

SSN has compiled these example answers using content from the 2015 submitted reports. A range of public bodies' reports have been used and content has been anonymised as far as possible.

PART 4: ADAPTATION

4(a) Has the body assessed current and future climate-related risks?

We recommend that you break this question into two parts (i) Assessing current climate related risk and (ii) Assessing future climate related risk

(i) Assessing current climate risk

Example 1: We have started a comprehensive assessment of current climate-related risks for the region, (such as severe weather events and snow and ice) which are assessed in Public Body X's Community Risk Register. (link here).

Example 2: Public Body X has completed a Local Climate Impacts Profile (LCLIP). This can be accessed at (link here). The key findings were.....

Example 3: Current risks for the region, including climate related, area assessed by XX Regional Resilience Partnership. Our Community Risk Register summarises the highest risks e.g. p7 Severe Weather, p9 Flooding and p15 Transport Disruption (link).

(ii) Assessing future climate risk

Example 1: We have produced strategic flood risk assessments for our area which consider the potential impact of climate change on sea levels (link). The assessment considered information produced by UKCIP – UKCP09. We have also used information from UKCP09 when designing flood defences as part of our recent coastal flood defence project.

Example 2: The Climate Change Adaptation Framework 2014-2020 was approved by the Council in October 2014 and endorsed by the Sustainable Development Partnership in November 2014. The Framework takes a risk-based approach to assessing the areas vulnerability to weather-related risks and predicted climate change impacts; identifies city services and sectors that may be affected, and presents high level actions to address the most significant risks identified.

Example 3: Future risk was assessed and incorporated into our Shoreline Management Plan. It provides information on the assets at potential risk from erosion or flooding and helps to identify the likely future investment needed to safeguard human lives, and a wide range of assets, from the threat posed by the sea.

Answer split into
'current risk' and 'future
risk'

4(b) What arrangements does the body have in place to manage climate-related risks?

Example 1

Following approval of the Climate Change Adaptation Framework 2014-2020 in 2014, a citywide adaptation action plan is being developed in partnership with the Sustainable Development Partnership, Adaptation Scotland and key stakeholders under the Adapts Project. A number of stakeholder workshops and engagement activities have been held to collate actions and develop the Action Plan and a Vision for a Climate-Ready city.

The organisation's Resilience service drives and manages the Resilience Management Programme and is the focus for resilience activities. The Resilience service is responsible for ensuring Public Body X complies with its statutory emergency planning and business continuity obligations, which is carried out in conjunction with designated Resilience coordinators from each service area and key function together with stakeholders and partner organisations.

Our plans contain measures to ensure climate change adaptation and flood prevention is incorporated into planning policy. The Second Proposed Local Development Plan, which is due to be formally adopted later in 2016, has specific measures dealing with climate change adaptation. It 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. This includes managing surface water drainage, treatment and flood risk through sustainable urban drainage, providing amenity and biodiversity benefits.

The organisation is a signatory to the Central Scotland Green Network and is working in partnership with neighbouring authorities and other stakeholders to support a range of projects. The Local Biodiversity Action Plan 2010-15 includes a section and various actions on climate change mitigation and adaptation. The organisation is in the process of developing a new Biodiversity Action Plan for 2016-18 which will include a number of organisation related risks and actions.

The Parks and Greenspace Strategy aims to conserve natural habitats and wildlife.

Climate change adaptation considerations are embedded into strategies for green and blue networks as well as into wider land use planning decisions through forest and woodland strategies.

Example 2

Our Sustainable Development Framework (link) – one of our four objectives states that: 'The Council will work to reduce the causes and effects of climate change in line with national targets'.

Our Corporate Risk Register- Climate Change is incorporated as a strategic risk with delivery of the Climate Adaptation Strategy Action Plan a treatment action. The Risk and Resilience team have produced a Severe Weather Management Framework (link) as part of the Major Emergency Management Procedures.

Example 3

1. Sustainable Development Action Plan 2015-16 contains actions and timescales specifically on climate change mitigation and adaptation
2. Climate-related risks (such as x, y and z) are recorded on the organisational risk reporting tool
3. There are Site Business Continuity plans which detail procedures that should be undertaken in the event of disruption to business at site level
4. The Corporate Disaster Recovery Plan details procedures that should be undertaken in the event of disruption at a corporate level
5. We have a Major Incident Plan which details procedures that should be undertaken in the event of a major incident

4(c) What action has the body taken to adapt to climate change?**Example 1***(i) Building Adaptive Capacity*

Preparation of this report has included consulting with many staff, raising awareness of the duties, the need to adapt and the responsibilities for delivery of the SCCAP. Public Body X is the Lead Local Authority for the Local Plan District. Preparation of the draft plan included consultation events and drop-in sessions from March to June 2015 and raised awareness of the need to adapt. Following publication of SEPA's Flood Risk Management Strategy for each local plan district in December 2015, Public Body X will publish the Local Plan District Local Flood Risk Management Plan in June 2016.

Since joining Adaptation Scotland's 'Adaptation Learning Exchange' in May 2014, two staff members have been able to increase their knowledge and understanding of climate change adaptation through attending ALE workshops. A member of staff has been allocated time to take part in the IMPRESSIONS project, which aims to increase the understanding of the implications of high-end climate change, and to help decision-makers apply their knowledge within integrated adaptation and mitigation strategies.

Public Body X carries out an annual Energy Awareness survey of staff to which we have added questions on projected climate changes for the region, indicating awareness of the risks and opportunities. In Education wider world responsibilities are taught as part of the curriculum.

Public Body X was a lead organisation in the preparation of the Biosphere vision "Climate Ready Biosphere". In 2014-15, supported by the expertise of Adaptation Scotland, the visioning process consisted of a series of three workshops to take a range of participants on a journey from recognising and understanding what climate change is, through to options for adaptation to counter threats and make the most of the opportunities. The Climate Ready Vision and an action plan were published on line in 2015-16. Roads Service has a Winter Service Operations Plan (revised annually) with a user friendly version online and a full version distributed to all partner agencies.

(ii) Deliver Adaptation Action

Public Body X has a Flood Pod for the region, plus a Flood Trailer based in the West, which can be deployed by Scottish Fire and Rescue Service, managed by the Flood risk management team. The Pod and Trailer contain flood protection equipment which can be issued (e.g. floodgates on a loan basis) to the public at time of flood emergency. Public Body X promotes and manages a property level flood product subsidy scheme for homes and businesses and a Community Winter Resilience Scheme. It also promotes Household Emergency Life-saving Plans, enables Community Resilience Plans and promotes the Ready Scotland web-site.

The LBAP is a partnership plan; many of the actions being applied through the plan will result in climate change mitigation and adaptation, e.g. woodland expansion, peatland restoration, coastal realignment. The organisation's Natural Environment Team are consulted on natural heritage actions, and take cognizance of climate change issues. We are applying the revised design standards addressed in the Design Manual for Roads and Bridges.

Example 2*(i) Building Adaptive Capacity*

Public Body X and its Community Planning Partners form an Alliance which in its Single Outcome Agreement 7 considers the effects of a changing climate. Public Body X is included in SEPA's Flood Risk Management Strategy for the area. The organisation is a member of the West of Scotland Regional Resilience Partnership. Public Body X alongside another body form the Joint Civil Contingency Service.

The organisation communicates, through a variety of media, advice to staff, residents and local businesses on how to prepare and respond to disruptive weather, in particular during winter.

(ii) Deliver adaptation actions

The main climate change adaptation actions carried out by the organisation are with respect to flooding since a number of areas are deemed to be at significant risk from flooding. These are as follows:

- Automated trash screen at place 1.
- Formalisation of attenuation/storage at place 2.
- Bypass pipe installed at place 3.
- Flow control device installed at place 4.
- Culvert implemented at place 5.

The organisation has also invested in a range of equipment and measures with which to prepare and respond to disruptive weather. This includes stockpiling of sand bags, salt in salt barns and grit in containers across the area. Sand bags can be delivered to residents and businesses in flood hot spots and are available for their and the organisation's use. It further includes the purchase of winter equipment such as snow ploughs, leaf removal equipment and so on.

Answer split into building
adaptive capacity and
delivering adaptation actions

4(d) Where applicable, what progress has the body made in delivering the policies and proposals referenced N1, N2, N3, B1, B2, B3, S1, S2 and S3 in the Scottish Climate Change Adaptation Programme(a) ("the Programme")?					
Objective	Objective reference	Theme	Policy / Proposal reference	Delivery progress made	Comments
Understand the effects of climate change and their impacts on the natural environment.	N1	Natural Environment	N1-1	Public Body X promotes understanding of climate change impacts on the natural environment through its role in the LBAP. Published various plans and strategies for the region - see 4b above. Managed Environment Fair event for public, particularly families, March 2015. Process to develop the Biosphere Vision and Action Plan.	Policy description:- Raising awareness of the implications of climate change for nature. NB Full details of the SCCAP ("the Programme") are available at: http://www.gov.scot/Resource/0045/00451392.pdf
			N1-8	The Local Flood Risk Management Plan has been developed to detail the actions adopted to reduce the devastating and costly impact of flooding in the Local Plan District. The actions are based on agreed objectives for tackling floods in high-risk areas.	Our role for this policy is as a Local Authority. Policy description:- Understand the risks associated with coastal, river and surface water flooding through development and implementation of local flood risk management plans
Support a healthy and diverse natural environment with capacity to adapt.	N2	Natural Environment	N2-2	Our LDP has been informed by and taken account of <ul style="list-style-type: none"> • National Planning Framework 2 • Scottish Planning Policy (SPP) • Designing Places • Designing Streets • various Circulars We have our own open space strategy which recognises the value of green space and networks. The spatial elements of the Strategy feed into the Local Development Plan e.g. Objective 2: avoid fragmentation of existing open space networks	Our role is as LA and as Land Manager. Policy description:- The Scottish Planning Policy includes green networks, green space, street trees and other vegetation, green roofs, wetlands and other water features, and coastal habitats in helping Scotland to mitigate and adapt to climate change
Understand the effects of climate change and their impacts on buildings and infrastructure networks.	B1	Buildings and infrastructure networks	B1-7	Raised awareness of responsibilities.	Our role is as a member of the Society of Chief Officers of Transportation Scotland (SCOTS). Policy description:- A report on risks from fog projections
			B1-13	We are working with SEPA and others to develop the Local Flood Risk Management Plan.	Our role is as a LA. Policy description:- Flood Risk Management Plans - The Flood Risk Management (Scotland) Act 2009 requires the development of Flood Risk Management Strategies (FRMS) and Local Flood Risk Management Plans (LFRMP).
Provide the knowledge, skills and tools to manage climate change impacts on buildings and infrastructure.	B2	Buildings and infrastructure networks	B2-7	Progress was made in raising awareness of the LA's role in Regional Marine Planning Partnerships and that National and Regional Marine Plans will be taken into account in decisions relating to infrastructures which incorporate marine and terrestrial elements.	Our role is as a lead member of a future Regional Marine Planning Partnership. Policy description:- National and Regional Marine planning frameworks will include clear policies for climate change mitigation and adaptation in relation to marine development and activity will be taken into account in decisions relating to infrastructures which incorporate marine and terrestrial elements

Good detail provided - the organisation's role is clear, useful policy descriptions.

			B2-12	Knowledge:- in-house engineering services carry out bridge inspections.	Our role is as a member of the Society of Chief Officers of Transportation Scotland (SCOTS). Policy description:- Road Scotland Act (1984); Asset Management Plans and Network Rail Asset Management Policy Enhanced monitoring of bridges and other structures within inspection regimes for those structures known to be at risk. Will help manage risks to road and rail bridges.
			B2-13	Winter Service Operations Plan and the Local Resilience partnership arrangements.	Our role is as a member of the Society of Chief Officers of Transportation Scotland (SCOTS). Policy description:- Road Scotland Act (1984); Implement Resilience Plans - Maintain the current level of winter preparedness across road networks.
Increase the awareness of the impacts of climate change to enable people to adapt to future extreme weather events.	S2	Society	S2-2	Process to develop the Biosphere Vision and Action Plan with Adaptation Scotland. Public web-site: Reporting facilities for flood incidents, public consultation events on the LFRMP etc. Resilience Team promotes community resilience plans. Flood Risk Management Team promotes property level protection through the Flood Protection Products Subsidy Scheme.	Policy description:- Scottish Government to continue to raise awareness and provide information to society on how best to adapt to a changing climate.

4(e) What arrangements does the body have in place to review current and future climate risks?

Example 1

Current and future climate risks will be assessed through the climate change adaptation action plan for the city, which is in development. In terms of the organisation's internal resilience arrangements, risk assessments are monitored and reviewed on a quarterly basis through the Resilience Group. In terms of the organisation's contribution to the Resilience Partnership, risk assessment is a continual process. Current assessments will be reviewed on an annual basis, as new information emerges or following any significant incident or exercise.

The Proposed Strategic Development Plan (SDP 2) is expected to replace the current Strategic Development Plan in 2018, five years after the first adopted SDP. A review of current and future climate risks will be addressed in future LDP policies which will be written in the context of SDP 2. It is expected that an updated LDP will also be on a five year cycle.

A study is to be undertaken to ascertain the impact of siltation. A study is to be undertaken to ascertain the effects of potential flooding. Building on previous flood risk studies, the Flood Prevention Team will complete a Surface Water Management Plan in due course to assess current and future flooding risks for the city.

The Biodiversity Action Plan for 2016-18 incorporates climate change actions and will review current and future risks to biodiversity and greenspace. Engagement with key stakeholders and focus groups has been ongoing to develop the plan.

Example 2

- Through our role in UKWIR we are actively engaged in the latest climate thinking as it pertains to the sector, and apply this to our work. A current focus is the development of tools to integrate climate projections into time series rainfall for drainage planning.
- The CCRA was reviewed in 2015/16. The findings have led to more detailed impact assessments being undertaken in the coming year.
- Our 25 year Water Resource Plan is updated in line with the regulatory investment planning process, and the current climate focus is to build on previous vulnerability assessments and integrate climate models as appropriate.
- Within SR15 we are undertaking extensive, detailed, Integrated Catchment Studies in 15 urban areas, as agreed with SEPA and Scottish Government, to understand our assets and the current/future operating challenges to secure service.

Varying levels of detail are acceptable depending on what stage the organisation is at. For example, the organisation in example 3 is still developing their adaptation strategy.

**Example 3**

We are committed to producing an adaptation strategy by the end of 2017 and as part of this it will be necessary to consider inclusion of review periods and a review process for reviewing climate risks.

4(f) What arrangements does the body have in place to monitor and evaluate the impact of the adaptation actions?**Example 1**

Each of the items described in 4d are managed as Projects, Programmes or are part of Programmes, with full and SMART descriptions of outputs and with indicators of success embedded into each one; all of which is monitored and evaluated within the project or programme.

They represent more than 30 projects, from small staff-based projects to develop case studies evaluated as part of our Climate Change communications plan, to our leadership and contribution to the Scottish Biodiversity Strategy Route Map which includes work across the organisation and partners and for which we publish an annual progress report for Scottish Government, to the multi-million pound Peatland Action project which we deliver on behalf of Scottish Government.

Internal and external management are both focused on the delivery of the outputs. These will then inform next-stage plans. The condition of features of protected sites is monitored as part of a planned programme, which indicates whether measures to improve condition, e.g. in response to climate change risks, are effective. We contribute advice, data and information to the suite of indicators that are being developed by ClimateXChange to assess how well Scotland, particularly the natural environment, is doing against the objectives of the Scottish Climate Change Adaptation Programme.

Example 2

Where investment has been made in physical works, the organisation will monitor the performance of the measures in response to weather conditions to ensure that it remains effective. In the event that frailties or failures are identified, it will then be reviewed and the need for further work identified.

Performance indicators are also being developed linked with the Flood Risk Management Plan and new SEPA data to measure whether the number of properties at risk of flooding, in the context of climate change, is reducing.

Greater incidents of tree pests and diseases including Ash Dieback (Chalara) are already affecting the area and this is being informally monitored.

Example 3

Monitoring and evaluation of the impacts of adaptation actions listed in question 4d will be assessed through the development of a climate change action plan for the city.

4(g) What are the body's top 5 priorities for the year ahead in relation to climate change adaptation?Example 1

- 1: To further embed adaptation, future proofing and resilience throughout each service and our communities.
- 2: To continue to assess climate threats for adaptation opportunities.
- 3: To ensure that adaptation is included in the 2016-2020 Climate Change Action Plan.
- 4: To continue to work with ClimateXChange and Adaptation Scotland on a project looking into the economics of climate risk.
- 5: To work with the Equalities team to combine the current Equalities Impact Assessment with work done on a Combined Impact Appraisal which examines the impacts of proposals on climate change and health inequalities.

Example 2

1. To carry out a formal climate change adaptation risk assessment as part of the CCAP implementation.
2. To develop a biodiversity strategy related to the management of the campus wide SUDS.
3. To carry out a detailed assessment of risks associated with the proposed development of Edinburgh Innovation Park
4. To work with partners on integrating localised activities into the wider regional plans / risk assessments.
5. To educate and communicate staff and students on the issues arising from adaptation risk assessment as part of a programme of behaviour change.

Example 3

Priorities for 16/17 reflect our commitments to the Adaptation Programme and include:

- Support implementation of the results of the National Coastal Change Assessment
- Support the Scottish Peatland group to deliver the National Peatland Plan including management of the Peatland Restoration Fund
- Complete the roll out of the vulnerability assessment of features on protected sites on land, including Sites of Special Scientific Interest and Natura sites, and begin the assessment of features of Marine Protected Areas
- Lead the Ecological Coherence LIFE + project for integrated habitat networks to improve ecological coherence across the Central Scotland Green Network, and the Pearls in Peril LIFE+ project to increase the resilience of rivers to support freshwater pearl mussels.
- Lead the 2015 – 2020 European Regional Development Fund (ERDF) programme of Green Infrastructure projects across Scotland to improve green space in our towns and cities, many of which will support climate change adaptation.

Looking ahead, following the publication of the Climate Change Risk Assessment Report 2017, we will review priorities for action and work with government and other public bodies ahead of the preparation of the next Climate Change Adaptation Programme.

4(h) Supporting information and best practiceExample 1

Public Body X's climate change action plan summarises the effects of climate change on nature in Scotland, advises on how to help nature adapt to climate change, and sets out X's priorities for 2016-2018. Adaptation case studies can be found on our website, which show examples of how we can help nature adapt.

Reports of the work to assess risks to features of protected sites from climate change can be found at <http://www.....>

The indicators being developed to assess progress in relation to the risks to the natural environment can be found here: <http://www.....>

Example 2

The approach to adaptation is largely framed by sector-specific guidance and tools developed through an industry research body. This collaborative research partnership has developed guidance on climate change risks and responses, as well as providing bespoke 'best practice' tools for water resource planning and drainage management. In particular UKWIR was a key part of the 'future flows' project led by Defra to understand the implication of future rainfall on rivers, surface waters and groundwaters. This has informed the development of tools to take climate change into account.

Example 3

As part of the work of the Resilience Team and multi agency partners, a unique project was developed to identify vulnerable people during emergencies. Using GIS mapping, NHS and social work information, the Persons at Risk Database(PARD) now provides details and plots where vulnerable people live and so that in an emergency, responders can prioritise and deploy resources to help those who need support the most. This has saved time during recent emergencies and allowed the team to identify affected individuals and put specific arrangements in place to provide support to them. Officers are working with national agencies to support the development in other areas of Scotland. This project has won a number of awards, most recently a CoSLA Delivering Excellence award and Scottish Government are looking to take this project forward on a national basis.

Involved in Scotland's National Coastal Change Assessment.

Represented on Sustainable Scotland Network Steering Group, Scottish Biodiversity Strategy implementation groups, SCOTS Flood Group, SCOTS RAMP Group and Adaptation Scotland's 'Adaptation Learning Exchange'.

Cross organisation working e.g. as part of the wide-ranging partnership which has prepared the Biosphere vision ""Climate Ready Biosphere"".

Preparation and publication of the Local Plan district LFRMP includes joint working with SEPA, Scottish Water, other organisations and other responsible bodies. This partnership will continue to meet periodically to monitor progress towards implementing the actions in the LFRMP.

In 2005 X commissioned the Scottish Road Network Climate Change Study. In 2008 a further report of the progress on recommendations contained within the initial report was published. This includes revisions in the Design Manual for Roads and Bridges (DMRB) which should enable current climate change predictions to be mitigated. (DMRB informs services).

Scottish Government have established a National Centre for Resilience in the area.

We are planning a 'Water Matters Cross Service Group' in response to the need for collaborative working for the development of SUDS (Sustainable Drainage Systems) - internal for now, but it may be possible to include partners in future.

