgh Adapts Action Plan.

Flood Prevention

Ref	Summary of Action	Partners	Progress 2017/18	Status
FL1	Water of Leith (Phase 2) Flood Protection Works	The City of Edinburgh Council	The Water of Leith (Phase 2) Flood Prevention Scheme is now complete and fully functional.	
FL2	Water of Leith Flood Protection Works Future Phases	The City of Edinburgh Council	No funding is currently available and no further works are planned.	
FL3	Forth Estuary Flood Risk Management Strategy	Scottish Environment Protection Agency (SEPA), The City of Edinburgh Council, local authorities, Scottish Water, Scottish Natural Heritage	Strategy published December 2015. SEPA are in the process of reviewing strategies, interim report to be published 2018/19.	
FL4	Forth Estuary Local Flood Risk Management Plan 2016-2025 (LFRMP)	Scottish Environment Protection Agency (SEPA), Scottish Water, The City of Edinburgh Council and 12 neighbouring Local Authorities, Scottish Natural Heritage	A LFRMP for the Forth Estuary Catchment has been prepared which will outline strategies and identify areas vulnerable to flooding from all sources and potential mitigation measures and actions. This plan was published in June 2016. The Plan can be found at: http://www.edinburgh.gov.uk/info/20045/flooding .	
FL5	Edinburgh and the Lothians Integrated Catchment Study (ICS) (linked with below)	Scottish Water	The integrated catchment study for the City of Edinburgh is now complete, the City of Edinburgh Council are awaiting outcomes and results to be provided in full by Scottish Water.	
FL6	Surface Water Management Plan (SWMP) (linked with the above)	The City of Edinburgh Council, Scottish Water	The outcomes and results of the above sewer integrated catchment study will be used to start preparing surface water management plans.	
FL7	Water of Leith Siltation Study	The City of Edinburgh Council, Forth Ports and consultant	Siltation study was completed in February 2017 on the Water of Leith basins area. Further investigation is being undertaken in 2018, to confirm study findings.	
FL8	Niddrie Burn Flood Prevention Study	The City of Edinburgh Council, Scottish Environment Protection Agency and consultant	This project is progressing, two rain gauges have been installed and flow meter installation is expected in the coming months, data currently being recorded.	
FL9	Gogar Burn Flood Prevention Study	The City of Edinburgh Council, Scottish Environment Protection Agency and consultant	As from last year installation of a gauging station was no longer required, there has been no further progress to date.	
FL10	Water of Leith Flood Protection Scheme – continue to maintain existing flood protection scheme	The City of Edinburgh Council	Ongoing. Records are maintained by Flood Prevention Team.	

Flood Prevention

Ref	Summary of Action	Partners	Progress 2017/18	Status
FL11	Maintain the Water of Leith (Phase 2) Flood Protection Scheme in Murrayburn and Roseburn when completed in 2018	The City of Edinburgh Council	Ongoing. Records are maintained by Flood Prevention Team. Flood Prevention are still awaiting health and safety file / as built from principle designer.	
FL12	Braid Burn Flood Protection Scheme	The City of Edinburgh Council, Scottish Water, Network Rail, SEPA, Scottish Natural Heritage, and private landowners	Records maintained by the Flood Prevention Team.	
FL13	Greendykes and Nether Craigour	The City of Edinburgh Council	Greendykes has been constructed. Flood Prevention undertaking annual inspection and maintenance. Nether Craigour is an NHS Project, still under construction.	
FL14	Coastal flood defences	The City of Edinburgh Council, Scottish Water, Network Rail, Marine Scotland, SEPA, Scottish Natural Heritage and private landowners	Records maintained by the Flood Prevention Team.	
FL15	Reservoir maintenance	The City of Edinburgh Council	Records maintained by the Flood Prevention Team.	
FL16	Assessment and Inspection, Clearance and Repair	The City of Edinburgh Council, asset/land managers	Watercourses are inspected and maintained and records maintained by the Flood Prevention Team	
FL17	Emergency Response	The City of Edinburgh Council, Emergency and Health Services, SEPA, Met Office, Scottish Water, Voluntary Organisations and other agencies	Ongoing. As and when required.	
FL18	Strategic Mapping and Modelling - sewer catchments	Scottish Water	Ongoing.	
FL19	Awareness raising	SEPA, Scottish Flood Forum, community flood action groups and local authorities	The City of Edinburgh Council will engage at a project level when required.	
FL20	Site Protection Plans	Edinburgh Airport, other organisations	Ongoing	
FL22	Reach agreement on SUDS between Scottish Water and CEC	The City of Edinburgh Council, Scottish Water	Discussions between CEC and Scottish Water are ongoing. Planning department taking the lead on section 7 agreement, no progress to date.	

Society and Economy

Climate change poses threats to our citizens and to the future prosperity of Edinburgh. Appropriate adaptation action taken now will help maintain a city that is safe for residents, attractive to business and investors, and climate proofed for tourism.

Communities across the city are vulnerable to a whole range of impacts from climate change, including flooding, damage to property and temperature fluctuations. The Action Plan aims to raise awareness of the impacts of climate change on individuals, communities and the economy, and ways to increase resilience to them through partnership, neighbourhood and locality working.



The [Re-Imagining Your Gardens and Streets](#) community engagement project focused on working with residents in the Granton area on innovative ways to transform their local streets into well adapted community spaces. The project was

developed by the Royal Botanic Garden Edinburgh and Heriot Watt University with sessions run by the Museum of the Future Now. From this project, a neighbourhood adaptation planning tool will be created to help other areas explore the possible routes to creating well adapted gardens and streets.



Edinburgh Shoreline is a new community centred initiative celebrating Edinburgh's coastline.

As part of this project the Royal Botanic Garden Edinburgh is holding an exhibition exploring how living shorelines are more resilient to climate change.

The Green Arts Initiative (GAI) is an interactive community of Scottish arts organisations working to reduce their environmental impact. They share knowledge and keep informed about climate change issues and are incorporating adaptation into their programmes of work. The [GAI conference](#) this year will focus on Culture Change, partly looking at how the impacts of climate change will have direct consequences for the artistic and operational work of cultural organisations. Edinburgh Adapts is to feature as one of the presenters at the event. In 2018 a research internship will examine climate change implications specifically for the visual arts organisations in Edinburgh, undertaking a deeper sub-sector approach to provide learnings which can be shared at a local and national level.

Planning Aid Scotland have been working with Adaptation Scotland on lesson plans for schools and these are now available on the Adaptation Scotland website. A training resource on climate adaptation for planners is currently being designed.

Overleaf is the full list of Society and Economy actions being delivered through the Edinburgh Adapts Action Plan.

Society and Economy

Ref	Summary of Action	Partners	Progress 2017/18	Status
SE1	Edinburgh Community Resilience Project (Pilot)	Corporate Resilience Unit, Category 1 Responders, other relevant agencies, Neighbourhood Partnerships, community-based groups	The community resilience groups that were established in two Community Council areas as part of this project continue to operate. A second phase of the project is currently being scoped and funding proposals developed, with the aim of extending community resilience to include and align: local communities, local businesses and Responder organisations. If project funding is successful, it is anticipated this project will begin in April 2019.	
SE2	Partnership & locality working	The City of Edinburgh Council, Edinburgh Partnership, Neighbourhood Partnerships, Locality Leadership Teams, Community Planning partners	Ongoing. A number of events have been held. A “Re-shaping Our Street” community engagement project focused on new ways to communicate climate change risks and opportunities to the local community in Granton.	
SE3	Public Sector Sustainable Food Procurement	Edinburgh Food for Life Partnership (EFFLP)	Ongoing. Through EFFLP all City of Edinburgh Council schools, four care homes and a day care centre hold at least the bronze Catering Mark Award and the University of Edinburgh was the first university in Scotland to be awarded it. Two Council-run schools and one care home hold the silver Catering Mark. Edinburgh partners now serve more than 3.5 million award winning meals each year.	
SE4	Food Hubs - development proposals	Edible Edinburgh, Glasgow Food Policy Partnership, City of Edinburgh Council, Glasgow City Council, Nourish Scotland, Edinburgh/Glasgow food groups	A number of food hubs exist in Edinburgh. Next steps will be to join these hubs together to form a network across the city.	
SE5	Measure Edinburgh’s progress as a ‘Sustainable Food City’	Edible Edinburgh, Edinburgh Centre for Carbon Innovation, Edinburgh’s universities	Indicators and monitoring will be developed as part of Edible Edinburgh’s work plan going forward.	
SE6	Local Sustainable Food Growing Strategy	Edible Edinburgh	In the early stages of development. Scoping exercise completed and consultation events being planned. Food Growing Strategy to be delivered by April 2020.	
SE7	MSc Participation in Policy & Planning Food project	University of Edinburgh MSc Participation in Policy and Planning course, Edible Edinburgh	Completed. MSc student project undertaken with final report being presented at special Scottish Parliament event.	

Society and Economy

Ref	Summary of Action	Partners	Progress 2017/18	Status
SE8	Adaptation advice, support, awareness raising and research	Edinburgh Centre for Carbon Innovation (ECCI), ClimateXChange (CXC), Sniffer	ECCI/CXC/Sniffer continue to work providing practical adaptation advice for businesses and organisations based on the best available evidence.	
SE9	The Green Arts Initiative (GAI)	Creative Carbon Scotland, Festivals Edinburgh, Green Arts Initiative members	Ongoing. The Green Arts Initiative has continued to develop and grow, with over 200 members across Scotland. Knowledge sharing activity between members keeps them informed about climate change issues. 2017 report published in March. 2017 reporting form will ask explicitly about member adaptation actions. 2017 Green Arts conference had a part focus on adaptation plans of cultural SMEs and the 2018 Conference will partly focus on how the impacts of climate change will have direct consequences for the artistic and operational work of cultural organisations.	
SE10	PAS Training Programme - Engagement & Awareness	Adaptation Scotland, Planning Aid Scotland (PAS), partners	Completed the lesson plans for schools with Adaptation Scotland, now available on the Adaptation Scotland website. A training resource on climate adaptation for planners is currently being designed. PAS is engaging with the Scottish Government in discussion on how to provide support for the development of the second Scottish Climate Change Adaptation Programme.	
SE11	PAS planning advice helpline	Planning Aid Scotland (PAS) Advice Service	Ongoing support through the advice service.	
SE12 & SE13	Community Raingardens and community mentoring	Grow Wild Scotland	Ongoing. Activity undertaken through Grow Wild seed kit resource to get people started on planning and growing wildflower areas. Upcoming community garden training day in Edinburgh in October providing hands-on skills training on developing and maintaining wild spaces for biodiversity.	
SE14	Living Wall	Lymbus	Not progressed. No funding was secured for this.	
SE15	VisitScotland Quality Assurance Scheme [Scotland wide]	VisitScotland	Quality Assurance Scheme minimum sustainability requirement increased to promote continuous improvement in sustainable practices in tourism businesses.	

Society and Economy

Ref	Summary of Action	Partners	Progress 2017/18	Status
SE17	Adaptation showcase and information hub	RSPB, Schools, community groups, Edinburgh Living Landscapes, Community Councils, Friends of Parks Groups, tenant/ housing groups.	To be progressed. Methodology and resourcing of this action needs to be developed. This will be taken forward in 2018/19.	
SE18	Royal Botanic Garden Edinburgh (RBGE) awareness raising	Royal Botanic Garden Edinburgh	Progressing. Range of public engagement and practical events held in 2017-18 including: the Edinburgh Shoreline Exhibition exploring how living shorelines are more resilient to climate change; a lunchtime session with Council employees on green infrastructure best practice and how this could feature in Edinburgh's coastal development; a session on sea defences with Craigroyston High School and sessions with four secondary school classes delivered by the Scottish Wildlife Trust on how sea defences protect cities and what changes need to be made to account for sea level rise; and, 'Sceptics in the pub' evening event open to the general public involving specialists from University of Glasgow presenting their work on climate change and how it impacts cities/coastal areas in a way accessible to local people and wider audiences.	
SE19	'Are we ready' toolkit and workshops	Scottish Communities Climate Action Network (SCCAN), Adaptation Scotland	'Are we Ready?' toolkit available on SCCAN's website. Resource designed to facilitate and start conversations about resilience and adaptation amongst community groups.	
SE20	Community Adaptation Network	Edinburgh Adapts Steering Group, Adaptation Scotland, Community Adaptation Network	Ongoing. Adaptation Scotland held a number of Community Adaptation events in 2017/18.	
SE21	2050 Climate Group	2050 Climate Group	Second Young Leaders Development Programme (YLDP) began in April 2017 with 150 Young Leaders selected from over 300 applications, showing the rising interest among the 2050 Climate Group's target demographic of 18-35 year olds in this programme. Young Leaders attended six climate change and leadership modules, which addressed how change can be created within personal, professional and political spheres of influence. Modules included keynote speakers, workshops and development of action plans. Young Leaders undertook over 200 actions to address climate change. See their 2017/18 Actions Impact Report .	