



Adaptation Part 2: Section 4 of the Public Bodies Climate Change Reports

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Overview

- The Adaptation Scotland programme
- Brief summary of part one
 - Policy and legislative drivers
 - What is adaptation?
 - The adaptation process
- The Public Bodies Climate Change Reporting
- Making progress with adaptation: Strathclyde University



About us



Providing guidance and support to help organisations, businesses and communities in Scotland prepare for, and build resilience to, the impacts of climate change.

- Developing tools and guidance;
- Raising awareness about adaptation;
- Enabling and supporting partnership working; and
- Delivering training events.



Adaptation Scotland is a programme funded by the Scottish Government and delivered by Sniffer



<http://www.adaptationscotland.org.uk>

The policy and legislative context

- ❖ The Climate Change (Scotland) Act 2009 requires a Scottish Climate Change Adaptation Programme (SCCAP)
- ❖ The SCCAP addresses the risks in the UK's Climate Change Risk Assessment (CCRA)
- ❖ The Act also requires Public Bodies to report on their adaptation work through the Public Bodies Climate Change Reporting.
- ❖ From 2016, it became mandatory to report on adaptation progress. Deadline: 30 November 2016.



What is adaptation?

"The adjustment in economic, social or natural systems in response to actual or expected climatic change, to limit harmful consequences and exploit beneficial opportunities."

(SCCAP, 2014)

- Adapting to the present climate or weather
- Adapting to future climate change

...not to be confused with mitigation

Mitigation - Reducing greenhouse gas emissions in order to slow or stop global climate change.

Adaptation - Adjusting to the impacts of climate change to reduce the negative impacts and exploit any opportunities.



The adaptation process

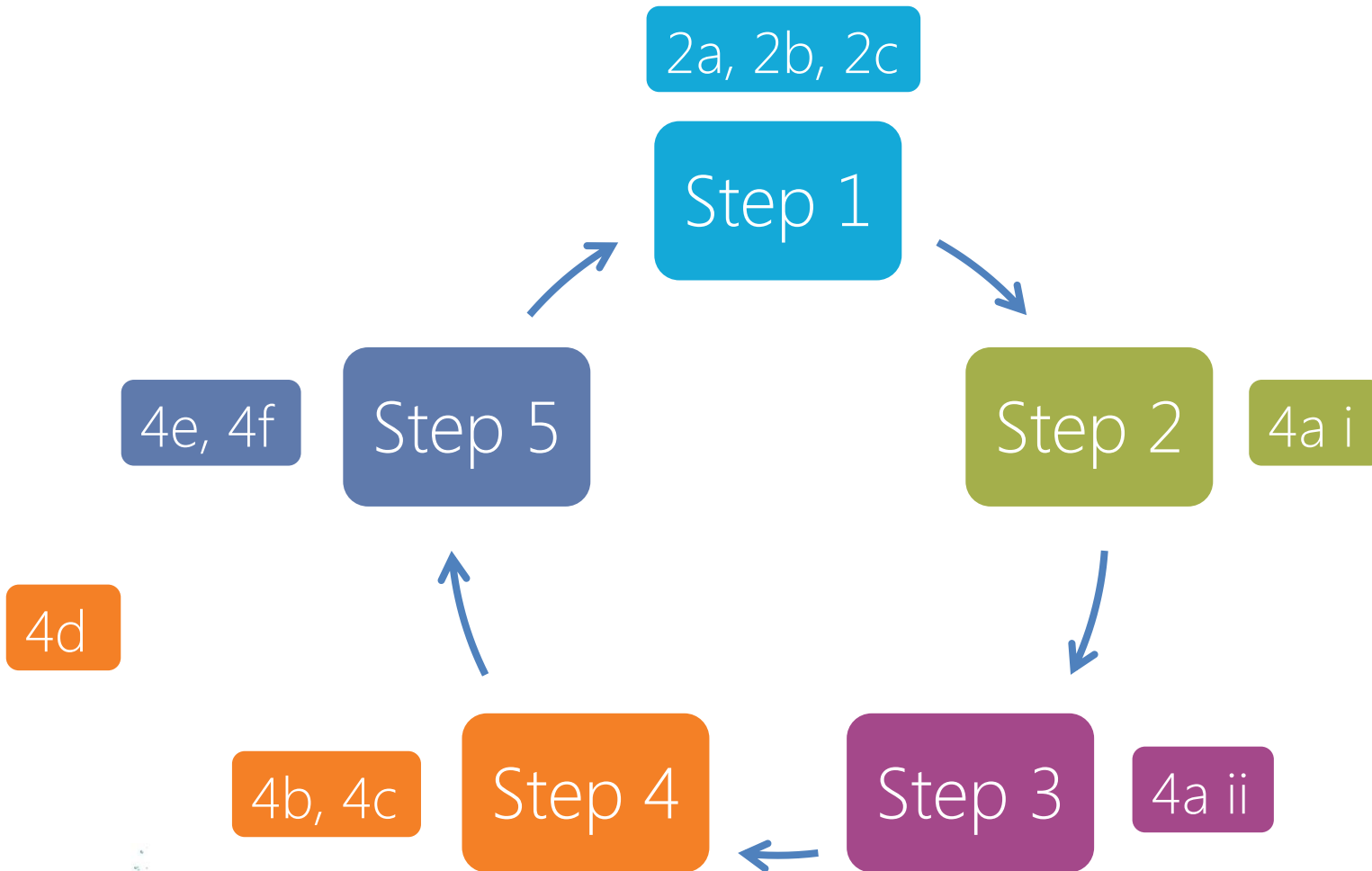
Five steps to managing your climate risks

A Guide for Public Bodies in Scotland



Supporting compliance with the Climate Change (Scotland) Act 2009
Public Bodies Climate Change Duties

How do the 5 steps align with the Public Bodies Duties Climate Change Reports?



SSN Guidance

- This guidance note has been prepared by the SSN team at KSB to help you to fill in your report.
- It is divided into 7 parts
- Part 4 covers Adaptation
- It explains how you can complete each question.
- There is also guidance on the online reporting form.

www.keepsotlandbeautiful.org/media/1556388/pbccd-master-guidance-2016.pdf



Guidance Notes for completing your Public Bodies Climate Change Duties Report, 2015-16

This guidance note has been prepared by the SSN team at KSB to support you to fill in your report. Please read this carefully before contacting the team with any questions. There is also further support and information available on the [SSN website](#) and via the [Knowledge Hub](#).

1

Public Bodies Reports

Section 2: Governance, Management and Strategy

2a How is climate change governed in the body?



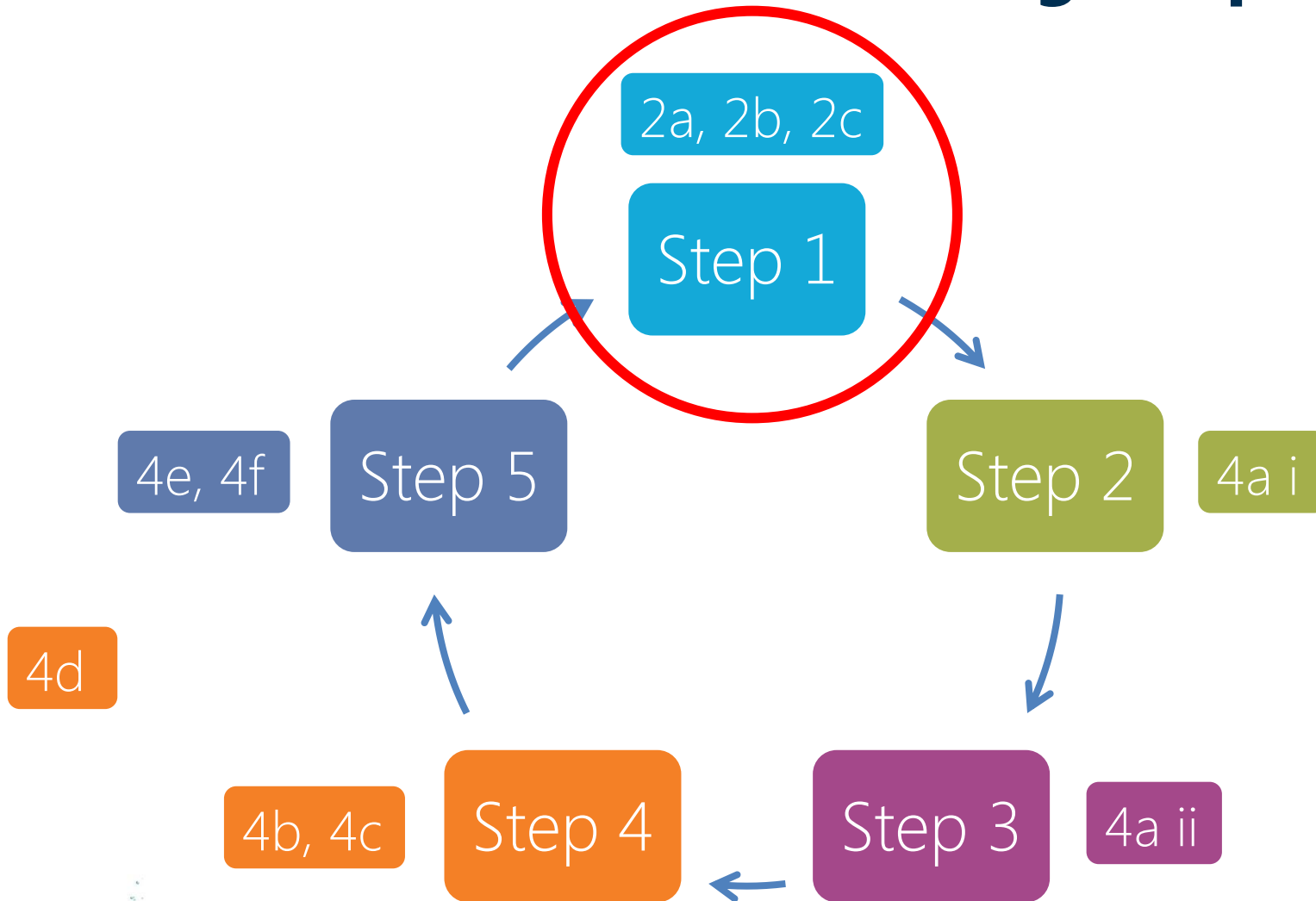
Public Bodies Reports

Section 2: Governance, Management and Strategy

- 2a How is climate change governed in the body?
- 2b How is climate change action managed and embedded in the body?
- 2c Does the body have specific climate change mitigation and adaptation objectives in its corporate plan or similar document?



How do the 5 steps align with the Public Bodies Duties Climate Change Reports?



1 Define the challenge

- Identify aims and objectives
- Establish governance of your adaptation arrangements
- Find contacts working on adaptation
- Embed adaptation-related risk on your Risk Register

Public Bodies Reports

Section 4: Adaptation

4a. Has the organisation assessed current climate-related risks?





Service or department	<i>Estates</i>	
Manager	<i>John Smith</i>	
Critical function, service or asset	<i>1: Maintain physical infrastructure</i>	
Key performance indicator or specific objective	<i>To continue the improvement and provision of student residential accommodation</i>	
Is this function, service or asset currently affected by the following? If so, explain how.		
Heavy rainfall and flooding	<i>Although the existing student accommodation is on high ground, access to the site does flood.</i>	
Drought	<i>No</i>	
Very hot days and heat waves	<i>No</i>	
High winds	<i>There have been a few minor damages caused by the wind speed of the recent storms.</i>	
Snow and ice	<i>One of the student halls has concrete steps that need to be gritted often in the winter months.</i>	
Sea level rise and coastal flooding	<i>No</i>	
With changes in the climate in the future, could this function, service or asset be affected by the following? If so, explain how.		
Increasingly mild, wet winters	<i>Yes. Increase in damp in older student <u>accomm.</u></i>	
Increasingly warm, dry summers	<i>No</i>	
Increased heavy rainfall	<i>Yes. Potential for more surface water flooding and issues with drainage.</i>	
Less frost and snow	<i>Less grit required for student halls.</i>	

A Weather Impacts Table

Past weather impacts								Affected services and communities	
Weather variable	Description of impact	Location	Date	Consequences (costs, service disruption, injury, reputation)	Critical thresholds	Actions / plans / policies put in place to reduce this impact	Evidence of the effectiveness of these actions / plans / policies	Responsible department/ agency	Services/ communities that were affected
Frost/ice	Sub-zero ground temperatures lead to a series of road incidents	Dundee	Dec 2012	Council worker injured leading to reputational consequences; wall needing repaired – unforeseen costs	N/A	Safe winter driving plan introduced	Number of winter weather driving incidents has decreased	Transport and roads; Police	N/A

Qu. 4a i) Has the body assessed current climate-related risks?

Example answer

"X has carried out an LCLIP twice to assess its current climate vulnerability, once in 2009 and again in 2014.

The link to the second assessment is below:

www.gov.uk/local-climate-impacts-profile-lclip-2nd-edition"



4a i) Has the body assessed current climate-related risks?

Example answer

"In line with our University strategy, work has begun on evaluating the impact of climate change on the organisation. Planning work has started for a University-wide Local Climate Impacts Profile (LCLIP) and to run climate threat and opportunity process workshops with key colleagues."

Public Bodies Reports

Assessing future climate change risk

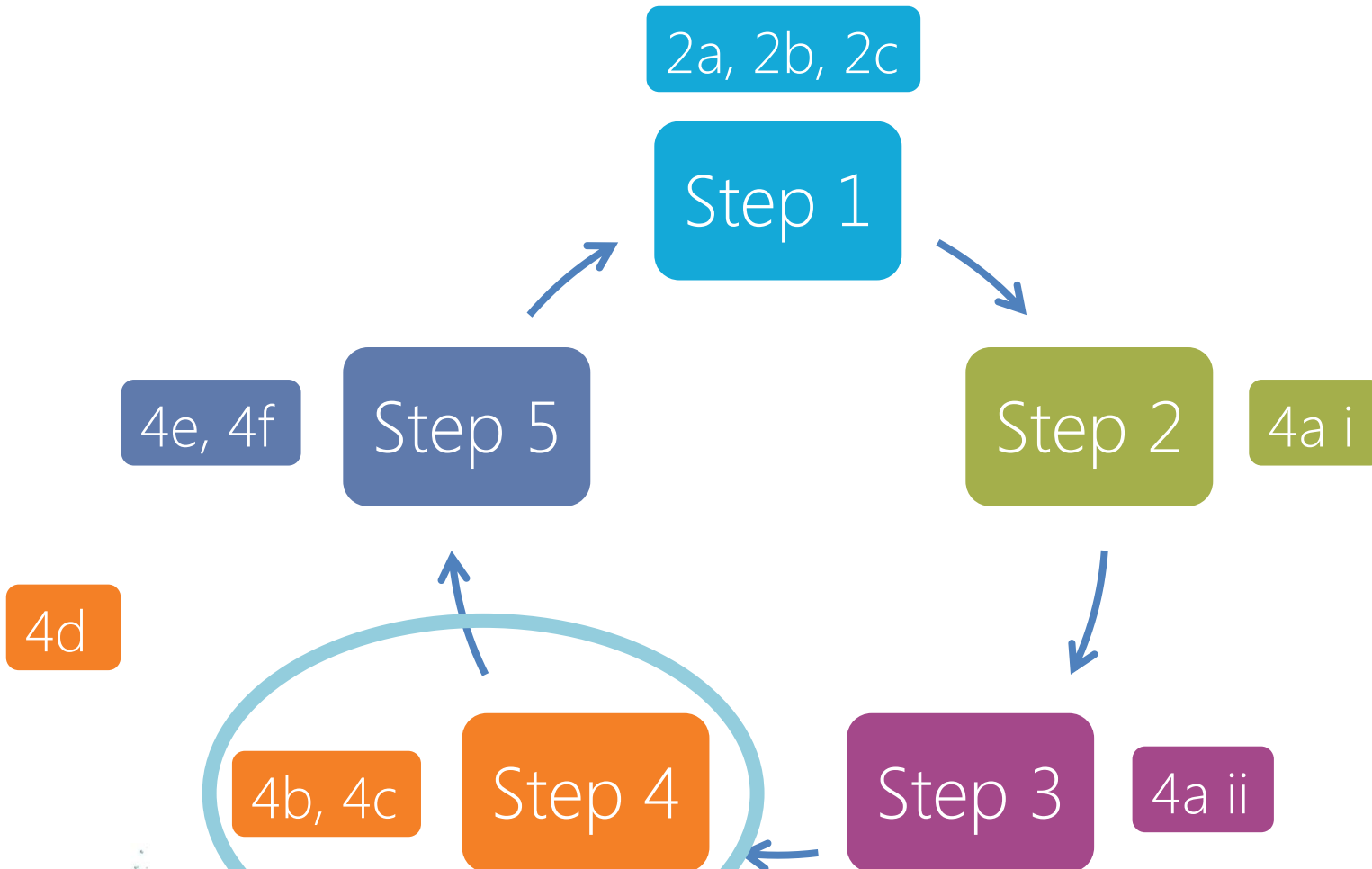
Weather or climate impacts			2013			2013			2020s			2020s				
Climate hazard	Threat or opportunity	Consequences	Inherent risk			Critical thresholds	Controls	Residual risk			Inherent risk			Residual risk		
			Likelihood	Consequence	Risk rating			Likelihood	Consequence	Risk rating	Likelihood	Consequence	Risk rating	Likelihood	Consequence	Risk rating
Heavy rainfall	Flooding blocks key roads and prohibits access to hospital	Emergencies diverted to another hospital; medical supplies delayed; loss of life; reputational impact	2	4	8	Major road closures must be limited to 2 hours	Road management contingency planning; emergency planning	2	3	6	3	4	12	3	3	9
High temperature	Buildings overheat causing discomfort and reduced productivity	Health and safety impacts; Reputational impacts	1	3	3	Internal temperature must not exceed 28°C	Risk not currently considered	1	3	3	2	3	6	2	3	6
High temperature	Buildings overheat causing problems in server rooms	Disrupted services; Loss of critical data	1	3	3	Server room temperature must not exceed 27°C and relative humidity level must not exceed 60%	Risk not currently considered	1	3	3	2	3	6	2	3	6
High winds	Trees blown on to key road and rail links causing danger to staff and delays to the delivery of essential	Financial losses; Reputational damage; Injury / loss of life	3	4	12	Staff should refrain from driving when winds exceeding 70mph are forecast	Driver training; Speed limits enforced; High-risk trees identified	2	4	8	3	4	12	3	3	9

Same controls as 2013

4a ii) Has the body assessed future climate-related risks?

"X considers future climate-related risks in a number of its development and planning processes, primarily through the use of the UKCP09 climate change scenarios to predict changes to various risks to new developments and current infrastructure."

How do the 5 steps align with the Public Bodies Duties Climate Change Reports?



Public Bodies Reports

Section 4: Adaptation

- 4b. What arrangements does the organisation have in place to manage climate-related risks?



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

"Xs' Emergency and Business Continuity Plans are wide enough in scope to apply to risks associated with:

- Disruption to energy, transport, water and ICT; rising sea levels for coastal communities; Impacts on health and wellbeing...

*Departmental **Risk Registers** include 'climate-related' risks but are not referenced as such*

All Council strategies, plans and programmes are assessed for their environmental impact including climate change adaptation risk and opportunities."

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

“

1. *SDAP 2014-15 contains actions and timescales specifically on climate change adaptation and mitigation.*
2. *Risks are recorded on DATIX, the organisations **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. *Corporate **Disaster Recovery Plan** which details procedures that should be undertaken in the event of disruption to business at corporate level.*
5. ***Major Incident Plan** which details procedures that should be undertaken in the event of a major incident. ”*

Public Bodies Reports

Section 4: Adaptation

- 4c. What action has the organisation taken to adapt to climate change?



4c. What action has the organisation taken to adapt to climate change?

“Building adaptive capacity:

- In 2014-15 we were selected as a participant in Adaptation Scotland’s, Adaptation Learning Exchange. Information on this work and process has been disseminated to staff through Directorate magazines, website information and to stakeholders through a quarterly environmental news publication.*
- In February 2015, a Managing Risk and Building Resilience Workshop was held for key service representatives to build understanding of adaptation.*
- In 2015, face-to-face meetings took place with key service representatives to complete Climate Impact Assessments.*
- In 2015, work commenced in the development of a range of staff sustainability training measures which includes climate adaptation.*
- We produced a briefing paper on climate adaptation for senior managers.”*

4c. What action has the organisation taken to adapt to climate change?

“Delivering adaptation action:

- Completion of a natural flood management project, increasing the capacity of the area at times of heavy rainfall.*
- Dev. of a climate change park - a project with Greenspace Scotland.*
- Improvements to a Green Space Network... The network aims to protect and enhance designated sites; to improve connectivity between habitats and open spaces; and to promote opportunities for access to the outdoors. It also takes into account climate adaptation opportunities and flood risk or alleviation.*
- Core path remediation to address flooding erosion has included adaptation measures to help future proof these paths within the network.*
- A Surface Water Management Plan is being developed and to manage the urban drainage which is at particular risk from surface water...”*

4 Report and implement

- Implement, and collate and report your adaptation arrangements internally and externally.



Public Bodies Reports

Objective N1 - Understand the effects resulting from climate change and their impacts on the natural environment

No.	Policy and description	How will this help deliver the Objective?	Who will deliver?
N1-2	Increase understanding of the implications of climate change for nature through data gathering, analysis and research.	Continuing research and data gathering is needed to detect, quantify and understand the impacts of climate change on nature to inform adaptation policy and management.	Scottish Government, ClimateXChange, BICCO-Net, Universities , Scottish Natural Heritage, Forestry Commission Scotland, Scottish Environment Protection Agency.

Public Bodies Reports

Section 4: Adaptation

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



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

“Current and future climate risks will be reviewed when the Climate Change Strategy is reviewed and updated during 2016.”

“We are committed to producing an adaptation strategy by the end of 2015 and as part of this it will be necessary to consider inclusion of review periods for assessing climate risks: the strategy will be an ideal place to present all this information in one place and provide a sense as to appropriate review periods.”

Public Bodies Reports

Section 4: Adaptation

- 4e. What arrangements does the body have in place to review current and future climate risks?
- 4f. What arrangements does the body have in place to monitor and evaluate the impact of the adaptation actions?



4f. What arrangements does the body have in place to monitor and evaluate the impact of the adaptation actions?

“Monitoring and evaluation of the impacts of adaptation actions will be assessed through the development of a climate change adaptation action plan for the city. This work is planned for 2016.”

5 Monitor and review

- Establish a process for monitoring and reviewing your adaptation arrangements.



Public Bodies Reports

Section 4: Adaptation

- 4g. What are the body's top 5 climate change adaptation priorities for the year ahead?



4g. What are the body's top 5 climate change adaptation priorities for the year ahead?

- 1. To embed adaptation in plans and strategies across departments and services.*
- 2. To run an adaptation awareness raising workshop.*
- 3. To include adaptation in staff training.*
- 4. To work with my Local Authority on adaptation work.*
- 5. To work through the Climate Change Assessment Tool to gain a baseline score for my adaptation work.*



Are there any questions?

Adaptation
Scotland
supporting **climate change** resilience

Adaptation Scotland is a programme funded by the Scottish Government and delivered by Sniffer



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Glasgow

CLIMATE CHANGE ADAPTATION

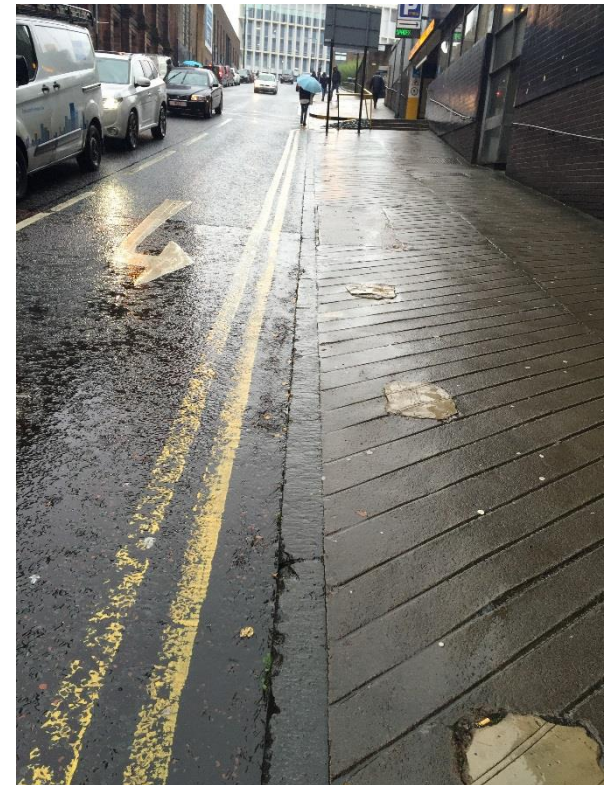
UPDATE ON PROGRESS

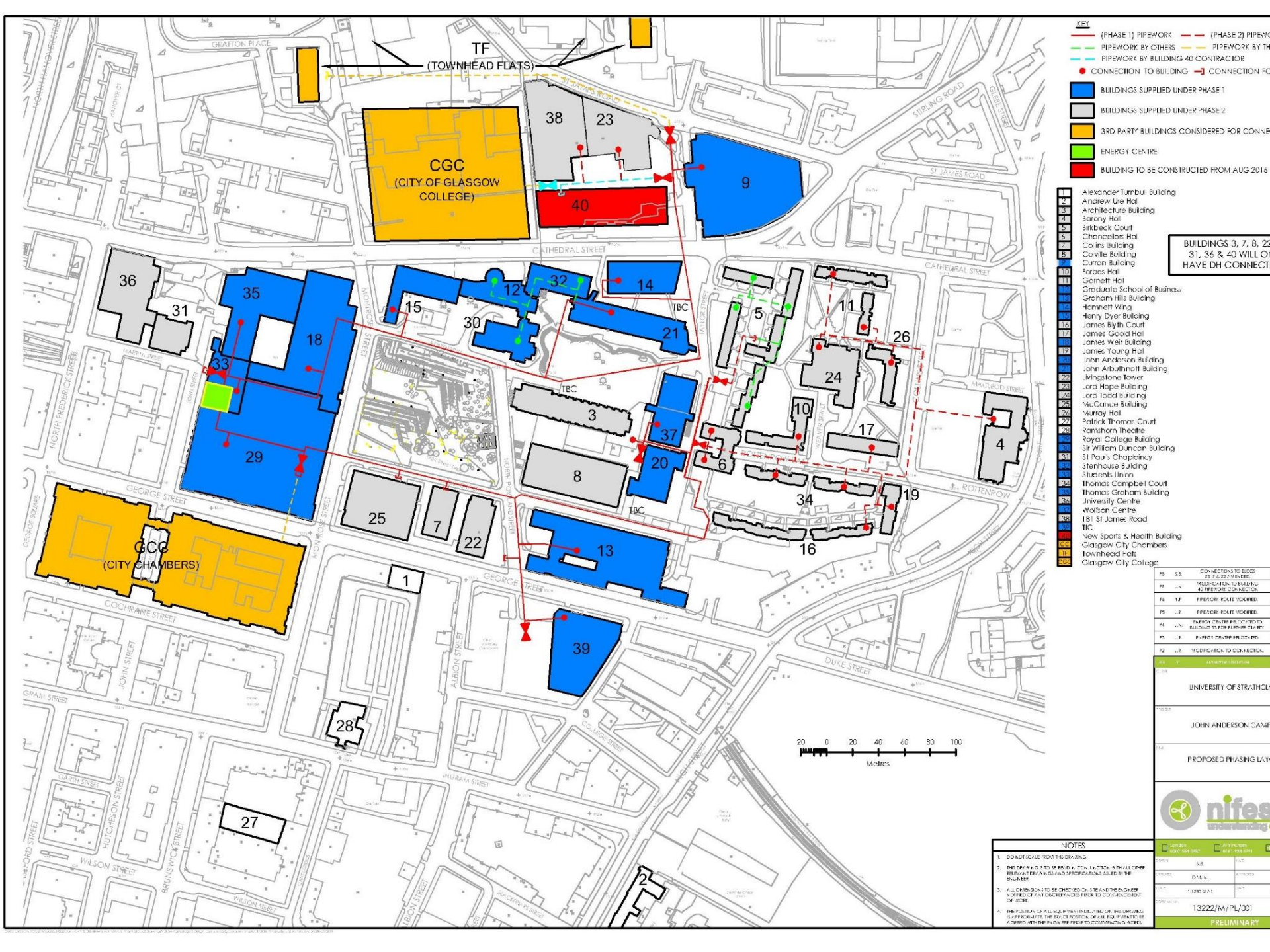
Roddy Yarr, Assistant Director
(Sustainability and Environmental
Management)



Background

- Several sites across the west of Scotland
 - Glasgow City Centre (36 acres)
 - PNDC at Cumbernauld, North Lanarkshire (3 acres)
 - AFRC at Inchinnan, Renfrewshire (9 acres)
 - Ross Priory, Stirlingshire, Loch Lomond and Trossachs National Park (190 acres)



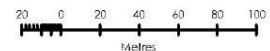


- KEY**
- (PHASE 1) PIPEWORK
 - (PHASE 2) PIPEWORK
 - PIPEWORK BY OTHERS
 - PIPEWORK BY BUILDING 40 CONTRACTOR
 - CONNECTION TO BUILDING
 - CONNECTION FROM BUILDING
 - BUILDINGS SUPPLIED UNDER PHASE 1
 - BUILDINGS SUPPLIED UNDER PHASE 2
 - 3RD PARTY BUILDINGS CONSIDERED FOR CONNECTION
 - ENERGY CENTRE
 - BUILDING TO BE CONSTRUCTED FROM AUG 2018

- 1 Alexander Turnbull Building
- 2 Andrew Urie Hall
- 3 Architecture Building
- 4 Barony Hall
- 5 Birkbeck Court
- 6 Chancelors Hall
- 7 Collins Building
- 8 Coville Building
- 9 Curzon Building
- 10 Forbes Hall
- 11 Garnett Hall
- 12 Graduate School of Business
- 13 Graham Hill Building
- 14 Harriett Wing
- 15 Henry Dyer Building
- 16 James Byth Court
- 17 James Good Hall
- 18 James Weir Building
- 19 James Young Hall
- 20 John Anderson Building
- 21 John Arbutnot Building
- 22 Livingstone tower
- 23 Lara Hope Building
- 24 Lara Todd Building
- 25 McCance Building
- 26 Murray Hall
- 27 Patrick Thomas Court
- 28 Ramshorn Theatre
- 29 Royal College Building
- 30 Sir William Duncan Building
- 31 St Pauls Chaplaincy
- 32 Stephenson Building
- 33 Students Union
- 34 Thomas Campbell Court
- 35 Thomas Graham Building
- 36 University Centre
- 37 Wolfson Centre
- 38 151 St James Road
- 39 TIC
- 40 New Sports & Health Building
- 41 Glasgow City Chambers
- 42 Townhead Flats
- 43 Glasgow City College

BUILDINGS 3, 7, 8, 22, 31, 36 & 40 WILL NOT HAVE DH CONNECTION

PS	S.B.	CONNECTION TO BUILDING 25 7 & 22 (M/ENCL)
PS	..	MODIFICATION TO BUILDING 40 PIPEWORK CONNECTION
PS	T.F.	PIPEWORK IS/IS NOT IDENTIFIED
PS	..	PIPEWORK IS/IS NOT IDENTIFIED
PS	..	ENERGY CENTRE IS/IS NOT IDENTIFIED TO BUILDING 33 FOR FURTHER CLARITY
PS	..	ENERGY CENTRE IS/IS NOT IDENTIFIED
PS	..	MODIFICATION TO CONNECTION



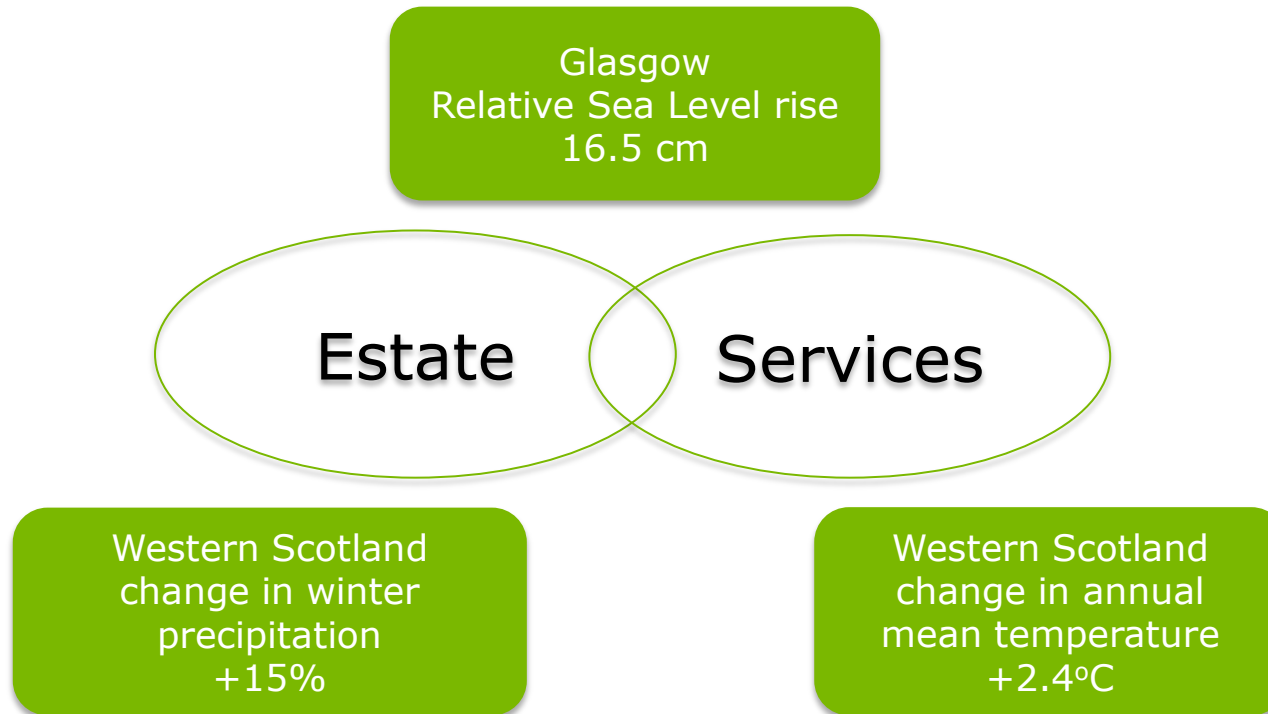
- NOTES**
- DO NOT SCALE FROM THE DRAWING
 - THESE PHASING TO BE USED IN CONJUNCTION WITH ALL OTHER RELEVANT DRAWINGS AND SPECIFICATIONS ISSUED BY THE ENGINEER
 - ALL DIMENSIONS TO BE CHECKED ON SITE AND THE ALLOWED TOLERANCES OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT OF WORK
 - THE POSITION OF ALL EQUIPMENT/INSTRUMENTS ON THE DRAWING IS APPROXIMATE. THE EXACT POSITION OF ALL EQUIPMENT/INSTRUMENTS TO BE AGREED WITH THE ENGINEER PRIOR TO COMMENCEMENT OF WORK

nifes
UNIVERSITY OF STRATHCLYDE

UNIVERSITY OF STRATHCLYDE
JOHN ANDERSON CAMPUS
PROPOSED PHASING LAYOUT

13222/K/PL/001
PRELIMINARY

Impact of climate change on estate and services

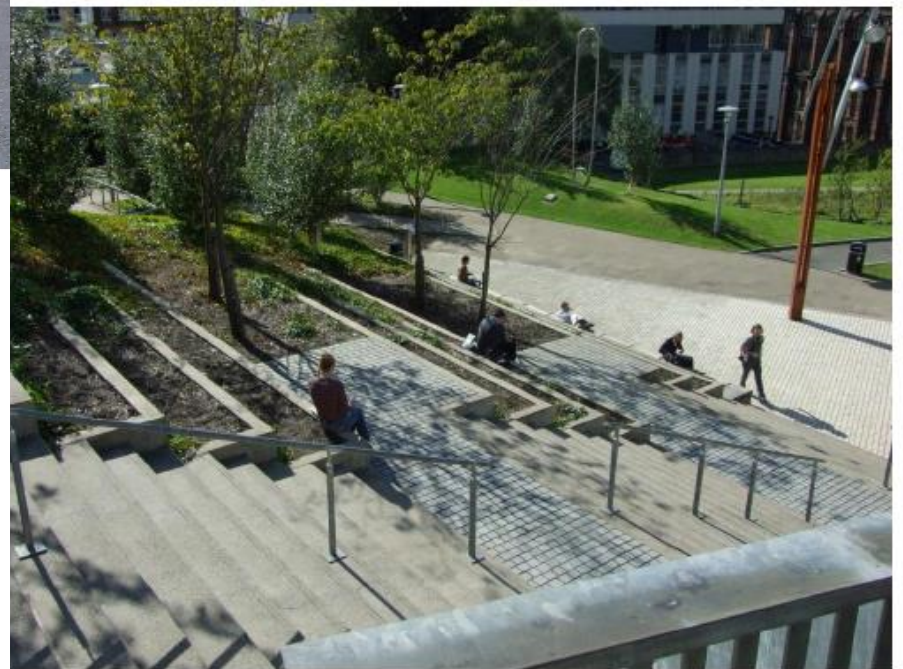


Climate Change Adaptation

- Issues and Drivers

- Severe weather events already have an impact on the University in terms of travel disruption and fabric damage.
- Climate change will result in significant impacts on the built, natural, and social environments
- Adapting to climate change includes planning to reduce the risks while identifying and capturing opportunities.





Local planning policy framework

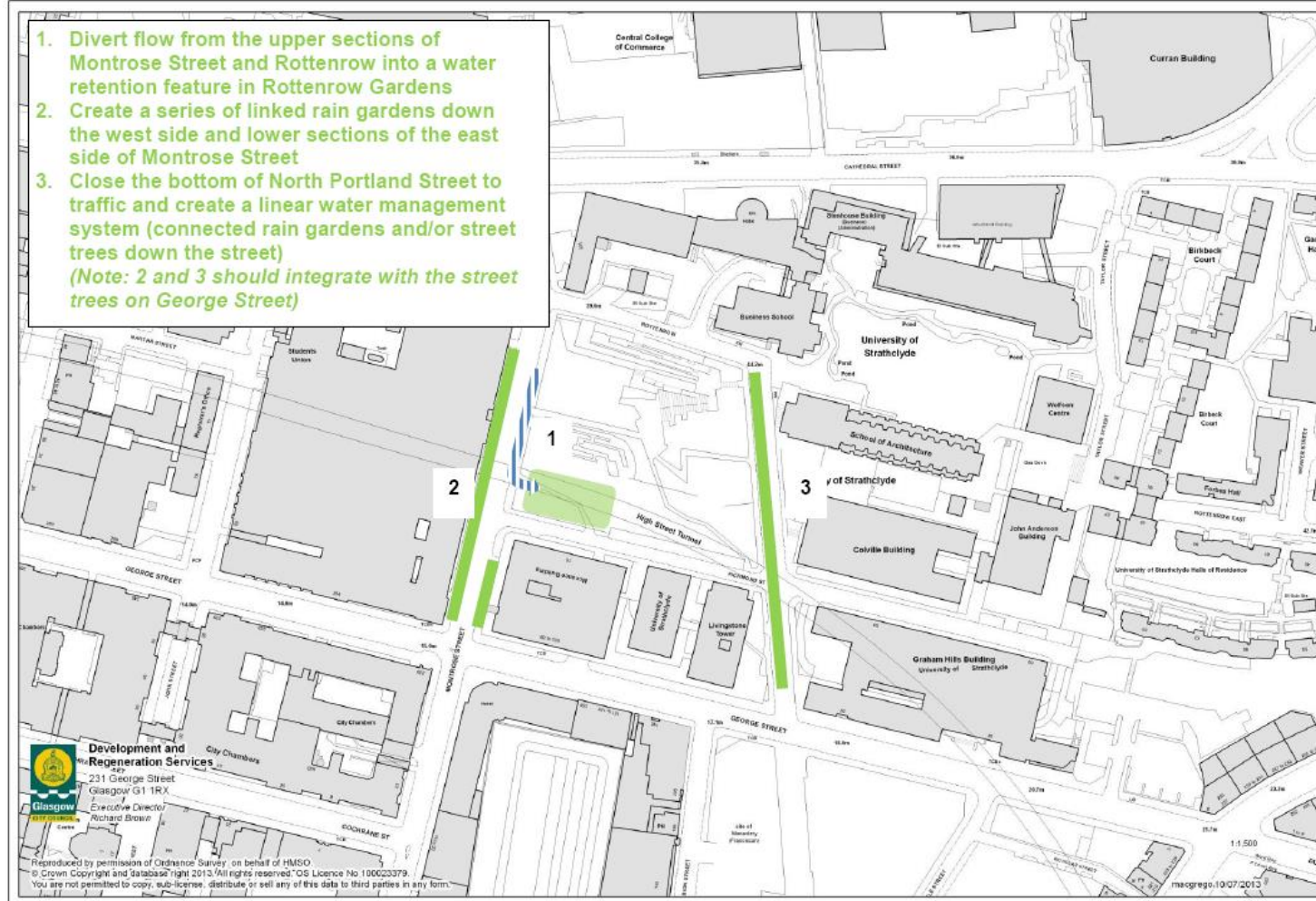
- Glasgow aims to be one of the most sustainable cities in Europe over the next twenty years
- Sustainable Glasgow is the partnership for achieving that – delivering on environmental, social and economic aspects
- Climate adaptation planning and climate ready placemaking is one of the biggest challenges facing Glasgow

What we are doing

- Understanding what Climate Change and Climate Change Adaptation means for the University
 - Identifying future climate vulnerability and risks
- Identifying Adaptation priorities
 - Developing a Climate Adaptation Plan and business case
 - Build this into development masterplan
 - Integrating climate change issues into infrastructure works e.g landscaping to incorporate 'rain gardens'
- Complete Climate Change Assessment Tool and responded to CC Reporting Duties

Long term actions – Montrose Street / Rottenrow / North Portland Street

1. Divert flow from the upper sections of Montrose Street and Rottenrow into a water retention feature in Rottenrow Gardens
2. Create a series of linked rain gardens down the west side and lower sections of the east side of Montrose Street
3. Close the bottom of North Portland Street to traffic and create a linear water management system (connected rain gardens and/or street trees down the street)
(Note: 2 and 3 should integrate with the street trees on George Street)

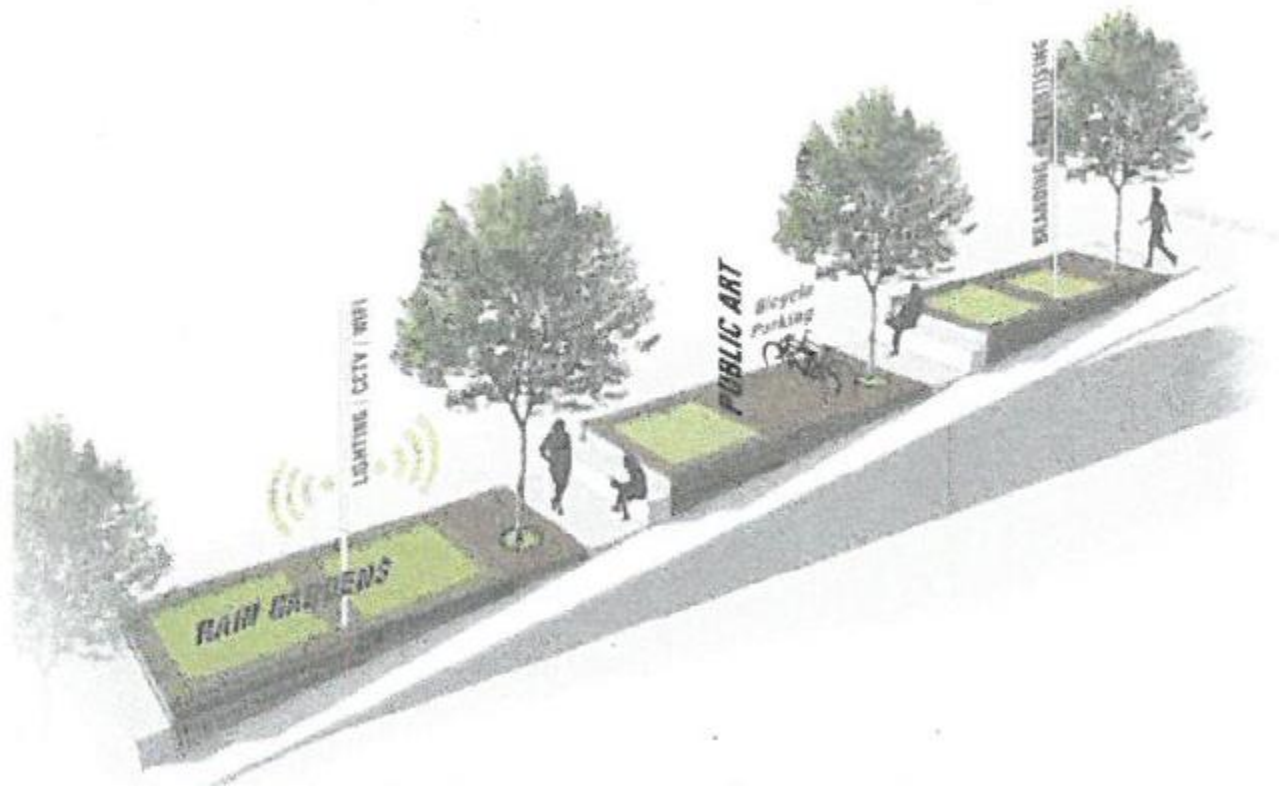


Development and Regeneration Services
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Executive Director
Richard Brown

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imgregio/10/07/2013

Rain Garden North Portland Street



Next Steps

- Identify Adaptation priorities in more detail
- Liaise with Glasgow City Council (and other Councils, Parks Authority as appropriate for other sites); Scottish Funding Council; Sustainable Scotland Network; SEPA etc
- Continue to raise awareness

Thank you.
Are there any questions?



Adaptation Scotland

supporting **climate change** resilience

www.adaptationscotland.org.uk

- please contact us -

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 @AdaptationScot