ANNEX D



York Climate Change Risks and Vulnerabilities Assessment

September 2023

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ANNEX D

Executive Summary

This report has been produced in response to the City of York Council motion that requested the Executive provide a report on the city's climate resilience. It draws on the approach set out by the UK Climate Change Risk Assessment, with additional evidence from the region, local partners and council business continuity plans, with modifications to make it more suitable to the local context.

The Yorkshire and Humber Climate Commission Adaptation Programme has brought attention to the importance of building climate resilience to local authorities across Yorkshire and Humber. The City of York Council has remained an active participant and learned from neighbouring council's own risk assessments.

It is clear that as global warming intensifies, it is difficult for the science, policy and regulatory frameworks to evolve at the same pace. As a result, this risk and vulnerabilities assessment will remain "live" and be reviewed annually as climate change impacts are better understood, or predictions are more confident. The report identifies climate resilience risks for York.

Local data is scarce for many of these risks, limiting the effectiveness of potential policy and decision making. To support an evidence-based approach to climate resilience the council will continue to work with regional partners to share best practice and evidence.

York has significant experience of adapting to climate risk and manages the flood risk well. This is due to a joined up, local, regional, and national response, involving multiple agencies and multiple stakeholders which has produced a response that is proportionate to the risk. We will seek to replicate our approach to the flood response to other risk areas.

Climate Change risks are not easily evaluated with traditional cost/benefit analysis making it difficult to make the case and allocate funding.

Finally, the risks highlighted are not the only ones relevant to York. Resilience is a joined-up, overall response to climate change, and it is important to highlight that building general adaptive capacity, should be prioritised over responses to any singular threats.

Introduction

In 2019, City of York Council declared a Climate Emergency and have since set an ambition for York to be net zero carbon by 2030.

York's 10-year Plan sets out a goal for York to be carbon neutral and contribute to the regional ambition to be carbon negative, with iconic green spaces to enjoy today and the environment protected for future generations. The Plan will be delivered, in part, through the York Climate Change Strategy 2022-2032 and Action Plan which recognises the threat of climate change at both a global and local scale.

The 10-year Plan and Climate Change Strategy and Action Plan align to the Council Plan 2023-2027 One City for All which includes Four Core Commitments (outcomes)

covering Equalities and Human Rights, Affordability, Climate Change, Health and Wellbeing (E.A.C.H.).

There is currently no statutory requirement for local authorities to strengthen resilience to a changing climate based on the scientific predictions such as anticipated rises in temperatures.

Local Authorities are required to report to DEFRA an assessment of risks and actions annually.

To elevate the importance of building climate resilience, the net zero ambition will be extended to include "by 2030 York will have set the conditions to be Climate Ready".

The impacts of climate change are already being seen locally. Together with our net zero and carbon mitigation activity, we also need to adapt to become more resilient to the changes in our climate to create a city fit for the future.

Background

Climate change is one of the greatest threats facing our planet. According to the World Resource Institutei, global temperatures have so far risen by 1.1°C, and already the planet has seen an increase in natural disasters such as flooding, hurricanes, and other extreme natural events.

¹NASA announced in September 2023 that this summer (June, July, August) was the hottest summer on record. The months of June, July, and August combined were 0.23°C warmer than any other summer in NASA's record, and 1.2°C warmer than the average summer between 1951 and 1980. August alone was 1.2°C warmer than the average.

According to the World Resource Institute², global temperatures have so far risen by 1.1°C, and already the planet has seen an increase in natural disasters such as flooding, hurricanes, and other extreme natural events.

The 2023 IPCC Report³ warned that the world is set to reach 1.5°C above preindustrial levels within the next two decades and stated that only the most drastic cuts in carbon emissions would help prevent an environmental disaster. The IPCC declared in their latest report that,

"Widespread and rapid changes in the atmosphere, ocean, cryosphere and biosphere have occurred. Human-caused climate change is already affecting many weather and climate extremes in every region across the globe. This has led to widespread adverse impacts and related losses and damages to nature and people. Vulnerable communities who have historically contributed the least to current climate change are disproportionately affected "

¹ NASA Announces Summer 2023 Hottest on Record – Climate Change: Vital Signs of the Planet

² <u>https://www.wri.org/climate</u>

³ https://www.ipcc.ch/report/ar6/wg2/

ANNEX D

Council Motion.

This report has been produced in response to a City of York Council motion (21st October 2021)4 that requested the Executive provide a report on the city's climate resilience:

 Council therefore resolves: To ask Executive to report on the City's climate resilience by assessing the risks from the eight priority risk areas of the UK Climate Change Risk Assessment (June 2021) https://www.theccc.org.uk/publication/independentassessment-ofuk-climaterisk/, plan for enhancement of the city's climate resilience and management of the unavoidable impacts of climate change.

The assessment of York's risks set against the eight priority risk areas has been published with the Executive Member Decision report in November 2023. Working with the region as part of the Yorkshire and Humber Climate Commission Adaptation Programme, it is clear that there are additional, more localised risks that need to be considered, which this report sets out.

The City of York Council is also signed up to the CDP, formally known as the Carbon Disclosure Project, and is a signatory to the Global Covenant of Mayors. This sets an expectation that York will regularly report on York's climate risks and vulnerabilities.

Aim and Objectives.

This report sets out to improve our understanding of climate change risks and vulnerabilities to York through:

- Identifying the most significant threats to York due to climate change
- Presenting initial findings and recommendations of the most significant risks
- Clarifying the ambition set in the York Climate Change Strategy 2022-2032

What is resilience?

According to the IPPC: "Resilience is defined as the capacity of social, economic and ecosystems to cope with a hazardous event or trend or disturbance, responding or reorganising in ways that maintain their essential function, identity, and structure as well as biodiversity in case of ecosystems while also maintaining the capacity for adaptation, learning and transformation. Resilience is a positive attribute when it maintains such a capacity for adaptation, learning, and/or transformation".

Essentially, resilience means how well a complex system (like an ecosystem or a city) can 'bounce back' from adverse events and return to a place where the system functions as normal. Resilience is a dynamic process in which the system actors constantly learn and evolve to build resilience against future events.

 $^{^{4} \}underline{\text{https://modgov.york.gov.uk/documents/g12805/Printed\%20minutes\%20Thursday\%2021-Oct-2021\%2018.30\%20Council.pdf?T=1}$

York has significant expertise in "resilience" with successive flood events managed through multi-agency response that includes learning from the event and adapting pressure points across the city to ensure floor resilience measures are appropriate and reduce the risk to businesses, households and York's infrastructure and related systems.

UK Third Climate Change Risk Assessment.

Recent resilience strategies use the Third UK Climate Change Risk Assessment (UKCCRA3) as a reference point. Within the UKCCRA3, a variety of risks and opportunities from the effects of climate change were analysed under various scenarios (e.g. 2°C of warming by 2050, 4°C by 2080 etc.), with the report concluding that there were eight priority risk areas where the UK required more action to meet the magnitude of the risk.

Priority Risk Area	Magnitude of Risk	Key policy areas
Risks to the viability and diversity of terrestrial and freshwater habitats and species from multiple hazards.	High	Biodiversity; Soil and water protection and restoration; Environmental land management; Sustainable farming and forestry; Net Zero; Green finance
Risks to soil health from increased flooding and drought.	Medium but will increase to high by 2050.	Biodiversity; Soil and water protection and restoration; Environmental land management; Sustainable farming and forestry; Net Zero; Green finance
Risks to natural carbon stores and sequestration from multiple hazards leading to increased emissions.	Medium but will increase to high by 2050.	Biodiversity; Soil and water protection and restoration; Environmental land management; Sustainable farming and forestry; Net Zero; Green finance
Risks to crops, livestock and commercial trees from multiple hazards.	Medium but will increase to high by 2050.	Biodiversity; Soil and water protection and restoration; Environmental land management; Sustainable farming and forestry; Net Zero; Green finance
Risks to supply of food, goods and vital services due to climate-related collapse of supply chains and distribution networks	Medium but will increase to high by 2050.	Public procurement; Business resilience; Environmental land management; Trade
Risks to people and the economy from climate- related failure of the power system	High	Infrastructure; Energy; Net Zero

Risks to human health, wellbeing and productivity from increased exposure to heat in homes and other buildings	High	Building regulations and strategies Planning reform
Multiple risks to the UK from climate change impacts overseas	High	National resilience; Overseas aid; Research and capacity building

Table 1: The 8 national priority risk areas to UK, according to the UKCCRA3

Whilst these eight priority risk areas have relevance to York within the national context, more localised risks are not considered and as a result, through work with the YHCC Adaptation Programme, and engagement with city partners, the risk areas have been expanded to cover additional risks and vulnerabilities.

UKCCRA3 Risks not considered.

Not all risks and opportunities included in the UKCCRA3 have local relevance to York. The following risks and opportunities were excluded from the analysis.

International Dimensions.

Whilst international dimensions are a key part of the climate change problem, some of risks have been excluded from the analysis as they encompass issues that are unlikely to be able to be affected by Council policy e.g., "ID4 Risks to the UK from international violent conflict resulting from climate change on the UK", was excluded as it is more in the scope of the national governments remit, as seen in the Ukraine/Russia conflict.

Update: Whilst international dimensions are largely outside of the Council's control, they can and will impact York and should be explored further in future reports. E.g. migration from conflict could put pressure on housing and other services etc.

Risks to education and prison services.

This risk was omitted as:

- York does not have a prison within its boundary.
- ii) The effect on education that the UKCCRA3 Technical Report details concerns issues that are not regionally dependent or affected by location e.g., the effect on concentration levels of children due to warmer classroom conditions. As this risk applies largely equally across all local authorities, no new information can be gained that isn't already contained in the UKCCRA3.

Update: HMP Askham Grange is within York's administrative boundary. City of York Council influences choices within the education sector, such as insulating school buildings, fitting renewables etc. On this basis prisons and education risks should be considered as part of ongoing risk assessment work and will be picked up within the buildings risk measures.

Coastal and Marine.

The risks in Table 4 were omitted because they only referred to coastal and marine related threats. York does not have a coastline and is therefore not relevant in trying to inform local resilience strategy decisions.

Update: This risk should be considered in ongoing risk assessment work, due to potential impacts on the city in the coming decades, including likely impact of sea level rise on the wider region, land becoming salinated, East Coast storm surges and increasing migration.

Risk ID	Risk
N14	Risks to marine species, habitats, and fisheries from changing climatic conditions, including ocean acidification and higher water temperatures
N15	Opportunities to marine species, habitats, and fisheries from changing climatic conditions
N16	Risks to marine species and habitats from pests, pathogens, and invasive species
N17	Risks and opportunities to coastal species and habitats due to coastal flooding, erosion, and climate factors
13	Risks to infrastructure services from coastal flooding and erosion
H3b	Risks to people, communities, and buildings from coastal flooding
H4	Risks to the viability of coastal communities from sea level rise

Table 2.: Excluded Risks

Met Office risk impacts on urban areas.

The Met Office produced the below graphic of the expected impacts on urban areas as a result of climate change.



Figure 1: Negative impacts in urban areas from climate change

These impacts will not impact all countries or areas equally; therefore, understanding the local impacts of climate change are an important consideration when developing an appropriate response.

Approach

To understand the risks and vulnerabilities likely to present challenges to York's ecosystems and infrastructure, the following steps were taken:

- Evidence about the future risk of climate hazards collated from the YHCC Adaptation Programme and other published sources.
- A review of the assessment of the UKRCC risks, by inviting subject matter experts to assess the magnitude.
- An understanding of the risks of disruption to the city, summarising evidence and best practice collated during the YHCC Adaptations Programme together with involvement in the DEFRA 4th Adaptations and Actions Plan pilot and engagement with city partners.
- An assessment of risks to council services developed through engagement with council officers.
- An understanding that some residents and community groups are more vulnerable to climate change than others.

It is recognised that the risk of extreme weather events will continuously change and evolve, at some times heightened and at others, less severe than predicted. This report is set out as a basis for ongoing discussion and reflection on council services and the city to support risk management and business continuity planning. It is not an exhaustive list of risks which will vary between services, organisations, systems and individuals.

1. Future risk of climate hazards – UK Climate projections: headline Findings⁵

- All the top ten warmest years for the UK, in the series from 1884, have occurred since 2002.
- A recording of 38.7 °C at Cambridge Botanic Garden on 25th July 2019 became the highest summer temperature officially recorded in the UK, exceeding the previous record of 38.5 °C recorded at Faversham, Kent, in August 2003.
- The most recent decade (2009-2018) has been on average 1% wetter than 1981-2010 and 5% wetter than 1961-1990 for the UK overall.
- Winters in the UK, for the most recent decade (2009-2018), have been on average 5% wetter than 1981- 2010 and 12% wetter than 1961-1990. Summers in the UK have also been wetter, by 11% and 13% respectively.
- By the end of the 21st century, all areas of the UK are projected to be warmer, more so in summer than in winter. This projected temperature rise in the UK is consistent with future warming globally.
- The temperature of hot summer days, by the 2070s, show increases of 3.8 °C to 6.8 °C4, under a high emissions scenario, along with an increase in the frequency of hot spells.

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- Hot spells, typically defined as maximum daytime temperatures exceeding 30 °C for two or more consecutive days5, are largely confined to the south-east UK in the present-day. In the future (by 2070s), under a high emissions scenario, the frequency of hot spells increases.
- Rainfall patterns across the UK are not uniform and vary on seasonal and regional scales and will continue to vary in the future. By 2070, in the high emission scenario, this range amounts to -45% to +5% in summer, and -3% to +39% in winter (where a negative change indicates less precipitation and a positive change indicates more precipitation)
- Despite overall summer drying trends in the future, new data from UKCP Local (2.2km) suggests future increases in the intensity of heavy summer rainfall events. Future climate change is projected to bring about a change in the seasonality of extremes. UKCP Local (2.2km) projects an extension of the convective season from summer into autumn, with significant increases in heavy hourly rainfall intensity in the autumn.
- UKCP Global (60km), Regional (12km) and Local (2.2km) all project a decrease in soil moisture during summers in the future, consistent with the reduction in summer rainfall. Locally this could lead to an exacerbation of the severity of hot spells.
- By the end of the 21st century, lying snow decreases by almost 100% over much of the UK, although smaller decreases are seen over mountainous regions in the north and west.

2. An assessment of UKRCC risks

To understand the UKRCC risk assessment, subject matter experts were invited to assess 46 risks and opportunities, with each assigned a magnitude by experts. Of these, the 6 most significant were progressed to stage 2⁶:

Risk	Average Magnitude Score	No. Responses	UKCCRA3 Magnitude Results (based on 2°C warming pathway by 2050)
N4 Risk to soils from changing climatic conditions, including seasonal aridity and wetness	2.93	3	High
H9 Risks to food safety and food security	2.92	2	High
N1 Risks to terrestrial species and habitats from changing climatic conditions and extreme	2.64	2	High

⁶ NB. The report notes limitations in the expert survey response rate, and for this reason makes clear that ALL UKRCC3 risks should be considered in future risk assessment.

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events, including temperature change, water scarcity, wildfire, flooding, wind, and altered hydrology			
N3 Opportunities from new species colonisations in terrestrial habitats	2.57	2	Medium (Opportunity)
H3a Risks to people, communities and buildings from river and surface flooding	2.57	1	High
H5 Risks to building fabric	2.45	3	Medium

Table 3.: Top Risks as a Result of Climate Change

These are not the only risks and opportunities that should be considered in resilience planning, with additional risks documented in the following report.

Limitations to the approach of this study and available responses provided a low level of confidence in the assignment of severity, however, they do provide the basis for an ongoing discussion about risks and vulnerabilities to inform business continuity planning and risk management. It is recommended that All UKRCC3 risks are considered as part of ongoing risk assessment.

3 Risks of disruption to the city

The risk of disruption to different aspects of the city are listed below. These have not been assessed to determine the severity, and instead are shared to form the basis of risk management discussions and business continuity plans:

Water:

- Water supply interruptions/restriction.
- Increase in daily peak demand.
- Waste seepage into water supply
- Poor water quality.
- Flooding, including damage to property, threat to life, displacement.

Waste:

- Increase in wet waste.
- Increase in weight of waste.
- Reduction in the efficiency of energy plants (cooling steam to generate electricity).
- Bin collections disrupted.

Culture, tourism and leisure:

- Flooding of leisure services and provisions.
- Overheating of playgrounds and outdoor sports facilities with no shade.
- Closure of businesses (e.g., damaged buildings or not being retrofitted).

Agriculture and the natural environment:

Risk to terrestrial species and habitats.

- Increase in pests, pathogens and invasive species.
- Damage to Sites of Special Scientific Interests.
- Damage to soils e.g. due to periods of drought.
- Bare peat from past industrial pollution at risk of erosion/being washed away.
- Limitations in the window for peatland restoration work.

Health and wellbeing (incl. adult care, children and young people):

- Increased incidences of heat exhaustion and dehydration.
- Increased anxiety.
- Increase in vector borne diseases.
- Further risks to homeless communities without safe shelter.
- Unsafe working conditions for site, outdoor workers and frontline workers.
- Population and demographic changes (e.g. increased migration) placing increased demands on services

Buildings and property:

- · Overheating.
- Increased requirement for retrofitting properties with cooling systems.
- Risk to household energy demands from increased cooling/heating requirements.
- Increase in risk of condensation, damp, mould growth, mildew.
- Flooding
- Changes in ground water levels.
- Increase in risk of subsidence.

Energy and infrastructure:

- Damage to energy assets and supply infrastructure (e.g., wind turbines, energy plant).
- Energy security, including supply disruption, price spikes etc.
- Damage to IT infrastructure.
- Damage to transport infrastructure (e.g. road melt).
- Increase in local accidents on motorways and major trunk roads.

Services:

- Damage to service buildings and assets such as schools, prisons, care homes.
- Increase in demand for health and social care services.
- Damage to specialist equipment.
- Increase in response time / wait times.
- Disruption to delivery of services (e.g., due to road closures etc.).

4 Climate change impacts on council services.

Risks to council services were collated and discussed by council officer workshops, and evidence drawn from regional partners in the YHCC Adaptations Programme:

Service area Key impacts

Adult Services and public health	 Overload on health support services during extreme events Increases in migration impacting services. Food security, including price spikes and supply – increased need for support services.
Housing and buildings	 Damage and disruption form flooding and extreme weather. Overheating. Impact on health and wellbeing of residents. Damage and disruption due to subsistence. Insurance costs etc. Materials supply and costs Proximity to shade / access to green space Risk to water and energy supply. Water saving and energy efficiency.
Emergency planning, civil contingencies and Fire	 Increased frequency and diversity of events including fires on open ground, flooding, damage to major local infrastructure, increasing antisocial behaviour during hot weather. Overall population resilience to repeated events may be eroded.
Transport and Highways	 Existing infrastructure not sufficient to manage flood waters. Damage to infrastructure due to heat impacts and excess rainfall and the need to increase and maintain drainage. Increased risk from trees. Potential need to re-route longer term to avoid flood zones. Air quality, especially during hot, still weather affecting public health.
Children's Services and schools	 Suitability of existing buildings to provide a comfortable learning environment in the longer term this includes could include location and building design/adaptations. Increased migration placing additional demands on services
The natural environment, parks, farms and open spaces	 Changes to eco systems and the viability of flora and fauna. Drought conditions impacting tenanted farms. Flooding of country parks and impact on business activities. Damage to trees through repeated cycles of drought and wet weather.
Waste disposal	 Disruption to collections due to weather. Rising water tables could impact landfill sites and lead to leeching of contaminants. Higher temperatures leading to odours, pests and public nuisance

Planning	 Ability of built structures to withstand heat and provide a comfortable environment. Location of new settlements and facilities to avoid flood plains etc. Management of surface water through sustainable drainage systems. Preservation of water resources and water quality. Sustainable landscaping. Planning applications and local development plans will need to consider climate impacts and resilience measures.
Corporate	 Increased costs such as insurance for buildings or construction contracts. Impact on staff working in extreme weather conditions

4.1 Climate change impacts on other services.

Service	Responsibility	Key impacts
Utilities	Utility companies (water, wastewater, electricity, gas and communications)	 Infrastructure damaged by extreme weather (most likely flooding) leading to service disruption and public health issues. Speedy recovery from any incidents is important due to the disruption caused and public health impacts.
Drainage and watercourses	Landowners, drainage boards, canal trusts	 Capacity, replacement and maintenance of facilities. Managing the flow of flood waters is essential to ensuring that damage and disruption is minimised.
Sport/leisure	Private operators and trusts	 Swimming pools may be difficult to fill during drought. Long term suitability of grass pitches or allotments in some locations. Increased cost of heating pools
Health	Health Board	 Increasing patient numbers due to extreme heat or flooding. New infectious diseases. Rising water tables can impact existing burial grounds.
Transport	Network Rail, train operators, Highways England	 Damage to infrastructure due to extreme weather. Long term suitability of existing routes. Ability to maintain/deliver services
Economy	Manufacturing and service sector	 Changes in demand for goods and services Disruption to supply chains Productivity Staff

5 Vulnerable Population Groups⁷:

Climate change can affect anyone. However, vulnerable population groups expected to be most affected by future hazards, as outlined in the CDP and Global Covenant of Mayors (GCoM) reporting frameworks, include:

- Women and girls are more vulnerable to climate change based on biophysical characteristics as well as a result of their position in society (often being of lower socioeconomic status in society).
- The **elderly** population are more likely to be increasingly physically, financially and emotionally at risk to the impact of climate change, largely due to changes in mobility, physiology and restricted access to resources.
- Young children and babies also face disproportionate health effects
 particularly from heat related impacts as they are dependent on adults to
 help them adapt in their behaviour and clothing, this can have a
 detrimental impact on mental health and wellbeing.
- Marginalised/minority communities can be disproportionately affected by climate change. This is generally linked to the vulnerabilities associated with people on lower incomes due to historic and systemic inequalities faced by these communities.
- **People with reduced personal mobility**, can experience significant levels of vulnerability to changes in climate as a result of limitations presented across local infrastructure and services.
- Existing medical conditions can make individuals more sensitive to climatic changes, increasing the potential for health impacts and worsening symptoms.
- **People on low income** are less able to deal with climate events as they lack the economic or financial capacity to invest in measures to make their home more resilient or to obtain e.g. flood insurance.
- Tenants in the social and private rented sector are likely to have a lower ability to adapt to climate change and extreme weather events compared to homeowners.
- Outdoor workers are vulnerable to extreme heat and weather events, impacting their occupational health and safety as well as influencing their line of work.
- Health, education and emergency service workers become
 increasingly vulnerable as climate change exacerbates conditions as they
 have increased exposure to people suffering from climate induced health
 problems (e.g., vector-borne diseases), as well as an increase in strain on
 services due to demand impacting the physical and mental health of
 frontline workers.

Limitations

There are several limitations associated with this report which need to be considered when managing risks and preparing business continuity plans:

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⁷ Kirklees CCRVA 2022

- The future climate hazards are unpredictable, and with the impacts of global warming happening faster than previously predicted it is impossible to confidently assess what significant changes to the complex interrelated weather, ocean and biosphere systems will lead to.
- The Assessment of the UKRCC risks has a relatively low confidence with low number of subject matter expert responses.
- The risks of disruption to the city is the starting point for a discussion.
 Evidence is collated from multiple sources, including workshops and discussions with partners, however, to assess using risk methodology of likelihood vs severity will be expensive and not likely to add more to the discussion.
- The risks to council services will remain under review as per the usual council business continuity process. It is anticipated this will evolve over time as severity and intensity of extreme weather results create more disruption across wider supply chains, such as sourcing materials from abroad.

Next steps

Understanding the risks resulting from climate change is just the start. Learning from neighbouring authorities and to help York build on the positive catchment area flooding programme, the York Climate Change ambition will be strengthened such that by 2030, by adding that by 2030 York will have set the conditions to be Climate Ready.

Several steps will be taken to strengthen York's climate resilience:

- The climate change action plan will be updated to indicate when actions are mitigating carbon admissions or adapting to weather climate change events, or both, continuing to keep climate adaption to the fore of planning and delivery.
- ii. A task and finish group will identify opportunities and requirements for additional action against identified priority risks.
- iii. Emerging strategies and policies, such as the draft Local Transport Strategy, will take into account the speed of global warming and build in provision for climate adaptation from the outset.
- iv. The Community Infrastructure Levy criteria will be reviewed to include supporting preparations for climate resilience, whether that's new developments or supporting existing developments, transport, education or economic activity.
- v. The Council will continue to engage with regional and local partners, sharing good practice and lessons learned to help build a library of adaptation expertise.
- vi. The Council will continue to work with DEFRA to share understanding of the risks and actions and opportunities to strengthen local authority

- powers to deliver adaptation activities across different systems and infrastructures.
- vii. The Council will review *York's Climate Change Risks and Vulnerabilities report* annually, updating it to ensure it remains comprehensive and relevant.

Evidence base:

- York Climate Risk and Vulnerability Assessment Stakeholder Sessions:
 - Place Leadership 2022/23
 - Place officers / directorate management team (September 2023)
- City Leaders workshops 2022/23
- CDP Disclosure Insight Action (https://www.cdp.net/en)
- Global Covenant of Mayors for Climate and Energy Global Covenant of Mayors for Climate and Energy (https://www.globalcovenantofmayors.org/)
- HM Government (2022) UK Climate Change Risk Assessment 2022 (https://www.gov.uk/government/publications/uk-climate-change-risk-assessment-
 - 2022#:~:text=The%20risk%20assessment%20considers%20sixty,and%20spe cies%20from%20multiple%20hazards)
- Met Office (2019) UK Climate Projections 2018 (UKCP18) (https://www.metoffice.gov.uk/research/approach/collaboration/ukcp)
- YHCC Adaptations Programme (https://yorksandhumberclimate.org.uk/)
- Defra 4th annual adaptation and reporting (https://consult.defra.gov.uk/climatechange-adaptation/fourth-round-adaptation-reporting-power/)
- Kirklees Climate Change Risks and Vulnerability Assessment https://www.kirklees.gov.uk/beta/climate-emergency/pdf/kirklees-climate-change-risk-vulnerability-assessment.pdf

Appendix A: Full Council Motion

Government Must Work with Councils to Tackle Worsening Heatwaves and Extreme Weather

Council notes:

- The work currently being done by City of York Council to progress towards our 2030 zero carbon ambition including the community woodland, new zero carbon housing and energy efficiency retrofit schemes as well as a draft citywide strategy.
- That progress in most areas is nonetheless held back by a lack of substantial and consistent Government investment and closer working with local councils.
- The signs in York over the last few years that climate change has already begun in earnest, with hotter drier summers, warmer wetter winters and increased frequency of extreme weather and flooding.
- That in 2018 at COP24 the UK Government signed up to working with local communities to deliver the UK's 'Nationally Determined Contributions' in the 2015 Paris Climate Agreement.
- That, in May 2021, the Rt. Hon. Alok Sharma MP, President of COP26, said collaboration would be a key objective of the COP26 Climate Summit in November - "Governments, business and civic society need to work together to transform the ways we power our homes and businesses, grow our food, develop infrastructure and move ourselves and goods around".

Council believes:

- That despite these agreements and statements, there is still no formal relationship allowing joint partnership working between Local and National Government to take mitigation and adaptation actions against the climate emergency.
- That greater collaboration and action are required if we are to mitigate our greenhouse gas emissions and meet our commitments under the Paris Climate Agreement;18
- That mitigation strategies should be accompanied by effective adaptation measures to ensure that we are equipped to deal with the changes in our climate that have already begun. These include the potential for heatwaves and extreme weather that will threaten the health and wellbeing of our most vulnerable residents and may also impact on food security.

Council therefore resolves:

 To ask Executive to report on the City's climate resilience by assessing the risks from the eight priority risk areas of the UK Climate Change Risk Assessment (June 2021) https://www.theccc.org.uk/publication/independentassessment-ofuk-climaterisk/, plan for enhancement of the city's climate resilience and management

of the unavoidable impacts of climate change.

• To add this Council's voice to calls by the Local Government Association and the Association of Directors of Environment, Economy, Planning and

Transport, and others, for a joint local and national government taskforce to plan action to reach 'net zero' emissions.

- To call for such a partnership to set appropriate regulations, benchmarks and targets and create the much-needed long-term funding to enable local council areas, communities, and economies to decarbonise whilst remaining resilient and able to realise the benefits of decarbonisation in terms of new green jobs and a healthier environment.
- To therefore ask the Chief Operating Officer to write to Alok Sharma MP, President for COP26, the Prime Minister, and the Leadership Board of the LGA, informing them of our support for a joint Local/National Government Climate Change Partnership Taskforce and asking for one to be established as soon as possible.

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i https://www.wri.org/climate