

Cabinet

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Supplemental Agenda No. 1

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9. Climate Resilience and Adaptation Strategy
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APPENDIX 1

CLIMATE RESILIENCE AND ADAPTATION STRATEGY

Executive Summary

The climate emergency remains the challenge of our time, and time is running out. Since declaring a climate emergency in 2019, Southwark has developed and is now delivering a climate strategy and action plan with an ambition to do all we can to be a carbon neutral borough by 2030.

But even if global greenhouse gas emissions stopped tomorrow, the climate will continue to change. We need to improve our resilience to the impacts of climate change and adapt to meet the challenges. Making changes now will help prepare Southwark for the future. Ensuring these changes are made the right way will also contribute to living more sustainably and reducing our impact on climate change.

Extremes of weather, flooding, water scarcity, food insecurity and new pests and disease which threaten our biodiversity are all impacts of climate change that we are experiencing in Southwark. This strategy forms a new section of our climate strategy and sets out our ambitions for tackling each of these risks. To achieve a carbon neutral borough which has adapted and is more resilient to climate change we will:

- 1. Build resilience to overheating by cooling buildings, providing respite from heat and preparing for extreme temperatures.
- 2. Reduce the risk of flooding by improving drainage, reducing the demand on the sewer system and improving our flood defences.
- 3. Conserve more water and adapt our green spaces to be drought-resistant.
- 4. Improve food security by reducing wastage and increasing local supply.
- 5. Protect our biodiversity from new pests and diseases.

We will do this while remaining true to our values and our commitment to climate justice, reducing inequality and building a fairer borough for all.

We cannot achieve this alone and will only do so working with partners in London such as the GLA, London Councils and other boroughs. We will need to work with major organisations in the borough such as universities, schools and NHS trusts. We will partner with Government through DEFRA, the Environment Agency and others, and we will also work with local businesses, residents and all those committed to building a fairer and more sustainable Southwark.

This strategy outlines our five ambitions, which will inform the goals we set and the actions that we take. They will sit alongside the actions in the climate strategy, working together to tackle climate change and build our borough's resilience.

Introduction

The climate emergency remains the challenge of our time, and time is running out. Since declaring a climate emergency in 2019, Southwark has developed and is now delivering a climate strategy and action plan with an ambition to do all we can to be a carbon neutral borough by 2030.

Working with our communities, we have already made progress decarbonising buildings, making walking and cycling easier and delivering projects across the borough to reduce carbon and invest in a more sustainable future. It is right that our top priority remains to reduce carbon to slow and eventually stop the warming of the planet and the catastrophic effects of climate change. However, too much damage has already been done. Even if the world stopped producing carbon and other greenhouse gases tomorrow, the increased carbon already in the atmosphere means the planet will continue to warm and it will take many thousands of years to return to pre-industrial temperatures.ⁱ

While we need to redouble our efforts to reduce carbon and move to a net zero future, we also need to adapt for a warmer world and ensure we are resilient to the changes that are already happening. We also expect those changes to continue to intensify in the coming years.

The worst impacts of climate change will not impact everyone equally and will exacerbate existing economic and social inequity. Research from CDP in 2023 shows that 92% of low-income households are among those that will be most affected by climate-related risks including flooding and heatwaves. This is followed by older people (85%), children (73%) and minority communities (65%). Our commitment to climate adaptation and resilience must focus on these groups who are most affected but often have the least resource to mitigate against the impact. We also recognise that climate change adversely impacts those who have made the least contribution to the increase in carbon emissions.ⁱⁱ

According to the Climate Change Committee (CCC), no single sector in England is prepared for the impacts of climate change, with the last ten years being a "lost decade" for government action.ⁱⁱⁱ

We recognise the challenge from the Climate Change Committee and have developed this resilience and adaptation strategy to ensure that in Southwark no more time is lost. This strategy should be considered alongside our climate strategy and shows how we plan to create a more resilient borough that can overcome the current and future impacts of climate change in a just, equal and fair manner. It formalises our approach through a list of clear and defined actions that will focus on how we best prepare the borough and its residents for a changing climate. It builds on work already taking place to adapt the borough in the face of a changing climate, through work on flooding, overheating, biodiversity and many other areas.

Our aim is to create a borough that does not passively endure climate change but acts to limit its impacts and do so in a way that contributes to a reduction in carbon emissions. Our aim is to do this working with our residents, businesses, schools, institutions and everyone who lives, works and cares about Southwark and its future.

This strategy appends to the Southwark Climate Change Strategy "Tackling the Climate Emergency Together". It contains new actions for our climate action plan and builds on the work we are doing to reduce carbon, to also ensure the borough is prepared and resilient for the effects of climate change. This strategy sets out a new dimension to our climate work, but does not change our overall approach or the values that drive us. We intend for this to be viewed alongside the Climate Change Strategy to give a complete picture of our ambition and plan to tackle the climate emergency together and build a more resilient future for Southwark.

What is resilience and adaptation?

The Mayor of London's resilience strategy^{iv} defines resilience as the capacity of communities and systems to survive, adapt, and thrive no matter what kinds of chronic stresses and acute shocks they experience. A recent example of where resilience was tested would be the COVID-19 pandemic, where communities and systems were under considerable pressure in the face of unprecedented changes.

Adaptation refers to communities and systems adjusting how they operate in response to actual or expected impacts of change. Both resilience and adaptation are important in relation to climate change. Our borough will have to be resilient to unexpected and unpredictable environmental conditions, and will have to adapt how it behaves and operates to ensure that it continues to thrive. There is also an opportunity to change in a way that creates a more just and equal Southwark.

The impacts from climate change are wide ranging and can affect both natural and human systems. We must consider how extreme changes in the weather will affect the lives, livelihoods and health of our residents, and the ecosystems and economy within our borough.

The impacts of climate change do not affect all people equally. Economic and social inequalities are exacerbated and sometimes even caused by our changing climate. It is therefore necessary to implement preventative adaptation strategies in a way that is fair and proportionate to the impacts felt. In no way should adaptation to the way we live be to the detriment of communities already affected by climate change.

Why do we need this strategy?

As set out in our climate strategy, Southwark is already seeing the impact of climate change. All ten of our warmest years have occurred since 2002, whereas none of the ten coldest years has occurred since 1963. Summer heatwaves are now 30 times more likely than they would be without climate change. Climate change means UK temperatures are set to become more volatile with more extremes of both heat and cold.

We are already experiencing the effects of climate change in Southwark and this is set to worsen. Adapting the borough and strengthening our resilience is a crucial part of our response to the climate emergency.

Deaths due to heat are expected to rise by two thirds in the next decade, and increased death rate will also be associated with extreme cold. Burning fossil fuels in cars, heating and industry is also polluting the air we breathe as well as contributing to climate change. In Southwark, already around 72 deaths occur due to air pollution every year. vi

60% of Southwark's residents live on land less than ten meters above sea level, any changes in sea levels will therefore have a direct effect on Southwark. Current flood defences will need to be renewed in the future.

An estimated 75,000 of Southwark's residents are food insecure. VII Climate change will increase food insecurity and we can expect this to affect prices and create greater food inequality in Southwark.

Southwark is a proudly global borough. This means many of our residents are connected to friends and families around the world who are affected by conflict and migration caused by food shortages, water shortages and extreme weather. Climate change and ecological damage will increase this forced migration that will affect residents here in Southwark.

Climate justice and health inequalities

We recognise that the impacts of climate change do not affect everyone equally. Shocks from emergencies and disasters exacerbate existing inequalities around poverty, race, gender, health and disability. Southwark is home to some of the most and the least deprived areas in the country. Median household income in Dulwich at £74,000 is more than twice that of Old Kent Road at £33,000.

25% of residents in Southwark are Black, Black British, Caribbean or African backgrounds and 28% of these experience food insecurity, compared with 9% of white residents in the borough.

The Covid-19 pandemic laid bare the inequalities that exist in our society, and how these adversely affect those who experience social and economic hardships, as well as for older people or those who have health problems.

Climate adaptation and resilience is necessary to make sure our communities, services and infrastructure are able to withstand shocks from climate change. During the Covid-19 pandemic, local organisations, community groups and the council were able to mobilise to provide urgent support for those who needed it the most. This was possible because they were already embedded in communities across Southwark. To build resilience to climate change for our communities, we need to use these same networks and expertise and target interventions to benefit those who most need support.

Southwark's approach

Climate resilience and adaptation can cover a huge breadth of issues, from flooding to the impact of global migration. To ensure that this strategy is focused and actions can be delivered, it considers key areas where the actions that we take can make the borough more resilient. It ensures these actions also tackle factors that contribute to climate change. The strategy focuses on solutions that as a borough, we can deliver or influence and the partners we can work with. For example, the strategy does not try to tackle global food supply chains but looks at what we can do to ensure a greater use of locally sourced food.

Climate risk will increase as global temperatures rise from the levels we experience today through to higher temperatures at the end of this century. We will make sure we take the impact of these higher temperatures and increased risk into account as we deliver and plan new and existing services for our residents and invest in our buildings, places and neighbourhoods.

Whilst we recognise that there is a certain amount of uncertainty associated with future climate change projections, we have to plan for change. Every five years, the CCC produces an assessment of national climate change risk called the Climate Change Risk Assessment. The third and most recent climate change risk assessment, CCRA3, was published in 2022 and it assesses the urgency of adapting to the climate risk using our current climate and two future climate scenarios that model future temperature rises. These are:

- (1) A +2°C increases in global mean temperature by the middle of the century (2050), representing a medium-high emissions scenario in carbon emissions. This would result in warmer temperatures with a greater number of hotter days and less rainfall in summer than today. Our weather would also be stormier with heavier rainfall when it does rain and higher chances of flooding.
- (2) A +4°C rise in global mean temperatures at the end of the century (2100), which is the scenario that is consistent with the current limited global ambition for reducing carbon emissions. This scenario would result in more days above 40°C and summer mean temperatures being significantly warmer. Sea levels will have risen by at least 1 metre and this will require long term, collaborative approach within London. Peak river flows will be more extreme due to heavier storms, yet periods of drought will also take place with lower average rainfall in the summer.

The CCC advises that we should plan for the +2°C temperature increase by 2050 and assess risk for the +4°C temperature rise scenario by 2100. We will do this by taking an adaptive, flexible approach to the delivery of our strategy, where we will frequently review and update it as new data, technology and approaches become available. An example of being flexible is our planned major refresh of our Climate Change Strategy in 2025, which will enable us to review how we are adapting and take into account better data.

The strategy considers five themes, which are consistent with the latest national Climate Change Risk Assessment (CCRA, 2022): overheating, flooding, water scarcity, pests and diseases, and loss of natural capital. The sixth theme from this

report, 'Thriving Natural Environment', has a dedicated section in the Climate Strategy and Climate Change Action Plan, so is not covered here. We will consider further themes through our adaptive approach.

Taking action

Our strategic approach to taking action is underpinned by the need to respond to the impacts of a +2°C global mean temperature increase by 2050. We are committed to the following principles:

1. Delivery

We want to ensure our borough is fair, equal and for everyone. As climate change will affect those who are most vulnerable, we will focus our efforts on working with the residents and neighbourhoods that are most at risk. Neighbourhoods at the centre of Southwark have been identified to be most vulnerable to climate risk (London Climate Risk Map, GLA, 2022). The red areas in the Figure 1 below illustrate this high climate risk coinciding with areas of income and health inequalities.

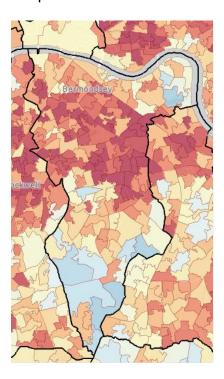


Figure 1: London Climate Risk Map showing Southwark (Source: https://data.london.gov.uk/dataset/climate-risk-mapping)

Improving climate adaptation and resilience will inform the decisions we take as a council alongside our other polices and priorities. We will ensure new plans and strategies consider climate risk at the earliest opportunity and seek opportunities to realise co-benefits and efficiencies.

We will continue to engage and collaborate with our residents and neighbourhoods through our programmes, stakeholder panels and other engagement methods such as our annual climate day.

In delivering the strategy, we will act at different scales within the borough. This means we will focus on people and the buildings that they live in and use, through to our public realm, our parks and neighbourhoods. We will also address risks that affect our entire borough. To do this we will work closely with our partners and neighbouring boroughs, as risks of this magnitude will require a coordinated approach.

We will leverage funding and investment to deliver the actions in this plan and make best use of the resources we have.

2. Data

We will continue to identify climate risks and their potential impacts so we can work out how will manage them in our decision-making and through our actions. We must be sufficiently flexible to ensure our decisions do not have long-lasting consequences that create obstacles for future adaptation.

We will underpin our response and preparations for climate change by using the best available evidence and data to identify and tackle the climate risks. For example, we will continue the development of digital tools to inform our work and decisions by building on our partnerships within the borough and across London, such as the London Climate Risk Map

3. Coordination

We will continue to take an integrated approach for the governance of this strategy within the council and work to align this with other council strategies. We will seek out opportunities to reduce emissions and climate risks at the same time.

We recognise that although we do not own or manage important all infrastructure within our borough (e.g. the electricity grid, Rotherhithe Tunnel, the TfL 'red route' network) we are a key partner to those who do. We will work closely with our partners to futureproof infrastructure.

We will continue to work collaborate with London Councils and other London boroughs to learn, establish and share climate adaptation and resilience best practice across London.

Themes

Our vision is for a borough resilient to climate impact. To achieve this, we have considered themes identified by the CCC and aligned our resilience and adaptation strategy with them.

Overheating

Southwark has a high risk of excessive heating, particularly in the centre of the borough. High heats are felt more significantly in areas with less tree canopy and a lower level of access to green open spaces. It is also felt more strongly in urban areas, due to the Urban Heat Island effect. Our borough is also warmed by waste heat from our heating sources, housing and transport.

Heatwaves – The average summer temperatures in London are predicted to keep rising. Dense urban areas also retain more heat which can result in the centre of London being up to 10°C warmer than rural areas.

Wildfires – 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. ix Southwark had an 'exceptional' chance of fire risk during June and July 2022 and this is expected to occur again. As well as negatively affecting health, large wildfires also release carbon dioxide that exacerbates climate change.

Health Impacts – Higher temperatures have resulted 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.^{xi} Increased temperatures may put additional stress on local health services, which in turn could lead to worse health conditions for Southwark residents.

We will build resilience to overheating, by cooling buildings, providing respite from heat and preparing for extreme temperatures.

Flooding

60% of Southwark residents live on land less than ten meters above sea level, and any changes in sea levels will have a direct effect on Southwark. Southwark is protected from tidal and river flooding by various flood defences including the Thames Barrier, but with increased sea levels these may no longer be effective and stakeholders in the borough must do more to reduce the future impact of flooding on our residents.

Surface Water Flooding - 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. Xii Surface water flooding occurs after heavy rainfall, when water cannot drain away or soak into the ground. This is a particular problem in urban areas.

Tidal Surges – 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.

Sewer Flooding - Southwark has a mostly Victorian sewer network. This network was designed to serve four million people, but London's population is estimated to

increase to 16 million by 2160.xiii Currently, even light rain causes untreated sewage to enter the Thames and into surrounding streets and more intense rainfall will put further pressure on our sewage system.

Groundwater Flooding - Flooding from groundwater 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, basements and low-lying land can be flooded.

Action is already being taken, for example the council have planning conditions that developments must not increase flood risk on or off site by incorporating designs that are safe and resilient to flooding. Southwark Council is continuing to implement strategic sustainable urban drainage systems (SUDS) on highways and in parks. We have plans to increase the replacement of hard surfaced areas with permeable and green space, as well as increasing irrigation frequencies of newly planted trees to ensure their successful establishment.

We will reduce the risk of flooding by improving drainage, reducing the demand on the sewer system and improving our flood defences.

Water Scarcity

Extreme 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, 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.

Drought - Droughts are when there is a prolonged period of below average rainfall, which leads to low levels of groundwater and reduced river flows. These affect 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 - An aquifer is an underground layer of permeable rock, which can hold and transport water to and from rivers and other water sources. 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. 'Over-abstraction', taking water faster than it can be replaced, risks not leaving enough water for wildlife. 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.

It is essential that people in Southwark and across the country treat water as a valuable asset, reducing consumption and reducing waste. We need to find new ways to capture rainwater and other grey water for non-drinking purposes. This not only ensures our water is maintained, but also reduces the energy and carbon emissions associated with managing wastewater and supplying fresh water.

We will conserve more water and adapt our green spaces to be droughtresistant.

Trade and food security

75,000 of Southwark's residents are food insecure, which 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^{xiv} 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 heat and flood risk will also affect businesses, so plans will need to be in place to protect our economy from the worst impacts of this.

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

Supply Chain Disruption - Supply chains both within Southwark and globally are being affected 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 affect crops globally, which can affect food supply and cost in the UK. In 2020 weather patterns affected wheat production leading to reduced supply and increased 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 or 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 overseas.

We will improve food security by reducing wastage and increasing local supply.

Pests and diseases

London is experiencing an increase in pests and diseases as a result 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 affect our borough.

Invasive non-native species – Species who 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. It can cause severe allergic reactions which we are already seeing increase across London.

Climate-sensitive diseases – Diseases resulting for pests are also likely to rise. Warmer temperatures are allowing species such as the Asian Tiger Mosquito to survive and reproduce in the UK. This mosquito can transmit diseases such as dengue fever and chikungunya, which were once rare in the UK but are now becoming more common.

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.

We will protect our biodiversity from new pests and diseases.

Wider benefits

Making a more resilient borough not only mitigates against the main impacts of climate change, it also potentially enables us to further reduce our carbon emissions and deliver other benefits to our residents.

Greener buildings – Improvements to buildings are needed to protect against extremes of hot and cold. Greater energy efficiency to enable people to stay warm will make our homes and residents more resilient but also reduce energy demand and fuel poverty.

Biodiversity and air quality – Through implementing greening measures to manage climate risks such as improved shade and canopy coverage, we will also support our local ecology and wildlife. Air quality can also be improved through greening our borough which impacts on health and wellbeing.

Water scarcity – By taking steps to reduce demand for water and preventing flooding, we reduce water run-off and risk of water pollution. We also reduce energy demands by using less water which reduces our overall carbon emissions.

Cost reduction and risk limitation – Steps to protect the borough from extremes of weather and flooding reduces risk for businesses, making the borough a more attractive place for them. This benefits the local economy and jobs and helps Southwark to thrive.

Health – Lessening the impact of climate change can improve health outcomes for Southwark. The shocks that climate change causes are a risk to mental and physical health which is reduced as we become more resilient. We are also better prepared to deal with new diseases that are introduced due to climate change.

Policy Context

To deliver this plan, we will work with national and regional government and their plans for climate resilience. This includes understanding and working in the context of the latest National Adaptation Programme and also the London Environment Strategy (LES) and the London Resilience Strategy.

Within Southwark, this strategy forms part of the climate change strategy. We are currently working to ensure that all Southwark policies and strategies are aligned with the climate strategy. This will continue with the addition of this resilience and adaptation work. This will include:

- Streets for People Strategy, which includes our walking, cycling and electric vehicles plans
- Southwark Plan
- Buildings Strategy (upcoming)
- Southwark Economic Strategy
- Air Quality Strategy
- Cold Weather Plan
- Local Flood Risk Management Strategy
- Fuel Poverty Action Plan (upcoming)
- Southwark Heatwave Delivery framework
- Joint Health and Wellbeing Strategy
- Partnership Southwark Health and Care Plan
- Outbreak Prevention and Control Plan
- Sustainable Food Strategy
- Waste Management Strategy
- Tree Risk Management Strategy
- Tree Management Policy
- Southwark Nature Action Plan, and the future Local Nature Recovery Strategy and Biodiversity Plan

Action Plan

Work is already underway to deliver this priority area. The themes and goals below show what we need to achieve to reach our vision together with the immediate actions that we need to take. Alongside this work, we will continue to develop new actions to ensure we stay on track to reach our goals and reduce carbon emissions:

We will build resilience to overheating, by cooling buildings, providing respite from heat and preparing for extreme temperatures.

To tackle climate change and be a better adapted and more resilient borough, our goals are that:

- Residents can get respite from the heat at times of excessive temperatures
- Buildings stay cool while minimising their carbon emissions

- The borough's infrastructure is adapted to cope with extremes of heat
- Support vulnerable communities are supported to be resilient to the impacts of climate change

We will reduce the risk of flooding by improving drainage, reducing the demand on the sewer system and improving our flood defences.

To tackle climate change and be a better adapted and more resilient borough, our goals are that:

- Reduce surface run off and increase the amount of land which drains water
- Reduce demand on the sewer system
- Improve flood defences with more sustainable drainage systems

We will conserve more water and adapt our green spaces to be droughtresistant.

To tackle climate change and be a better adapted and more resilient borough, our goals are that:

- Improved water conservation, including greater use of rainwater and grey water
- Parks, gardens and green spaces are adapted to be drought resistant

We will improve food security by reducing wastage and increasing local supply.

To tackle climate change and be a better adapted and more resilient borough, our goals are that:

- Strengthened local economy, with an increase in local trade and reinvestment in our local economy
- Local food suppliers and local food production is maximised
- Capacity for communities to share food and reduce food waste is increased

We will protect our biodiversity from new pests and diseases.

To tackle climate change and be a better adapted and more resilient borough, our goal is that:

• Protect the local community from new and existing pests and diseases

Partnership

We cannot tackle the climate emergency alone and need to work with residents, businesses and other partners to reduce carbon emissions and deliver a more resilient future.

<u>Business</u> – Southwark has a thriving local economy, from small businesses to major global corporations, all of which contribute to Southwark and our future. We will work with businesses to encourage them to diversify their supply chains to be more resilient to shocks, as well as to decarbonise their supply chains. Businesses will manage buildings throughout the borough, and we can work with them to help make them cooler and more resilient and find sustainable solutions to overheating.

<u>Residents</u> – We will continue to work with our residents when planning changes to the borough to make it more resilient. Our residents have an important role to play in how we implement changes, from increased tree coverage to changing surfaces to aid drainage. As part of our overall engagement approach, we will ensure residents are central to the work we do.

<u>Institutions</u> – Southwark is home to many large, world leading institutions, from major hospitals to global universities. We have over one hundred schools and many other public and private institutions who as major employers and managers of large buildings and sites in the borough, are key to tackling the climate emergency. As they develop their own climate and resilience plans, we will work with them to encourage alignment and find opportunities where we can have greater impact by working together. We will explore how we can use public buildings differently to increase our resilience and how the activities in these institutions can contribute to tackling climate change.

Next Steps

The list of goals above have been used to develop the actions we need to take. These have been developed incrementally, but there will also be further new actions that may become a focus in the future and will be considered accordingly as we take an adaptive approach. We will report on progress as part of our reporting on our main Climate Change Strategy and Action Plan.

Beyond the council's own actions, there must also be a focus on what other partners and stakeholders can action themselves, from central government through to residents. This highlights how important collective action will be. Central government need to significantly increase the level of funding available, and businesses need to help identify and maximise opportunities in this area.

¹ The Royal Society, "If emissions of greenhouse gases were stopped, would the climate return to the conditions of 200 years ago?"

ii CDP, Building Local Resilience (March 2023). https://cdn.cdp.net/cdp-production/cms/reports/documents/000/006/915/original/CDP_UK_Cities_Report_EN_%282%29.pdf?
https://cdn.cdp.net/cdp-production/cms/reports/documents/000/006/915/original/CDP_UK_Cities_Report_EN_%282%29.pdf?
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https://cdn.cdp.net/cdp-production/cms/reports/documents/docum

iii The CCC, Progress in Adapting to Climate Change 2023 Report to Parliament

iv London City Resilience Strategy

^v The Met Office, "Chance of summer heatwaves now thirty times more likely"

vi Air Quality JSNA 2022

vii Annual Report JSNA 2022

viii Greater London Authority, Heat

ix London Fire Brigade, "Mayor joins the Brigade in urging the public to take extra measures as the impact of extreme weather conditions continue"

^x The Met Office, England and Wales Fire Severity Index

xi UCL, "Feeling the heat? How climate changes affect our health and working lives"
xii "Mayor warns Londoners in basements about flooding risk"
xiii Tideway London, "Why London needs a super sewer"
xiv United Kingdom Food Security Report 2021: Theme 2: UK Food Supply Sources

APPENDIX 2

Theme Reference	Action Point Reference	Thome	Goal	Action point	Lead Cabinet Member	Director	Team leading action	Supporting Team	Any work completed to date?	Milestone	КРІ	Planned Date for Milestone Completion	Milestone Target Date	Major Risks to Milestone
		Broad area of activity (key at bottom of page)	More specific area of activity	Most granular level of activity	Councillor responsible for action	Director accountable for action	The team leading on this action	The team supporting on this action	The work that has been completed to date on this action	The key milestone(s) that are approaching for this action	How progress will be measured against the upcoming milestone(s)	When will the milestone(s) be complete	Milestone Target Date	The major risk(s) to the milestone(s) being completed
A	A1	Resilient to the impact of overheating	Residents can get respite from the heat at times of excessive temperatures	Increase the number of cool spaces, ensuring good coverage in the parts of the borough that are most at risk from high temperatures.	Clir McAsh / Clir Akoto	Chris Page / Sangeeta Leahy	ССТ	Public health, CFM	None to date	Increase the number of 'cool spaces' in our buildings.	Double of number of new cool spaces by 2026 - Actual number	2024	2026	Resource
A	A2	Resilient to the impact of overheating	Residents can get respite from the heat at times of excessive temperatures	Provide social care workers who visit vulnerable residents in their homes with improved means of monitoring home temperatures.	Cllr Akoto / Cllr Ali	Alisdair Smith / Pauline O'Hare	Public Health		Research undertaken by Public Health team	Agree pilot project for monitoring devices	Pilot project delivered	2024	2025	Resource
A	A3	Resilient to the impact of overheating	Residents can get respite from the heat at times of excessive temperatures	Improve insulation standards in district heating pipes to decrease heat and temperature losses in the pipe networks within buildings	Clir McAsh / Clir Merrill	David Hodgson	Housing (DH)		District heating pipework project at Aberfeldy House has commenced to reinsulate pipes. Furthers quotes will be sought to cost project.	Requote for the Aberfeldy House pipework project. Identify and scope up next projects.	Aberfeldy House project delivered	2024	2025	Resource
A	A4	Resilient to the impact of overheating	Residents can get respite from the heat at times of excessive temperatures	Ensure our parks provide shading for our residents as our summer weather gets hotter.	Clir Rose	Director of Leisure	Parks & Natural Environment Policy and Programmes team	Planning, New Homes/Southwark Construction	Ongoing park refurbishment programme	Consider hotter weather as a design consideration in our designs.	Pilot shading in an planned project.	2026	2025	Budget
A	A5	Resilient to the impact of overheating	Buildings stay cool while minimising their carbon emissions	Expand the Green Homes Advice Service to help residents deal with overheating by retrofitting their homes.	Clir McAsh	Chris Page	сст		The green homes advice service is up and running in parthership with London Southbank University (LSBU) and work has been undertaken to determine how best advice around overheating could be targeted	Launch overheating advice for residents	Number of residents receiving advice about overheating for their home	2024	2024	Resource
A	A6	Resilient to the impact of overheating	Buildings stay cool while minimising their carbon emissions	Review Southwark Plan policies to ensure new development takes further steps to milmite and militigate the risk of overheating, and provide planning guidance on climate adaptation design for buildings and places through new and updated Supplementary Planning Documents (SPDs).	Cllr Dennis	Stephen Platts	Planning Policy		Mapping out of evidence base needed to implement policy changes for the partial review of the Southwark Plan Initial drafting and research of some SPD chapters including energy	Completion of evidence base ahead of consultation Completion of first draft of Climate and Householder SPDs for internal consultation Completion of final draft for Members Publish for consultation	Once the evidence is complete policy will be drafted for formal consultation Creation of document	2024	2024	Resource
A	A7	Resilient to the impact of overheating	Buildings stay cool while minimising their carbon emissions	Develop an approach to tackling 'hot homes' so residents who are most vulnerable to this issue have cooler homes.	Cllr Merrill	David Hodgson	Asset Management, Public health	Climate Change	None to date	Scope a project plan for a multi team approach to tackling hot homes for most vulnerable.	Plan in place with prioritised homes.	2025	2024	Resource
A	A8	Resilient to the impact of overheating	Buildings stay cool while minimising their carbon emissions	Work collaboratively to collect and develop data and digital tools so we can better understand and plan for current and future climate risk.	Clir McAsh	Chris Page	сст		Ongoing work with London Councils, GLA and Bloomberg to look at borough climate risk mapping	Undertake climate risk mapping and identify new data sources	Publish borough climate risk map	2024	2024	Resource
A	A9	Resilient to the impact of overheating	The borough's infrastructure is adapted to cope with extremes of heat	Prepare a wildfire emergency plan	Cllr Williams (as emergency planning lead) / Cllr Dennis / Cllr McAsh	Andy Snazell	Emergency Planning		No work completed to date	Create a wildfire plan to respond to any wildfires. Identify high risk areas (such as grasslands in parks) and mitigations.	Plan prepared	2024	2024	Resource
A	A10	Resilient to the impact of overheating	The borough's infrastructure is adapted to cope with extremes of heat	Update he Southwark Streetscape Design Manual to include climate adaptation through sustainable design, incorporating instruction to the state of	Clir McAsh	Matt Clubb	Highways		The new Highways contract is up for renewal before May 24, plans and progress need to be made prior to this selection	Prior to the selection of the next highways contractor, the Southwark Streetscape Design Manual needs to be reviewed to include climate adaptation through sustainable design, incorporating nature based solutions that are more resilient to climate change.	climate	2024	2024	Resource
A	A11	Resilient to the impact of overheating	The borough's infrastructure is adapted to cope with extremes of heat	Develop a Highways Heat Network for sanding roads during periods of extreme high temperatures.	Clir McAsh	Matt Clubb	Highways		A cold network exists which could be replicated	Look to make changes to contracts to include sanding machines so that the machines are available and can be deployed in the event of hot weather	Contracts obtained/ amended to include sanding capable machines	2024	2024	Resource / unavailability of necessary machinery
В	B!	Reducing the risk of flooding	the amount of land which drains water	Adopt a new Local Flood Risk Management Strategy that recognises the need to adapt to future climate impacts, and increase the capacity of sustainable when drainage systems in the borough and ensure that the approach is integrated and the strategy of the production of the control of societies integrated solutions.	Dennis	Matt Clubb	Flood team / Policy & Programmes within Leisure	Parks & Natural Environment, Planning Policy	Preparation of a SUDs programme has commenced. The Strategy is due to go to cabinet in early 2024.	Finalise SUDs programme for projects that use permeable materials to allow arranvaler to infiltrate the ground, reducing runoff Strategy approved at cabinet.	delivery commenced. Adoption of Strategy	Ongoing	2024	Resource
В	B2	Reducing the risk of flooding	Reduce demand on the sewer system	Ensure at least 10% of the footprint of new highway and public realm projects is blue-green infrastructure. (Blue-green infrastructure is an interconnected network of natural and designed landscape features that includes water bodies and green and open spaces.)	Clir McAsh	Matt Clubb	Highways		This is already the target, looking for evidence of completion before increase target to 30, then 50%	All projects to demonstrate at least 10% of blue/ green infrastructure	All projects for the last 6 months to demonstrate 10%	Ongoimg	2024	Resource

Theme Reference	Action Point Reference	Theme	Goal	Action point	Lead Cabinet Member	Director	Team leading action	Supporting Team	Any work completed to date?	Milestone	КРІ	Planned Date for Milestone Completion	Milestone Target Date	Major Risks to Milestone
		Broad area of activity (key at bottom of page)	More specific area of activity	Most granular level of activity	Councillor responsible for action	Director accountable for action	The team leading on this action	The team supporting on this action	The work that has been completed to date on this action	The key milestone(s) that are approaching for this action	How progress will be measured against the upcoming milestone(s)	When will the milestone(s) be complete	Milestone Target Date	The major risk(s) to the milestone(s) being completed
В	В3	Reducing the risk of flooding	Reduce demand on the sewer system	Explore options for a Riverside Strategy for borough riverside defences.	Cllr Dennis / Cllr Rose	Matt Clubb	Flood team		No work completed to date	Project team assembled of internal and external stakeholders to discuss need Riverside Strategy	First meeting of project team held before June 2024	2024	2024	Resource
В	B4	Reducing the risk of flooding	Reduce demand on the sewer system	Update our Strategic Flood Risk Assessment to ensure it takes into account increased risk from a changing climate.	Cllr Dennis	Steve Platts	Planning Policy	Flood Team	To be commissioned early 2024	Commission consultant to prepare SFRA	SFRA update complete	2024	2024	Resource
С	C1	Water is conserved and not wasted	Better conservation of water including greater use of rainwater and grey water	Roll out best practice water saving measures across the council's buildings, operations and spaces	Clir Rose	Chris Page / Director of Leisure	CCT / Leisure		No	Undertake baseline exercise to understand existing water consumption and to inform next steps Work with colleagues in leisure to reduce consumption in council-managed leisure centres	Scope baseline exercise	NA	2025	Resource
С	C2	Water is conserved and not wasted	Better conservation of water including greater use of rainwater and grey water	Prepare and adopt planning guidance to minimise water use through relevant new Supplementary Planning Documents (SPDs)	Clir Dennis	Stephen Platts	Planning Policy	Climate Change	Initial drafting and research of some chapters including energy	Completion of first draft for internal consultation Completion of final draft for Members Publish for consultation	SPD to go to formal consultation and then adoption	2024	2024	Resource
С	C3	Water is conserved and not wasted	Parks, gardens and green spaces are adapted to be drought resistant	Explore options to adapt public parks, gardens and green spaces to be drought resistant	Clir Rose	Director of Leisure	Parks & Natural Environment Policy and Programmes team		A transformative approach aimed to combat water scarcity has been delivered over the past rine years in Southwark introducing drought-resistant plant species as well as grouping plants based on their water requirements. Feasibility study completed to identify climate mitigation measure at cemeteries including tap replacement.	Implementation of smart irrigation controllers that will adjust watering schedules based on real-time weather conditions and soil mieisture levels, thereby enhancing water efficiency in green spaces. Explore rainwater harvesting for a pond in the Surrey Canal walk and to water a new forest at Consort Park. Replacement of taps in cemeteries with tap water turn off automatically to reduce water waste.	100% of all species drought resistant where required Completion of feasibility studies	Ongoing 2024-25	2025	NA NA
D	D1	More sustainable locally sourced food and resilient local economy	Strengthened local economy, with an increase in local trade reinvesting in our local economy	Work with business and public sector partners to plan for and prevent impacts from climate-related events on the local economy, such as extreme heat and flooding.	Clir Seaton	Danny Edwards	Local Economy Team		No work completed to date	Engage business about current extreme weather and supply chain preparedness	Hold meetings with BIDs and stakeholders	2024	2024	Resource
D	D2	More sustainable locally sourced food and resilient local economy	Strengthened local economy, with an increase in local trade reinvesting in our local economy	Undertake climate risk assessments on our services and ensure they are resilient so that the most vulnerable can access them, including conducting an extreme weather risk assessment for Southwark Council's workforce.	Clir McAsh/Clir Williams	Chris Page / Ben Plant	Human Resources / Climate Change Team	Emergency Planning	None	Undertake research on how council services will be impacted by overheating Review emergency planning and health and safety policies with regards to extreme weather	Meet with key stakeholders to agree a framework around corporate response to extreme weather	2024	2025	Resource
D	D3	More sustainable locally sourced food and resilient local economy	Local food suppliers and local food production is maximised	Use the Sustainable Food Strategy to protect and increase food growing spaces in the borough	Clir Akoto	Sangeeta Leahy	Public Health		Food strategy published June 2023 - 200 new food-growing plots in the borough	Increase the number of food growing plots in the borough by 30	Number of food- growing plots	2024	2024	Resource, space for plots
D	D4	More sustainable locally sourced food and resilient local economy		Map emergency food provision in the borough for different food cultures and identify how to fill in gaps in food security for the diverse communities in the borough	Clir Akoto	Sangeeta Leahy	Public Health		Food strategy published June 2023	Identify/ map existing local food distributions centres such as food banks	Mapping complete	2024	2024	Resource
E	E1	pests and disease	new and existing pests and diseases	Ensure climate adaptation is central in biodiversity plans that we prepare, and support residents and businesses in identifying and reporting new and existing pests and diseases		Sangeeta Leahy / Director of Leisure	Ecology / Parks	CCT	No work completed to date	The preparation of a Biodiversity Plan and Local Nature Recovery Strategy as required by our statutory Biodiversity Duty. Include as part of wider council behavioural change campaign and update website.	Completion of Biodiversity Plan and Local Nature Recovery Strategy Inclusion in campaign and updated website	2024	2026	Resource
E	E2	The local environment and community is resilient to new pests and disease	Protect biodiversity from new and existing pests and diseases	Implementation of advanced monitoring techniques, such as drones equipped with sensors, to quickly detect and identify new pests or diseases in urban areas.	Clir Rose	Director of Leisure	Trees		Have recently procured a company to undertake drone surveillance of ash trees with woodland areas to map spread of ash dieback.		Complete initial survey	2024	2024	Funding

Theme Reference	Action Point Reference	Theme	Goal	Action point	RAG Risk Assessment for Milestone	Estimated Cost of Milestone	Funding in Place for Milestone	Overlapping Strategies
		Broad area of activity (key at bottom of page)	More specific area of activity	Most granular level of activity	Red / Amber / Green risk assessment for the upcoming milestone	The cost of completing the upcoming milestone Low - Under £100k Medium: £100k - £1m High: £1m - £10m Very High: Over £10m	The status of funding for this milestone	e.g. Trees Strategy
A	A1	Resilient to the impact of overheating	Residents can get respite from the heat at times of excessive temperatures	Increase the number of cool spaces, ensuring good coverage in the parts of the borough that are most at risk from high temperatures.	Green	Low	No	Public Health Heat Plan
A	A2	Resilient to the impact of overheating	Residents can get respite from the heat at times of excessive temperatures	Provide social care workers who visit vulnerable residents in their homes with improved means of monitoring home temperatures.	Amber	Low	No	
A	А3	Resilient to the impact of overheating	Residents can get respite from the heat at times of excessive temperatures	Improve insulation standards in district heating pipes to decrease heat and temperature losses in the pipe networks within buildings	Amber	High to very high	Part	
A	A4	Resilient to the impact of overheating	Residents can get respite from the heat at times of excessive temperatures	Ensure our parks provide shading for our residents as our summer weather gets hotter.	Green	Low	Yes as part of existing programme	
A	A5	Resilient to the impact of overheating	Buildings stay cool while minimising their carbon emissions	Expand the Green Homes Advice Service to help residents deal with overheating by retrofitting their homes.	Green	Low	Yes	
A	A6	Resilient to the impact of overhealing	Buildings stay cool while minimising their carbon emissions	Review Scuthwarf, Plan policies to ensure new development takes further steps to minimise and mitigate the risk of the plan of the plan of the plan of the plan of substantial development of buildings and places through new and updated Supplementary Planning Documents (SPDs).	Red	Low	Greener Buildings Fund	Southwark Plan
Α	A7	Resilient to the impact of overheating	Buildings stay cool while minimising their carbon emissions	Develop an approach to tackling 'hot homes' so residents who are most vulnerable to this issue have cooler homes.	Red	Low to high	No	
A	A8	Resilient to the impact of overheating	Buildings stay cool while minimising their carbon emissions	Work collaboratively to collect and develop data and digital tools so we can better understand and plan for current and future climate risk.	Green	Low	yes	
А	A9	Resilient to the impact of overheating	The borough's infrastructure is adapted to cope with extremes of heat	Prepare a wildfire emergency plan	Red	Low	Planning Policy	Existing Emergency plan
A	A10	Resilient to the impact of overheating	The borough's infrastructure is adapted to cope with extremes of heat	Update the Southwark Streetscape Design Manual to include climate adaptation through sustainable design, incorporating nature based solutions that are more resilient to climate change.	Green	Low	No	SSDM, Streets f People
A	A11	Resilient to the impact of overheating	The borough's infrastructure is adapted to cope with extremes of heat	Develop a Highways Heat Network for sanding roads during periods of exfreme high temperatures.	Green	Medium	No	Highways Carbo Management Plan
В	B!	Reducing the risk of flooding	Reduce surface run off and increase the amount of land which drains water	Adopt a new Local Flood Risk Management Strategy that recognises the need to adapt to future climate impacts, and increase the capacity of subtainable than drainage systems in the borough and ensure that the approach is integrated alonguide the requirement for biodiversity net gain in order to achieve integrated solutions.	Green	TBC	TBC	
В	B2	Reducing the risk of flooding	Reduce demand on the sewer system	Ensure at least 10% of the footprint of new highway and public realm projects is blue-green infrastructure. (Blue-green infrastructure is an interconnected network of natural and designed landscape features that includes water bodies and green and open spaces.)	Green	Low	No	SSDM, Streets f People

Theme Reference	Action Point Reference	Thome	Goal	Action point	RAG Risk Assessment for Milestone	Estimated Cost of Milestone	Funding in Place for Milestone	Overlapping Strategies
		Broad area of activity (key at bottom of page)	More specific area of activity	Most granular level of activity	Red / Amber / Green risk assessment for the upcoming milestone	The cost of completing the upcoming milestone Low - Under £100k Medium: £100k - £1m High: £1m - £10m Very High: Over £10m	The status of funding for this milestone	e.g. Trees Strategy,
В	B3	Reducing the risk of flooding	Reduce demand on the sewer system	Explore options for a Riverside Strategy for borough riverside defences.	Green	Low	No	Local Flood Risk Management Strategy
В	B4	Reducing the risk of flooding	Reduce demand on the sewer system	Update our Strategic Flood Risk Assessment to ensure it takes into account increased risk from a changing climate.	Green	Low	Yes	
С	C1	Water is conserved and not wasted	Better conservation of water including greater use of rainwater and grey water	Roll out best practice water saving measures across the council's buildings, operations and spaces	Amber	NA	Planning to apply for funding externally, if not will use CCF grant	SNAP strategy
С	C2	Water is conserved and not wasted	Better conservation of water including greater use of rainwater and grey water	Prepare and adopt planning guidance to minimise water use through relevant new Supplementary Planning Documents (SPDs)	Red	Low	Planning Policy	
c	C3	Water is conserved and not wasted	Parks, gardens and green spaces are adapted to be drought resistant	Explore options to adapt public parks, gardens and green spaces to be drought resistant	Green	tbc	yes	Southwark Nature Action Plan
D	D1	More sustainable locally sourced food and resilient local economy	Strengthened local economy, with an increase in local trade reinvesting in our local economy	Work with business and public sector partners to plan for and prevent impacts from climate-related events on the local economy, such as extreme heat and flooding.	Amber	Low	No	Southwark Economic Strategy
D	D2	More sustainable locally sourced food and resilient local economy	Strengthened local economy, with an increase in local trade reinvesting in our local economy	Undertake climate risk assessments on our services and ensure they are reallient so that the most vulnerable can access them, including conducting an extreme weather risk assessment for Southwerk Council's workforce.	Amber	Low	Yes	
D	D3	More sustainable locally sourced food and resilient local economy	Local food suppliers and local food production is maximised	Use the Sustainable Food Strategy to protect and increase food growing spaces in the borough	Green	Medium	No	Sustainable Food Strategy
D	D4	More sustainable locally sourced food and resilient local economy	Increased capacity for communities to share food and reduce food waste	Map emergency food provision in the borough for different food cultures and identify how to fill in gaps in food security for the diverse communities in the borough	Green	Low	No	Sustainable Food Strategy
E	E1	The local environment and community is resilient to new pests and disease	Protect the local community from new and existing pests and diseases	Ensure climate adaptation is central in biodiversity plans that we prepare, and support residents and businesses in identifying and reporting new and existing pests and diseases	Green	Low	No	
E	E2	The local environment and community is resilient to new pests and disease	Protect biodiversity from new and existing pests and diseases	Implementation of advanced monitoring techniques, such as drones equipped with sensors, to quickly detect and identify new pests or diseases in urban areas.	Green	50k	Yes	Tree management policy







Climate Resilience and Adaptation Strategy Consultation Report

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Introduction

Overview of the Climate Change Resilience and Adaptation Strategy

In July 2023, Southwark Council's Cabinet approved a draft Climate Change Resilience and Adaptation Strategy (CRAS). The strategy sets out the council's plans to protect communities, homes, infrastructure, and the environment from the physical impacts of climate change. This includes extreme weather such as heat and flooding, risks to water and food supply as well as the emergence of new pests and diseases. The borough-wide strategy sets out how the council will:

- Future-proof the borough's buildings, streets, and critical infrastructure
- Work with others to prepare, plan, and respond to challenges and shocks
- Improve the borough by improving air quality and biodiversity and reducing inequalities

The council already does a lot of work in these areas, including:

- shaping new building design in planning policy to reduce overheating
- managing flood risk and delivering sustainable urban drainage schemes
- emergency planning that ensures we have a quick and effective response to support residents in times of need
- large programmes of urban greening and planting

The draft strategy recognised this ongoing work while ensuring that the borough is prepared for the challenges that climate change will bring.

Purpose of this Consultation Report

To help create a robust strategy, the council sought the views of Southwark residents, businesses, and community groups on the CRAS. Crucially, the council wanted to hear about local people's response to climate change impacts such as extreme weather and food shortages – to help understand the way communities have pulled together and adapted through recent shocks and stresses.

This Consultation Report has been prepared to provide a comprehensive record of this consultation, the feedback received and the regard had to that feedback.

Further information

The council declared a climate emergency in 2019 and it has an ambition to be a carbon neutral borough by 2030. You can read more about our work to tackle the climate emergency by:

- Visiting the tackling the climate emergency pages
- Reading the annual report on progress made during 2022-23
- Viewing the Climate Change Strategy, and action plan

The council has also been clear that the climate is changing now, and it is changing fast. This is why the CRAS has been produced and developed. You can read more about the draft strategy, the climate threats and plans to prepare Southwark on the climate resilience web pages.

Consultation Summary

Public consultation on the draft CRAS took place for six weeks from 29 August 2023 to 9 October 2023. 124 people completed the online survey and written representations were received from Southwark campaign groups (Extinction Rebellion, Southwark Planning Network, Southwark Law Centre), stakeholders (Historic England, Environment Agency, Natural England) and members of the public. Issues raised included:

- Climate justice and focusing resources on those who are most vulnerable to the impacts of climate change
- +2°C and +4°C temperature increase scenarios and the latest national policy context
- More engagement with the community e.g. Citizens' Assembly
- 'Hot homes' that suffer from excess heat as a result of their heating systems or insulation
- Nature-based solutions, urban greening, biodiversity net gain and trees

Officers have updated the strategy in response to suggestions that were raised through consultation. Updates included:

- An increased focus on residents who are exposed to a higher climate risk within the borough and who are most vulnerable to the impacts of a changing climate
- Ongoing commitment to community engagement
- New and revised action points for the five themes within the Strategy

Consultation

Approach to consultation

Early engagement

The draft CRAS and draft action points were developed following a period of internal consultation. This included:

- Meetings between relevant officers in different teams including Planning, Highways, Flood team, Asset Management, Parks and Leisure
- Cabinet member briefings and reviews
- Workshops on climate resilience and adaptation with officers from across different departments

The draft CRAS was then approved for consultation by Southwark Council Cabinet on 10 July 2023.

At this point, whilst the consultation was not live, the draft strategy was publicly available. Extinction Rebellion Southwark provided a deputation to the item at the Cabinet meeting on 10 July 2023. The council had a subsequent meeting with the group on 14 August 2023, to talk through their feedback in detail. This has been considered as part of the public consultation.

Public consultation (29 August – 9 October)

A public consultation opened on 29 August and closed on 9 October 2023. The consultation was open to anyone who lives, works or spends time in the borough. It sought the views of residents on how to make the borough as prepared as possible for the impacts of climate change.

To support the consultation, the council made the following documents available online:

- <u>A new suite of webpages</u> on the Southwark Council Tackling the Climate Emergency website (please see Appendix B for screenshots).
- A consultation hub on the council's online consultation platform. Including a consultation survey (please see Appendix C for screenshots).
- The draft Climate Change Resilience and Adaptation Strategy
- A summary of the Climate Change Resilience and Adaptation Strategy
- Draft actions, that will inform a final action plan for the strategy
- A background document, to show how we've considered various international, national and regional policies and frameworks

An email inbox, <u>climateemergency@southwark.gov.uk</u>, was also available to support any enquiries and to receive direct feedback on the CRAS.

Identifying consultees

The consultation was open to all interested people who lived, worked or spent time in the borough. Following a stakeholder mapping exercise, key stakeholders were also identified. The different stakeholder groups identified included:

- Southwark residents
- Local community and interest groups
- Organisations with statutory and non-statutory responsibility for areas which are relevant to the CRAS

Further details of the contact organisations are listed in Appendix A.

Publicising the consultation

The public consultation began on Tuesday 29 August 2023. At this point, all of the consultation documents, including the webpages and online survey, became available to view and download online.

The consultation was publicised extensively throughout the consultation period. A summary of the outgoing communications are listed in the table below.

Communication method	Audience
Southwark Council Tackling the Climate Emergency electronic newsletter	Residents who want to be kept up to date about climate news in Southwark
Community Gardening newsletter	Community gardener network
Direct email to key stakeholders from climateemergency@southwark.gov.uk	Key stakeholders
Reminder email on 28 September 2023 to key stakeholders from climateemergency@southwark.gov.uk	Key stakeholders
Email notification to residents who had asked to be informed about the start of the consultation	Residents who asked to be notified about the consultation starting
Resident enewsletter	Large distribution of residents
Business enewsletter	Businesses in Southwark
Partnership Southwark newsletter	Southwark health organisations
Housing magazine	Southwark council home tenants
Media release	Local news organisations
Social media promotion – throughout the consultation period	All residents

Email notifications to networks	 Faith leaders Housing forum attendees Southwark Biodiversity Partnership Residents who had previously responded to consultations on flooding
	risk and the response to the council Tenants' Forum
	Homeowners' Forum
	 Local Housing Forum - Central East
	 Local Housing Forum - Central West
	 Local Housing Forum - North East
	 Local Housing Forum - North West
	 Local Housing Forum - South

Methods of receiving comments and feedback

The council hosted an online survey on its consultation hub. The consultation hub included relevant information from the CRAS to help users answer questions fully. Residents were encouraged to give feedback via this digital survey. They were also able to provide feedback via email by writing to climateemergency@southwark.gov.uk.

The council also captured feedback by attending a number of events and listening to the experiences of residents.

A summary of the feedback received, and the council's response, is included later in this document.

Meetings and events

As well as online information and documentation, council officers made themselves available for a number of meetings and events. At these events, council officers presented the CRAS, invited feedback and promoted the consultation.

Meeting/event	<u>Date</u>
Community Stakeholder Panel	Monday 11 September
Veolia Wonder Day	Saturday 16 September
Hot Homes Community Meet-up	Wednesday 13 September
Climate Change Resilience and Adaptation Q&A (online)	Thursday 5 October
Better Bankside theme group meeting	Wednesday 4 October
Elephant & Castle Business Forum	Thursday 28 September
Team London Bridge Net Zero Steering Group	Tuesday 10 October

Southwark Climate Collective Launch Meeting	Tuesday 3 October

Wonder Day

On Saturday 16 September, council officers attended Veolia Wonder Day at the Integrated Waste Management Facility off Old Kent Road, where they had a stall to promote the consultation. As part of this stall, officers spoke to residents about climate change, resilience and adaptation, encouraging people to complete the survey.



Figure 1: Veolia Wonder Day

Residents were also encouraged to annotate a map of Southwark and provide comments about how they already experience climate change.

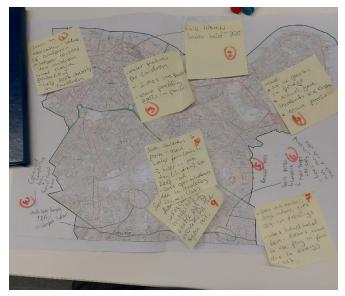


Figure 4: Annotated map (north)



Figure 3: Annotated map (south)



Figure 2: Annotated map (central)

Climate Change Resilience and Adaptation Q&A (online)

In response to feedback received during the consultation period, and to support residents with their responses, the council held an online information session on Thursday 5 October. The event ran between 6pm – 7.30pm, and featured a presentation followed by opportunity to ask questions to council officers.

Feedback received

Summary of feedback received

Throughout the consultation period people could respond by completing the online survey, or by emailing comments directly to climateemergency@southwark.gov.uk. Feedback was also received at events and meetings which were attended as part of the consultation.

In total, 124 responses to the online survey were completed, and seven responses were received via email. These responses, and the regard given to them, has been outlined in the next section of this document.

Responses received

Overarching comments on the Climate Resilience and Adaptation Strategy and action points

Survey responses

Most respondents were clear or somewhat clear on the council's plans around climate change resilience and adaptation. However, a significant minority were still not clear.

Figure 5: Are you clear on the council's strategy?

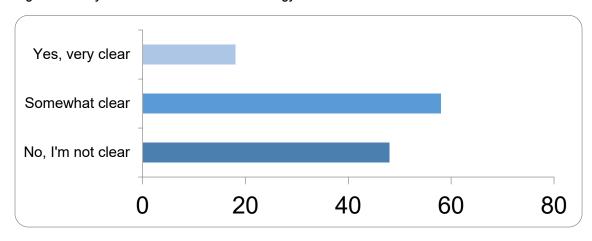


Figure 6: Are you clear on the council's strategy? Total and percentage

Option	Total	Percent
Yes, very clear	18	14.52%
Somewhat clear	58	46.77%
No, I'm not clear	48	38.71%
Not Answered	0	0.00%

Over a third of respondents believed that there were risks or actions not covered adequately in the CRAS.

Figure 7: Do you think risks are adequately covered?

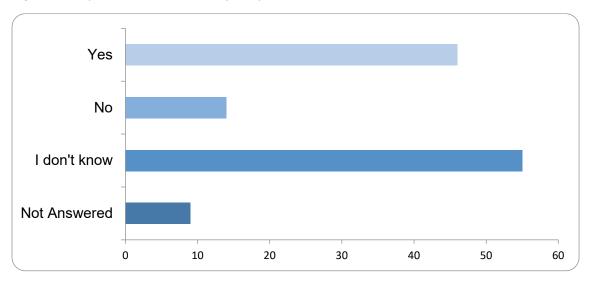


Figure 8: Do you think risks are adequately covered? Total and percentage

Option	Total	Percent
Yes	46	37.10%
No	14	11.29%
I don't know	55	44.35%
Not Answered	9	7.26%

Consultation responses

Extinction Rebellion

- The strategy should be based on the latest UK Climate Change Risk Assessment 2022 and respond to the key policy requirement to plan for 2°C and 4°C of warming.
- Limited progress on securing funding to tackle climate action. The strategy requires 'SMART'er objectives.

Southwark Planning Network's Climate Change and Planning Group

- The strategy must focus on climate justice and those who are most at risk, particularly those with have multiple over-lapping vulnerabilities e.g. black and minority groups, people with disabilities, older, poorer people.
- Further community engagement is needed with a programme of mechanisms like a Citizens Assembly. High risk groups must be included in this.
- Long term engagement with residents, Tenants and Residents Associations (TRAs), and business and other sectors is needed, this needs to start with people's current concerns.
- The council should use existing good practice and resources e.g. GLA guidance on SUDs, and learn from other London boroughs etc.
- Some key messages about reduce and reuse of resources need to run through strategy an
 action points everything, e.g. new and existing buildings to be adapted in the future for
 other uses giving a longer lifetime and less demolition.
- Ensure new developments don't contribute to climate change in the first place this needs to come before we consider mitigation of the results of climate change. That means the council getting tougher on expecting developments to be net zero, and only allowing

payments in lieu (carbon offset contributions) in very exceptional circumstances and a potential penalty payment for resorting to a payment in lieu. The council should expect greater ingenuity in coming up with climate solutions as part of planning applications – Council discretion to determine what is sufficient in each case.

Southwark Law Centre

- It could be made clearer that this document is only part of Southwark Council's broader climate strategy. Documents piece together – perhaps a subheading on the front page?
- There should be a greater focus on consultation and community engagements
- Efforts should be made to tap into local knowledge and understand local concerns, as an
 ongoing process and not a one-off. It is for the Council to actively set up these streams
 rather than passively expect community to navigate the process and organise. This should
 be with residents and businesses directly, as well as via TRAs and other community
 groups.
- There needs to be a focus on climate justice, including the greater risks for certain groups, including various ethnic minority groups, people with disabilities, older people, and those from lower socioeconomic groups.
- Ensuring new developments don't contribute to climate change in the first place this
 needs to come before we consider mitigation of the results of climate change. I appreciate it
 might be more appropriate to go into the detail via the broader climate strategy, but it need
 to be referenced here. That means:
 - Focusing on reduce and reuse strategies;
 - The Council getting tougher on expecting developments to be net zero, and only allowing payments in lieu (carbon offset contributions) in very exceptional circumstances;
 - A potential penalty payment for resorting to a payment in lieu;
 - Expecting greater ingenuity from developments in coming up with climate solutions as part of planning applications – Council discretion to determine what is sufficient in each case.

Natural England

No comment

Coin Street Builders

• Welcome the overall aims of the draft Strategy and particularly its approach to working in partnership. States that they can contribute to the implementation of the strategy under four of the five strategic headings through the delivery of their Doon Street development

Environment Agency

The strategy aligns with numerous threads that run through Thames Estuary 2100 Plan.
 The 2100 Plan introduces the riverside strategy approach as a way for those involved in shaping the future of the Thames riverside to work together to ensure the required future changes to the riverside take place in a planned and integrated way.

Historic England

• Encourage the referencing of the historic environment at points throughout the strategy and suggest options for the future planning guidance.

General summary of feedback and regard had to responses

- Officers have updated the strategy to ensure the strategy and actions focus on those in the borough who will be most vulnerable to the impacts of a changing climate.
- The council has given due regard to the UK Climate Change Risk Assessment 2022 and has updated the strategy to plan for 2°C rise by 2050 and assess the risk 4°C of warming by 2100, in line with Climate Change Committee advice. The council recognises that there is a certain amount of uncertainty associated with longer-term climate change projections, and will take a responsive approach to delivering and updating the strategy on an annual basis as better data becomes available.
- The council is committed to ongoing community engagement regarding climate adaptation and resilience in the borough and will be undertaking this throughout 2024.
- The theme of 'Circular Economy' is one of the key priority areas in the council's main Climate Change Strategy, where a series of actions points seek to support circular principles within the borough.
- The council will continue to work closely with neighbouring boroughs, GLA, London Councils and the climate change sector to learn and share best practice and inform council climate workstreams.
- The consultation responses that relate to planning policy and how the council should determine planning applications are noted. Although suggestions for new planning policies are outside the scope of the strategy as it does not form part of the council's Local Plan that guides the work of the planning team the need for ensuring climate adaptation is considered through the planning system is fundamental to ensuring the resilience of the borough. Climate adaptation is covered by various policies in the adopted Southwark Plan (2022) and the London Plan (2021) that are used on a daily basis in the planning process. The partial review of the Southwark Plan has commenced with planning policies being updated in relation to the climate emergency and climate adaptation. The first stage of public consultation on new and updated policies will take place later in 2024. Consultation will also take place on climate-related planning guidance in supplementary planning documents.
- Officers will be working collaboratively with relevant stakeholders on the Thames Estuary 2100 Plan (TE2100) and a new Riverside Strategy for the borough.

General feedback

Survey responses

Respondents were asked a number of question about themselves. The vast majority of respondents, 87%, said that they lived in Southwark.

Figure 9: Which of these best describes you

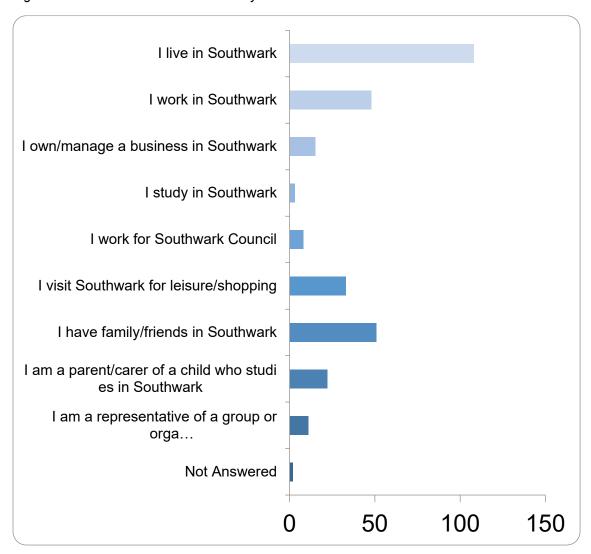


Figure 10: Which of these best describes you (total and percentage)

Option	Total	Percent
I live in Southwark	108	87.10%
I work in Southwark	48	38.71%
I own/manage a business in Southwark	15	12.10%
I study in Southwark	3	2.42%
I work for Southwark Council	8	6.45%
I visit Southwark for leisure/shopping	33	26.61%
I have family/friends in Southwark	51	41.13%
I am a parent/carer of a child who studies in Southwark	22	17.74%

I am a representative of a group or organisation (please specify)	11	8.87%
Not Answered	2	1.61%

The most common way respondents found out about the consultation was by receiving an email from the council.

Figure 11: How did you find out about the consultation?

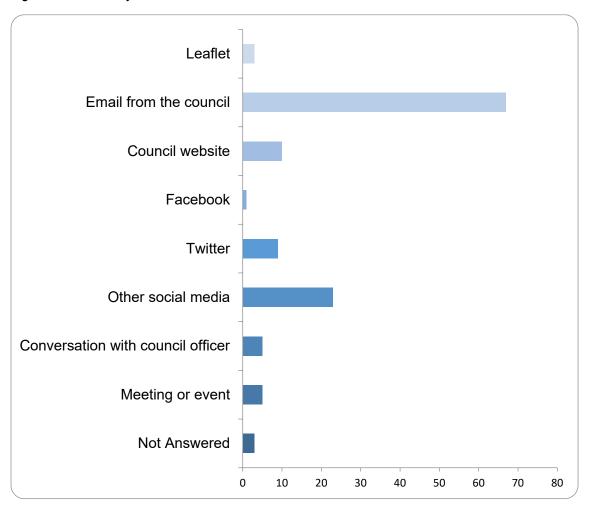


Figure 12: How did you find out about the consultation? (total and percentage)

Option	Total	Percent
Leaflet	3	2.42%
Poster	0	0.00%
Email from the council	67	54.03%
Council website	10	8.06%
Facebook	1	0.81%
Twitter	9	7.26%
Instagram	0	0.00%
Other social media	23	18.55%
Conversation with council officer	5	4.03%
Meeting or event	5	4.03%
Not Answered	3	2.42%

Over 90% of respondents were either very concerned or slightly concerned about the impacts of climate change in their local area.

Figure 13: How concerned are you about climate change?

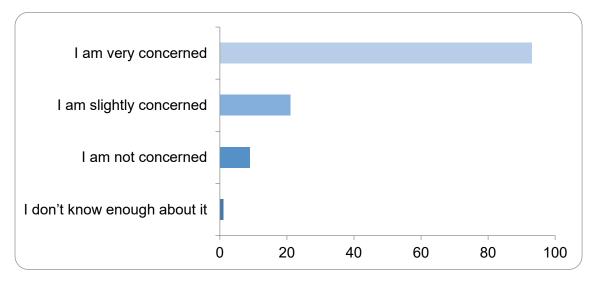


Figure 14: How concerned are you about climate change? Total and percentage

Option	Total	Percent
I am very concerned	93	75.00%
I am slightly concerned	21	16.94%
I am not concerned	9	7.26%
I don't think it will affect me	0	0.00%
I don't know enough about it	1	0.81%
Not Answered	0	0.00%

Respondents were also asked where they look for support or guidance on extreme weather. Responses to this question showed that there is a variety of trusted messengers for extreme weather, including Southwark Council. However, the most commonly used methods are via the news or a weather app on a mobile phone.

Figure 15: How do you find out about extreme weather?

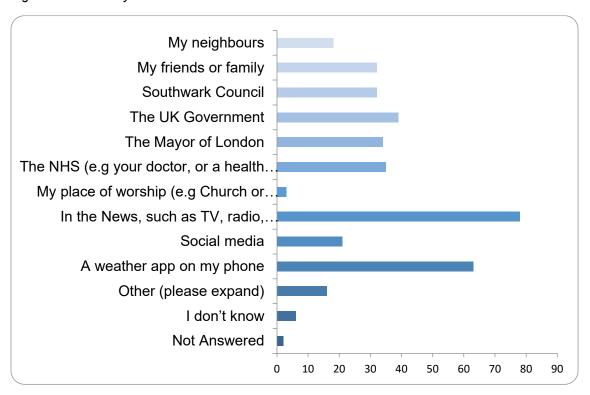


Figure 16: How do you find out about extreme weather? (total and percentage)

Option	Total	Percent
My neighbours	18	14.52%
My friends or family	32	25.81%
Southwark Council	32	25.81%
The UK Government	39	31.45%
The Mayor of London	34	27.42%
The NHS (e.g. your doctor, or a health visitor)	35	28.23%
My place of worship (e.g. Church or Mosque)	3	2.42%
In the News, such as TV, radio, websites or newspapers	78	62.90%
Social media	21	16.94%
A weather app on my phone	63	50.81%
Other (please expand)	16	12.90%
I don't know	6	4.84%
Not Answered	2	1.61%

Overheating

Survey responses

The vast majority of respondents stated that they had experienced overheating in the past five years.

Figure 17: Have you experienced overheating?

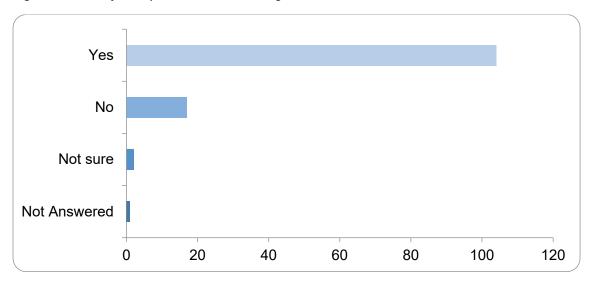


Figure 18: Have you experienced overheating? Total and percentage

Option	Total	Percent
Yes	104	83.87%
No	17	13.71%
Not sure	2	1.61%
Not Answered	1	0.81%

Most respondents believe that overheating is a risk or an extremely big risk to their local area.

Figure 19: How much of a risk is overheating to your local area?

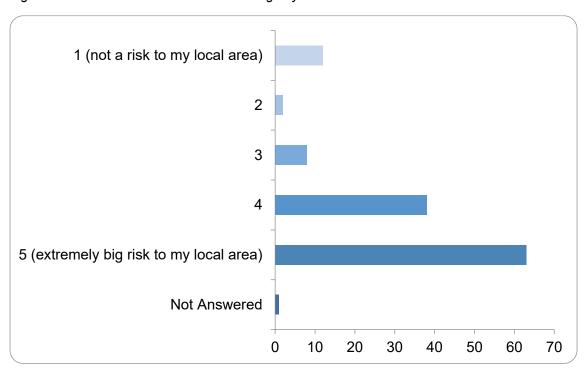


Figure 20: How much of a risk is overheating to your local area? Total and percentage

Option	Total	Percent
1 (not a risk to my local area)	12	9.68%
2	2	1.61%
3	8	6.45%
4	38	30.65%
5 (extremely big risk to my local area)	63	50.81%
Not Answered	1	0.81%

Respondents were asked if, when experiencing periods of extreme heat, they had done anything differently. The three most common thing which respondents had done were changing their plans, buying a fan or air-cooling device, or going to a local park or green space.

Figure 21: What actions did you take during periods of extreme heat?

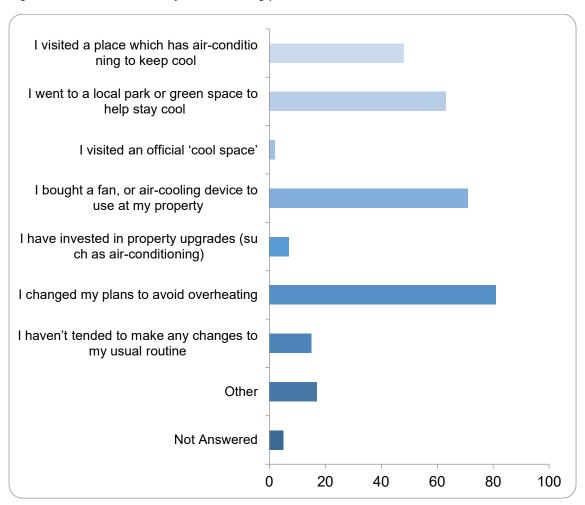


Figure 22: What actions did you take during periods of extreme heat? Total and percentage

Option	Total	Percent
I visited a place which has air-conditioning to keep cool	48	38.71%
I went to a local park or green space to help stay cool	63	50.81%
I visited an official 'cool space'	2	1.61%
I bought a fan, or air-cooling device to use at my property	71	57.26%

I have invested in property upgrades (such as airconditioning)	7	5.65%
I changed my plans to avoid overheating	81	65.32%
I haven't tended to make any changes to my usual routine	15	12.10%
Other	17	13.71%
Not Answered	5	4.03%

Hot homes study

From early August to mid-September this year, 40 properties in Southwark were part of a study led by the Bureau of Investigative Journalism and University of Glasgow's Urban Big Data Centre. This study investigated the temperatures of these properties over the summer period, and recorded the experiences of the residents. It included a range of property types.

The council has been working with the researchers to be able to consider as much of the data as possible. Every home in the study rose to at least 25°C, the maximum safe indoor temperature for London as recommended by the World Health Organization (WHO). Some did so for over a fortnight. Ten homes recorded temperatures over 30°C.

Prior to this research being published, and during the public consultation period, council officers attended a meeting with participants on Wednesday 13 September. Here, officers heard first-hand about some of the experiences.

Consultation responses

The council received the following responses regarding this theme:

Southwark Planning Network

- A key issue of heat risk is night-time temperatures. Cooler buildings are needed, especially homes: cool respite spaces during the day is not a medium/long term solution, many of respite spaces on GLA cool spaces map are parks/green spaces.
- Mitigation measures are essential as deaths from heat impacts take place very quickly
- Assessment of heat risk in new buildings is not adequate via planning policy in some planning applications, mitigation measures are reliant on curtains and blinds.
- Consider the orientation of proposed new buildings, to reduce overheating and ensure shade
- Include green or brown roofs and encourage more natural solutions more broadly.
- Consider whether the height and mass of new buildings could contribute to heat risk both for users and neighbours.
- Keep Biodiversity Net Gain either onsite or local, so those affected by development can get environmental benefits, including against overheating.
- Ensure that buildings' impact on overheating is minimised, i.e. by making them eco-friendly.

- A key focus should be the inclusion of green/brown roofs and the encouragement of other natural solutions ties into the focus needing to be on reduction, not just mitigation.
- Buildings should look to eco-friendly credentials (natural and beyond) before pivoting to mitigation.
- Assessment of heat risk in new buildings within planning process is not sufficiently robust some applications point to curtains and blinds for mitigation.
- Consider the orientation of proposed new buildings, to reduce overheating and ensure shade. Consider adding this in as express policy requirement.
- Holistic approach which considers how new development may increase heat effects for neighbouring buildings and broader area.
- This should be linked with push to keep Biodiversity Net Gain either onsite or local, so those affected by development can get environmental benefits, including against overheating.
- One of the key issues of heat risk is night-time temperatures, which daytime respite spaces will not alleviate. This must be combatted with cooler buildings.

Natural England

No comment

Summary of feedback and regard had to responses

Officers have added new and updated overheating action points for the strategy to tackle hot homes, undertake risk assessments for our services so the council can ensure they are available to those who are most vulnerable, and pilot projects to trial new shading in council parks.

Several responses referenced the implementation of planning policy through the planning process and design guidance for new development, such as green roofs, internal overheating and building orientation. Officers have updated the action point to prepare appropriate planning guidance in supplementary planning documents that will ensure new development responds to climate risk and the partial review of the Southwark Plan will look to update planning policies.

The adopted Southwark Plan (2022) and London Plan (2021) have a suite of existing design and environmental policies that positively requires development to respond to climate change and these are used for decision-making in the development management process.

The council's approach to biodiversity net gain is currently being prepared; considering new government regulations and climate adaptation will be central to this.

Flooding

Survey responses

Around one-fifth of respondents had experienced flooding in the past five years.

Figure 23: Have you experienced flooding in the past five years?

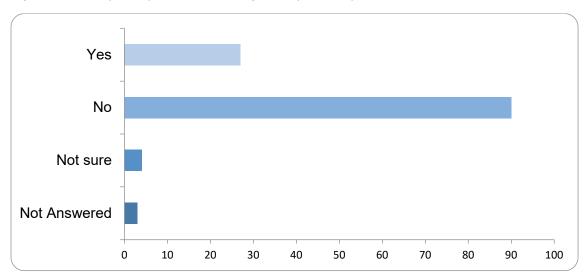


Figure 24: Have you experienced flooding in the past five years? Total and percentage

Option	Total	Percent
Yes	27	21.77%
No	90	72.58%
Not sure	4	3.23%
Not Answered	3	2.42%

Most respondents consider flooding to be a risk, with a range of severity. However, one-fifth of respondents do not consider flooding to be a risk at all to their local area.

Figure 25: How much of a risk is flooding?

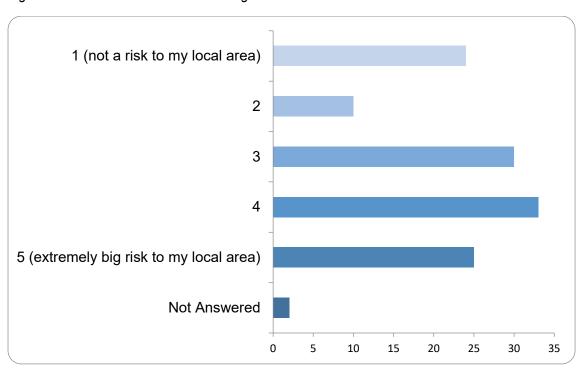


Figure 26: How much of a risk is flooding? Total and percentage

Option	Total	Percent
1 (not a risk to my local area)	24	19.35%
2	10	8.06%
3	30	24.19%
4	33	26.61%
5 (extremely big risk to my local area)	25	20.16%
Not Answered	2	1.61%

Respondents were asked if they had experienced a number of things that can be caused by sudden, heavy rainfall. A number of people did not answer the question. Of those who answered the question, problems with travel due to flooding was the most common issue.

Figure 27: Experience of impacts caused by flooding.

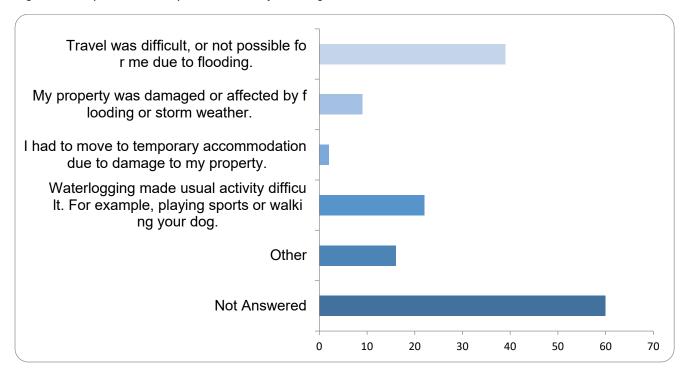


Figure 28: Experience of impacts caused by flooding, total and percentage

Option	Total	Percent
Travel was difficult, or not possible for me due to flooding.	39	31.45%
My property was damaged or affected by flooding or storm weather.	9	7.26%
I had to move to temporary accommodation due to damage to my property.	2	1.61%
Waterlogging made usual activity difficult. For example, playing sports or walking your dog.	22	17.74%
Other	16	12.90%
Not Answered	60	48.39%

Stakeholder responses

The council received the following responses regarding this theme:

Southwark Planning Network

- New developments to have zero run-off/better than green field run-off.
- Drinking water does not need to be used for all activities used grey water is suitable for flushing toilets. The Strategy should ensure that grey water is being reused.
- The Strategy should ensure that rainwater is being harvested and reused.
- Many areas of Southwark are at risk of groundwater and surface water flooding and sewer overflows - in part because it is very low lying compared to other areas of London
- Ensure that external surfaces are permeable to allow water to penetrate the ground rather than being channelled to a sewer
- Greening should extend beyond individual sites and link to local walking and cycling routes and nature corridors between green spaces
- Minimise hard surfaces, maximise green roofs, attenuation and infiltration.
- Emphasise the need for natural solutions, including the existing reference to blue-green infrastructure.

Southwark Law Centre

- Emphasise need for natural solutions, including existing reference to blue-green infrastructure e.g. minimise hard surfaces, maximise green roofs, attenuation and infiltration.
- New developments to have zero run-off/better than green field run-off.
- Strategy should ensure that rainwater and grey water are being harvested and reused.
- Drinking water does not need to be used for all activities used grey water is suitable for flushing toilets.
- Many areas of Southwark are at risk of groundwater, surface water and sewer overflows in part because it is very low lying compared to other areas of London. This heightened sensitivity needs to be reflected into policy and developments react accordingly.
- Ensure that external surfaces are permeable to allow water to penetrate the ground rather than being channelled to a sewer.
- Greening should extend beyond individual sites and link to local walking and cycling routes and nature corridors between green spaces

Natural England

No comment

Summary of feedback and regard had to responses

Officers have expanded an action point to roll out best practice water saving measures across the council to include buildings, operations and spaces. This will consider the use of grey water and water sensitive urban design. The new Local Flood Risk Management Strategy that will be adopted in early 2024 and the action point to include blue/green infrastructure in our highways will also reduce the risk of flooding in the borough.

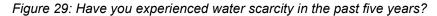
The consultation responses that relate to water and flooding planning policies and how the council applies them to determine planning applications are noted. Although suggestions for new planning policies are outside the scope of the strategy, as it does not form part of the Local Plan that guides all planning decisions, the need for flooding to be considered through the planning system is fundamental to ensuring the resilience of the borough. Mitigating flood risk is covered by policies in the adopted Southwark Plan (2022) and the London Plan (2021) that are used on a daily basis in the planning process.

The partial review of the Southwark Plan will offer the opportunity to review water use in the design of our buildings and spaces. This will build on the existing suite of planning policy and guidance.

Water scarcity

Survey responses

The vast majority of respondents stated that they had not experienced limitations or gaps in the supply of running water at their property in the past five years.



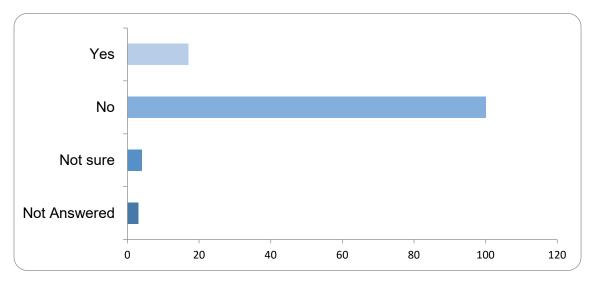


Figure 30: Have you experienced water scarcity in the past five years? Total and percentage

Option	Total	Percent
Yes	17	13.71%
No	100	80.65%
Not sure	4	3.23%
Not Answered	3	2.42%

Generally most respondents saw a low level of risk in their local area for limitations or gaps in the supply of running water.

Figure 31: How much of a risk is water scarcity?

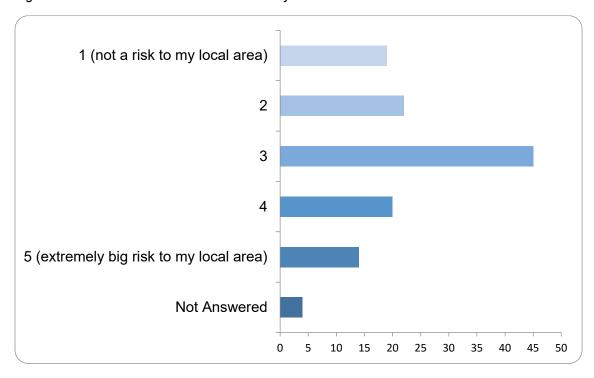


Figure 32: How much of a risk is water scarcity? Total and percentage

Option	Total	Percent
1 (not a risk to my local area)	19	15.32%
2	22	17.74%
3	45	36.29%
4	20	16.13%
5 (extremely big risk to my local area)	14	11.29%
Not Answered	4	3.23%

Respondents were asked if they had experienced any common problems relevant to water shortages. The most common things which people had experienced were a 'hosepipe' ban and burst pipes or sewage in their local area.

Figure 33: Experience of Water scarcity issues

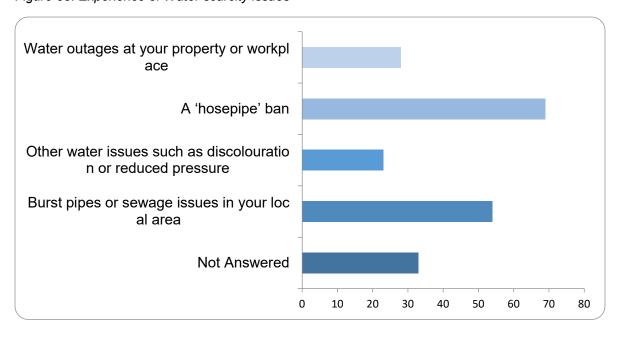


Figure 34: Experience of Water scarcity issues, total and percentage

Option	Total	Percent
Water outages at your property or workplace	28	22.58%
A 'hosepipe' ban	69	55.65%
Other water issues such as discolouration or reduced pressure	23	18.55%
Burst pipes or sewage issues in your local area	54	43.55%
Not Answered	33	26.61%

Respondents were asked what they did in these situations to adapt. Most people reduced their water usage, whilst some people spent more money on temporary solutions like bottled water.

Figure 35: What action was taken during water scarcity issues? Total and percentage

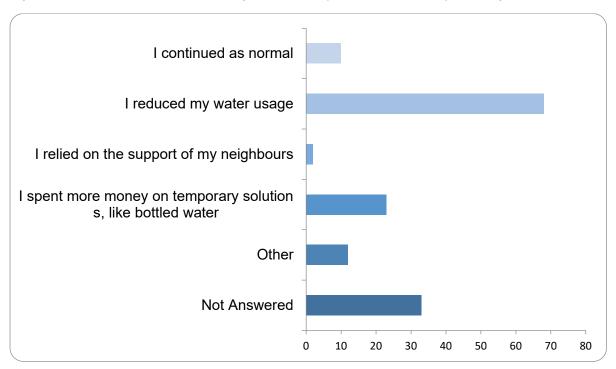


Figure 36: What action was taken during water scarcity issues? Total and percentage

Option	Total	Percent
I continued as normal	10	8.06%
I reduced my water usage	68	54.84%
I relied on the support of my neighbours	2	1.61%
I spent more money on temporary solutions, like bottled water	23	18.55%
Other	12	9.68%
Not Answered	33	26.61%

Consultation responses

The council received the following responses regarding this theme:

Southwark Planning Network

- Existing trees should be retained and new trees should have good canopy size and value;
 use CAVAT to measure value of existing trees.
- Make sure that greenspace is getting enough hours of sunlight.
- Information should be provided to help local communities understand Biodiversity Net Gain documents / reports in planning applications, and to know what to look for.
- Biodiversity Net Gain requirements for new projects: the Council should require a higher threshold of biodiversity net gain from developments (e.g. 20% rather than the current 10%), at least for certain developments.
- There should be a clear link between the Climate Resilience Strategy and the Local Nature Recovery Strategy for Southwark.
- Connectivity Southwark should extend its green corridors. Southwark Land Commission Recommendation 16: Join up existing green spaces to create a network of Biodiversity Corridors.
- Plant selections should have very high proportion of native species and wildlife friendly species.
- Encourage communities to get involved in protecting and extending greenspace. Southwark Land Commission Recommendation 17: Offer opportunities to participate in the greening of our borough, through community gardening and re-wilding.
- Southwark should call on Thames Water to improve their practices and minimise lost water. The emphasis should be on the big players and not just individuals.

Southwark Law Centre

- Retain existing trees and make sure new trees have good canopy size and value; use CAVAT to measure value of existing trees. There should be a more robust assessment under the planning system, going beyond BNG / UGF assessments, given the risk of newer biodiversity dying.
- Make sure that greenspace is getting enough hours of sunlight. Assessment of
 overshadowing of outside natural space needs to go beyond the basic BRE "2+ hours" test
 to reflect specific needs/sensitivities this is set out in the BRE guidance itself.
- Provide information to help local communities understand Biodiversity Net Gain documents / reports in planning applications, and to know what to look for.
- Biodiversity Net Gain and Urban Greening Factor the Council should commit to a higher BNG threshold (say 20% rather than the current 10%) for certain developments.
- Create a clear link between the Climate Resilience Strategy and the Local Nature Recovery Strategy for Southwark.
- Connectivity Southwark should extend it green corridors.
- Plant selections should have very high proportion of native species and wildlife friendly species.
- The draft suggests using Thames Water as an external partner Southwark should call on Thames Water to improve their practices and minimise lost water. The emphasis should be on the big players and not just individuals. We are all aware that the climate crisis cannot

be fixed by individuals alone, and needs systemic change. Selecting Thames Water as an external partner without a critique of their practices would be greenwashing.

Natural England

No comment

Summary of feedback and regard had to responses

Policy P61 'Trees' of the adopted Southwark Plan (2022) is the planning policy that is used to determine the impact on trees. The policy sets out a process to use CAVAT to measure and secure value. The policy will be reviewed in the partial review of the Southwark Plan.

The council's approach to delivering its Biodiversity Duty is being prepared in light of further publication of government regulations and guidance arising from the Environment Act (2021). The duty requires the council to consider what it can do to conserve and enhance biodiversity. The three main aspects of the Biodiversity Duty are:

- (1) The preparation of a council wide Biodiversity Plan that will encompass all the actions and initiatives the council is taking to enhance biodiversity. Preparation of biodiversity plan is underway and must be statutorily reported on by January 2026. It will draw together council work streams, plans and strategies that contain a biodiversity focus, including the Climate Change Strategy and Southwark Land Commission recommendations.
- (2) The preparation of a Local Nature Recovery Strategy is expected to commence in early 2024. This will be local strategy for nature and environmental improvement established by the Environment Act 2021. Each local nature recovery strategy will agree priorities for nature's recovery, map the most valuable existing areas for nature and map specific proposals for creating or improving habitat for nature and wider environmental goals.
- (3) Biodiversity Net Gain delivery which is led by Planning Policy from January 2024. Southwark's approach to BNG is therefore just one aspect of this council-wide plan. The partial review of the Southwark Plan will offer the opportunity to review local biodiversity net gain uplift options.

Trade and food security

Survey responses

Around one-fifth of respondents stated that they had struggled to access affordable food and other essentials in the last five years.

Figure 37: Have you experienced food insecurity in the past five years?

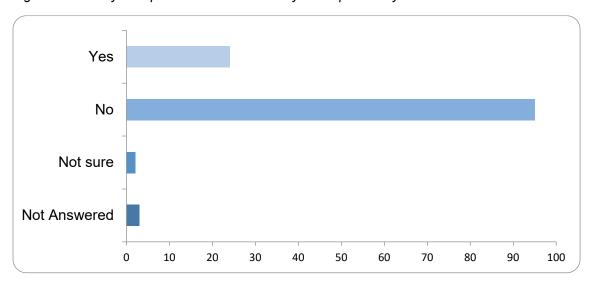


Figure 38: Have you experienced food insecurity in the past five years? Total and percentage

Option	Total	Percent
Yes	24	19.35%
No	95	76.61%
Not sure	2	1.61%
Not Answered	3	2.42%

Most respondents believe that struggling to access affordable food and other essentials is a risk in their local area.

Figure 39: How much of a risk is food insecurity?

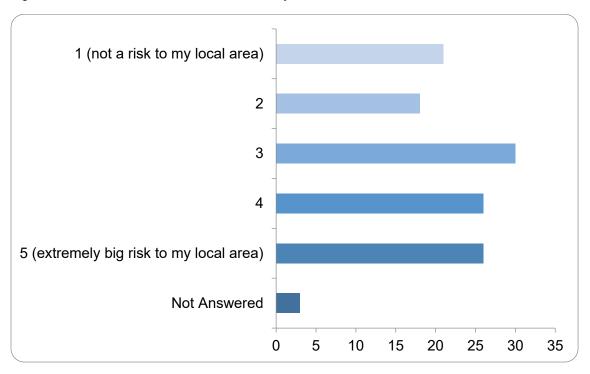


Figure 40: How much of a risk is food insecurity? Total and percentage

Option	Total	Percent
1 (not a risk to my local area)	21	16.94%
2	18	14.52%

3	30	24.19%
4	26	20.97%
5 (extremely big risk to my local area)	26	20.97%
Not Answered	3	2.42%

Respondents were asked if they had experienced a number of things relevant to food security. Over half of respondents said that they have taken steps to reduce their food waste. 30% of respondents also stated that they have been unable to find the food or essentials at their usual locations.

Figure 41: Impacts of food insecurity

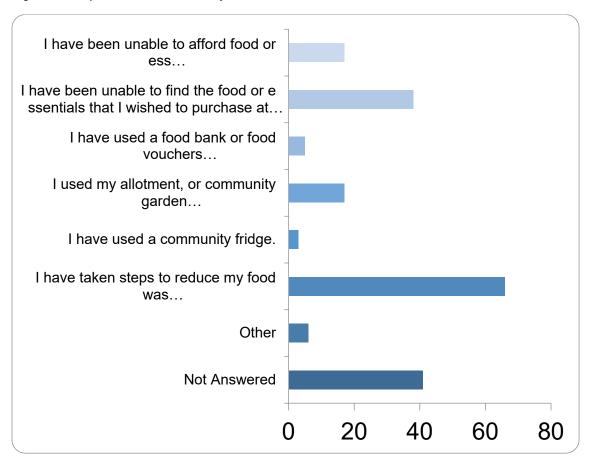


Figure 42: Impacts of food insecurity, total and percentage

Option	Total	Percent
I have been unable to afford food or essentials due to increasing costs.	17	13.71%
I have been unable to find the food or essentials that I wished to purchase at the usual locations (such as your local shops).	38	30.65%
I have used a food bank or food vouchers.	5	4.03%
I used my allotment, or community gardening space for some food.	17	13.71%
I have used a community fridge.	3	2.42%
I have taken steps to reduce my food waste, such as by buying only what I need from my local shops.	66	53.23%

Other	6	4.84%
Not Answered	41	33.06%

Consultation responses

Southwark Planning Network

- Consider how this point links to gentrification flowing from improper redevelopment not only when developments include large chains etc., but understanding how new developments can disrupt the local economy and lead to local independents being priced out / losing business, to be replaced by bigger chains.
- We welcome the mention of social vulnerability in this theme social vulnerability should be referred to under other themes as well.

Southwark Law Centre

- Consider how this point links to gentrification flowing from improper redevelopment not only when developments include large chains etc., but understanding how they can disrupt the local ecosystem and lead to local independents being priced out / losing business, to be replaced by bigger chains.
- As the recent Land Commission report states "during the plan-making process, it must take
 a dynamic approach to the urban environment, considering not just the affordable space
 provided in a given development but the potential inflationary pressure the "non-affordable"
 space could have on land in the surrounding area".
- The proposal for an "extreme weather risk assessment" is likely to be another box-ticking
 exercise: developers will not change developments but simply explain why the development
 they have always proposed is sufficient and point to explanations why a lower standard is
 acceptable on the facts. Objective duties / standards / thresholds are preferable to another
 document that gives the developer discretion. At least proper scrutiny from the Council
 would be required.
- This is the only section mentioning social vulnerability this needs to feed into other points as well.

Natural England

No comment

Summary of feedback and regard had to responses

Officers have updated the strategy to ensure climate risk and vulnerability is a key principle for the strategy, and will be a focus of delivery. The council will be working with business networks and public sector partners to plan for and prevent impacts from climate-related events on the local economy, town centres and high streets.

Pests and diseases

Survey responses

Over a quarter of respondents had experienced new or more common plant diseases in their garden or allotment in the past five years. Notably, around a quarter of respondents also expressed that were unsure about this.

Figure 43: Have you experienced new pests or diseases in the past five years?

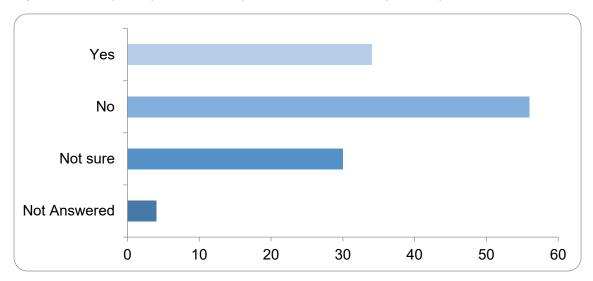


Figure 44: Have you experienced new pests or diseases in the past five years? Total and percentage

Option	Total	Percent
Yes	34	27.42%
No	56	45.16%
Not sure	30	24.19%
Not Answered	4	3.23%

Most respondents believe that new or more common plant diseases present a medium risk.

Figure 45: How much of a risk is new pests and diseases?

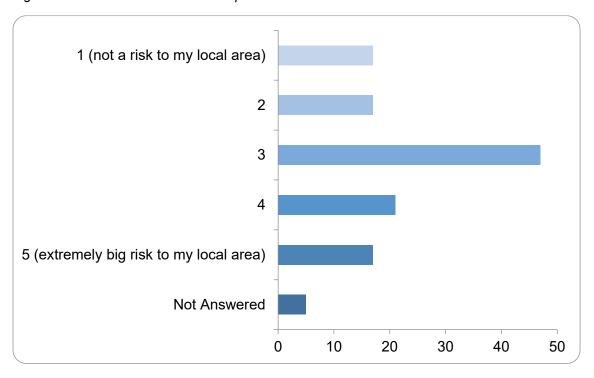


Figure 46: How much of a risk is new pests and diseases? Total and percentage

Option	Total	Percent
1 (not a risk to my local area)	17	13.71%
2	17	13.71%
3	47	37.90%
4	21	16.94%
5 (extremely big risk to my local area)	17	13.71%
Not Answered	5	4.03%

Respondents were asked about their knowledge of pests and diseases in their garden or local areas. Most respondents stated that they have no knowledge, or they have some knowledge of pests and diseases.

Figure 47: How much do you know about new pests and diseases?

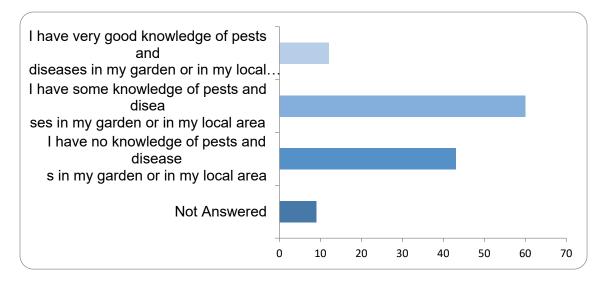


Figure 48: How much do you know about new pests and diseases? Total and percentage

Option	Total	Percent
I have very good knowledge of pests and diseases in my garden or in my local area	12	9.68%
I have some knowledge of pests and diseases in my garden or in my local area	60	48.39%
I have no knowledge of pests and diseases in my garden or in my local area	43	34.68%
Not Answered	9	7.26%

The vast majority of respondents also stated that they would like to know more about invasive pests and diseases and how to report them.

Figure 49: Would you like to know more about new pests and diseases?

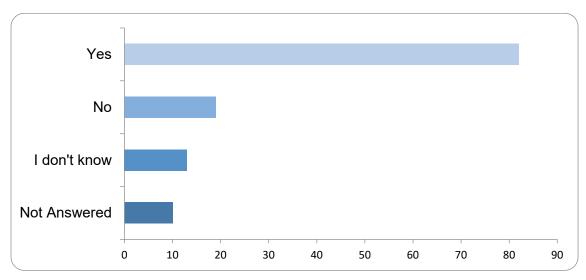


Figure 50: Would you like to know more about new pests and diseases? Total and percentage

Option	Total	Percent
Yes	82	66.13%
No	19	15.32%
I don't know	13	10.48%
Not Answered	10	8.06%

Consultation responses

Southwark Planning Network

- See points above (Water theme) about improving Biodiversity Net Gain standards flourishing biodiversity will be more resilient
- Increase powers and enforcement around developers keeping greenery alive once delivered and ensuring it is appropriate and likely to survive in the first place

Southwark Law Centre

• See points above about improving Biodiversity Net Gain standards - flourishing biodiversity will be more resilient.

Greater powers and enforcement around developers keeping greenery alive once delivered
 and ensuring proposed biodiversity is appropriate and likely to survive in the first place

Natural England

No comment

Summary of feedback and regard had to responses

The council's approach to biodiversity net gain is currently being reviewed in light of new government regulations. Climate adaptation will be central to the council's approach as new plans and strategies are developed.

Planning permissions for new development require ongoing maintenance of landscaping through planning conditions and this is subject to planning enforcement when required.

Monitoring our consultation

Why we monitor our consultation

Our statement of community involvement indicates that the success of consultation can be measured by the numbers and diversity of consultees and respondents. As a result, we have tried to engage with as many different groups as possible.

We monitor our consultation at every stage so that we can see where we need to engage more with certain groups at the next stage of consultation

How we monitor our consultation

We reviewed the consultation to see how we could improve future consultations on tackling the climate emergency in Southwark. This includes reviewing the consultation against the requirements of our statement of community involvement.

Where possible we try to monitor event attendance and survey responses. We monitor age range, gender and ethnicity by including a monitoring form within our consultation questionnaires so that we can monitor the range of people from our communities that responded to the consultation.

However, this is optional and in a number of cases, respondents do not provide this information.

Appendices

Appendix A: Stakeholder organisations notified about the consultation

- Active Travel England
- Age UK Lewisham and Southwark
- Southwark Faith Leaders
- Alzheimer's Society Southwark
- Ancient Monument Society
- Argiva
- Bakerloo Line Extension
- Bankside Open Spaces Trust
- Better Bankside
- Blackfriars Settlement
- Blue Bermondsey BID
- Bolivian Latin Age Association
- Bonamy And Bramcote Estate TRA
- Borough Market
- British Land
- Chokedup
- Citizens Advice Southwark
- City Airport
- City Planning At TfL
- Civil Aviation Authority
- cliniQ
- Commission For Architecture And The Built Environment
- Community Southwark
- Council For British Archaeology
- Dept. For Housing, Communities & Local Government
- Dulwich Almshouse Charity
- Elephant Amenity Network
- Environment Agency
- Excel Beyond Barriers
- Extinction Rebellion Southwark
- Fields In Trust
- Fire And Emergency Department
- Fossil Free Southwark
- Friends Of Burgess Park
- Friends Of Peckham Rye Park
- Friends Of Russia Dock Woodland
- Glengall Road RA
- Greater London Authority
- Guys and St Thomas' NHS Trust
- Health And Safety Executive

- Healthwatch Southwark
- Heathrow Airport Safeguarding
- Historic Royal Palaces
- HSE Fire Risk Assessments
- Irish Pensioners Centre
- Jewish Care
- King's College London
- Latin Elephant
- LBS Harbour Master
- Ledbury Residents
- Lend Lease
- Link Age Southwark
- Living Bankside
- Living Streets
- London Bridge City
- London Climate Change Partnership
- London Councils
- London Fire & Emergency Planning Authority
- London LGBTQ Centre
- London South Bank University
- London Underground
- Metropolitan Police Service (Designing Out Crime)
- MHCLG Planning Casework Unit
- National Air Traffic Safeguarding Office
- Natural England London Region & South East Region
- Network Rail Property (Southern)
- NHS London Healthy Urban Development Unit
- Northfield House RA
- Notting Hill Genesis
- Opening Doors
- Pages Walk Residents Association
- Partnership Southwark
- Peabody Housing
- Peckham Heritage Regeneration Partnership
- Perronet House TRA Chair
- Plasic Free East Dulwich
- Plastic Free Peckham
- Port Of London Authority
- Repowering London
- Rye Lane Trader's Association
- SDA Independent Living
- SDCAS
- SE24
- SELCE
- SGTO
- South East London Integrated Care Board (ICB)
- South London and the Maudsley NHS Trust
- South London Cares

- Southbank And Waterloo Neighbours
- Southbank BID
- Southwark biodiversity partnership
- Southwark Carers
- Southwark Charities
- Southwark Cyclists
- Southwark Diocese
- Southwark Food Action Alliance
- Southwark Law Centre
- Southwark Park Association 1869
- Southwark Pensioners Action Group
- Southwark Pensioners Action Group (SPAG)
- Southwark Pensioners Centre
- Southwark Travellers Action Group
- Southwark TUC
- Southwark Wellbeing Hub
- Space Studios
- St George's Circus Group
- Surrey Docks Angling Club
- Team London Bridge
- TFL Railway Infrastructure Manager
- Thames Tideway Tunnel
- Thames Water
- The Camberwell Society
- The Dulwich Society
- The Gardens Trust
- The Georgian Group
- The Girdlers' Company
- The Peckham Society
- The Society For The Protection Of Ancient Buildings
- The Tate
- The Trustees Of The Dulwich Estate
- The Victorian Society
- The Walworth Society
- Theatres Trust
- Time and Talents Association
- Transport For London
- Trinity Newington Residents' Association
- Tustin Estate TRA
- Twentieth Century Society
- UK Power Networks
- United St Saviours
- University of the Arts London
- Veolia
- Vital OKR
- We are Waterloo

Appendix B: Resilience and adaptation web pages

Figure 51: Screenshot of Resilience and adaptation web pages





What are the climate threats?



How we will prepare Southwark



Our climate resilience and adaptation strategy



Resources and key documents

Figure 52: Screenshot of webpage about climate threats

What are the climate threats?

There are a range of risks and threats that will be caused by the climate emergency, many of which will overlap with one another. The impact of these threats will also depend on how quickly we can reduce our carbon emissions. You can see what the difference between 2°C and 4°C of warming will mean for overheating and rainfall in your area on this website.

We've broken these down into five categories to help us target our work. We've summarised the categories below. If you'd like more details, view our <u>full draft strategy document</u>.

<u>Overheating</u>

<u>Flooding</u>

Water scarcity

Trade and food security

Pests and diseases

Read about how we plan to take action on these threats

Figure 53: Screenshot of web page about resources and key documents

Resources and key documents

There are lots of resources and information available to learn more about the climate emergency. Below are some links that we'd recommend looking at. Please note that some of these are external sites, and may not be using the most recent data available.

- Look at how high temperatures might climb and how much rain might fall in your area and how – this was produced by the BBC and the Met Office in August 2022 to show how climate change will impact different parts of the UK based on 2°C and 4°C of warming
- What are the effects of climate change and how will it impact weather in the UK? various information resources from the Met Office

Key documents

If you'd like to read more about our draft resilience and adaptation strategy, view the following documents:

- our draft Climate Change Resilience and Adaptation Strategy Summary (PDF, 353kb)
- our full draft Climate Change Resilience and Adaptation Strategy (PDF, 406kb)
- our draft actions, that will inform a final action plan for the strategy (PDF, 441kb)
- <u>a background document, to show how we've considered various international, national and</u> regional policies and frameworks (PDF, 808kb)

Figure 54: Screenshot of webpage about the resilience and adaptation plan

How we will prepare Southwark

Our vision is for a just, equal and resilient Southwark, where all residents are protected from the changing climate and have the same opportunities to thrive in our borough. The impacts of climate change do not impact all people in the same way, and inequalities could be made worse without us taking action now.

We cannot achieve this alone, and will only do it by working with partners in London such as the Greater London Authority, London Councils and other boroughs. We will need to work with major organisations in the borough such as universities, schools and NHS trusts. We will partner with government, the Environment Agency and others, and we will also work with local businesses, residents and all those committed to building a fairer and more sustainable Southwark.

Below are the goals and key actions we have set out to tackling each climate risk.

Overheating

Flooding

Water scarcity

Trade and food security

Pests and diseases

Figure 55: Screenshot of webpage about the climate change resilience and adaptation strategy

Our climate resilience and adaptation strategy

The climate emergency remains the challenge of our time, and time is running out. The best action we can take is to cut our emissions as quickly as possible. We already have a plan to do this, with an ambition to be a carbon neutral borough by 2030. However, we also know that our climate is changing now, and it changing fast.

That is why we have made a draft strategy to prepare Southwark for the future. The draft strategy creates a framework to protect our communities, homes, infrastructure and environment. It is a strategy for the whole of the borough, and sets out how we will:

- future-proof the borough's buildings, streets and critical infrastructure
- work with others to prepare, plan and respond to challenges and shocks
- improve the borough at the same time, such as by improving air quality and biodiversity and reducing inequalities

The council already does a lot of work in these areas, including:

- shaping new building design in planning policy to reduce overheating
- managing flood risk and delivering sustainable urban drainage schemes
- emergency planning that ensures we have a quick and effective response to support residents in times of need
- large programmes of urban greening and planting

Our draft strategy recognises this ongoing work while ensuring that we're prepared for the challenges that climate change will bring.

Appendix C: Consultation Hub

Figure 56: Screenshot of consultation hub





Southwark 2030 Find Activities We Asked, You Said, We Did

Climate Change Resilience and Adaptation

Overview

This survey is to get your views on how to make the borough as prepared as possible for the impacts of climate change.

Have you experienced your home or place of work being too hot in recent years, or maybe you have been flooded after some heavy rain?

Tell us about your experiences to help us make our draft strategy as helpful as possible for all of Southwark.

Why we need this strategy

The climate emergency remains the challenge of our time, and time is running out. The best action we can take is to cut our emissions as quickly as possible. We already have a plan to do this, with an ambition to be a carbon neutral borough by 2030.

However, we also know that our climate is changing now, and it is changing fast. In its most recent report (March 2023), the Intergovernmental Panel on Climate Change (IPCC) made its starkest warning yet on the urgency and the scale of action. The report showed not enough progress is being made by world leaders and estimated that current policies would see global temperature increases exceed 1.5°C, reaching around 3.2°C by 2100. National projections show we

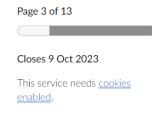
Closed 9 Oct 2023
Opened 29 Aug 2023

ClimateEmergency@southwark.gov.uk

Contact

Figure 57: Screenshot of a question in the online survey

Climate Change Resilience and Adaptation



General questions

6. How concerned are you about the impacts of climate change in your area?
(Required)
○ I am very concerned
O I am slightly concerned
○ I am not concerned
O I don't think it will affect me
O I don't know enough about it

	Yes	No	Not sure
Overheating – excessively warm or not weather	0	0	0
Flooding at your nome, work, or in your neighbourhood	0	0	0
Limited or no supply of running water at your property	0	0	0
Struggling to access affordable food and other essentials	0	0	0
New or more common plant diseases in your garden or allotment	0	0	0





Climate Change Resilience and Adaptation Strategy

Background Paper

August 2023

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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.

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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 areawide 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.

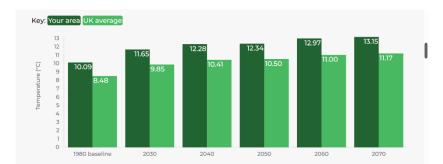
3. Key facts relating to a changing climate in Southwark

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 aguifer. 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.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/998237/Water stre final_classification_2021.odt ssed areas

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

<u>Intergovernmental Panel on Climate Change: 6th Synthesis Report – Climate Change 2023</u>

<u>Intergovernmental Panel on Climate Change: 6th Synthesis Report - Climate Change 2022:</u>
<u>Mitigation of Climate Change</u>

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

UK policy context

UK Government: Climate Change Act 2008 as amended

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

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

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

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

Climate Change Strategy and Action Plan

Southwark Economic Strategy

Southwark Plan

Joint Health and Wellbeing Strategy

Streets For People Strategy

Southwark Heatwave Delivery Framework

Southwark Skills Strategy

Southwark Waste Strategy

Southwark Sustainable Food Strategy

Southwark Nature Action Plan

Tree Management Policy

Tree Risk Management Strategy

Strategic Flood Risk Assessment



APPENDIX 5

Climate Resilience and Adaptation Strategy: Equality Impact Assessment (EQIA)

December 2023

Guidance notes

Things to remember:

Under the Public Sector Equality Duty (PSED) public authorities are required to have due regard to the aims of the general equality duty when making decisions and when setting policies. Understanding the effect of the council's policies and practices on people with different protected characteristics is an important part of complying with the general equality duty. Under the PSED the council must ensure that:

- Decision-makers are aware of the general equality duty's requirements.
- The general equality duty is complied with before and at the time a particular policy is under consideration and when a decision is taken.
- They consciously consider the need to do the things set out in the aims of the general equality duty as an integral part of the decision-making process.
- They have sufficient information to understand the effects of the policy, or the way a function is carried out, on the aims set out in the general equality duty.
- They review policies or decisions, for example, if the make-up of service users changes, as the general equality duty is a continuing duty.
- They take responsibility for complying with the general equality duty in relation to all their relevant functions. Responsibility cannot be delegated to external organisations that are carrying out public functions on their behalf.
- They consciously consider the need to do the things set out in the aims of the general
 equality duty not only when a policy is developed and decided upon, but when it is
 being implemented.

Best practice guidance from the Equality and Human Rights Commission recommends that public bodies:

- Consider all the <u>protected characteristics</u> and all aims of the general equality duty (apart from in relation to marriage and civil partnership, where only the discrimination aim applies).
- Use equality analysis to inform policy as it develops to avoid unnecessary additional activity.
- Focus on the understanding the effects of a policy on equality and any actions needed as a result, not the production of a document.
- Consider how the time and effort involved should relate to the importance of the policy to equality.
- Think about steps to advance equality and good relations as well as eliminate discrimination.
- Use good evidence. Where it isn't available, take steps to gather it (where practical and proportionate).
- Use insights from engagement with employees, service users and others can help provide evidence for equality analysis.

Equality analysis should be referenced in community impact statements in Council reports. Community impact statements are a corporate requirement in all reports to the following meetings: the cabinet, individual decision makers, scrutiny, regulatory committees and

community councils. Community impact statements enable decision makers to identify more easily how a decision might affect different communities in Southwark and to consider any implications for equality and diversity.

The public will be able to view and scrutinise any equality analysis undertaken. Equality analysis should therefore be written in a clear and transparent way using plain English. Equality analysis may be published under the council's publishing of equality information, or be present with divisional/departmental/service business plans. These will be placed on the website for public view under the council's Publications Scheme.

Equality analysis should be reviewed after a sensible period of time to see if business needs have changed and/or if the effects that were expected have occurred. If not then you will need to consider amending your policy accordingly. This does not mean repeating the equality analysis, but using the experience gained through implementation to check the findings and to make any necessary adjustments.

Engagement with the community is recommended as part of the development of equality analysis. The council's Community Engagement Division and critical friend, the Forum for Equality and Human Rights in Southwark can assist with this (see section below on community engagement and www.southwarkadvice.org.uk).

Whilst the equality analysis is being considered, Southwark Council recommends considering health and wellbeing implications, as health and health inequalities are strongly influenced by the environment we live and work in. As a major provider of services to Southwark residents, the council has a legal duty to reduce health inequalities and this is reflected in its values and aims. For this reason, the council recommends considering health & wellbeing impacts in all equality analyses, not forgetting to include identified potential mitigating actions.

Section 1: Equality analysis details

Proposed policy/decision/business plan to which this equality analysis relates	Climate Resilience and Adaptation Strategy

Equality analysis author	Tom Buttrick / Tom Sharland		
Strategic Director:	Caroline Bruce		
Department	Environment, Neighbourhoods and Growth	Division	Climate Change & Sustainability
Period analysis undertaken	December 2023		

Date o	f review (if applicable)	N/A			
Sign- off	Tom Buttrick	Position	Climate Change Programme Manager	Date	21/12/2023

Section 2: Brief description of policy/decision/business plan

1.1 Brief description of policy/decision/business plan

Climate change is already having an impact across the world, and there is overwhelming evidence that human activity is continuing to drive planetary warming which threatens all who in inhabit the earth. This threat is not evenly distributed, and it is the poorest and most vulnerable who are most threatened. The effects can already be seen in Southwark with more extreme weather, greater flood risk and an impact on health of our residents. All carbon emissions – wherever they are produced in the world – are contributing to this crisis, and so every part of the world needs to play its part.

That is why Southwark Council declared a climate emergency in 2019 and committed to do everything it can to make the borough carbon neutral by 2030. Our 2021 climate change strategy set out our approach, principles, partnerships and governance for tackling the climate emergency going forward.

However, too much damage has already been done. Even if the world stops producing carbon and other greenhouse gases tomorrow, the increased carbon already in the atmosphere means the planet will continue to warm and it will take many thousands of years to return to pre-industrial temperatures.

While we need to redouble our efforts to reduce carbon and move to a net zero future, we also need to adapt for a warmer world and ensure we are resilient to the changes that are already happening. We also expect those changes to continue to intensify in the coming years.

With this in mind, we have developed this resilience and adaptation strategy. It should be viewed alongside our climate strategy, and shows how we plan to create a more resilient borough that can overcome the current and future impacts of climate change in a just, equal and fair manner. It formalises our approach through a list of clear and defined actions that will focus on how we best prepare the borough and its residents for a changing climate. It builds on work already taking place to adapt the borough in the face of a changing climate, through work on flooding, overheating, biodiversity and many other areas.

Our aim is to create a borough that does not passively endure climate change but acts to limit its impacts, and to do so in a way that contributes to carbon reduction. Our aim is to

do this working with our residents, businesses, schools, institutions and everyone who cares about Southwark and its future.

To manage the constantly changing nature of the climate emergency, we have ensured that our approach to the Climate Change Strategy is iterative, with our strategy able to evolve as we move forward. This also allows for continual long-term engagement with our communities. We will continue to have regard to the public sector equality duty throughout that ongoing iterative process. This strategy appends Southwark Climate Change Strategy "Tackling the Climate Emergency Together". It contains new actions for our climate action plan and builds on the work we are doing to reduce carbon, to also ensure the borough is prepared and resilient for the effects of climate change. This strategy sets out a new dimension to our climate work, but does not change our overall approach or the values that drive us. We intend for this to be viewed alongside the Climate Change Strategy to give a complete picture of our ambition and plan.

Section 3: Overview of service users and key stakeholders consulted

2. Service users and stakeholders			
Key users of the department or service	The Climate Resilience and Adaptation Strategy will be used across the council to inform its approach in reducing climate risk and to make the borough more resilient to the impacts of climate change. It is expected to lead to policy changes in wide-ranging areas including transport, buildings and public spaces. The strategy recognises that the impacts of climate change are already felt in the borough, and more will need to be done to protect the most vulnerable.		
Key stakeholders were involved in this strategy	The Strategy was produced in collaboration with numerous colleagues and teams from across the council, who are responsible for delivering existing work relevant to responding to the climate emergency, as well as projects contained in the strategy's action points. A full public consultation has now taken place to learn from the lived experiences of residents, community groups, businesses and organisations. This informed the strategy and action points as set out in the consultation report.		

Section 4a: Summary of EQIA

The Climate Resilience and Adaptation Strategy is the council's framework for tackling climate risk by adapting the borough and improving resilience to the impacts of a changing

climate. Its successful implementation will ensure that residents and the borough are in a better position to deal with the impacts of climate change, especially those with protected characteristics who are most vulnerable. There are direct health and wellbeing implications in relation to the delivery of this strategy, as the strategy has clear aims to improve health outcomes.

Borough data used to inform this EQIA is provided by the recent Joint Strategic Needs Assessment (JSNA) Annual Report (October 2023) that provides a broad overview of health and wellbeing in Southwark and is based on 2021 census data. This annual report provides an analysis of our changing population, along with details of the health inequalities that exist in the borough. The JSNA Annual Report forms part of the borough's broader JSNA work programme, and supports the monitoring of key health and wellbeing outcomes set out in the Joint Health & Wellbeing Strategy (JHWS) and other local strategies and plans. The annual report is available here: https://www.southwark.gov.uk/health-and-wellbeing/public-health/southwark-health-data/strategies-and-reports/jsna-annual-report

Section 4: Pre-implementation equality analysis

This section considers the potential impacts (positive and negative) on groups with 'protected characteristics', the equality information on which this analysis is based and any mitigating actions to be taken.

The first column on the left is for societal and economic issues (discrimination, higher poverty levels) and the second column on the right for health issues, both physical and mental. As the two aspects are heavily interrelated it may not be practical to fill out both columns on all protected characteristics. The aim is, however, to ensure that health is given special consideration, as it is the council's declared intention to reduce health inequalities in the borough.

Age - Where this is referred to, it refers to a person belonging to a particular age (e.g. 32 year olds) or range of ages (e.g. 18 - 30 year olds)			
Potential impacts (positive and	Potential health impacts (positive and		
negative) of proposed	negative)		
policy/decision/business plan			
The Climate Resilience and Adaptation Strategy will have a positive impact on the protected characteristic of age. This is primarily achieved through ensuring that the age groups that are unequally affected by the impacts of climate change are considered through the strategy.	The Climate Resilience and Adaptation Strategy will have positive health impacts on the protected characteristic of age in working to tackle the impacts of climate change that adversely affect specific age groups. These age groups are younger people (0 to 18 years) and older people (65 years or older).		
There are no foreseen negative impacts to people based on their age.	For example, heat stress may affect older people more than others. Some people aged 65 years and over may be at increased risk of heat-related illnesses. The evidence suggests that vulnerable groups, such as the very young, elderly and those with health issues are more affected by the climate.		
	Older and younger people are also less likely to have the resource to make adaptations due to extremes of weather. There are no foreseen negative impacts to people based on their age, however poor, limited or non-delivery of the strategy may result in negative impacts being identified.		

Equality information and health data on which above analysis is based

Home to some 307,600 people, Southwark has a comparatively young population. The average age (32.4 years) is more than two years younger than London's, and almost seven years younger than England's. 41% of the Southwark population is aged 20 to 39.

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to this protected characteristic is minimal. This is particularly the case in relation to climate risks that impact the most vulnerable.

Disability - A person has a disability if s/he has a physical or mental impairment which has a substantial and long-term adverse effect on that person's ability to carry out normal day-to-day activities.		
Potential impacts (positive and negative) of proposed policy/decision/business plan Potential health impacts (positive and negative)		
The council's 2021 Climate Change Strategy recognises that the climate	The Climate Resilience and Adaptation Strategy will have positive health impacts	

on the protected characteristic of disability

emergency disproportionately affects disabled people.

The Climate Resilience and Adaptation Strategy will have a positive impact on the protected characteristic of disability. This is because it focuses on actions that will seek to minimise climate impacts that may have a negative impact on those with compromised health.

There are no foreseen negative impacts to people based on their disability.

in working to prepare and adapt to the impacts of climate change that adversely affect disabled people.

According to the UN environmental programme, compromised health makes disabled people more vulnerable to extreme climate events, ecosystem services loss, or infectious diseases. In a climate emergency, disabled people may be more vulnerable to contracting infectious diseases because of underlying conditions, which often do not allow them to move and to independently access water and sanitation.

With extreme weather events and disasters set to increase in a warming climate, more needs to be done to plan for and protect the most vulnerable in our societies, this demonstrates the need for the council's first Climate Resilience and Adaptation Strategy.

Equality information and health data on which above analysis is based

The 2021 Census collected information on residents' disability status, with over 42,000 Southwark residents (14%) recording a disability. This is a similar proportion to London but slightly less than the national average of 17%. Almost a quarter of households (33,000) had at least one resident with a disability.

The neighbourhoods with higher proportions of disability are Old Kent Road, South Bermondsey and Nunhead & Queen's Road, where in some areas 17-23% of residents were disabled.

Of those in Southwark who were disabled at the time of the Census, half were aged 50 or over. Levels of disability among residents of different ethnicities broadly mirror that of the general population in the borough.

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to this protected characteristic is minimal. This is particularly the case in relation to climate risks that impact the most vulnerable. Where necessary the council will work with community groups, Public Health and the Clinical Commissioning Group (CCG) to offer the best support around engagement with disabled groups and residents.

Gender reassignment – The process of transitioning from one gender to another		
Potential impacts (positive and negative) of proposed policy/decision/business plan	Potential health impacts (positive and negative)	
The Climate Resilience and Adaptation Strategy will have a positive impact on the protected characteristic of gender reassignment. This is primarily achieved through ensuring that those who are unequally affected by the impacts of climate change are considered through the strategy and its action points.	The Climate Change Resilience and Adaptation Strategy will have a neutral health impact on the protected characteristic of gender reassignment. The strategy does not put forward actions or policies that specifically reference or primarily respond to issues relating to people in the process of transitioning from one gender to another.	
There are no foreseen negative impacts to people based on their gender reassignment.		

Equality information and health data on which above analysis is based

The 2021 Census asked residents optional questions about their gender identity. Southwark ranked the 5th highest local authority in England for trans or non-binary identities. Within the borough 3,200 residents reporting a gender identity different from their sex registered at birth. Half of these used no specific gender identity term, the rest used 'trans woman', 'trans man' or 'non binary'. Despite having a relatively high proportion of the population with gender identities that differed from sex assigned at birth, the numbers are likely to be underestimates as many residents declined to answer the question.

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to this protected characteristic is minimal. This is particularly the case in relation to climate risks that impact the most vulnerable.

Marriage and civil partnership - In England and Wales marriage is no longer restricted to a union between a man and a woman but now includes a marriage between same-sex couples. Same-sex couples can also have their relationships legally recognised as 'civil partnerships'. Civil partners must not be treated less favourably than married couples and must be treated the same as married couples on a wide range of legal matters. (Only to be considered in respect to the need to eliminate discrimination.) Potential impacts (positive and negative) Potential health impacts (positive and of proposed policy/decision/business negative) plan The Climate Resilience and Adaptation The Climate Change Resilience and Strategy will have a neutral impact on the Adaptation Strategy will have a neutral protected characteristic of marriage and civil health impact on the protected characteristic of marriage and civil partnership. partnership. The strategy does not put forward actions or policies that specifically There are no foreseen negative impacts to people based on marriage and civil reference or primarily respond to issues partnership. relating to relationship statuses.

Equality information and health data on which above analysis is based

No data

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to this protected characteristic is minimal.

Pregnancy and maternity - Pregnancy is the condition of being pregnant or expecting a baby. Maternity refers to the period after the birth, and is linked to maternity leave in the employment context. In the non-work context, protection against maternity discrimination is for 26 weeks after giving birth, and this includes treating a woman unfavourably because she is breastfeeding.

Potential impacts (positive and negative) of proposed policy/decision/business plan

The Climate Resilience and Adaptation Strategy will have a positive impact on the protected characteristic of pregnancy and maternity. This is because it focuses on actions that will seek to minimise climate impacts that may have a negative impact on those who are vulnerable to climate impacts.

Potential health impacts (positive and negative)

The Climate Resilience and Adaptation Strategy will have positive health impacts on protected characteristic of pregnancy and maternity, by working to prepare and adapt to impacts of climate change that adversely affect pregnant people.

For example, evidence shows that heat exposure can have a significant impact on pregnancies. The Journal of the American Medical Association identified 57 studies since 2007 showing a significant association between these factors and the risk of pre-term birth, low birth weight and stillbirth. The review analysed 32m births tracked across 68 studies. Of those, 84% found air pollution and heat to be risk factors.

Equality information and health data on which above analysis is based

The total number of babies born in Southwark has been decreasing year on year over the past 10 years. There were 3,250 live births in 2022, down from over 5,000 in 2011, a 35% decrease. The birth rate in Southwark was 38.4 births per 1,000 women aged 15-44 in 2022.

The decline in the fertility rate in Southwark is seen across all age groups, but particularly among younger women. The average age of mothers giving birth in Southwark in 2022 was around 33 years. Across the borough there is substantial variation in the number of births each year, with rates highest in Dulwich and Peckham Rye.

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to this protected characteristic is minimal.

Race - Refers to the protected characteristic of Race. It refers to a group of people defined by their race, colour, and nationality (including citizenship) ethnic or national origins. N.B. Gypsy, Roma and Traveller are recognised racial groups and their needs

should be considered alongside all others Potential impacts (positive and negative) of proposed policy/decision/business plan Potential health impacts (positive and negative)

Potential impacts (positive and negative) of proposed policy/decision/business plan

Potential health impacts (positive and negative)

The Climate Resilience and Adaptation Strategy will have a positive impact on the protected characteristic of race in relation to eliminating discrimination and promoting equality. The strategy recognises that racial groups are unequally impacted by the impacts of climate change and seeks to address this by focusing efforts on the parts of the borough that will be most impacted. We will meaningfully engage with people in all ethnic groups to improve empowerment in the borough so that all residents have the tools and abilities to make positive changes and be part of our climate change work.

The Climate Resilience and Adaptation Strategy will have a positive health impact on the protected characteristic of race. This is because it will focus efforts on the areas of the borough that are most impacted by climate change, notably those which adversely affect specific racial groups.

Equality information and health data on which above analysis is based

Southwark is a diverse borough with residents from a wide range of ethnicities and backgrounds.

Data from the 2021 Census shows that 51% of people living in Southwark have a White ethnic background compared to 81% nationally. Just over a third (36%) of residents identify as 'White: English, British, Welsh, Scottish or Northern Irish' ethnicity.

The largest ethnic group other than White is 'Black, Black British, Caribbean or African', with one-quarter (25%) of Southwark residents reporting this as their ethnicity compared to only 14% of residents across London and 4% of residents nationally. Almost one-fifth (16%) reported 'African' ethnicity and 6% reported a 'Caribbean' ethnicity.

For the first time the 2021 Census provided data on the number of residents identifying as Hispanic or Latin American. In total, 9,200 people in Southwark recorded this as their ethnicity.

The diversity of Southwark is much greater among our children and young people, with roughly equal proportions of young people from White and Black ethnic backgrounds, and 14% with mixed or multiple ethnicities.

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to this protected characteristic is minimal. We will continue our engagement work with diverse residents and community groups across the borough to inform and deliver our climate adaptation and resilience work.

Religion and belief - Religion has the meaning usually given to it but belief includes religious and philosophical beliefs including lack of belief (e.g. Atheism). Generally, a belief should affect your life choices or the way you live for it to be included in the definition.

Potential impacts (positive and negative) of proposed policy/decision/business plan

Potential health impacts (positive and negative)

The Climate Resilience and Adaptation Strategy will have a neutral impact on the protected characteristic of religion and belief and there are no foreseen negative impacts. Adapting the borough and its buildings to climate change will ensure religious practice can continue for all. The Climate Change Resilience and Adaptation Strategy has a neutral health impacts on the protected characteristic of religion and belief. The strategy does not put forward actions or policies that specifically reference or primarily respond to issues relating to religion.

Equality information and health data on which above analysis is based

There were over 40 distinct religions identified among Southwark residents by the 2021 Census.

In 2021, 43% of residents reported their religion to be Christian, a drop of 10% since the 2011 Census.

'No religion' was the second most common option reported among Southwark residents, representing over one third (36%) of the population, substantially larger than across London (27%), but similar to the proportion nationally (37%).

Over 29,600 Southwark residents reported their religion to be Muslim, equating to approximately 10% of the population. Those with Muslim or Hindu religion made up a notably smaller proportion of the population in Southwark than was seen across London.

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to this protected characteristic is minimal.

Sex - A man or a woman.		
Potential impacts (positive and negative)		
of proposed policy/decision/business		

plan

Potential health impacts (positive and negative)

The Climate Resilience and Adaptation Strategy will have a neutral impact on the protected characteristic of Sex and there are no foreseen negative impacts. The Climate Change Resilience and Adaptation Strategy has a neutral health impacts on the protected characteristic of sex. The strategy does not put forward actions or policies that specifically reference or primarily respond to issues relating to sex.

Equality information and health data on which above analysis is based

Southwark is home to ~307,600 people made of 149,000 Males and 158,600 Females.

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to this protected characteristic is minimal.

Sexual orientation - Whether a person's sexual attraction is towards their own sex, the opposite sex or to both sexes

Potential impacts (positive and negative) of proposed policy/decision/business plan	Potential health impacts (positive and negative)
The Climate Resilience and Adaptation Strategy will have a neutral impact on the protected characteristic of sexual orientation and there are no foreseen negative impacts.	The Climate Change Resilience and Adaptation Strategy has a neutral health impact on the protected characteristic of sexual orientation. The strategy does not put forward actions of policies that specifically reference or primarily respond to issues relating to sexual orientation.

Equality information and health data on which above analysis is based

New, voluntary, questions in the 2021 Census on sexual orientation provide the most recent local data on residents' sexual orientation.

Southwark is ranked the 4th in England for residents identifying with a non-heterosexual orientation, frequently lesbian, gay or bisexual. In Southwark, 8% of residents (nearly 21,000 people) aged 16+ have a non-heterosexual sexual identity. Within this population, 56% identified as lesbian or gay and 40% identified as bisexual or pansexual. 6% of Southwark women identify as LGB+ overall, though this reaches 12% within the 16-24 age bracket. More men identify as LGB+: 10% of male residents overall, peaking at 13% within the 35-44 age bracket. The Burgess Park area of Southwark has the largest LGB+ population within the borough.

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to this protected characteristic is minimal.

Socio-economic disadvantage – although the Equality Act 2010 does not include socioeconomic status as one of the protected characteristics, Southwark Council recognises that this continues to be a major cause of inequality in the borough. Socio economic status is the measure of an area's, an individual's or families economic and social position in relation to others, based on income, education, health, living conditions and occupation.

and occupation.	
Potential impacts (positive and negative)	Potential health impacts (positive and
of proposed policy/decision/business	negative)
plan	
	The Climate Change Resilience and Adaptation Strategy will have a positive health impact on those who are socioeconomically disadvantaged as its delivery will focus on areas that experience the highest climate risk. These areas correlate with areas of higher socio-economic disadvantage.

Equality information and health data on which above analysis is based

Southwark has seen an improvement in its ranking relative to other local authorities since 2015, yet remains one of the most deprived authority areas in the country.

Table 1: Indices of Deprivation – Southwark ranking in 2015 & 2019 Source: Ministry of Housing, Communities & Local Government

Measure	Ranking out of 317 local authorities IoD 2015	Ranking out of 317 local authorities IoD 2019
Rank of average rank	23 rd	43 rd
Rank of average score	40 th	72 nd

Approximately 21% of Southwark's population live in communities ranked within the most deprived nationally. This increases to 23% among those aged under 18.

The 2021 Census shows that economic activity levels in Southwark are higher than both London and England. At the time of the Census in March 2021, just over 70% of the population aged 16+ were economically active, 92% of whom were in employment.

Economic inactivity in Southwark is below regional and national levels. The main group of those who are economically inactive and not seeking work are students, with 16,500 in the borough, followed by those who are long-term sick, with over 10,000 in this group.

An individual's income significantly impacts their experience of climate change and the resources they have available to adapt to the changing environment. According to the 2019 Indices of Deprivation study, Southwark ranked 43rd out of 137 local authorities in terms of socio-economic deprivation and almost a third of our residents live in communities ranked in the 20% most income-deprived in England.

Mitigating actions to be taken

We will continue to monitor and review the delivery of the Strategy to ensure that the likelihood of negative impacts to socio-economic status is minimised.

We will also seek to identify and deliver opportunities for positive socio-economic outcomes through the delivery of the Strategy such as training, engagement, and new employment opportunities.

Human Rights

There are 16 rights in the Human Rights Act. Each one is called an Article. They are all taken from the European Convention on Human Rights. The Articles are The right to life, Freedom from torture, inhuman and degrading treatment, Freedom from forced labour, Right to Liberty, Fair trial, Retrospective penalties, Privacy, Freedom of conscience, Freedom of expression, Freedom of assembly, Marriage and family, Freedom from discrimination and the First Protocol

Potential impacts (positive and negative) of proposed policy/decision/business plan

Potentially, not preparing and adapting to the adverse impacts of climate change can ultimately be relevant to the right to life enshrined in the Humans Rights Act. The impact of climate change on Southwark residents' living environments, and the risk this poses to the health and wellbeing

of individuals, is a fundamental component in the resilience and adaptation strategy and will continue to be considered as the work in this area progresses.

Information on which above analysis is based

The analysis of the need to tackle climate change is set out in the Council's Climate Change Strategy (2021) and have subsequently informed development of the Climate Action Plan.

Mitigating actions to be taken

Continued engagement with those in the community adversely affected by the impact of climate change and the continued consideration and development of plans taking account of any representations.

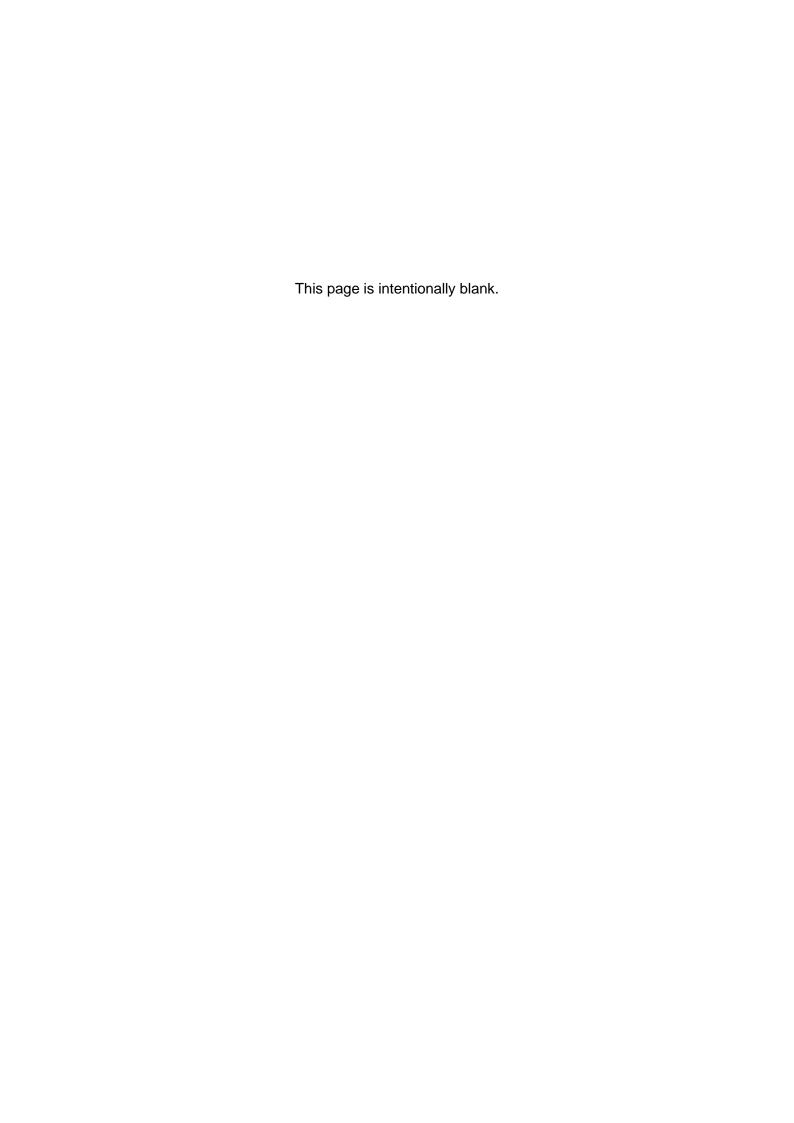
Ongoing consideration of the right to life as a relevant factor in the ongoing development of the Climate Resilience and Adaptation Strategy.

Section 5: Further actions and objectives

5. Further actions

Based on the initial analysis above, please detail the key mitigating actions or the areas identified as requiring more detailed analysis.

Number	Description of issue	Action	Timeframe
1	Developing our understanding of the impact that climate change will have on those who are most vulnerable in the borough.	We have proposed an action point in the Strategy to undertake further research into climate impact within the borough.	2024
2			
3			
4			



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