Climate Change Resilience and Adaptation Strategy

Background Paper

August 2023

Contents

1. Introduction

The recent impacts from extreme weather in the UK highlight the urgency of adapting to climate change. The record-breaking temperatures seen through the summer of 2022 brought unprecedented numbers of heat-related deaths, wildfire incidents and significant infrastructure disruption.

Climate adaptation is an integral part of addressing the impacts and opportunities created by these changes to our climate. The Intergovernmental Panel on Climate Change (IPCC) defines adaptation as *"adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderate harm or exploit beneficial opportunities".*[1]

Despite efforts to limit the man-made causes of climate change by reducing greenhouse gases like carbon dioxide, a level of harmful change in our climate is now unavoidable and we must take further action to adapt to these changes. Climate adaptation is a process of on-going adjustments to reduce the risks of climate change impacts on our wellbeing, business and society as well as allowing us to take advantage of the opportunities a changing climate could provide. We need to better understand this process to help our borough make effective decisions in a changing climate. It is recognised that adaptation can mean difficult choices. It is essential that fairness and justice are considered when developing adaptation responses.

Climate resilience is equally important as it is the ability to anticipate, prepare for, and respond to dangerous events, trends, or disturbances that are a result of climate change. At the borough level, we must quantify and understand these risks so that we can build resilience to them using the levers that are available to us.

This background paper explores the policy framework for climate resilience and adaptation and signposts the key documents and data that informs our local response within our draft Climate Resilience and Adaptation Strategy (CRAS). Responses to climate resilience and adaptation can cover many different themes at varying scales. Some climate adaptation responses are not covered by our draft strategy as they fall outside its scope due to the spatial characteristics of the borough. For example, Southwark does not have farming or agricultural land or significant forests but is a dense urban environment, so our responses take this into account.

It is important to note that the policy framework for resilience and adaptation continues to evolve at a rapid rate across the different levels of international, national and regional governance. We will continue to monitor, review and absorb key information to ensure our borough meets these challenges, alongside reducing greenhouse gas emissions within the borough.

[1] Intergovernmental Panel on Climate Change (IPCC). *Impacts, Adaptation, and Vulnerability, Summary for Policymakers and Technical Summary of the Working Group II Report*; IPCC: Geneva, Switzerland, 2001.

2. Policy summary

International policy context

International policies on climate adaptation and resilience aim to address the impacts of climate change and build the capacity of countries and communities to cope with its effects. Several key international agreements and initiatives focus on climate adaptation and resilience.

Here are some notable ones:

IPCC's Sixth Assessment Report (AR6)
The IPCC prepares comprehensive Assessment Reports about the state of scientific, technical and socio-economic knowledge on climate change, its impacts and future risks, and options for reducing the rate at which climate change is taking place. IPCC's Sixth Assessment Report (AR6) includes:

- The Climate Change 2023 Synthesis Report that summarises the state of knowledge of climate change, its widespread impacts and risks, and climate change mitigation and adaptation. The report concludes that human activities, principally through emissions of greenhouse gases, have unequivocally caused global warming, with global surface temperature reaching 1.1°C above 1850-1900 in 2011-2020. It notes that global greenhouse gas emissions have continued to increase, with contributions arising from unsustainable energy use, land use and land-use change, lifestyles and patterns of consumption and production. This is occurring across regions, between and within countries, and among individuals
- Climate Change 2022: Mitigation of Climate Change assesses the observed and projected impacts and risks to ecosystems and people over the near, mid and long term, while considering adaptation measures and climate resilient development
- Climate Change 2022: Impacts, Adaptation and Vulnerability assesses the impacts of climate change, looking at ecosystems, biodiversity, and human communities at global and regional levels. It also reviews vulnerabilities and the capacities and limits of the natural world and human societies to adapt to climate change.

Paris Agreement (2015)
The Paris Agreement, adopted under the United Nations Framework Convention on Climate Change (UNFCCC), is a landmark international treaty aiming to limit global warming to well below 2°C above pre-industrial levels, with an aspirational target of 1.5°C. The agreement recognizes the importance of enhancing adaptive capacity, strengthening resilience, and reducing vulnerability to climate change.

Sendai Framework for Disaster Risk Reduction (2015-2030)
This global framework, adopted at the Third UN World Conference on Disaster Risk Reduction, sets out targets and priorities to reduce disaster risks and enhance resilience to natural hazards. It emphasizes the integration of disaster risk reduction into climate change adaptation efforts.

United Nations Sustainable Development Goals (SDGs)
SDG 13 specifically focuses on Climate Action and includes targets related to strengthening resilience and adaptive capacity to climate-related hazards.

National Adaptation Plans (NAPs)
Under the UNFCCC, countries develop NAPs to identify and address medium- and long-term adaptation needs. NAPs are essential in enhancing adaptive capacity and integrating climate change adaptation into national planning processes.

Climate risk insurance
Initiatives such as the InsuResilience Global Partnership aim to provide insurance and risk-transfer mechanisms to vulnerable populations and countries to cope with climate-related disasters.

Green Climate Fund (GCF)
The GCF is a financial mechanism under the UNFCCC, designed to support climate action in developing countries, including projects that enhance resilience and adaptation.

The Adaptation Fund
This fund, established under the Kyoto Protocol, supports adaptation projects and programs in developing countries that are particularly vulnerable to climate change.

Climate-Resilient Infrastructure Development
International organisations and partnerships promote the development of climate-resilient infrastructure, such as the Global Commission on Adaptation and the Coalition for Climate Resilient Investment (CCRI).

These policies and initiatives focus on enhancing resilience, reducing vulnerability, and facilitating adaptation measures to ensure that countries and communities are better prepared to cope with the impacts of climate change. As the global climate challenge continues to evolve, these international efforts remain crucial in building a more sustainable and resilient future for all.

UK policy context

We are already seeing significant changes to the national climate, and this is expected to continue in the future. Mandated by the 2008 Climate Change Act, the UK Government is required to publish a climate change risk assessment (CCRA) every five years, with the third climate change risk assessment, *Progress in adapting to climate change – 2023 Report to Parliament (CCRA3)*, being published in 2022. It reports that the UK will witness increases in average and extreme temperatures, changes to rainfall patterns leading to flooding in some places, and water scarcity in others. The report also states that the UK can expect coastal flooding and erosion; alongside an increased frequency and intensity of wildfires.[2] Potential other changes to other weather variables including wind strength and direction, sunshine and UV levels, cloudiness, and changes in sea conditions such as wave height.

The CCRA3 Technical Report notes that even if the international community meets the goals of the Paris Agreement, further climate change will occur and hence will require adaptation.[3] With current commitments and ambition on emissions, global warming could still reach between approximately 2°C and 4°C by the end of this century, or potentially even higher. The CCRA3 Technical Report assesses the urgency of adapting to UK climate risks and opportunities, considering both the current climate and projected future climates consistent with two future pathways:

- Stabilising 2°C by the end of the century, representing achievement of the Paris Agreement goals.
- 4°C global warming at the end of the century, the current trajectory which is consistent with the current limited global ambition for reducing emissions.

Sixty-one climate risks and opportunities arising from climate change are assessed through the report and are grouped into five categories:

- Natural Environment and Assets
- Infrastructure
- Health, Communities and the Built Environment
- Business and Industry
- International impacts on the UK from around the world.

The extent to which current UK adaptation plans will manage these risks is assessed alongside the benefits of additional action on adaptation within the next five years. Each risk is scored according to the urgency of additional adaptation action that is needed.

The CCRA3 Report noted that the second National Adaptation Programme (NAP2) had not adequately prepared the UK for climate change, and that there was very limited evidence of the implementation of adaptation at the scale needed to fully prepare for climate risks facing the UK

[2] https://www.theccc.org.uk/publication/progress-in-adapting-to-climate-change-2023-report-to-parliament/
[3] https://www.ukclimaterisk.org/independent-assessment-ccra3/technical-report/

across cities, communities, infrastructure, economy and ecosystems. NAP3 National Adaptation Programme must therefore make a step change.

The UK government's Third National Adaptation Programme (NAP3) and the Fourth Strategy for Climate Adaptation Reporting is the Government's key strategic response to address the main risks and opportunities of climate adaptation. The National Adaptation Programme is the UK's key pillar in addressing adaptation to climate impacts and includes actions around forestry, flooding across the energy and transport networks, emergency planning and overheating in buildings. It recognised that disadvantaged communities across the country will be disproportionately impacted by these changes. Climate impacts can interact with each other, producing knock-on effects that can cascade through society. Existing disparities, such as income and health inequality are likely to become more severe and resources stretched to respond to our changing climate.

NAP3 was published one week after our draft Climate Resilience and Adaptation Strategy was agreed for consultation at the council cabinet meeting on 11 July 2023. We will consider it through the consultation process and as we prepare the final version of the strategy.

Other key national policies and frameworks include:

- The Climate Change Act 2008 as amended: This landmark legislation sets legally binding targets for reducing greenhouse gas emissions in the UK. The Act requires the government to set carbon budgets to meet long-term emission reduction goals. It also includes provisions for adapting to the impacts of climate change.
- The Environment Act 2021 introducing a mandatory requirement for 10% biodiversity net gain in most developments and for habitat to be secured for at least 30 years. This will strengthen the biodiversity objective for public authorities and introduce a requirement for local authorities to produce Local Nature Recovery Strategies.
- The National Flood and Coastal Erosion Risk Management Strategy (FCERM) guides the work of Risk Management Authorities to achieve the overarching vision 'a nation ready for, and resilient to, flooding and coastal change – today, tomorrow and to the year 2100'.
- The National Planning Policy Framework (NPPF) requires local authorities to have a duty to address climate change adaptation and to conserve and enhance the natural environment through their Local Plans.
- The 25-Year Environment Plan: This long-term plan sets out the UK government's vision for environmental improvement and sustainability. It includes commitments to protect and restore natural habitats, improve air and water quality, and address climate change impacts.
- Flood and Coastal Erosion Risk Management: The UK has various policies and strategies to manage flood and coastal erosion risks. This includes investment in flood defences, natural flood management measures, and community engagement to enhance resilience to flooding events.
- The Green Finance Strategy: This strategy promotes sustainable finance and investment in projects that contribute to climate adaptation and resilience. It aims to align private sector investments with the UK's climate and environmental objectives.
- Building Regulations and Standards: The UK has implemented building regulations and standards to improve the energy efficiency and climate resilience of new constructions and renovations.

London policy context

Climate change is already significantly impacting London's environment. According to the Greater London Authority (GLA), air in the city is so badly polluted that it is responsible for the early deaths of thousands of people every year, and for the poor health of many thousands more. Loss of natural capital means that almost half of Londoners have poor access to public open space, and water demand now outstrips supply. This is twinned with hotter temperatures (like the heatwaves seen in the summer of 2022) and increased flooding. London is also expected to be home to over 11 million people by 2050. The impact of these issues must be reduced now before they become a more significant problem for future generations.

The Mayor of London has recently commissioned an independent review of London's preparations for changes in extreme weather. The London Climate Resilience Review will identify actions to ensure the whole city is climate ready and blockages to adaptation and resilience action. The review is due to report at the end of 2023.

Key London policy documents include:

- London Plan 2021 is the Spatial Development Strategy for Greater London and sets out how London will develop over the next 20-25 years and consider climate change through planning.
- The London Environment Strategy (LES) sets out key flooding, drought and heat risks, and how they are interconnected with other systems, including policies delivered through the London Plan and Mayor's Transport Strategy. The LES also sets out a range of policies on greening, many of which are also streamed through into the London Plan.
- The London Resilience Strategy was published to identify the shocks and stresses that are likely to impact London from 2020 to 2050 and then highlight actions that can be taken to combat these threats to London's resilience. In this strategy, there are specific actions that relate to extreme heat management, using water sustainably, integrated circular water systems, and resilient and zero carbon infrastructure.
- Climate Change Adaptation Strategy: The GLA's Climate Change Adaptation Strategy for London focuses on preparing the city for the impacts of climate change, such as flooding, extreme heat, and water scarcity. It includes measures to enhance infrastructure resilience, protect green spaces, and promote climate-conscious urban planning.
- London benefits from the Thames Barrier which is a vital flood defence system protecting London from tidal surges and rising sea levels. The Thames Estuary 2100 plan was published in 2012. The plan aims to manage the risk of flooding and adapt to the challenges of climate change.
- Ultra Low Emission Zone (ULEZ): London's ULEZ aims to reduce air pollution and improve air quality by encouraging the use of low-emission vehicles within designated areas of the city.

The GLA has worked with Bloomberg Associates to create a Climate Risk Map that analyses exposure and vulnerability to climate change across Greater London. The map helps the public sector to target resources to support communities at highest risk of the impacts of climate change. 'Climate vulnerability' relates to people's exposure to climate change impacts like flooding or

heatwaves, but also to personal and social factors that affect their ability to cope with and respond to extreme events. High climate risk coincides with areas of income and health inequalities, such as areas in Peckham, Old Kent Road and Bermondsey.

Southwark policy context

In Southwark, the final Climate Resilience and Adaptation Strategy will form an integral component of our Climate Change Strategy and Action Plan once adopted in late 2023. Our ongoing efforts involve aligning all policies and strategies in Southwark with our climate strategies including work on resilience and adaptation.

There are a wide range of existing Southwark strategies and policies that impact this area:

Southwark Economic Strategy
An inclusive-growth-focused strategy that aims to capture the benefits of growth for Southwark residents and businesses, ensuring every resident who wanted to work would be able to do so, emphasising skills development through the Southwark Skills Strategy and supporting small business growth.

Southwark Plan
The Southwark Plan was adopted in February 2022 and is the regeneration and planning strategy for the borough. It directs development in Southwark from 2019 to 2036, with a particular emphasis on strategies and policies for effectively adapting to the impacts of climate change. This includes addressing enhancing resilience, and integrating sustainable design into new development and infrastructure.

Joint Health and Wellbeing Strategy
One of the principles of the strategy is ‘making sustainability and tackling climate change an integral part of protecting and improving health as it has a direct impact on the residents of Southwark and it is often those who are vulnerable who are most directly impacted.’

Southwark Heatwave Delivery Framework
This supports the borough in implementing actions from the UKHSA Heatwave Plan for England. It outlines processes for alert dissemination, delineates responsibilities, and provides guidance on utilising the Met Office Heat Health Watch system, all aimed at reducing health risks during severe heat for various stakeholders including public agencies, professionals, and local communities.

Southwark Skills Strategy
Outlines our vision for a high-quality local skills offer that includes green jobs that are needed to address climate adaptation and resilience.

Waste Strategy
The Southwark Waste Strategy outlines a comprehensive approach to managing waste within the borough. Through a set of strategic initiatives and policies, the plan aims to promote recycling, reduce waste generation, and enhance overall sustainability in waste management practices.

Sustainable Food Strategy
The strategy, co-developed with Southwark Food Action Alliance, will look at how to best improve access to healthy, affordable and sustainable food for all. It will set out sustainable practises such as local food growing, reducing food waste and minimising emissions from the food growing and delivery process.

Southwark Nature Action Plan
The Southwark Nature Action Plan is a partnership document that identifies the priorities for biodiversity in Southwark and sets out a programme of actions to conserve, promote and increase biodiversity across the borough.

Tree Management Policy
Southwark's Tree Management Policy highlights the importance of trees in climate change adaptation, emphasising their role in providing shade, mitigating heat, and absorbing carbon dioxide, aligning with Southwark's broader efforts to enhance climate resilience.

Tree Risk Management Strategy
The Tree Risk Management Strategy incorporates climate adaptation strategies, recognising the changing climate's potential impact on tree stability and outlining measures to ensure that Southwark's urban trees contribute to climate resilience while ensuring public safety.

Strategic Flood Risk Assessment
This document identifies the spatial variation in flood risk across the borough, allowing an area-wide comparison of future development sites with respect to flood risk considerations. One of the key objectives of the SFRA is to assess and map the distribution of flood risk from all sources across the borough, including an assessment of the potential implications of climate change.

Cold Weather Plan
This is a comprehensive strategy designed to address the challenges posed by winter weather conditions, ensuring the safety and well-being of residents by coordinating responses and resources effectively.

Streets For People
This strategy sets out a bold vision and a firm commitment to improve our residents’ quality of life and take action on climate change, by changing how we all travel and use streets in our borough.

Generic Emergency Plan
This document details how we comply with the Civil Contingencies Act 2004 and sets our strategy for dealing with a broad range of incidents.

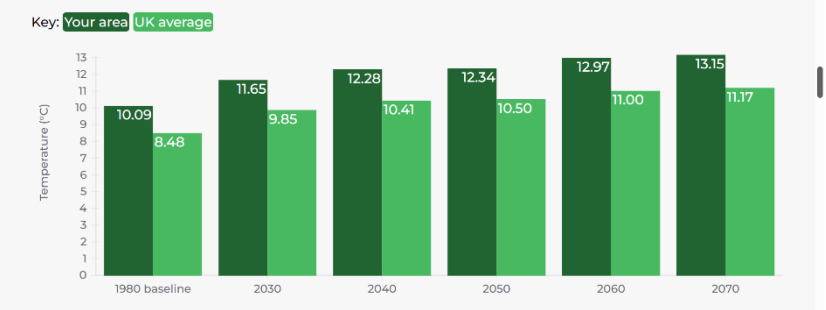
3. Key facts relating to a changing climate in Southwark

Overheating and extreme heat

Southwark has a high risk of excessive heating, particularly in the centre of the borough.[4] High heat is felt more significantly in areas with less tree canopy and lower levels of access to green open spaces. Urban areas can trap heat and raise local temperatures. This is known as the urban heat island effect. Our borough is also warmed by waste heat from housing and transport and these sources add to the Southwark's susceptibility to overheating. Dense urban areas also retain more heat which can result in the centre of London being up to 10°C warmer than rural areas.

Future climate change expected in Southwark under existing global policies is expected to increase average temperature by 3.06 degrees by 2070 which is almost higher by 2 degrees in comparison with the rest of the UK.[5] This will have negative impact across the borough. Figure 1 below illustrates estimated temperature increase by 2070 (equivalent to global warming level of 2.0-3.7C which is RCP 6.0), and shows the yearly temperature averages for Southwark vs the UK.

Figure 1: Yearly temperature averages for Southwark vs the UK between1980 and 2070



Analysis by Manchester University identifies the neighbourhoods in England that are most vulnerable to extreme heat.[6] Southwark has 91 priority neighbourhoods for adaptation and is in the top ten boroughs with the highest number of priority neighbourhoods for adaptation.

[4] https://data.london.gov.uk/dataset/climate-risk-mapping
[5] https://www.ecehh.org/research/local-climate-adaptation-tool/

[6] https://policy.friendsoftheearth.uk/sites/default/files/documents/2022-07/Neighbourhood_heat_data_sharable.xlsx

Figure 2: Local authorities with highest number of priority areas vulnerable to heat risk.

Local Authority name	Number of priority neighbourhoods for adaptation
Birmingham	210
Newham	154
Tower Hamlets	117
Hackney	111
Nottingham	101
Southwark	91
Leicester	85
Enfield	81
Ealing	79

Wildfires are becoming a far more prevalent risk as temperatures soar during summer. The London Fire Brigade saw a 128% increase in grass fires in 2022 compared to 2021.[7] Southwark had an 'exceptional' chance of fire risk during June and July of last year and this is expected to occur again. As well as negatively impacting health, large wildfires also release carbon dioxide which exacerbates climate change.

The health impacts resulting from higher temperatures can result in adverse mental health outcomes, increased dehydration, pregnancy complications, kidney function loss, skin malignancies, and tropical infections. These health impacts all disproportionately affect the most vulnerable in society. Increased temperatures may put additional stress on local health services, which in turn could lead to worse health conditions for Southwark residents.

Southwark is a borough that has a wealth of open space of different types including woodland, parks, community farms, Thames-side paths, and sports pitches. We protected more open spaces through the Southwark Plan (2022), however our Open Space Strategy notes that we need to increase the number of open spaces further so that we can meet the needs of an increasing and changing population and tackle urban heating and climate change.

[7] https://www.london-fire.gov.uk/news/2022-news/august/mayor-joins-the-brigade-in-urging-the-public-to-take-extra-measures-as-the-impact-of-extreme-weather-conditions-continue/

Flooding

Climate change is anticipated to have a significant impact on temperature, rainfall and seasonal changes within London. The latest predictions are for warmer, drier summers, and wetter winters, with appreciable changes anticipated through the 2020s. Flooding poses a risk to people, infrastructure, and ecosystems. 60% of Southwark residents live on land that is less than ten meters above sea level, and any changes in sea levels will have a direct effect on Southwark.

The expected impacts of climate change on various sources of flooding across Southwark include:

- Increased frequency and intensity of rainfall events is anticipated, which could lead to further groundwater flooding in the borough due to increased perched groundwater levels and associated spring flows. A perched water table is an aquifer that occurs above the regional water table.
- Surface Water and Sewer Flooding: Increased storm intensity, frequency and duration is anticipated to increase the pressure on existing drainage and sewer systems, potentially leading to more frequent localised flooding incidents. Surface water flooding occurs after heavy rainfall, when water cannot drain away or soak into the ground. In July 2021, Southwark was directly affected by two serious flash floods in two weeks. Across London, some areas received more than twice the average monthly rainfall in just two hours. Our emerging Local Flood Risk Management Plan will take an area-based approach to tackling localised flooding hotspots with new flood prevention measures.
- Tidal Flooding: Thermal expansion of the oceans and polar ice melt is anticipated to lead to rises in mean sea level, storm surge height and frequency, and wave heights, exacerbating the tidal flood risk to the borough from the Thames. Tidal surges occur when river levels rise, creating increased wind and low atmospheric pressure. London is currently protected from tidal surges by the Thames Barrier, but additional stress could weaken these defences.
- Fluvial Flooding: Changing rainfall patterns are likely to increase peak river flows, thereby increasing levels of fluvial flood risk across the borough. While fluvial flooding from the Thames is considered unlikely to be a problem (because fluvial flood levels are unlikely to overtop the defences), this may act to exacerbate levels of tidal flood risk.

Groundwater flooding happens when the level of water within the rock or soil making up the land surface rises significantly. Groundwater levels typically peak in Southwark during March, and if there is extremely heavy rainfall groundwater, basements and low-lying land can be flooded.

We work with key partners to understand the risk and steps that must be taken to reduce the future impact of flooding on our residents and businesses. We limit flooding in several ways. From requiring new developments to not increase flood risk on or off site by incorporating designs that are safe and resilient to flooding, through to implementing strategic sustainable urban drainage systems (SuDs) on highways and in parks.

Water scarcity

Water is an essential resource for our borough, however, extremes of weather and an ageing sewer system threatens water security. The Environment Agency has warned that within just 25 years, the southeast of England, including Southwark, could run out of water. Without protecting our water sources, we would experience severe economic, social and environmental consequences. The Environment Agency produced its Water Stress Areas Classification in 2021,[8] in which Thames Water was highlighted as having a 'serious' level of water stress. To remain sustainable, Southwark needs to reduce its level of water consumption.

Currently the average Londoner consumes 164 litres per day (ltr/d), which is around 20 ltr/d above the national average. Projections for population growth in London and in the wider south-east will mean that new strategic water resources will be required.

Droughts are when there is a prolonged period of below average rainfall, which leads to low levels of groundwater and reduced river flows. These impact both people and wildlife, and in London can build over period of months and years. Despite increased understanding of how they work, they are often hard to predict. The London Risk Register ranks drought as a 'high' risk.

Aquifer Depletion is when water held in underground layers of permeable rock is taken quicker that it can be replenished. In London, we have a large chalk basin aquifer. A key challenge for Southwark and across London is the impact of over-abstraction of water from aquifers as it risks not leaving enough water for wildlife and other uses. When there are water shortages, due to low rainfall or leaky pipes, water companies may increase abstraction to compensate which can lead to aquifer depletion.

Trade and food security

75,000 of Southwark's residents are food insecure.[9] This means they do not have enough money to buy food, must skip meals or cut down on quantities due to money, or do not have the money for a balanced diet. Climate change will increase food insecurity. The UK imports around 40% of its food so we will be affected by the changes happening in other countries. As food insecurity increases globally, we would expect to see price increases and increasing inequality in Southwark. Climate changes such as increased heats and flood risk will also impact businesses, so plans will need to be in place to protect our economy from the worst impacts of this.

[8] https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/998237/Water_stressed_areas___final_classification_2021.odt

[9] https://www.southwark.gov.uk/assets/attach/117530/2021-JSNA-Household-Food-Insecurity.pdf

Infrastructure failure: Extreme weather events will mean that our built infrastructure will be directly affected by the physical impacts of climate change. This will effect business and trade in the borough and could impact the ability of our residents to access their places of work.

Supply Chain Disruption: Supply chains both within Southwark and globally are being impacted by our changing climate. Floods, heatwaves, droughts and windstorms trigger cascading impacts that can be felt locally, but also far away from where the actual event is taking place.

Reduced Food Production: Climate change can impact on crops globally, which can affect food supply and cost in the UK. In 2022 weather patterns impacted on crop production across Europe impacting on supply and cost.

Social Vulnerability: Climate change is expected to exacerbate existing economic, social, and environmental challenges across the globe. Many of Southwark's residents have links to and come directly from these communities. Adaptation measures we undertake will need to take these experiences into account and support vulnerable residents who have been directly impacted by climate change oversees.

Social vulnerability is also likely to be exacerbated as our climate changes in Southwark. Already vulnerable communities, such as older people and children, are likely to be impacted. For example, hotter temperatures and increased levels of flooding are likely to put additional pressure on our health service, which means less support provided to those who need it.

There are 18 allotments in Southwark that are managed independently by voluntary organisations and are protected. We offer new community growing sites under our Allotment Expansion Guarantee as part of the Great Estates Programme.

Pests and diseases

London is experiencing an increase in pests and diseases because of a changing climate. This can affect human, animal and plant health. As temperatures rise and weather patterns become more unpredictable, pests and diseases can thrive in new and unexpected ways. This will also directly impact our borough.

Invasive non-native species: Species which are not usually found in the borough but are now found here can have a direct impact on our biodiversity. One of the most notable examples of invasive non-native species in London is the spread of the oak processionary moth. This moth, which is native to southern Europe, is now able to survive and reproduce in the warmer temperatures found in the UK. They can cause severe allergic reactions which we are already seeing increase across London.

Plants pests and diseases: The changing climate is also affecting the spread of plant diseases in London. For example, the warmer temperatures and increased rainfall in recent years have led to an increase in the incidence of sudden oak death, a disease that can kill a wide range of trees and shrubs. The disease is caused by a fungus-like organism that thrives in moist conditions and can be spread by wind and rain.

Changing disease risks from mosquitoes and ticks: Warmer temperatures could see non-native mosquito species establishing in parts of the UK, and the increase the risk of diseases they carry being transmitted to humans such as dengue, chikungunya and Zika. Ticks are also a public health concern, with Lyme disease already endemic in the UK. Milder winters and springs could lengthen the periods that ticks are active and biting, although it is also the case that warmer summers could limit their activity.

4. Related technical work ongoing at the council

Emerging Southwark plans and strategies include:

- New planning documents including climate, environment and design supplementary planning guidance and a partial review of the Southwark Plan.
- Local Flood Risk Management Strategy: A Local Flood Risk Management Strategy is a strategic document required under the Flood and Water Management Act (2010). It presents how flood risk will be managed locally by the Lead Local Flood Authority, in this case Southwark Council.
- Fuel Poverty Action Plan: This plan outlines the actions Southwark aims to deliver to address fuel poverty in the borough.

We undertake ongoing work with utility and infrastructure partners to ensure the resilience, future proofing and safety of the infrastructure within the borough.

Actions for improved biodiversity, habitat and green infrastructure are included in our adopted Climate Change Strategy and Action Plan and not covered in the Climate Resilience and Adaptation Strategy to avoid duplication.

5. Links to key documents

International

Intergovernmental Panel on Climate Change: 6th Synthesis Report – Climate Change 2023

Intergovernmental Panel on Climate Change: 6th Synthesis Report - Climate Change 2022: Mitigation of Climate Change

Intergovernmental Panel on Climate Change: 6th Synthesis Report - Climate Change 2022: Impacts, Adaptation and Vulnerability

UK policy context

UK Government: Climate Change Act 2008 as amended

Climate Change Committee: Progress in adapting to climate change – 2023 Report to Parliament (CCRA3)

Climate Change Committee: Third Climate Change Risk Assessment (CCRA3) Technical Report

UK Government: Third National Adaptation Programme (NAP3) and the Fourth Strategy for Climate Adaptation Reporting

UK Government: Environment Act 2021

UK Government: National Flood and Coastal Erosion Risk Management Strategy (FCERM)

UK Government: National Planning Policy Framework (NPPF)

UK Government: 25-Year Environment Plan

UK Government: The Green Finance Strategy

London policy context

Greater London Authority: London Plan 2021

Greater London Authority: London Environment Strategy

Greater London Authority: London Resilience Strategy

Greater London Authority: The London Climate Resilience Review

Greater London Authority: Climate Change Adaptation Strategy

Environment Agency: Thames Estuary 2100 Plan

Transport for London (TfL): Ultra Low Emission Zone (ULEZ)

Greater London Authority Climate Risk Map

Southwark policy context

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