

London boroughs climate change action plan: Creating a Resilient and Green London

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1. Purpose and Scope

The purpose of this action plan is to achieve the ambition set out in [London Councils Joint Statement on Climate Change](#), to ‘create a resilient and green London’. By this, we mean that London should be environmentally, socially and economically resilient to the changing climate, in a way that safeguards and enhances green and blue infrastructure and ensures that they are equally accessible to all. We define resilience in line with the London Resilience Strategy, as ‘the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and thrive no matter what kinds of chronic stresses and acute shocks they experience.’¹ In the first two years, this programme will undertake further work to bring this definition to life and develop a clear future vision for London.

The action plan has been developed collaboratively by London boroughs, with input from the Executive Member for Transport and Environment and support from London Councils, the London Environment Directors’ Network, the Association of Directors of Public Health London office, the London Climate Change Partnership, the Environment Agency and the GLA.

The Steering Group have adopted this plan, and progress will be reported back to the Transport and Environment Committee (TEC). This plan is designed to support all boroughs to achieve the headline ambition, whilst recognising that requirements and resourcing will vary from borough to borough.

¹ 2020, London City Resilience Strategy 2020, GLA. The Strategy defines shocks as ‘Sudden impact events that can immediately disrupt a city and may have wide-ranging and unexpected impacts’, and stresses as ‘Chronic issues that weaken the fabric of a city and can eventually lead to a major shock’.

2. Introduction

2.1. Climate change impacts in London

Climate change is already occurring, and even with action to mitigate current emissions, we expect to see significant changes in London's climate in the future. The Climate Change Committee (CCC) published an Independent Assessment of UK Climate Risk in 2021². It reports that the UK will witness the following:

- Increases in average and extreme temperatures, in winter and summer.
- Changes to rainfall patterns, leading to flooding in some places, and water scarcity in others.
- Increased coastal flooding and erosion.
- Increased frequency and intensity of wildfires.
- Potential changes to other weather variables including wind strength and direction, sunshine and UV levels, cloudiness, and sea conditions such as wave height.

Disadvantaged communities will be disproportionately impacted by these changes, and health and social care will also be affected – for example with threats to water supplies through greater risk of drought. We can chart the impacts and their scale on these sectors, as well as energy, built environment and information technology, which will affect individuals, the public sector and businesses. Although the broad impacts and risks are well understood, in some areas further research into likely impacts is needed.

2.2. London boroughs' action on climate change

Since 2019, 28 boroughs have declared a climate emergency, together with approximately 300 local authority declarations nationwide. The CCC has recognised that local authorities' 'leadership role in partnerships and with the public places them at the heart of the climate conversation and in developing and replicating local solutions', and that 'around a third of the UK's emissions are dependent on sectors that are directly shaped or influenced by local authority practice, policy or partnerships.'³

Recognising the need for coordinated support to boroughs climate change ambitions, the TEC and the London Environment Directors' Network (LEDNet) met in November 2019 to discuss climate change action and the development of shared priorities. There was a consensus on the urgency of climate change and the need to act promptly and collaboratively, and in December 2019 London Councils adopted the Joint Statement on Climate Change.

The Joint Statement on Climate Change that they adopted identifies seven key [climate programmes](#) that boroughs will jointly deliver. The seventh programme will focus on 'creating a resilient and green London' and will initially be led by LB Southwark.

² 2021, Independent Assessment of UK Climate Risk: Advice to Government for the UK's Third Climate Change Risk Assessment, Climate Change Committee

³ 2020, Local Authorities and the Sixth Carbon Budget, Climate Change Committee

2.3. National policy framework for climate change adaptation

At the national level, the Climate Change Act amendment in 2019⁴ commits the Government to meet net zero carbon emissions by 2050. Meanwhile, in the UK's sixth Carbon Budget in 2020 the Government committed to a 78% reduction in emissions by 2035, compared to 1990 levels⁵. The UK Climate Change Risk Assessment (CCRA) is a five yearly assessment by the CCC of the major risks and opportunities from climate change to the UK. The 2016 report⁶ identified six key risk areas:

- Flooding and coastal change risks to communities, businesses and infrastructure
- Risks to health, well-being and productivity from higher temperatures
- Risks of water deficits in public water supply, and for agriculture, energy generation and industry, with impacts on freshwater ecology
- Risks to natural capital, including soils, coastal, marine and freshwater ecosystems, and biodiversity
- Risks from climate-related impacts on domestic and international food production and trade
- New and emerging pests and diseases, and non-native species, affecting people, plants and animals

In the 2021 report, the CCC recognises that risks from climate change and the importance of adaptation, continue to grow. In identifying 14 comparable risks that have increased in future magnitude, compared to the last assessment in 2016, the report highlights the increasing size of the issues that must be overcome if we are to ensure a resilient London.

The National Adaptation Programme (2018 – 2023)⁷ is the Government's strategy to address the main risks and opportunities identified in the CCRA reports. It is a key pillar in addressing adaptation to climate impacts in the UK, and includes local authority-related actions around forestry, flooding across the energy and transport networks, emergency planning and overheating in buildings. The National Flood and Coastal Erosion Risk Management Strategy (FCERM)⁸ 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'. This is achieved by working towards three key ambitions:

- Climate resilient places, which proposes an adaptive pathways approach as reflected in London through the Thames Estuary 2100 Plan
- Today's growth and infrastructure resilient in tomorrow's climate
- A nation ready to respond and adapt to flooding and coastal change

Local authorities have a duty to address climate change adaptation and to conserve and enhance the natural environment as part of the development of Local Plans. Paragraph 153 of the National Planning Policy Framework (NPPF) states that,

'Plans should take a proactive approach to mitigating and adapting to climate change, taking into account the long-term implications for flood risk, coastal change, water supply, biodiversity and landscapes, and the risk of overheating from rising temperatures. Policies should support appropriate

⁴ 2019, Climate Change Act 2008, Parliament: House of Commons

⁵ 2020, The Sixth Carbon Budget: The UK's Path to Net Zero, Climate Change Committee

⁶ 2016, UK Climate Change Risk Assessment 2017, Synthesis Report: Priorities for the next 5 years, Climate Change Committee

⁷ 2018, The National Adaptation Programme and the Third Strategy for Climate Adaptation Reporting, DEFRA

⁸ 2020, National Flood and Coastal Erosion Risk Management Strategy for England, Environment Agency

measures to ensure the future resilience of communities and infrastructure to climate change impacts, such as providing space for physical protection measures, or making provision for the possible future relocation of vulnerable development and infrastructure.’⁹

Paragraph 174 of the NPPF states that,

‘Planning policies and decisions should contribute to and enhance the natural and local environment by:... protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils... recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services... minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures.’¹⁰

Section 40 of the Natural Environment and Rural Communities (NERC) Act¹¹ places a duty on public authorities to have regard, in the exercise of their functions, to conserving biodiversity including embedding consideration of biodiversity as an integral part of policy and decision making and seeking to make a significant contribution to the achievement of the commitments made by government in its [25 Year Environment Plan](#).

The passing of the Environment Act in 2021¹² was the first step to introducing a mandatory requirement for 10% biodiversity net gain in most developments and for habitat to be secured for at least 30 years. These measures will be finalised with the amending of the Town and Country Planning Act, likely to become law in 2023. This will strengthen the biodiversity objective for public authorities in the NERC Act and introduce a requirement for local authorities (in London this is likely to be the Mayor of London), to produce Local Nature Recovery Strategies.

2.4. Regional policy framework for climate change adaptation

There is an established regional climate adaptation policy framework for London, in the form of the [London Environment Strategy](#) (LES)¹³ (the corresponding Integrated Impact Assessment) and the London Plan¹⁴, together with a variety of existing programmes and funds to support climate adaptation and greening more generally.

The 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 Strategy¹⁵. Key areas include:

- Resilience of London’s infrastructure and services to severe weather and climate change
- Addressing flooding and water quality through action on flooding – tidal, surface water and other, sustainable drainage and sewerage systems
- Reducing water consumption and leakage

⁹ 2021, National Planning Policy Framework: 14. Meeting the challenge of climate change, flooding and coastal change, Department for Levelling Up, Housing and Communities

¹⁰ 2021, National Planning Policy Framework: 15. Conserving and enhancing the natural environment, Department for Levelling Up, Housing and Communities

¹¹ 2006, Natural Environment and Rural Communities Act, Parliament: House of Commons

¹² 2021, The Environment Act, Parliament: House of Commons

¹³ 2018, London Environment Strategy, GLA

¹⁴ 2021, The London Plan, GLA

¹⁵ 2018, Mayor’s Transport Strategy, GLA

- Resilience to extreme heat

The LES also sets out a range of policies on greening, many of which are also streamed through into the London Plan. These include increasing the extent and accessibility of green spaces, protecting and enhancing biodiversity and protected areas, and addressing the funding gap for parks and green spaces in the capital. Effective community engagement also underpins this work.

The London Resilience Strategy¹⁶ 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 this Resilient and Green Action Plan in the areas of extreme heat management, using water sustainably, integrated circular water systems, and resilient and zero carbon infrastructure.

Many London boroughs will play an important role in ensuring that London is resilient against all types of flooding. With tidal flooding being a particularly large risk, the Thames Estuary 2100 plan was published in 2012¹⁷. The plan aims to:

- Manage the risk of flooding
- Adapt to the challenges of climate change
- Ensure sustainable and resilient development in the floodplain
- Protect the social, cultural and commercial value of the tidal Thames, tributaries and floodplain
- Enhance and restore ecosystems and maximise benefits of natural floods

Boroughs will have to play an active role in this through floodplain management programmes and enhancing river defence walls, for example.

2.5. The impact of 2020-2022: Covid-19 and green recovery

In the preparation of this action plan, London boroughs and their partners have also been responding to the Covid-19 pandemic, which has had a severe impact on London. The coordinated response to Covid-19 has been managed through our statutory resilience functions, and has brought greater urgency to resilience planning, and the prospect of future, concurrent resilience to challenges, especially as climate change impacts become more severe. At the same time, issues raised in this plan have come to the fore. For example, Londoners have become ever more aware of the challenges associated with poor quality housing – including in relation to overheating – and the benefits of, and inequality in, access to green space. We have also seen an increase in food insecurity, and in water¹⁸ and energy consumption during lockdown, which will exacerbate financial pressure on households.

In developing plans for the city’s recovery, we have worked closely with the GLA under the London Recovery Board, including the Green New Deal and High Streets missions, which will have a role in securing greater resilience and greening in our public realm and built environment as part of the economic and social recovery.

¹⁶ Ibid, page 1

¹⁷ 2012, Thames Estuary TE2100 Plan, Environment Agency

¹⁸ 2020, Coronavirus lockdown caused dramatic changes in water consumption, research finds, The University of Manchester, <https://www.manchester.ac.uk/discover/news/coronavirus-lockdown-caused-dramatic-changes-in-water-consumption/>

3. Action Plan Development

3.1. London Councils' 'Resilient and Green' Working Group

London Councils established a 'Resilient and Green Working Group' in June 2020 to develop this action plan, chaired by LEDNet's green spaces cluster lead, Chris Whyte (Operational Director – Environmental Services, LB Brent). The Working Group included borough representatives across a wide range of services areas, the Environment Agency, London Climate Change Partnership, GLA and the Association of Directors of Public Health (ADPH) London office.

In order to shape the discussion on this wide-ranging area, the working group meetings were structured around the six climate adaptation risks to the UK that were identified in CCRA2¹⁹ (see section 2.3), with presentations from a wide range of expert speakers, and detailed discussions in each area around the appropriate priorities and actions for boroughs and their partners to draw into this action plan.

3.2. Main themes in the action plan

In developing this action plan, we have addressed each of the main adaptation risk to the UK, namely overheating, flooding, water scarcity, trade and food security, pests and diseases and loss of natural capital. We shaped this action plans with the following understanding of boroughs' role in each area:

- **Overheating:** statutory duty to address overheating in building and public realm through Local Plans and planning decisions/ development control, management of social housing and housing for vulnerable residents, management and/ or control of green and blue infrastructure, management and/ or control over highways
- **Flooding:** statutory duty to complete a Strategic Flood Risk Assessment and to avoid development in flood-prone areas, and to prepare a Flood Risk Management Plan²⁰, delivery of flood risk projects, working collaboratively to manage increasing tidal flood risk due to rising sea levels, management and/ or control of green and blue infrastructure, management and/ or control over highways
- **Water scarcity:** reducing water demand through Local Plans and planning decisions/ development control, community water saving projects and leadership, liaison with water companies over water supply and demand management
- **Trade and food security:** local authorities do not have a substantive role in how trade and food security are affected by (global) climate change, and these risks are therefore not addressed in this action plan
- **Pests and diseases:** statutory duty around food safety regulation, statutory duty to deliver public health functions in relation to disease surveillance and management, management and/ or control of green and blue infrastructure. In this plan, actions relating to pests and diseases have been placed within the natural capital and ecological emergency section, given the large crossover between the two

¹⁹ Ibid. page 3

²⁰ All 'lead local flood authorities' are required to prepare a Flood Risk Management Plan; all London boroughs are lead local flood authorities.

- **Loss of natural capital:** statutory duty to conserve and enhance biodiversity and the natural environment through Local Plans and planning decisions/ development control, management and/ or control of green and blue infrastructure, Local Nature Recovery Strategies which will include planning for biodiversity net gain and green infrastructure more generally.

3.3. Cross-cutting themes in the action plan

Cross-cutting themes that arose in the Working Group have been reflected in the action plan, in particular issues around capacity and coordination, evidence and data, and partnerships and communities. There was also a strong public health – and health inequalities – aspect to many of the working group’s discussions. Climate change in London will continue to be responsible for direct mortality and illness, and short and long-term impacts on human health. For example, we are already seeing around 2,000 excess deaths a year from overheating across the UK, and which is predicted to rise to around 3,300 a year in the 2020s. Addressing this specific challenge requires year-round action, since the burden of mortality occurs below the heatwave alert threshold, and across a wide range of services, including planning, development control, emergency planning, parks services and of course public health.

This illustrates a second key challenge for this action plan: integrated action across a range of services and disciplines, within, between and beyond individual councils. This includes strategy, data, operational, regulatory and financial issues, and all of these areas will require coordinated action to secure a resilient and green London.

To support this integration, we will need to ensure that data and evidence is used to develop robust plans, models and business cases. Although there is good evidence from the UK Climate Impacts Programme, it is not yet effectively used across borough level services.

We will also need to assess costs and benefits to all stakeholders, particularly across wider areas and timescales. If, for example, excess runoff in one borough causes flooding another, how can we address this together? Additionally, we need to integrate action to avoid unintended consequences – for example, failing to adapt homes for future climate change when retrofitting to increase energy efficiency. As a first step towards an integrated approach, this action plan has been shaped around thematic objectives, rather than departmental or service-specific activities – e.g. for planning, highways or public health.

A third major theme from the working group discussions is the disproportionate effects that climate change can have on already vulnerable communities, in terms of health and associated impacts (e.g. those who cannot afford adequately ventilated homes or air conditioning, and those whose homes are more prone to flooding). Action to address these impacts can reduce inequalities, for example by ensuring all communities have good access to (cool) green spaces; currently, about half of London’s households are more than 400m from their nearest local park, and many are in areas of deficiency in access to public open space.²¹

More generally, it was recognised that there are significant interactions between the actions in different risk areas identified as a priority. For example, action to protect natural capital by expanding quality green spaces – can reduce overheating risks. Likewise, there is also a large scope for co-benefits to be realised when implementing actions. For example, the creation of new flood defences will not only prevent flooding from impacting business and residents alike. It can also support construction jobs, allow for the creation of new or improved public areas and enhance the local environment and support biodiversity, if properly

²¹ 2018, London Environment Strategy, GLA

delivered. These interactions and co-benefits will need to be born in mind when prioritising, sequencing and managing actions within the plan.

Finally, we recognised that although this programme runs to 2030, in common with the other six climate programmes, the effective time horizon for work on resilience, adaptation and greening is considerably longer than that. For example, work on flooding is not expected to include construction of major flood defences, but instead reducing overall flood risk through the approach to e.g. development, and securing consensus on how we can fund and develop effective flood defences such that they can be brought forward as needed in future decades.

3.4. Lead borough for ‘resilient and green’

LB Southwark was appointed as lead borough for this ambition at the October 2020 TEC meeting. The borough was asked to fulfil this role for at least two years, and to:

- Develop and approve the action plan drafted by the working group where it exists and ensure that it is commensurate with the relevant ambition
- Develop a two-year work plan
- Ensure that appropriate governance structures and resourcing exists to support delivery of the work and action plan
- Oversee the effective delivery of the action plan
- Support advocacy activities that can secure resourcing and a supportive policy framework – at local, regional and national levels – that supports the aim of the action plan
- Report back to the LEDNet climate cluster on at least a quarterly basis
- Report back to London Councils TEC on at least a six-monthly basis

4. Action Plan (2021-2030)

Objective	Milestones	Timeline									
		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
To develop a vision and principles for the programme	A clear vision is established for the programme, articulating what a 'resilient and green' London will look like in 2030 and its positive impacts										
To develop effective borough leadership and capacity on resilience and adaptation	Boroughs understand the current and projected future impacts of key adaptation risks in their borough and how they are currently being addressed										
	Boroughs adopt best practice on Cabinet responsibility for adaptation and resilience										
	Boroughs ensure that health and wellbeing boards have a clear and integrated role on climate adaptation and resilience										
	Boroughs have access to well-evidenced business cases that support them to resource adaptation and resilience activities										
	Boroughs adopt local adaptation plans										
	Boroughs effectively collaborate at a local, sub-regional and pan-London level on shared priorities around key adaptation risks										
To Develop effective Data and Evidence	Produce recommendations on data and tools that should be collectively available to boroughs to enable effective action on adaptation and resilience										
	Boroughs have access to effective data, tools and skills to support understanding and management of key adaptation										
To develop effective strategic partnerships	Boroughs have effective strategic partnerships across key adaptation risks at the pan-London level										
	Boroughs and their strategic partners engage on shared adaptation and resilience challenges										
To ensure that London's communities	Boroughs support and roll out effective communications around key adaptation risks and communities most at risk										

understand key adaptation risks and are empowered to take action to address them														
To reduce heat risk to Londoners	Boroughs have access to research that can effectively guide action on heat risk													
	Boroughs plan collaborative priorities with strategic partners													
	Home retrofitting action plan supports reduction of heat risk and does not increase future heat risk													
	Development, infrastructure and planning functions effectively support reduction of overheating in new developments, public realm and transport planning													
To improve London's resilience to drought and reduce water demand	Boroughs have access to research that can effectively guide action on water scarcity													
	Boroughs support an agreed severe drought plan for London, as part of the Drought Response Framework													
	Boroughs have access to and actively engage with best practice approaches to reducing water demand, including Integrated Water Management Schemes													
	Development, infrastructure and planning functions effectively support water efficiency in new developments, public realm and transport planning													
To improve the management of and resilience to flooding , and to mitigate flood risk	Boroughs follow the lead of and support other organisations and working groups to reduce flood risk across London													
	Boroughs develop a vision for their future riverside that incorporates the required tidal flood defence raising with wider social, economic and environmental benefits and improvements (i.e. the riverside strategy approach)													
	Boroughs establish effective avenues to fund major flood mitigation schemes													
To enhance natural capital and address	Boroughs have access to research that can effectively guide action on loss of natural capital													

the ecological emergency by protecting, improving and extending green space and protecting biodiversity	Boroughs introduce effective surveillance of invasive species and pests and diseases affecting plants and animals across public green spaces and Sites of Importance for Nature Conservation in London										
	Boroughs coordinate approaches to upgrading existing parks and green spaces and creating extended urban greening to increase their resilience to current and future climate change										
	Development, infrastructure and planning functions effectively support reduction in the loss of natural capital in new developments, public realm and transport planning										

5. 2021 – 2023 Work plan

Objective	Milestones	Activities	Metric	Lead	Timeline
To develop a vision and principles for the programme	A clear vision is established for the programme, articulating what a ‘resilient and green’ London will look like in 2030 and its positive impacts	Boroughs, partners and stakeholders in the programme undertake a visioning process to establish a simple and inspiring vision for what a ‘resilient and green London’ would look like in 2030	Visioning process complete	LBS	By Dec 2022
		The vision is used as the basis for the second two-year programme work plan	2023 – 2025 work plan complete	LBS	By Dec 2023
To develop effective borough leadership and capacity on resilience and adaptation	Boroughs understand the current and projected future impacts of key adaptation risks in their borough and how they are currently being addressed	Undertake a survey on borough awareness, leadership, capacity, management of key adaptation risks and associated resilience issues	Survey complete	LC/ LBS	By Dec 2022
		Liaise with low Carbon Development Working Group to identify areas both groups can work on, confirm new actions and split action between programmes	New actions added to work plan	LCD Working Group	By Dec 2022
	Boroughs adopt best practice on Cabinet responsibility for adaptation and resilience	Develop best practice around governance of adaptation and resilience in consultation with TEC/ political groupings, including leadership responsibility and matrix management across council teams and across councils (e.g. the tri-borough Redbridge, Havering and B&D arrangement around flood risk)	Best practice adopted	LC/ LBS	By Mar 2022
	Boroughs ensure that Health and Wellbeing Boards have a clear and integrated role on climate adaptation and resilience	Pilot assesses how Health and Wellbeing Boards can best engage with and support climate adaptation and resilience	Pilot complete		By Mar 2023

	Boroughs have access to well-evidenced business cases that support them to resource adaptation and resilience activities	Develop a resource library to support adaptation activity by providing a knowledge base across the key risk areas, with some inclusion of case studies, policy and regulatory measures, e.g. the Urban Greening Factor, Local Nature Recovery Strategies and successful surface water flooding interventions	Template business case adopted by programme	Inc. GLA	By Mar 2023
		Ensure that effective training is available and taken up by boroughs to support ongoing best practice in key risk areas	Training is available and boroughs are signposted accordingly	Inc. GLA, Urban Design London, Mayors Green Skills Hub Academy	By Dec 2030
	Boroughs adopt local adaptation plans	Develop best practice around mechanisms to identify actions needed to address key adaptation risks, secure funding, implement and monitor effectiveness	Best practice shared with boroughs		By Dec 2022
		Adoption of local adaptation plans by boroughs	Plans adopted	Boroughs	2023 and beyond
	Boroughs effectively collaborate at a local, sub-regional and pan-London level on shared priorities around key adaptation risks	Undertake a review of borough-level climate action plans relating to key adaptation risks to identify opportunities for effective collaboration, building on London Councils' Borough Climate Action Plan Review	Survey complete		By Dec 2022
		London Councils TEC adopts an updated list of best practice actions for 'green and resilient' that should be incorporated in borough Climate Action Plans	Best practice adopted by TEC	LC	By Mar 2023
		Liaise with Green Economy Working Group to identify areas both groups can work on, confirm new actions and split action between programmes	New actions added to work plan	GE Working Group	By Dec 2022

		Explore options for jointly-resourced teams that work across groups of boroughs to activity across key adaptation risk areas, including flooding and green spaces	Scoping paper complete	LBS, inc. GLA ²²	By Dec 2023
To Develop effective Data and Evidence	Produce recommendations on data and tools that should be collectively available to boroughs to enable effective action on adaptation and resilience	Share existing methods of adaptation planning and risk management approaches for London boroughs in addressing key adaptation risks, including adaptive pathways, natural capital accounting and financial catastrophe modelling approaches	Report on scoping study	LCCP, EA, TFL, GLA	By Mar 2023
		Recommend approaches to using natural capital accounts, such as GLA's Natural Capital Account for London, and Local nature Recovery Strategies as a metric to monitor progress on the ecological emergency	Best practice adopted by programme	GLA	By Mar 2023
	Boroughs have access to effective data, tools and skills to support understanding and management of key adaptation	Put in place frameworks and guidance for data and information sharing, including the use of existing mapping resources [and borough level data], to: <ul style="list-style-type: none"> • monitor action to address overheating • monitor action to address water scarcity • monitor action to address all types of flooding (inc. recommending submission of data to State of the City) • monitor the health of the natural environment/ natural capital • Remind boroughs of data they should be collecting as part of statutory duties 	Accessible data and information made available	Partnering with GLA, EA, LOTI	By Dec 2022
		Support use of agreed adaption planning and risk management approaches and coordinated use	Best practice adopted by programme		By Mar 2023
		Consider approaches to developing climate adaptation competencies amongst borough staff ²³	Paper on competency needs and frameworks		By Mar 2023

²² Could link to London Green Space Commission Centre of Excellence, and/ or the All London Green Grid refresh.

²³ For example, via the Climate Adaptation Competency Framework: <https://adaptationlearningnetwork.com/climate-adaptation-competency-framework>

		Liaise with Green Economy Working Group to identify areas both groups can work on, confirm new actions and split action between programmes	New actions added to work plan	LCD Working Group	By Dec 2022
To develop effective strategic partnerships	Boroughs have effective strategic partnerships across key adaptation risks at the pan-London level	Map existing strategic partnerships with government departments, water companies, infrastructure providers, London Resilience statutory agencies including the EA, and the GLA Group and NHS	Internal report produced	EA	By Mar 2023
	Boroughs and their strategic partners engage on shared adaptation and resilience challenges	Revitalise collective relationship with water companies through sub-regional flooding partnerships to clarify shared borough objectives around climate resilience and opportunities for collaboration	Engagement through Water Advisory Forum		By Dec 2022
		Identify gaps in strategic partnerships on issues related to climate resilience and explore opportunities for partnership working where appropriate	Document produced to summarise learnings		Ongoing
		Liaise with Green Economy Working Group to identify areas both groups can work on, confirm new actions and split action between programmes	New actions added to work plan	LCD Working Group	By Dec 2022
To ensure that London's communities understand key adaptation risks and are empowered to take action to address them	Boroughs support and roll out effective communications around key adaptation risks and communities most at risk	Publish an overarching stakeholder engagement plan that coordinates central communications for all actions in this plan, ensuring this aligns with London Council's work across all 7 work streams and other strategic forums communications.	Publish Stakeholder Communication Document		By Mar 2023
To reduce heat risk to Londoners	Boroughs have access to research that can effectively guide action on heat risk	Draw together and /or commission new research on key topics, which could include: <ul style="list-style-type: none"> the equity and inequality issues surrounding overheating national and international case studies that can guide action in urban areas factors that amplify heat risk and how built environment can both positively and negatively impact heat risk 	Research published	[With/ led by LCCP]	By Mar 2023

	Boroughs plan collaborative priorities with strategic partners	Assess existing heat risk mapping and borough-level heat priorities across London to identify collective priorities	Priorities adopted by programme	With PHE?	By Dec 2022
		Identify pilot projects to develop activity and/ or funding that meets those priorities; these could include: <ul style="list-style-type: none"> • Develop a template heat risk action plan and approaches to borough-level engagement through e.g. Health and Wellbeing boards • Support the development of the Cool Spaces project, including approaches to using public buildings and public outdoor spaces to address heat risk • Support PHE heat and cold alerts • Support the development of ‘cool corridor’ proposals, as in Medellín²⁴ • Support to critical infrastructure, such as schools, hospital and care homes 	Pilot projects completed		By Dec 2023
	Home retrofitting action plan supports reduction of heat risk and does not increase future heat risk	Liaise with Home Retrofitting Working Group to identify areas both groups can work on, confirm new actions and split action between programmes	New actions added to work plan	LCD Working Group	By Dec 2022
Development, infrastructure and planning functions effectively support reduction of overheating in new developments, public realm and transport planning	Liaise with Green Economy Working Group to identify areas both groups can work on, confirm new actions and split action between programmes	New actions added to work plan	LCD Working Group	By Dec 2022	
	Liaise with Low Carbon Transport Working Group to identify areas both groups can work on, confirm new actions and split action between programmes	New actions added to work plan	LCD Working Group	By Dec 2022	
Boroughs have access to research that can	Draw together and /or commission new research on key topics, which could include:	Research published	[With/ led by LCCP]	By Mar 2023	

²⁴ [Medellín shows how nature-based solutions can keep people and planet cool \(unenvironment.org\)](https://www.unenvironment.org/en/stories/news/news/medellin-shows-how-nature-based-solutions-can-keep-people-and-planet-cool)

To improve London's resilience to drought and reduce water demand	effectively guide action on water scarcity	<ul style="list-style-type: none"> the equity and inequality issues surrounding water scarcity national and international case studies that can guide action in urban areas Develop mapping around water scarcity How built infrastructure can help to reduce the risk of drought (e.g. case studies on IWMS) Who uses water and for what purpose 			
	Boroughs support an agreed severe drought plan for London, as part of the Drought Response Framework	Engage with the process to develop an agreed plan to manage severe drought affecting London	Regular feedback received from representative on Water Advisory Forum	LC/ LBS	By Mar 2023
		Agree and implement a shared severe drought management plan for London	Plan adopted		By Dec 2023
	Boroughs have access to and actively engage with best practice approaches to reducing water demand, including Integrated Water Management Schemes	Engage with the findings from London Resilience Strategy pilot in Thamesmead and Isle of Dogs and other suitable pilots (e.g. GLA in East London) of Integrated Water Management Schemes (IWMS)	Programme receives regular feedback		By Dec 2023
		Implement recommendations and learning from pilots and work to identify future projects	# IWMS adopted		By Dec 2023
		Lead by example by increasing water efficiency in public buildings ²⁵	Reduction of water use in borough owned buildings		By Dec 2023
	Development, infrastructure and planning functions effectively support water efficiency in new	Liaise with Green Economy Working Group to identify areas both groups can work on, confirm new actions and split action between programmes	New actions added to work plan	LCD Working Group	By Dec 2022

²⁵ With reference to the Water Advisory Group Task and Finish group on water scarcity, and the CIWEM national water re-use group

	developments, public realm and transport planning				
To improve the management of and resilience to flooding , and to mitigate flood risk	Boroughs follow the lead of and support other organisations and working groups to reduce flood risk across London	Ensure that local policies, plans and strategies support Thames Estuary 2100 recommendations	Local policies, plan and strategies updated	Boroughs	By Mar 2023
		Acknowledge the Surface Water Flooding Working Group as the organisation taking the lead on surface water flooding actions in London.		Surface Water Flooding Group	By Dec 2022
		Ensure regular communication and cooperation with the Surface Water Flooding Working Group to allow for best practice to be adopted by boroughs and support to be provided to the working group as necessary.	Best practice adopted by boroughs	Surface Water Flooding Group	Ongoing
	Boroughs develop a vision for their future riverside that incorporates the required tidal flood defence raising with wider social, economic and environmental benefits and improvements (i.e. the riverside strategy approach)	Produce a visioning document that identifies the key actions that need to be taken for London to have resilient and green riverside	Visioning document published		By Mar 2023
		Work with boroughs, water companies and the Environment Agency (i.e. all Risk Management Authorities) to identify flooding hotspots	Flooding hotspots agreed	EA/ Flood advisors/ Thames RFCC	By Mar 2023
	Boroughs establish effective avenues to fund major flood mitigation schemes	Work with the Environment Agency to develop a London Councils position on how to secure approval and funding for enhanced fluvial and tidal defences, of a kind that are acceptable to community and include co-benefits including carbon reduction and biodiversity net-gain, including via planning gain secured by individual councils	LC position adopted	LC and EA	By Mar 2023
To enhance natural capital and address the	Boroughs introduce effective surveillance of	Evidence around effective methods of natural pests control developed and shared between boroughs	Evidence report produced		By Dec 2023

ecological emergency by protecting, improving and extending green space and protecting biodiversity	invasive species and pests and diseases affecting plants and animals across public green spaces and Sites of Importance for Nature Conservation in London	Tools and approaches for invasive species surveillance are effectively shared amongst boroughs	Tools and approaches shared		By Dec 2023
		Liaise with pan-London groups on biodiversity and green infrastructure to identify where we can add value		LTOA, Forestry Commission London [Parks for London?]	By Dec 2023
	Access to green space: milestone to be developed through Green New Deal process	In line with the London Plan, boroughs identify every resident that does not have access to a park within 400m of their residence	Identification of residents that do not meet criteria	Boroughs	By Dec 2023
	Boroughs coordinate approaches to upgrading existing parks and green spaces and creating extended urban greening to increase their resilience to current and future climate change	In line with the London Plan, boroughs should adopt and apply urban greening factors for new developments	Urban greening factors applied	Boroughs	<i>By Dec 2023</i>
		Liaise with Green Economy Working Group to identify areas both groups can work on, confirm new actions and split action between programmes	New actions added to work plan	LCD Working Group	By Dec 2022

6. Summary of Key Risks

There are a number of risks that may threaten the successful delivery of the Resilient and Green Action Plan. In light of this, the below table has been compiled. The aim of this table is to allow the identification of potential risks and facilitate the planning that will be required to mitigate them.

Risk Management Table

(1 – low probability/ risk, 5 – high probability/ risk)

Risk	Likelihood	Impact	Overall Risk	Mitigation
Different approaches and processes across and within council's limit collaboration	4	5	20	Secure senior support for and buy-in to this action plan, recognise the challenges surrounding collaboration across different systems and ensure that shared, detailed objectives are agreed for individual projects
Unable to adequately staff the programme	4	5	20	Provide clarity about where responsibility lies and where existing programmes can support activity. If sufficient staffing cannot be found, then projects may need to be scaled back, or funding opportunities explore to ensure the programme can be adequately resourced.
Unable to obtain sufficient funding	3	4	12	Sufficient funding should be available if we are willing to explore and collaborate on different and novel sources, but securing agreement around these may be challenging and will require financial expertise.
Unable to interest and involve the public	2	5	10	London Councils' polling ²⁶ shows that 52% of Londoners feel the changing climate is already affecting them; we will need to ensure that community engagement activities connect with people's existing concerns, speak in plain English and that they are developed with relevant community engagement and communications specialists in boroughs and amongst our partners.
Evidence and data are not sufficiently robust	2	4	8	We will work together with boroughs and other partners to secure adequate data and evidence where there are existing gaps, including through our Climate Evidence Review. The programme's academic partner will help in providing expertise in this area.
Unable to secure cross-borough engagement with the action plan	2	4	8	The ambition is already agreed in principle within the Joint Statement on Climate Change; we can ensure that boroughs have access to borough-level data and evidence demonstrating the current and future impacts of key adaptation risks to their

²⁶ 2020, Poll: Attitudes to Climate Change, London Councils

				residents, and the co-benefits of action in the short-term. Where boroughs struggle to resource action in-house due to operational and/ or financial constraints, funding opportunities will be explored
Unable to secure effective collaboration across different climate programmes with shared objectives	2	4	8	The overlap between different climate programmes may lead to confusion, replication and/ or inaction; need to actively manage this through the cross-director climate group and clear governance arrangements for each action plan.
Unable to achieve national policy asks	3	2	6	Many of the projects are under the remit of the boroughs, and we have the opportunity to work with influential partners, such as the Environment Agency, to support the programme.
Unable to persuade strategic partners to collaborate	1	3	3	Strategic partners have already been closely engaged, but there is a possibility that they will feel boroughs are too complex as a group and may struggle to deliver; present a clear, agreed action plan that actively seeks partner collaboration and allows us to build relationships that deliver clear benefits to the missions of different partners.

7. Governance and Programme Management

In 2019, LEDNET and the TEC released a joint statement on climate change. The result was the creation of seven working groups to take action on the key issues facing the city regarding climate change. The seven working groups covered the following:

- Retrofit London
- Low Carbon Development
- Low Carbon Transport
- Renewable Power for London Borough of Southwark
- One World Living
- Building the Green Economy
- Creating a resilient and Green London

In October 2020 LB Southwark was appointed as the lead borough for the Resilient and Green London Action Plan. The expectation is that LB Southwark will fulfil this role for two years until 2022/23, and will:

- Develop a plan of action setting out what boroughs can do individually and collectively with the resources and powers currently available to deliver a resilient and green city
- Ensure actions focus on delivering a city that can adapt to climate change, with recognition that action is needed both as an immediate priority and by 2030
- Support the development of lobbying asks to central Government, including any resource requirements and/or additional powers
- Supporting London-wide efforts to reach carbon neutrality by 2030

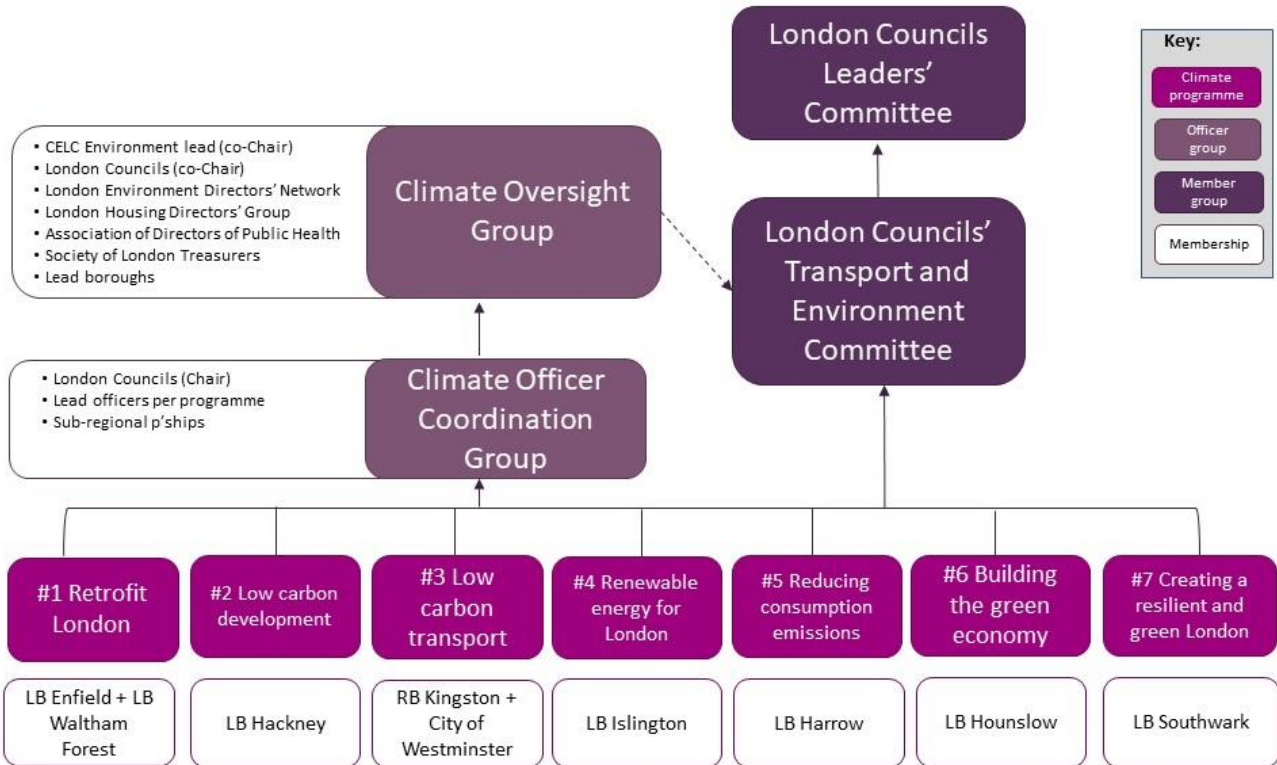
- Support any other outcomes as agreed by the group, either during its inception meeting or throughout its work programme
- Ensure a just transition to any resilient and adaptation actions identified i.e. an action that reduces inequalities and recognises the needs of the most vulnerable in society

To assist in achieving these goals, a two level governance structure was put in place. A Steering Group, of directors/assistant directors (led by the Climate Change Director at LB Southwark) was set up to provide advice through support, guidance and oversight of progress being made and to endorse and approve the programme. Below that, a working group of technical lead officers operated (led by the Climate Change Programme Lead at LB Southwark). Their role was to oversee the development, implementation and monitoring of the action plan. In order to achieve these goals, several knowledgeable organisations, who are committed to creating a more resilient and green London, were invited to join the steering and working groups. Currently, these groups consist of individuals from:

- GLA
- Environment Agency
- London Climate Change Partnership
- TfL
- London Borough of Bromley
- City of London
- London Borough of Hammersmith and Fulham
- London Borough of Hounslow
- London Borough of Southwark (Lead Borough)
- University of Westminster (Academic Partner)

The below diagram sets out how the seven London Councils Climate Programmes are governed. Each working group is responsible for reporting to TEC and the Climate Oversight Group on a 6 monthly basis.

London Councils Climate Programme: Governance



8. Monitoring, Reporting and Review

The milestones will be monitored at Working Group and Steering Work meetings which will occur every 3 months. Progress will then be reported to TEC on at least a 6 monthly basis. A dashboard will be created that gives an overall red / amber / green rating for each milestone, and a sub-set of RAG ratings for each action, based on whether they are on track, completed or behind schedule. Discussions for developing a second two-year work plan will begin in 2023. A decision will also be likely made in late 2022 on whether another borough wishes to take on the lead role from LB Southwark.