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BOROUGH COUNCIL

Climate Adaptation for Stevenage Borough Council

Agenda

- Session Objectives
- Climate Projections Overview
- Progress Update on Climate Adaptation – Globally, Nationally & Locally
- Climate Change Risk Assessment Results
- Draft 5-year Climate Adaptation Plan

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Session Objectives

- Understand the potential impacts of climate change on Council services and assets.
- Acknowledge the integration of climate risks within the Council’s corporate risk management framework.
- Support the continued development of the Council's Climate Adaptation Plan (2026–2031).
- Provide feedback on proposed adaptation priorities and the risk assessment approach.

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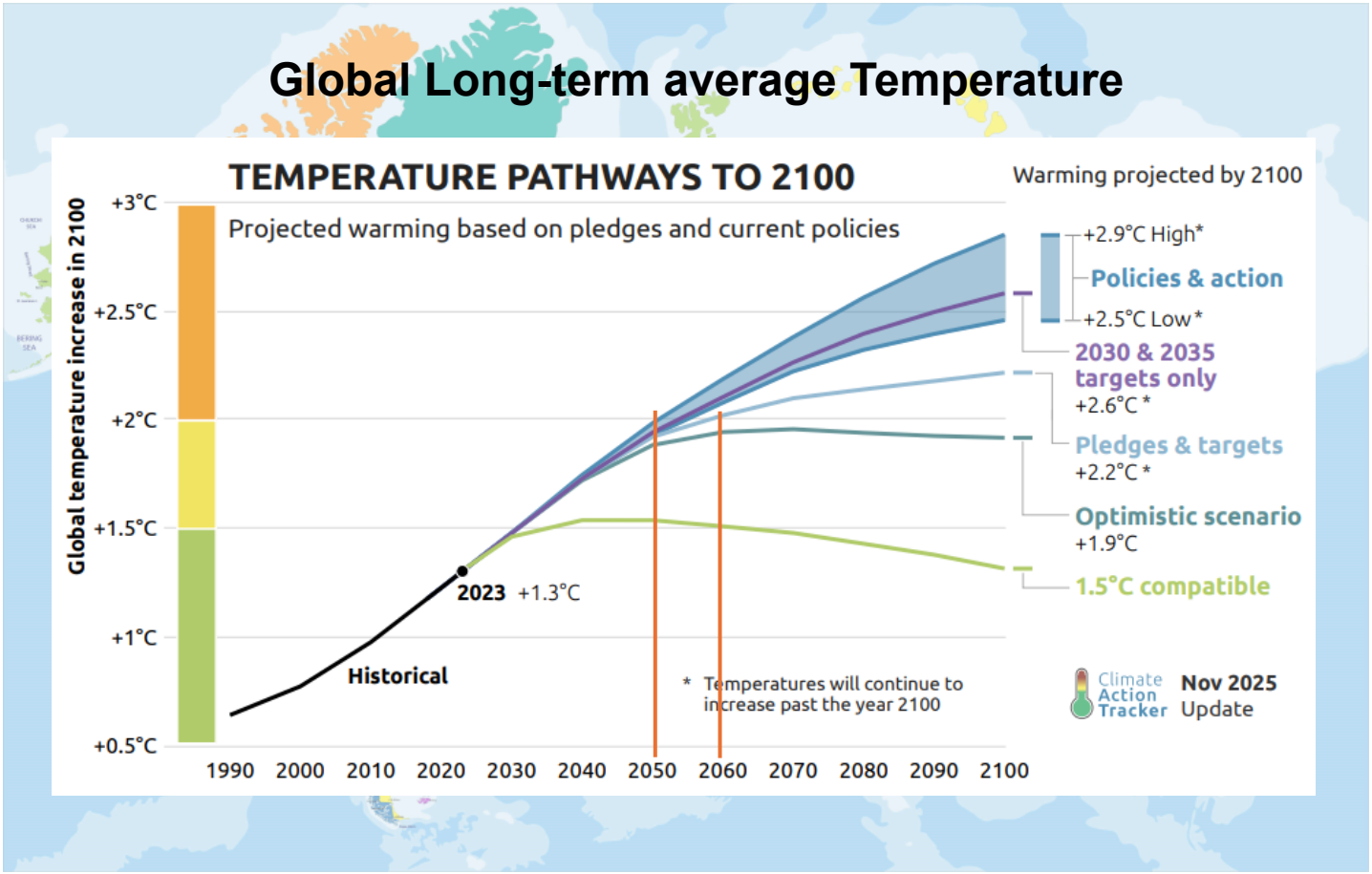
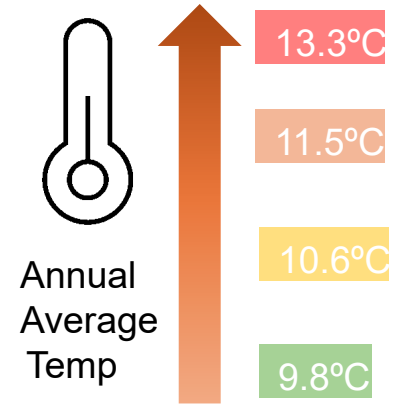
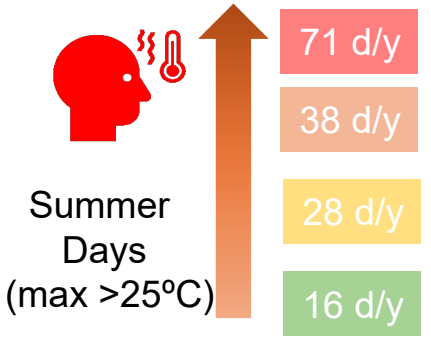
Changing Climate

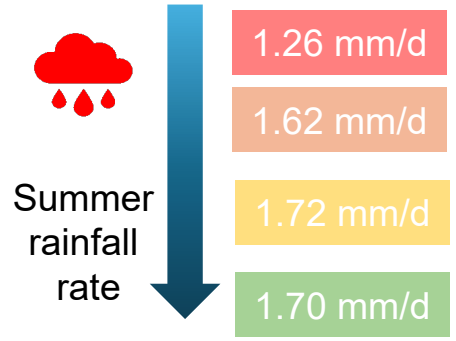
For Stevenage, it will be:

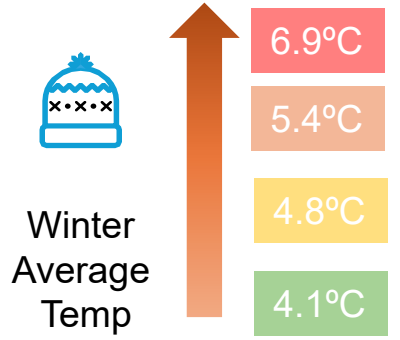
- hotter & drier summer
- milder & wetter winter

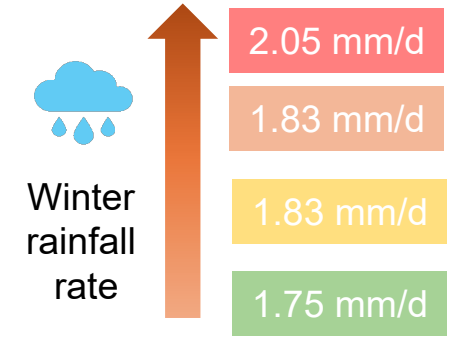












KEY | 1981-2000 | 2001-2020 | +2ºC | +4 ºC

Impacts from recent extreme weather events in Stevenage

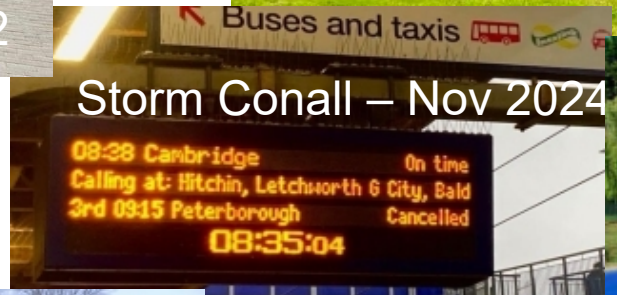
Heavy rainfall - Jul 2015


Summer 2022

Thunderstorm- May 2023


Storm Henry - 2016


Storm Eunice – Feb 2022



Storm Conall – Nov 2024


Summer 2024


October 2024

se impacts will **intensify & be more frequent** with the changing climate

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Climate Adaptation

"Adjustments in ecological, social or economic systems in response to actual or expected climatic stimuli and their effects.

It refers to changes in processes, practices and structures to moderate potential damages or to benefit from opportunities associated with climate change."

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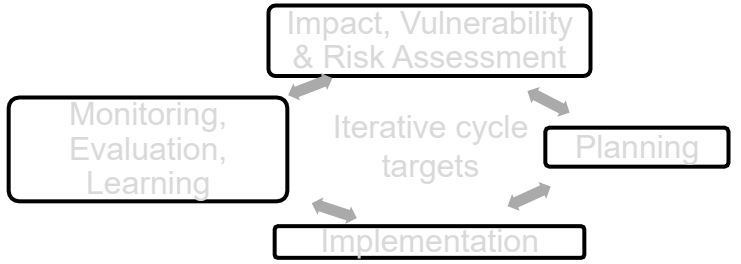
Globally - Work done so far

National Adaptation Plan
Formally established NAP process to help countries embed adaptation in core development decision making. It enable countries to identify & address their **medium- long term priorities** for adapting to climate change.
Led by national governments.

UAE-Framework for Global Climate Resilience
Toolkit for monitoring, evaluations, and learning for National Adaptation Plan, consists of 11 targets

7 thematic targets



2010 COP16, Cancun

2015 COP21, Paris

Global Goal on Adaptation
Structured framework with key principles & goals to guide global adaption effort, ensuing that actions are timely, scalable and context-specific. It aims to enhance adaptive capacity, strengthen resilience, and reduce vulnerability to climate change, with a view to contributing to sustainable development and ensuring an adequate adaptation

2023 COP28, Dubai

2025 COP30, Brazil

Belem Adaptation Indicators
Agreed on a new set of 60 adaptation progress indicators to **measure adaptation process**. Grouped into key themes:

- reducing climate risks: early warning systems, disaster preparedness
- strengthening resilience: health systems, water and food security
- protecting ecosystems: forests, wetlands and coastal areas
- supporting vulnerable people: gender, disability, Indigenous groups
- tracking finance and resources: how adaptation money flows to communities.

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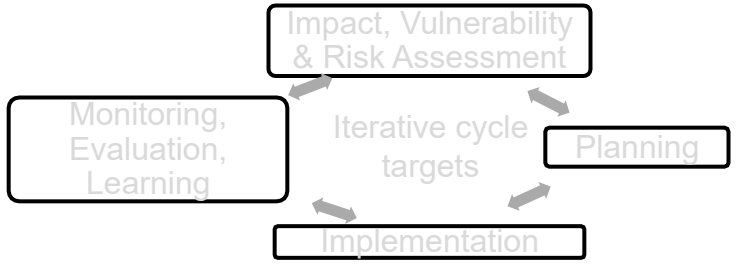
Water Food Heritage Health

Livelihoods Ecosystem nfrastructure



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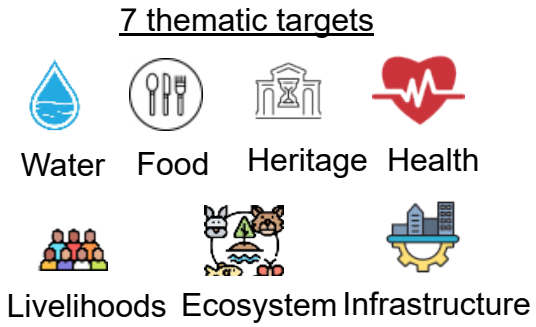

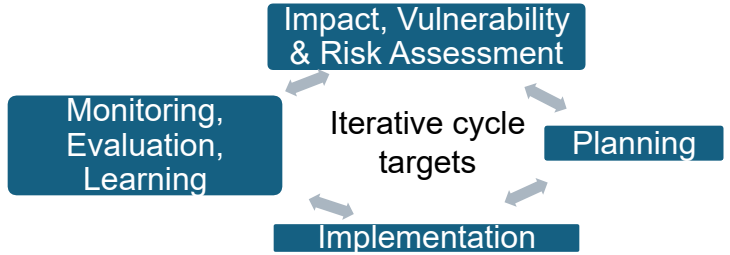

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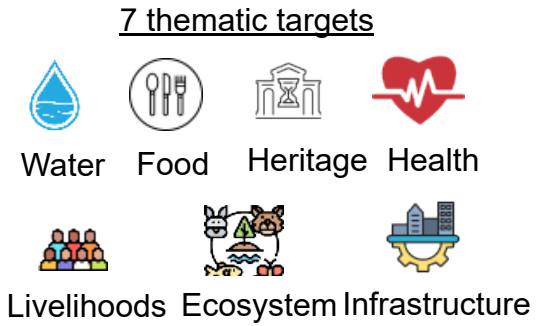

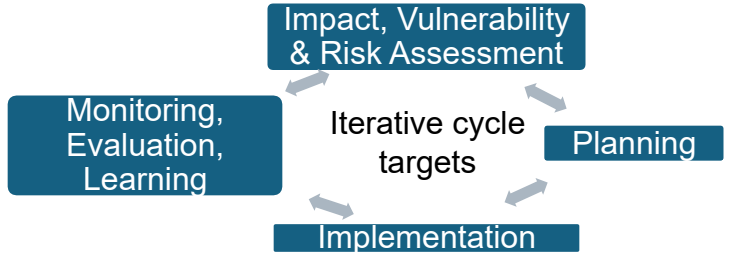

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Nationally - Work done so far

Under the **Climate Change Act 2008** – The UK government is required to assess climate risks & plan for adaptation.

- **UK Climate Change Risk Assessment (UKCCRA)**
  - Identifies current & future risks and opportunities from climate change for the UK.
  - Led by Secretary of State, advice & evidence for the assessment is provided by Climate Change Committee (CCC).
  - Published every 5 years, next due in 2027.
- **National Adaptation Programme (NAP)**
  - Sets out policies and actions to address the risks identified in the CCRA and the timescales for implementing those actions.
  - Led by DEFRA, responding to the UK CCRA.
  - Published every 5 years. Latest: NAP3, covering the period 2023 – 2028. The next: NAP4, due in 2028.
- **Adaptation Reporting Power (ARP)**
  - The Act gives the Government power to require organisations with public functions (e.g., utilities, infrastructure providers, regulators) to report on the climate risk affecting them & actions they are taking to adapt to climate change.
  - Reporting runs in a 5-year cycle. The 4th round APR ended in 2024 – invited a selective LAs to be part of a pilot & remained as voluntary. The 5th round of APR is anticipated to start in late 2026 and run until late 2029.
  - Feed into CCRA & NAP, helps CCC to evaluate risk level & if they should be prioritised in the national assessment & inform policy development and sector strategies.
- **CCC Monitoring & Progress report**
  - Report to Parliament on progress in preparing for climate change and implementing adaptation measures.

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Nationally - Third National Adaptation Programme 2023 to 2028 (NAP3)

❑ Health, Communities & Build Env.

- £5.2 bn of investment in flood & costal erosion.
- Continue to deploy the Adverse Weather & Health Plan and UK weather health alerting system.
- Support adaptation via NPPF & Building Regs.
- Provide dedicated local climate projection to support local adaptation planning.

❑ Business & Industry

- Deliver the Green Finance Strategy.
- Publish new strategy on supply chains & imports.

❑ International Dimensions (New!)

- £1.5bn adaptation fund to help building resilience in vulnerable communities to climate related disasters.

❑ Natural Environment

- Using Local Nature Recovery Strategies to evaluate the climate trends & hazards at a local level.
- Incorporate climate change adaptation into the design of Environmental Land Management schemes.

❑ Infrastructure

- New Resilience Framework, including new commitments on resilience standards.
- New transportation adaptation strategy, led by DfT.
- £2.2bn of investment in water quality & resilient supply, led by DEFRA.

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Locally – Work done so far

- Climate Change Risk Assessment (CCRA) based on a HCCSP template
  - An exercise undertook as part of HCCSP Adaptation subgroup.
  - Categorise by climate drivers (i.e. flooding, drought, storm, extreme heat).
  - Evaluate the **impacts on the statutory obligations and key services of the Council** at present via interview with the heads of services.
- Presented that to SLT in August 2024
  - Agreed to integrate the relevant operation climate risks to the Operational Risk Registers (ORRs) and Strategic Risk Registers (SRRs).
- Incorporated two of the high rating climate risks to existing ORRs and defined a cycle for future integration. Work in progress.

Continuation of Previous Work

- Revised CCRA based on new guidelines published by DEFRA for the 4th round of Climate Adaptation Reporting Power
  - Categorised by the affected sectors
    1. Natural Environment
    2. Infrastructure
    3. Health, Communities & Build Environment
    4. Business & Industry
    5. International Dimensions.
  - Evaluating the impacts at present-day, +2°C and +4°C warming scenarios.

- Drafted a 5-year Climate Adaptation Plan
  - Improve understanding and evidence base.
  - Enhance Council's climate resilience.

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Climate Change Risk Assessment

Understanding risks and their extent

Risk Matrix

Consistent with ORR for easy incorporation

		Likelihood Scoring				
		Rare (1)	**Unlikely (2)**	**Possible (3)**	**Likely (4)**	**Almost Certain (5)**
Impact Scoring	**Major (5)**	5 [Medium]	10 [High]	15 [High]	20 [Very High]	25 [Very High]
	Significant (4)	4 [Low]	8 [Medium]	12 [High]	16 [Very High]	20 [Very High]
	Moderate (3)	3 [Low]	6 [Medium]	9 [Medium]	12 [High]	15 [High]
	Minor (2)	2 [Low]	4 [Low]	6 [Medium]	8 [Medium]	10 [High]
	Insignificant (1)	1 [Low]	2 [Low]	3 [Low]	4 [Low]	5 [Medium]

Likelihood		Indicators
5	Almost certain	>85% Is expected to occur in most circumstances Likely to occur this year or at frequent intervals
4	Likely	60% - 85% Will probably occur at some time or in most circumstances Likely to occur at least once in the next 3 years
3	Possible	30% - 60% Fairly likely to occur at some time or in some circumstances Likely to occur at least once in the next 5 years
2	Unlikely	15% - 30% Is unlikely to, but could occur at some time
1	Rare	5% - 15% May occur only in exceptional circumstances Extremely unlikely to occur in the next 10 years

Impact		Indicative Overview
5	Major	Financial loss greater than £1 million Substantial lengthy impact on achievement of strategic objectives and performance Unable to provide statutory duties Unmanageable impact on reputation Very difficult, perhaps long-term to recover Death
4	Significant	Financial loss greater than £250k but less than £1 million Substantial impact on objectives/costs Serious impact on service quality National media interest Medium to long-term effects and expensive to recover
3	Moderate	Financial loss greater than £75k but less than £250k Significant waste of time and resources Noticeable operational disruption Considerable negative local media coverage or high level of customer complaints Short to medium term effect
2	Minor	Financial loss of greater than £1k but less than £75k Any financial impact can be managed Some limited disruption or fall in service quality Limited negative local media coverage or customer complaints Short term effects
1	Insignificant	Financial loss of less than £1k Internal impacts only Negligible loss, disruption or resource implications Minimal legal, environmental or health and safety risks

CCRA overview

- A total of 45 specific risks were identified, with some further broken down into subsidiary risks.

Thematic area	Present			+2 °C			+ 4 °C		
	L	M	H	L	M	H	L	M	H
Natural Environment & Assets	7	2	2	3	6	2	2	5	4
Infrastructure	4	6	1	3	6	2	-	8	3
Health, Communities and Built Environment	17	15	1	14	18	1	8	20	5
Business and Industry	4	4	-	3	5	-	-	8	-
International Dimension	5	2	-	4	3	-	1	6	-

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Natural Environment

Parks, woodlands, grasslands, lakes, and other green spaces that are owned and managed by the Council.

Habitats

Bank Erosion

Tree & plant Health

Water quality

Parks

Grasslands

Woodlands

Amenity trees

Lakes

Impacts on SBC

- Additional resources required to protect natural assets and maintain public spaces
- Increasing costs for green spaces upkeep
- Reducing local carbon storage capacity.

Existing Measures

- **Amenity Tree Management Policy**: retention & management
- **Biodiversity Action Plan**: protection & enhance biodiversity
- **Green Spaces Strategy**: maintain & expand green spaces
- **Tree and Woodland Strategy**: increase canopy cover
- **Local Plan**: tree replacement policy
- Meadow Management
- FVP dam & embankment management

Residual Risks

- Limitations in the current evidence base used for management decisions
- Data gap, e.g. sensitivity of species, habitats, and ecological processes, robust carbon sequestration baseline.

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Natural Environment – High Risk example

Fairlands Valley Park lakes & smaller ponds within Town – Freshwater species & habitats

Lakes & Ponds

Change of temperature will affect the water level & oxygen level

Species abundance & vitality

Increase runoff & temperature

Higher chance of algal bloom

Impacts on SBC

- Impacting the Council's commitment to protect & enhance wildlife habitats
- Increase the cost for maintenance & recovery of the lakes & ponds
- Health & safety risks for the public
- Loss of revenue due to potential closure for leisure activities
- Reputational damage

Existing Measures

-**Biodiversity Action Plan**: specific actions targeted at lakes, ponds, and Stevenage Brook

- **Adopt a Pond scheme**: locals take responsibility for caring local ponds
- Work with EA & regular water quality testing at FVP
- Apply treatment, i.e. natural dyes, to reduce the risk of algal bloom

-Work closely with Comms team

Suggested Actions

- Consider purchase of water quality testing equipment to reduce the long-term cost
- Investigate alternative treatment methods, i.e. ultrasound treatment system, to be more efficient & minimise the impact on wildlife and visual

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Health, Communities & Built Environment

Air Quality

Food Safety

Damp & Mould

Building fabric & structure

Public Wellbeing

Staff

Maintenance

Temporary accomm

Resident support

Impacts on SBC

- Added pressure on Environmental Health and public health services

- Increased maintenance, repair and insurance costs

- For social housing, risk of tenant complaints, and increased demand for temporary accommodation

- Demand for support from residents

Existing Measures

- Corporate & Commercial property management

- Green Spaces & Tree & Woodland Strategies to increase canopy cover

- Social Housing management & tenant support

- Local Plan: Strategic Flood Risk Assessment, water efficiency, energy efficiency, etc

- Work with HCC, as lead local flood authority, to deliver the Surface Water Management Plan

Residual Risks

- Condition of existing housing/building stock and constraints on available resources

- Engagement level from the locals

- Uncertainties over the scale and duration of future impacts, particularly in financial and resource terms

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Health, Communities & Built Environment – High Risk example

Fire risk of Council's owned properties

The extreme heat and dry conditions could ignite combustible materials, such as packaging, wood offcuts, paper, plastics, compost, etc.

Increased risk of structure fire

Impacts on SBC

- Increased the maintenance cost for recovering the damaged properties from fire

- Demand for support from residents. Potentially increased demand of temporary accommodation

- Demand for support from commercial tenants

Existing Measures

- Corporate Buildings are visited at a minimum once a month as part of compliance visits.

- Commercial Buildings are visited by the Senior Estates Surveyor and manages property condition.

- Canopy had been added at the depo to cover the area that temporarily store the wastepaper and cardboard

Suggested Actions

- Enhance public communication to support fire risk awareness and prevention during extreme heat and dry conditions.

Health, Communities & Built Environment – Medium Risk example

Deterioration of building fabric

Flooding & intense rain

Damp & water ingress

Strong wind

Structural damage from fallen trees, fences

Extreme dry –wet & heat conditions

Subsidence & cracking

UV radiation

Reduce material longevity

Impacts on SBC

- Increased the maintenance cost for SBC's owned properties

- Increased number of complaints from tenants regarding the damages

- Increased demand in temporary accommodation

- Increased insurance costs

Existing Measures

For all residential buildings:
- Local Plan outlines flood risk reduction, solar gain measures
- Regular tree condition survey
- Working with HCC on Surface Water Management Plan

For social housing:
- Housing stock historic data concerning flood risk indicating no significant risk is present
- Decant policy in place
- Dedicated maintenance team

For private residents:
- Existing reporting structure for damp & mould issues

Suggested Actions

- Evaluate the flooding risk for all SBC's properties

- Information gathering related to climate-related building fabric degradation & impacts on residents.

Infrastructure

Potential disruptions to the Council's statutory duties and operational activities resulting from damage to utilities and telecommunications infrastructure, the transport network, and structural assets such as bridges and pipelines

Transport network

Power Plant

Telecom

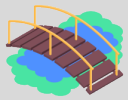
Water Supply

EV Charger

Staff

Access

Resident support



SBC Assets

Impacts on SBC

- Affect the **delivery of critical** services due to potential loss of staff availability, premises, ICT systems, and utilities

- **Restrict access**, force closure of public facilities

- **Demand** for emergency response, temporary housing support

- **Maintenance & insurance costs** on footbridges, renewable energy, EV chargers

Existing Measures

- **Business Continuity Plans**: framework to ensure the delivery of critical services

- **Sever Weather Plans**: to prepare for, respond to and manage severe weather

- **Employee Culture handbook**: Guidance on emergency

- **Herts Local Resilience Forum**: working with other organisations to plan, prepare & train in responding to emergencies & incidents

Residual Risks

- Complex interdependencies between infrastructure, service providers & external organisations

- Gaps in data, i.e. condition of all building stock, flood exposure of infrastructure, resilience of 3rd party assets

- Increase risk as the Council electrified and digitalised

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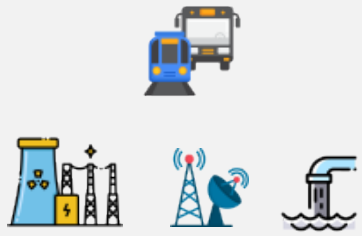
Infrastructure – High Risk example

Damage of infrastructure networks (water & sewage, energy, transport, ICT) and disrupted services/supply



Damage / disruption of critical infrastructure

Affect the Council's ICT system, accessibility / usability of offices & depo

Impacts on SBC

- Disruption/incapable of delivering statutory/critical services
- Divert staff and resources away from planned programmes and strategic priorities to deal with the emergency
- Additional pressure on the Council's emergency planning & communications

Existing Measures

- **Business Continuity Plans (BCPs)**
- Backup electricity generators on sites at DHH & CAV to support crucial activities

Suggested Actions

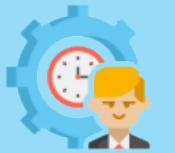
- Review & update BCPs to ensure it covering a wide range of potential scenarios
- Improve resilience by onsite energy production, especially with on-going electrification of assets & digitalisation

Business & Industry

Offices

Staff's home

Staff Wellbeing



Staff productivity

H&S

Leisure facilities

Insurance

Impacts on SBC

- H&S risks, i.e. injury, heat-related illness

- Work efficiency / productivity

- Operation of leisure facilities & Council-run events → Extended hours, revenue loss, maintenance costs, reputation impact

- Rising insurance premiums

Existing Measures

- **Business Continuity Plan:** ensuring operations continue during disruption

-Dedicated Green Spaces Team to manage and maintain green assets

- Dedicated event management & severe weather plans to priorities safety of staff, attendees and contractors

Residual Risks

-Uncertainties over the extend of disruption.

- Higher energy demand and associate costs relating to mechanical cooling systems.

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International Dimensions

Accessing the broad range of global climate change impacts, such as food production, human mobility, health, and global economic conditions, on the Council's operation & duties.

Global Economic

Supply Chain

International climate migration

Food supply

Temporary accomm

Project delay

Budget constrain

Residents & SME Support

Impacts on SBC

- Increased local demand for housing, social care, and employment support
- Supply chain issue delay Council projects and procurement
- Increased financial pressure
- Increased the demand for support from residents and SMEs

Existing Measures

- **Digital system** to track refugee status & support needs
- Internal procurement processes to activity manage supply chain
- Wide range of **investment** & seeking external grant to reduce financial pressure
- Support up-skilling to improve education & employment opportunities
- Support available for SMEs
- Collaborate with Healthy Stevenage Partnership & Citizen Advice

Residual Risks

- Uncertainties in climate-driven migration.
- Uncertainties in the wider economic pressures & funding constraints.

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Draft Five-Year Adaptation Plan 2026 – 2031

- Aims to:
  - Strengthens services and enhance resilience to the impacts of climate change;
  - Enable forecasting of additional resource requirements;
  - Support residents and local communities in meeting future needs.

- Suggesting 18 actions across evidence, policies, communities, infrastructure.

- Developed with sufficient flexibility to accommodate potential changes arising from Local Government Reorganisation (LGR).

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Draft Five-year Climate Adaptation Plan 2026 - 2031

Evidence Collection and Collation

- Extreme weather impact record
- Carbon sequestration baseline
- Analyse damp/mould enquiries record
- Analyse food safety data
- Investigate alternative water treatment methods for Fairlands Valley Park lakes

Policies Review & update

- Severe Weather Emergency Protocol review & update
- Severe Weather Plans review & update
- Internal wellbeing policies review

Community Resilience

- Sustainable living info packs for residents
- VCSFE training
- Integrate adaptation into Communications Plan
- Stakeholder mapping and subsequent engagement

Infrastructure Resilience

- Bridge inspections plan for Golf Course
- Explore on-site energy generation
- Temporary accommodation needs review
- Collaborate with other Herts LAs on countywide adaptation action

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Summary

- **Climate Projections Overview**
  - Current global average temperature is estimated to be +1.3ºC.
  - Under current policies and actions, global warming is projected to reach +2ºC between 2050 and 2060, with temperatures expected to rise to +2.6ºC by the end of 2100.
  - Stevenage will have hotter & drier summer and milder & wetter winter.
- **Climate Change Risk Assessment Results**
  - At present, most risks are rated as low to medium. However, the number of risks classified as medium to high increases as global temperatures rise.
- **Draft 5-year Climate Adaptation Plan 2026 – 2031**
  - Proposed actions can be categorised into 1. Evidence Collection and Collation; 2. Internal Policies Review & update; 3. Community Engagement; 4. Infrastructure Resilience.

Stevenage BOROUGH COUNCIL

Thank you

“Adapting to Climate Change is not a choice, it’s a vital priority”

Adaptation Campaign Hub