

# **London Environment Strategy: Third Progress Report (2021-2022)**

March 2023

Achievements from May 2021 to May 2022

---

## **COPYRIGHT**

**Greater London Authority  
March 2023**

Published by  
Greater London Authority  
City Hall  
The Queen's Walk  
More London  
London SE1 2AA

**[www.london.gov.uk](http://www.london.gov.uk)**

enquiries 020 7983 4100

minicom 020 7983 4458

ISBN

Photographs ©

Copies of this report are available  
from [www.london.gov.uk](http://www.london.gov.uk)

---

# CONTENTS

1.	Introduction	2
2.	Air Quality	5
3.	Green Infrastructure	12
4.	Climate Change Mitigation and Energy	15
5.	Waste and Circular Economy	23
6.	Climate Change Adaptation	27

# 1. Introduction

The [London Environment Strategy](#) was published in May 2018. It sets out the Mayor's overall vision to protect and improve London's environment. It also sets a direction of travel for the Mayor and his partners who need to collaborate to achieve these ambitions.

The Mayor also published an [Implementation Plan](#), which set out those actions that the Mayor has prioritised to take forward directly between 2018 and 2023 to help implement the policies and proposals in the strategy.

The '[one year on](#)' report summarised the actions taken by the Mayor against the strategy in the first year after its publication, covering the period to October 2019.

The '[second progress report](#)' covered the period to May 2021, with particular focus on achievements since the first progress report.

This document summarises key actions taken by the Mayor against the strategy and Green New Deal mission during the first year of the second Mayoral term, covering progress from May 2021 to May 2022.

## **London Environment Strategy background**

In 2018, the strategy brought together for the first time approaches to improve all aspects of London's environment. The key commitments were:

### **Air Quality**

The Mayor aims for the capital to have the best air quality of any major world city, going beyond the legal requirements to protect human health and minimise inequalities.

### **Green Infrastructure**

To ensure that London's green spaces meet their full potential for improving people's lives, the Mayor aims for London to be greener in the future than it is today and to increase tree canopy cover by ten per cent by 2050.

### **Climate Change Mitigation and Energy**

To help tackle the climate emergency, London will be a zero-carbon city, with energy efficient buildings, clean transport and clean energy.

---

## Waste

The Mayor aims to make London a zero-waste city, helping conserve resources and reducing the city's impact on the local and global environment. By 2026 no biodegradable or recyclable waste will be sent to landfill and by 2030 65 per cent of London's municipal waste will be recycled.

## Adapting to climate change

London and Londoners will be resilient to severe weather and longer-term climate change impacts. This will include flooding, heat risk and drought.

## Noise

Londoners' quality of life will be improved by reducing the number of people adversely affected by noise and promoting more quiet and tranquil spaces.

### London's Green New Deal mission

The Green New Deal mission is a key part of the Mayor's ambitions to make London a zero carbon city by 2030 and was one of nine missions developed by the then London Recovery Board, now London Partnership Board, in response to the capital's recovery from the coronavirus crisis.

The pandemic highlighted how Londoners experience their environment differently, with those living in deprived areas most likely to experience poor air quality; cold, damp homes, and limited access to green space.

To address these challenges, the Mayor and the London Recovery Board set the target to tackle the climate and ecological emergencies and improve air quality by doubling the size of London's green economy by 2030 to accelerate job creation for all.

London is a world leader for climate action. Its growing 'low carbon and environmental goods and services' sector is worth £40 billion in sales and employs nearly 250,000 people. Examples include renewable energy projects like wind and solar and other green technology and materials to make low carbon buildings and transport.

London's green economy is worth more to the city than the construction and manufacturing sectors combined. Putting the environment at the centre of our recovery is a chance to reverse the looming economic downturn. It will bring new investment to London, help businesses to see long-term growth, and provide decent, skilled, local jobs.

In practice, the Green New Deal means how we:

- Get London's buildings to net zero emissions

- Modernise our public transport, make our city greener and better able to cope with the impacts of a warmer climate
- Build the economic, industrial and political foundations so London's green economy can grow. This is vital if we are to meet the city's climate targets by 2030

The Mayor's Green New Deal Fund, launched in November 2020, is investing £10 million in programmes that directly support around 1,000 green jobs, and many more jobs indirectly, while tackling the climate and ecological emergencies and inequalities in London. The Fund was set up to support a range of projects to decarbonise the built environment, green transport and the public realm and provide business support to cleantech and circular economy businesses. This report highlights some of the key achievements of these projects.

### **About this report**

This progress report contains chapters on the key London Environment Strategy and Green New Deal mission policy and delivery areas:

- air quality
- green infrastructure
- climate change mitigation and energy
- waste
- adapting to climate change

As the Mayor has limited direct powers over most environmental policy areas, to be effective, the actions in this report must be complemented by work from partners, stakeholders and government.

The GLA has also published a set of high-level environment measures to track how London's biggest environmental issues are changing over time. Find out more on the London Datastore: <https://apps.london.gov.uk/resilience-dashboard/state-of-london.html>

## 2. Air Quality

Not a single area of London meets World Health Organization health-based air pollution guidelines. Research has shown that exposure to air pollution – even at low levels – has a big impact on health at all life stages, from development in the womb to the end of life.

Long standing structural inequalities in our society mean that the health impacts of pollution fall disproportionately on certain communities. These affect the poorest, the youngest, the oldest, those with pre-existing health conditions and those from Black, Asian and minority ethnic groups. A [study by Imperial College London](#) in 2021, found that in 2019 toxic air contributed to the premature deaths of around 4,000 Londoners, with the greatest number of deaths attributable to air pollution in outer London boroughs. Over 600,000 Londoners live with a lung condition and are more vulnerable to the impacts of air pollution, with more than half of these people living in outer London.

Everyone has the right to clean air and the Mayor has in his first year since re-election sought to take London closer to this goal in the following actions and outputs:

### Low Emission Zones

- The Mayor **expanded the world's first Ultra Low Emission Zone (ULEZ)** on 25 October 2021. The zone expanded up to, but not including, the North and South Circular Roads. The zone is now 18 times the size of the central London zone and covers 3.8 million people making it the largest of its kind in Europe.
- [Six months on from the expansion of the ULEZ](#) nearly 94 per cent of vehicles driving in the whole zone met the ULEZ standards on an average day, up from 87 per cent in the weeks before the ULEZ expanded and up from 39 per cent in February 2017 when changes associated with the ULEZ began.
- This means people in the zone are breathing cleaner air. Harmful nitrogen dioxide (NO<sub>2</sub>) concentrations alongside roads in inner London are estimated to be 20 per cent lower than they would have been without the ULEZ and its expansion. In central London, NO<sub>2</sub> concentrations are estimated to be 44 per cent lower than they would have been. This decrease in concentrations close to roads would have also led to reduced air pollution in locations away from traffic.
- To help Londoners prepare for the ULEZ expansion, in July 2021 the Mayor **announced an additional £5 million in funding for the scrappage scheme**, supporting disabled and low-income Londoners in replacing older higher polluting vehicles. This brought total investment in the schemes up to £61 million. In total the scrappage schemes helped remove over 15,200 older more polluting vehicles from

London's roads. The schemes closed in November 2021 after all funding was allocated.

- To address air pollution from vehicles in outer London, in March 2022 **the Mayor asked Transport for London to consult on proposals to expand the ULEZ London-wide in August 2023**. The consultation ran from 20 May to 29 July 2022. After considering the results of the consultation, the Mayor announced in November 2022 that he would expand the ULEZ to all London boroughs from 29<sup>th</sup> August 2023. The Mayor also announced a new £110 million scrappage scheme to help Londoners prepare for the expansion.
- The Mayor has also tightened the **standards within the London Emission Zone (LEZ) for large and heavy vehicles**. Since the **introduction (in March 2021) of tougher standards** 96 per cent of large and heavy vehicles meet these tough standards, up from an estimated 48 per cent in February 2017.
- The LEZ also has significant benefits outside of London, with independent analysis from Environmental Defense Fund Europe showing vehicles that passed through London's LEZ went on to drive through 95 per cent of the major towns and cities in England and Wales, bringing air quality benefits to a combined population of 18 million people.
- **The London Legacy Development Corporation (LLDC) published in May 2021 an action plan to achieve zero carbon mobility in the Queen Elizabeth Olympic Park neighbourhood**. LLDC is working with partners to deliver electric vehicle charge points in the Park, support innovation by facilitating trials such as with UPS to reduce freight miles, and reviewing wayfinding to support active travel choices.

### Cleaner vehicles on London's roads

- The Mayor on 17<sup>th</sup> September 2021 announced that **all new buses purchased would be zero-emission with the date for London having an all-zero emission bus fleet brought forward from 2037 to 2034**. With additional Government funding, the bus fleet could be zero emission by 2030, which would save five million tonnes of carbon.
- **Since January 2021 all buses in TfL's 9,000-strong bus fleet meet or exceed the ULEZ standards**, cutting bus-related NOx emissions by up to 90 per cent. As of December 2022 there were over 900 zero emission buses on London's roads, 10 per cent of the overall fleet and the largest zero emission fleet in Western Europe.
- The Mayor **continued to transform London's taxi fleet by no longer licensing new diesel taxis and reducing the age limit for older cabs to 12 years** with well over 6,000 zero emission capable taxis on the street (April 2022).
- The Mayor and TfL continued to work with London boroughs and the private sector to **deliver more electric vehicle charging infrastructure**. As of November 2022 London had over 11,500 charge points – around a third of the UK's total and 850 rapid charging



points. By 2030, London will need between 40,000 to 60,000 charge points, of which up to 4,000 will need to be rapid.

### **Measuring and monitoring air quality**

- In January 2022, emissions data from the [London Atmospheric Emissions Inventory \(LAEI\) for 2019](#) were released. Analysis of the data showed that while there were dramatic improvements in air quality since 2016, further action was needed to accelerate progress, including in outer London which did not experience emissions reductions at the same speed as central and inner London. The data revealed that from 2016 to 2019:
  - NO<sub>x</sub> road transport emissions reduced at just half the rate in outer London as they did in both central and inner
  - The percentage reduction in PM<sub>10</sub> was 10 times greater in inner and central than in outer London
  - The percentage reduction of PM<sub>2.5</sub> was 5 times greater in central London than in outer
- The Mayor convened the **London Clean Air and Health Summit** on 17<sup>th</sup> February 2022. It brought together leaders from national and local government and the health and care system as well as academics and representatives from NGOs. Attendees committed to a series of actions to address the concerns raised by the Coroner following the inquest into the death of Ella Adoo-Kissi-Debrah. These included amplifying messaging on the need to improve air quality and tackle health inequalities. At the summit the Mayor committed to review his air pollution alerts system including through messaging testing and reviewing additional methods to increase its reach.
- The Mayor's **Breathe London Network** has continued to empower Londoners with local air pollution data. Londoners, businesses and organisations can apply for free sensors or buy into the network and there are now over 300 small air quality sensors providing local, real-time air quality data to Londoners. In summer 2022, the first 10 community organisations received free sensors in the first round of the Breathe London Community Programme. Communities in areas of deprivation or high pollution are encouraged to apply. There are a further 50 free sensors available over the next two years.

### **Working with the boroughs**

- The Mayor continues to support and oversee borough action on air quality through the statutory **London Local Air Quality Management system**. This system ensures that boroughs deliver a range of priority actions that have been identified by the GLA, and that these (alongside any additional locally-derived actions) are quantified with clear deliverables, set out in up-to-date Action Plans. It also provides strategic oversight of the borough monitoring network and ensures publication of all local air quality data.

The Mayor publishes an annual [Compendium of Action](#) which collates information on borough performance and data.

- The Mayor has also supported boroughs and other organisations to deliver a range of innovative local air quality improvements through the **Mayor's Air Quality Fund (MAQF) and Good Growth Fund**. These funds have supported 10 new Low Emission Neighbourhoods and a range of other projects including pan-London initiatives tackling idling and polluting construction machinery. Projects have delivered a range of benefits including new cycle lanes and pedestrian infrastructure, over 300 workshops on air quality to over 17,000 students, and more than 250 car free initiatives. A full report on the outcomes from these projects will be published in 2023.

### **Non-transport related activity**

- The majority of local particulate matter emissions come from non-transport sources, including woodburning, commercial cooking and shipping, over which the Mayor has more limited powers. The Mayor continues to urge the Government to give London the powers we need to address these sources, including woodburning, commercial cooking and shipping, and adopt the WHO guideline limit for PM2.5 as a legally-binding target.

### **Wood burning**

- We have been working with Impact on Urban Health and Kantar on research aiming to reduce the negative health impacts associated with woodburning. Headline findings suggest there are several challenges around shifting current wood burning behaviours. There is a need to shift attitudes and beliefs around woodburning prior to driving significant behaviour change. We are now developing a tool kit guide for communications around wood burning.
- We have also supported a multi-borough application to the Defra air quality grants 2021 programme which is focused on quantifying the emissions from different types of burning activity and raising awareness of the impact of wood burning.
- In 2022, we established a partnership with Global Action Plan and Impact on Urban Health to develop a communications campaign. A wood burning information hub is now live on the Global Action Plan Clean Air Hub, informed by the behaviour change research the Mayor supported. This launched in January 2023 along with a fact-based digital campaign which will drive Londoners to the information hub and help raise awareness of the impacts of wood burning on air quality.

### **Non-road mobile machinery (NRMM)**

- As part of the NRMM LEZ we have inspected over 1,840 construction sites across London auditing almost 6,000 Machines since 2019. In April 2022, the compliance

rate was 86 per cent.

- In April 2022, a [new practical guide](#) was published, providing construction sites with guidance on how to use the NRMM register and how to ensure site compliance.

## **Research**

- In March 2022, [independent analysis commissioned by the GLA](#) showed the health impacts of poor air quality on Londoners:
  - Exacerbation of asthma by air pollution is estimated to lead to around 700 asthma admissions from 2017 - 2019 in children in London, 7 per cent of all asthma admissions in children in London.
  - Exacerbation of asthma and COPD by air pollution is estimated to lead to around 900 asthma/COPD admissions from 2017-2019 in the elderly in London.
- In October 2021, the GLA [published updated analyses](#) of the relationship between exposure to air pollution, deprivation and ethnicity in London in 2019. It showed that more deprived communities, or a higher proportion of people from a non-white ethnic background, were more likely to be exposed to higher levels of air pollution. However, the Mayor's policies have narrowed the gap between the most and least deprived areas for exposure to nitrogen dioxide (NO<sub>2</sub>) by up to 50 per cent.
- In September 2021, [a report](#) providing an evidence review confirmed that exposure to air pollution before the pandemic increased the risk of hospital admissions if a person became infected with COVID-19. This was most likely because air pollution contributed to people having heart or lung disease and they then become sicker from COVID-19 if they caught it.

## **Planning**

- Public consultation for the draft Air Quality Neutral LPG and draft Air Quality Positive LPG ran from 12 November 2021 to 27 February 2022, initiating the first steps to support London Plan policies which will help clean London's air through new development.

### **Ambient noise policy**

- The reduction in road traffic and the electrification of London's fleet (bus, taxis, and electric vehicle infrastructure) delivered by the Mayor's transport and air quality programmes across London will result in associated noise reductions. In the first six months of operation since the Ultra Low Emission Zone was expanded to the North and South Circular Roads in October 2021, there were 21,000 fewer vehicles seen in

the zone on an average day. TfL now has more than 900 zero emission buses in operation and is on track to convert the entire fleet by 2034.

- As part of the Vision Zero Action Plan the Mayor, through TfL, has implemented 20mph speed limits on all TfL roads in the central London Congestion Charging zone. Lowering traffic speeds will make our streets less dominated by motor vehicles and so less noisy and more attractive for walking and cycling. TfL has worked with London boroughs to deliver 20mph speed limits in a number of town centres including Whitechapel, Archway and Brixton. 107.5km of the TfL road network now have a 20mph speed limit, up from 35km in 2016 and TfL is accelerating this programme to deliver 220km of 20mph speed limits by 2024.
- Restricting road traffic around schools, using School Streets, is also reducing Londoners' exposure to noise, and particularly for primary school children. There are now more than 500 School Streets in place. The first School Street was launched in Camden in 2017, and over 400 School Streets have been introduced since the start of the pandemic – 372 funded with support from the Mayor and TfL.
- Low Traffic Neighbourhoods are another measure that the Mayor and TfL are supporting boroughs to deliver, which reduce vehicle dominance and so also reduce road noise and Londoners' exposure to it. They are a long-standing transport planning tool used to reduce through-traffic in neighbourhoods, with delivery rapidly accelerating during the pandemic. Close to 100 schemes have been implemented.
- The Mayor has continued to scrutinise airport expansion proposals and advocate on behalf of Londoners. In the past year he recorded his strong concerns with expansion plans at Gatwick and Luton airports on both carbon and noise grounds. In September 2021 the Mayor responded to the Government's consultation on its "Jet Zero" strategy and stressed the need for any airspace changes that may be proposed to not result in increased noise for local communities. He has continued to call for the noise reduction benefits of new technology to be shared with communities and not 'banked' by operators to justify more flights.
- The Mayor and TfL continue to be committed to minimising noise levels from transport services for passengers, staff and neighbours. TfL continues to regularly monitor noise and vibration levels across the Tube network and deploy practical interventions wherever possible. Some long-term interventions, such as replacing rail fastenings or Deep Tube Reconditioning, are expensive and have been impacted by the short-term nature of funding agreements with Government since 2020, which impacted TfL's ability to plan and budget for non-safety critical work. Despite this, TfL continued to invest in London Underground's track renewal and maintenance programme, including a continuous programme of rail grinding and track modernisation.

- The Mayor's London Plan embeds key policies addressing noise (policies D12 and D13) to reduce adverse noise and protect London's acoustic environment.

### 3. Green Infrastructure

Protecting, restoring, and increasing London's green infrastructure, and the wildlife it supports, is central to the Mayor's commitment that London's recovery from the pandemic should be a green one. The Mayor believes that green infrastructure is critical to improving Londoners' quality of life and reducing the social inequalities worsened by climate change, and wants all Londoners to live within a 10-minute walk of green space. Currently, over 96 per cent of London's residential addresses are thought to be within 10 minutes' walk of an accessible green space of at least 0.02 hectares.

A greener London is a healthier London, with benefits for both physical and mental well-being. Making London greener is also essential to limit the devastating impacts of climate change: green infrastructure including trees, parks and green streets helps to make the city cooler and manage flood risk.

The Mayor has continued his mission of expanding green spaces across London with his 2021 London Plan whilst safeguarding the Green Belt and green areas from development. The Mayor has also funded greening and rewilding projects across London, targeted at areas of the city where they are most needed. The Mayor's activities in 2021/22 have included:

#### **Green spaces**

- In December 2021 the Mayor announced the establishment of the **London Rewilding Taskforce**. The Taskforce is a time-limited advisory group convened by the Mayor to explore potential opportunities for rewilding in London. This will support the recovery of nature and enhance biodiversity, while bringing benefits to Londoners and addressing the climate and ecological emergency. The Taskforce will publish a joint statement on principles for rewilding in London; publish recommendations on potential opportunities for rewilding to inform the preparation of a Local Nature Recovery Strategy for London; and support the creation of a resource on international urban rewilding best practices and case studies.
- The Mayor's **2021 London Plan** has strong protections for the Green Belt, Metropolitan Open Land and other open space. It also introduced a new Urban Greening Factor (UGF) to ensure most major new developments include appropriate levels of new greening such as green roofs and trees. Draft Urban Greening Factor London Plan Guidance (LPG) was published in September 2021 to support boroughs and applicants in applying the UGF to proposed developments along with guidance on how to design urban greening to provide net gains for wildlife. Following a consultation on the UGF LPG the final guidance will be published at the beginning of 2023.

- The Mayor's **CLEVER Cities** project, in partnership with Peabody Housing Association, continued to involve communities in the improvement of green spaces. A Community Design Collective was established and saw ten residents of the South Thamesmead estate recruited, trained and paid for their essential participation in the re-design of a linear park and car dominated street. The project will lead to a more wildlife friendly landscape that encourages nature and people to thrive.
- The Mayor made a further £6 million available to support greening projects over the next 2 years. These include:
  - o In December 2021 the second round of the Mayor's **Grow Back Greener Fund** awarded £1.4 million (including £500,000 from Thames Water) to 45 community projects to create and improve green space and boost climate resilience. The fund prioritised projects in areas of deprivation, high climate risk and poor access to green space. Projects include community gardens, river restoration, new wetlands, greener school playgrounds and housing estates. These projects have improved over 18 hectares of green space, turning almost one hectare of grey to green, and involved over 5,000 Londoners as volunteers and trainees.
  - o Six large scale projects were awarded £3.44 million from the Mayor's **Green and Resilient Fund** in March 2022. These projects will bring benefits to areas more vulnerable to the impacts of climate change and will strengthen climate resilience, increase biodiversity, improve access to green space, build green skills and promote health and wellbeing. A further £520,000 of development funding was also awarded to 13 projects which will support them to work on their designs and community engagement. The six large projects will complete by March 2024 and improve the quality and climate resilience of over 57 hectares of public green space, equivalent to the size of over 2000 tennis courts and restore nature to over 4km of river in the capital.
  - o In March 2022 £600,000 was awarded through the new **Rewild London Fund** to 19 rewilding projects across the city. By April 2023 these will enhance and connect 54 of London's most important places for wildlife – Sites of Importance for Nature Conservation (SINCs) - and create more natural habitats for plants and animals to thrive. Over 250 hectares of priority habitat will be restored or created through the fund, the equivalent of ten St James' Parks.

### **Tree planting**

- The Mayor has **funded the planting of over 430,000 trees across London since taking office in 2016**. In 2021-22 The Mayor funded the planting of nearly 70,000 trees. This includes the completion of two major woodland creation projects, creating an additional 85 hectares of newly accessible green space in the Green Belt.

- In 2021 the Mayor secured £3 million from the Forestry Commission to **support the planting of almost 8,000 street trees across 22 boroughs by March 2023**, focusing on areas with low canopy cover and high deprivation. Over 3,600 of these trees were planted over winter 2021-22 and the rest are on track to be planted this winter.
- In March 2022 the Mayor secured almost £500,000 from the Defra Trees Call to Action Fund to support the **delivery of the London Urban Forest Plan** by the London Urban Forest Partnership over the next 3 years. This will support more trees to be planted and better management of London's existing trees and woodlands to help ensure tree canopy cover increases across the city.



## 4. Climate Change Mitigation and Energy

The climate crisis continues to be one of the defining issues of our generation. The science, including the International Panel on Climate Change Reports, as well as recent flooding, drought and heatwave events, highlight the urgent need for action if we are to keep temperature rise to 1.5°C and avoid the worst impacts of climate change. The Mayor has showed leadership by committing London to a landmark target of net zero by 2030 and becoming Chair of C40 Cities. His ambitious agenda tackles the triple threat of climate change, poor air quality and congestion.

The Mayor's programme of work aims to reduce energy demand and carbon emissions in London as well as the impact that energy bills, exacerbated by the spiralling cost of energy, has on London's citizens and businesses. These include programmes such as Warmer Homes, the Low Carbon Accelerators and the Business Climate Challenge. The Mayor, through his Green Finance London programme, is also providing stakeholders with affordable finance to help deliver decarbonisation projects. Programmes include the Mayor's Energy Efficiency Fund, his newly announced Green Bond and a Power Purchase Agreement programme to buy clean energy.

The Mayor is committed to tackling both the climate and cost of living crisis for Londoners:

### Leading the efforts on Net Zero by 2030

- The 2021 United Nations Climate Change Conference, more commonly referred to as **COP26**, was held in Glasgow from 31 October to 13 November 2021. The Mayor used COP26 to highlight, along with partners such as C40 Cities and UK100, how London is already a global leader on climate activity and is taking action. The Mayor became the **chair of the C40 Cities** network on 1 December 2021. The Mayor used COP26 to set out his priorities for his tenure. These include attributing two thirds of the C40 budget to cities in the Global South as they are on the frontline of experiencing the impacts of climate change; developing plans for a collaborative, fair and just Global Green New Deal; and rolling out the successful Breathe London air quality monitoring scheme to cities around the world as Breathe Global.
- The Mayor set out a preferred pathway for getting to net zero by 2030 in '[London Net Zero 2030: An Updated Pathway](#)'. This followed the publication of [a report by Element Energy](#) which analysed four possible pathways to net zero, and found that

it is possible to accelerate action and radically reduce carbon emissions with the right ambition, leadership, powers and funding. As well as helping avoid catastrophic climate change, there are many other benefits in achieving net zero, including supporting the creation of tens of thousands of jobs; improving people's health through better air quality and more active lifestyles; reducing inequalities and improving quality of life for all. The Mayor cannot deliver this ambition alone; all stakeholders, including government, need to ramp up ambition and investment to tackle the climate crisis. Currently, the Mayor only has powers to deliver a third of the emissions reductions we need. The Mayor's preferred pathway, the Accelerated Green pathway, will require London as a whole to deliver:

- Nearly 40 per cent reduction in the total heat demand of our buildings, requiring over 2 million homes and a quarter of a million non-domestic buildings to be properly insulated
  - 2.2 million heat pumps in operation in London by 2030
  - 460,000 buildings connected to district heating networks by 2030
  - A 27 per cent reduction in car vehicle km travelled by 2030
  - Fossil fuel car and van sales ended by 2030 and enforced in line with Government's existing commitments.
- To continue mobilising the investment required to achieve net zero, in February 2022 the Mayor announced the provision of £90 million of funding to support the development of a net zero project pipeline and the delivery of an initial **£500 million Green Bond**.
  - This financing initiative builds on the £30 million that the Mayor announced at COP26, to invest in energy efficiency and transport decarbonisation projects through his Mayor's Energy Efficiency Fund (MEEF). This £30 million has the potential to attract up to another £150 million of private sector finance into London projects. MEEF has already mobilised £315 million of investment since its launch in July 2018, which has reduced London's carbon dioxide emissions by more than 16,000 tonnes, equivalent to taking 14,500 cars off the road.

### **Cleaner energy and greener buildings**

- The Mayor has been clear that it is unacceptable that many Londoners cannot afford to keep their homes warm, instead suffering cold, damp conditions throughout winter months. With the unprecedented cost of living crisis and soaring energy prices, the Mayor is particularly concerned about those on lower incomes whose energy bills are likely to take up a larger share of their outgoings.
- From May 2021 to May 2022 the Mayor delivered a range of activities to **address fuel poverty**. This included the announcement of a £51 million funding package to keep homes warmer, including:

- The Mayor's Warmer Homes programme re-opened for applications in the winter of 2021/2022 with £2.6 million being committed by City Hall, and £8.5 million from central government (£11.1 million in total) to support emergency heating replacements and repairs. Measures could also include insulation and renewable technology, such as solar panels and heat pumps. This phase ran until June 2022.
  - The Mayor also announced the next phase of Warmer Homes programme, which launched in May 2022, with £40 million from government and £3 million from City Hall (£43 million in total). This will improve the energy efficiency of thousands of homes and help Londoners stay warm in winter. It provides free heating, insulation and ventilation improvements for low-income Londoners who own their own homes or rent privately.
  - The Warmer Homes Advice Service is a network of free local services for vulnerable Londoners and those on low incomes. It covers energy saving advice, financial help and dealing with energy debts. Typically addressing the needs of those in fuel poverty, usually by referral from other agencies, support is provided by home visits, preparation of applications for benefits or grants and through co-ordinating with local boroughs for additional services. The service continues to see growing numbers seeking support and advice of this local and specific nature. In the 2021/22 financial year, over 5,000 people used the advice service and 704 homes saw improvements to energy efficiency and low carbon heating, totalling 2,062 homes since the programme commenced in 2018.
  - The Mayor chaired a C40 and International Energy Agency (IEA) roundtable on energy poverty in April 2022. C40 launched a "10-point emergency plan" based on key city actions and Climate Action Plans. This sets out necessary actions and calls on national governments to support cities to make them happen.
  - The Mayor's Fuel Poverty Partnership agreed a new work programme focusing on the cost-of-living crisis, cold homes and health, the private rented sector and fair decarbonisation of heat. It has supported the development of the Mayor's Energy Advice London service, improved information to and between health practitioners, and ensured support is getting to the households that need it most. The Partnership is also testing innovative ideas around prescribing warmth, and working to improve enforcement and support for minimum energy efficiency standards in the private rented sector.
- The Mayor and the Chair of London Councils co-hosted the **Greener and Warmer Buildings Summit** on 22<sup>nd</sup> February 2022. The event brought together those responsible for greening London's existing buildings, from domestic, commercial and public sectors. They identified ways to rapidly accelerate building improvements across the city, at an ever-greater scale.
  - The Mayor continued the successful **Retrofit Accelerator – Homes** programme launched in February 2020. This is helping social housing landlords to cut carbon

and reduce energy bills, by drastically improving the energy efficiency of their homes through a 'whole-house' approach, tackling 'building fabric' (walls, windows, floors and roofs), heating systems and installation of renewable energy. Social housing providers have been supported to enter into contracts with building firms to undergo deep retrofit. Over 1,800 homes are now in contract, exceeding the programme's target of 1,678 homes by June 2022.

- The Mayor announced his **Innovation Partnership** in June 2021 to connect social housing providers in seven London boroughs and UK building firms. It aims to drive down the costs of deep retrofit measures, increasing demand for them, and improving quality and performance.
- The Mayor was awarded £3.45 million from BEIS to expand this work to the rest of England. This was done through the new **Social Housing Retrofit Accelerator**, launched in August 2021, and completed in March 2022. This helped social housing providers gain access to Government funding such as the Social Housing Decarbonisation Fund and has since been used as a model to build the national support offer.
- The Mayor's **Retrofit Accelerator – Workplaces** programme has improved over 560 public sector buildings since 2016, saving over 23,000 tonnes of carbon and 90 MWh of energy each year. It has helped secure £170 million in grant funding to public sector organisations since 2020.
- The Mayor's £6 million **Local Energy Accelerator Programme** continues to transform the way London generates, supplies and uses clean local energy in buildings and transport. It funds public and private organisations to use expertise from a Framework of suppliers to develop low carbon decentralised energy projects (such as heat networks or solar PV networks). By May 2022 LEA had agreed to fund the development of 17 low carbon, decentralised energy projects. Projects installed and operating by May 2022 are saving approximately 660 tonnes of carbon dioxide (equivalent) per year.
- **The Mayor launched the first phase of Solar Skills London in June 2021.** The programme focuses on skills and training to enable Londoners to learn more about solar technologies and help to create more green jobs. Delivery partners Solar Energy UK are working with solar companies and training providers to develop training resources and placements, and the first small grant scheme for boosting training in solar companies was launched in August 2021. There has been a further phase in 2022 on outreach to bring underrepresented groups into the training offer. In total the Mayor has made £150,000 available through the two phases for projects to increase the number of registered and accredited installers in Greater London.
- Through his **planning powers** the Mayor continues requiring all new major developments to be net zero. The Mayor's planning policies are delivering onsite emissions reductions that are 46 per cent greater than required by national building regulations. As part of the Mayor's Affordable Housing Programme developers are

required to meet London Plan requirements including net zero carbon and air quality neutral targets.

- The Mayor published in May 2022 pioneering London Plan Guidance outlining the requirements for **Whole Life-Cycle Carbon (WLC) Assessments**. WLC assessment requires applicants to demonstrate how they have calculated and minimised the carbon emissions of their proposal. It also encourages the retention and reuse of existing materials and structures to promote sustainable building practices. The guidance requires developers to fully consider options for retaining existing buildings before substantial demolition is proposed, as this is typically the lowest-carbon option.
- The GLA Group cut its carbon emissions by 43 per cent between 2015-16 and 2021-22 through a range of actions. For example, Walthamstow Fire Station was retrofitted to become England's second zero-carbon fire station; TfL enabled better regenerative braking on London Underground trains, saving £790,000 per year in energy costs and 700-800 tonnes of carbon dioxide emissions; and the MPS completed retrofits of three sites.
- GLA Group members – Transport for London (TfL), the Metropolitan Police Service (MPS), London Fire Brigade (LFB) and the London Legacy Development Corporation (LLDC) – worked on plans for their estates to achieve net zero carbon by 2030 (these were under development within the time period of this report).

### Working with businesses and communities

- The Mayor supported the London Recovery Programme to establish the **London's Anchor Institutions' Network** (LAIN), bringing together some of the capital's biggest organisations. They have pledged to work collaboratively to support the city's recovery from the pandemic, with a focus on delivering opportunities for people, businesses and places most impacted by the crisis. Since then, the participating organisations have brought together working groups to put the commitments into practice, including groups focusing on 'Hiring and Skills' and 'the Green New Deal'. **The GND Working Group was established in April 2022** and is focused on accelerating public estate decarbonisation efforts and ensuring a robust and trained workforce in green construction. All Anchor organisations now have net zero plans in place and are maximising support from the GLA to advance activity on estate decarbonisation through the Retrofit Accelerator – Workplaces (RA-W) programme, applications to the London Community Energy Fund and through submission to the regional decarbonisation pipeline. Network members include: NHS London, the University of London, the Association of Colleges, London and South East Colleges, New City College and faith communities.
- As part of the **Greener and Warmer Buildings Summit** in February 2022, the Mayor and London Councils joined leading business organisations launching a 'call to action' to London's businesses to make their buildings net zero carbon by 2030.

The Commercial Sector Retrofit Working Group, made up of the Confederation of British Industry, Federation of Small Business, BusinessLDN, LCCI and New London Architecture, is working closely with over 20 businesses who have signed up. This includes those with significant footprints in London such as the Excel Centre, Landsec and JLL.

- The Mayor's **Business Climate Challenge** (BCC) pilot programme, launched in March 2021, helped businesses tackle the climate emergency, reduce their energy costs and contribute to London's net-zero target. The programme, developed in partnership with Bloomberg Associates, provided support to 19 businesses committed to reduce their building's energy consumption by 10 per cent within a year.
- Findings from the Business Climate Challenge (BCC) pilot indicate that participants **reduced their annual energy consumption on average by 16 per cent compared to their 2019 baseline**.<sup>1</sup> Cohort-wide, businesses reduced total annual carbon emissions by 314 tonnes of carbon dioxide equivalent. Keeping 2022 energy prices constant, the energy use reductions achieved by BCC participants during the pilot year equate to estimated average annual savings of £15,774.<sup>2</sup>
- In February 2022, **the Mayor announced that the Business Climate Challenge will be extended to support up to 250 businesses** to decarbonise their buildings and reduce their energy costs. Meeting their energy efficiency target of 10 per cent could help with the pressures business face with rising energy bills.
- The Mayor's **Better Futures programme** has continued to provide SMEs access to the technical and business expertise to help them optimise prototypes and services for the market and develop their business for growth investment. By the end of October 2022, the programme has supported 242 London-based cleantech businesses. 25 new cleantech products have been developed and are now market ready.
- In November 2021, during COP26, the Mayor delivered the London Schools' **Climate Kick-Start**, awarding grants to 5 schools for their innovative, climate-change tackling projects. 66,000 students were involved from more than 48 schools across London, making it the largest programme of its kind in London. Nearly half of the schools involved hadn't taken part in any environmental programmes before,

---

<sup>1</sup> Based on data from 16 businesses. Changes in occupancy from 2019-2021/22 and other external factors may have influenced energy consumption.

<sup>2</sup> Expenditures are estimated using BEIS quarterly electricity and gas prices for the non-domestic sector. Values might differ for specific businesses as they are not based on individual tariffs. Businesses on fixed energy tariffs might have not seen an increase in their energy bills.

and a high proportion of students were from underrepresented backgrounds. The programme successfully engaged students with the climate and ecological emergency, building support for environmental solutions in London. The activities provided relevant and practical examples for young people to get involved such as green careers events, tree planting and making sustainable clothing.

### Highlights from GND Fund projects

- As part of the London Climate Summit in October 2021, the Mayor announced the two **Future Neighbourhoods** that will act as exemplars for what a more sustainable London will look like in 2030. These exemplars in Notting Dale in Kensington and Chelsea, and Somers Town in Camden, are working closely with their communities in developing and implementing the plans. The Mayor has also part-funded 10 Future Neighbourhood Strategies. Each one will set out how they will engage their communities and stakeholders as they develop a roadmap for sustainable place-making that will set out how they will create a Future Neighbourhood by 2030.
- The Mayor's **Better Futures+ Project** commenced delivery February 2022. It has expanded its programme of business support to increase access to more diverse communities through its access to work internship programme, grants to businesses to support them through covid, and business support to help those businesses particularly affected by covid to help them transition to net zero. As of April 2022, 198 businesses were in receipt of support.
- The Mayor's **London Community Energy fund** has offered over 116 grant offers through five rounds of funding since 2017 totalling over £1.4 million of grants. Buildings to have benefitted so far include schools, community centres, GP surgeries, churches, and sports centres. The majority have enabled solar PV installations, alongside energy efficiency retrofit and renewable heating. If all of the projects that applied to the first four phases proceeded to installation, this would have saved over 2,500 tonnes of carbon a year and generated up to 8MW of additional solar capacity. The Mayor launched the fifth round of the London Community Energy Fund on 1<sup>st</sup> October 2021. Applications have been assessed and offers of grant funding made to over 30 projects. Several new successful applicants were announced on 25<sup>th</sup> March 2022.
- The Mayor has now delivered the environmental justice project, **Greener Together** alongside a number of strategic partners. This project piloted community-led approaches to tackling environmental challenges in one of the most socially and environmentally deprived areas of London. The pilot concluded in April 2022 and successfully satisfied all key objectives: increasing participation in (and advocacy of) environmental programmes by under-represented groups; co-creating environmental solutions to improve health, wellbeing and community cohesion; increasing learning and green skills; and providing a successful,

replicable case study to roll out in other areas of the city. The project has since continued under '**Grow Together**' to include more boroughs and will end in 2022/23.



## 5. Waste and Circular Economy

The Mayor wants London to become a zero waste city and believes that eliminating waste and driving up recycling is a key part in developing a just and green transition that is inclusive of all Londoners.

Since being re-elected to a second term, the Mayor has continued to work with businesses and authorities to achieve his goal of no biodegradable or recyclable waste sent to landfill by 2026 and for there to be recycling of 65 per cent of all municipal waste by 2030. He is achieving this by continuing successful projects to cut single-use plastics by delivering over 100 water fountains across London and expanding into schools, as well as new programmes to support Londoners and reduce waste such as Food Connect, redistributing surplus food to those who need it most.

The Mayor has supported the moves to cutting waste and building a green circular economy with the following key achievements:

### **Waste and Recycling**

- The Mayor has approved all 33 borough 2018-22 **Reduction and Recycling Plans** (RRPs), which include over 500 individual actions to reduce waste, increase recycling, minimise the environmental impact of waste management and best utilise London's waste sites. If implemented in full by London's boroughs, these are expected to increase London's household waste recycling rate to 40 per cent. Drafting of new borough RRP's covering the 2023 to 2025 period was undertaken by boroughs in 2021/22, ahead of review and approval by the Mayor in early 2023. Through this review, greater ambition was requested in areas such as implementing ReLondon's Flats Recycling Package measures at purpose-built flats and estates locally.
  - Through ReLondon (a statutory body supporting GLA and boroughs) the Mayor has devised the **Flats Recycling Package**, featuring a toolkit and cost benefit calculator to help local authorities and housing associations improve recycling on estates. Extensive research has shown this package of measures can increase recycling rates by an average 152 per cent from purpose-built flats.
  - A new **London Recycles communications campaign** was created and delivered on behalf of the Mayor and London's boroughs in 2021 by ReLondon, called 'Be that person' and targeted at age groups and boroughs with lower recycling rates. After the first five months of campaign activity, 89 per cent of people who had seen the
-

campaign said they were recycling more than 6 months ago – compared to 59 per cent amongst the target audience who did not see the campaign.

- The Mayor published in March 2022 the final version of the guidance for **Circular Economy Statements**. This came after extensive consultation with industry, with the final guidance emphasising the importance of refurbishment over new build and applicants now having to demonstrate that the benefits of demolition outweigh the benefits of retrofit.

### **Water Fountains and Refill**

- The Mayor entered into a partnership with Thames Water in 2019 to install more than 100 **drinking fountains** across London. Due to the pandemic the programme was temporarily suspended. The Mayor re-opened the fountains programme on 19<sup>th</sup> July 2021 upon the lifting of the pandemic restrictions. By the end of May 2022, 90 drinking fountains were installed in addition to the 28 from Zoological Society of London (ZSL).
- The Mayor has continued to support **Refill London**, a water refill scheme where people can go into shops and businesses and ask for a free water refill instead of buying one. By the end of May 2022 there were over 4,000 refill points across the city, up from approximately 200 when the programme started in March 2018.

### **Food Waste**

- **Food Connect**, a food redistribution service operating in Southwark, was launched. The project is jointly funded by the GLA and Southwark Council and is being delivered by the environmental charity Hubbub and the Albrighton Centre. The service streamlines surplus food redistribution across a network of community fridges, enabling efficient, effective and agile collection and redistribution across the borough. In the first month of service Food Connect collected and redistributed 10 tonnes of edible food to the community
- The Mayor, along with ReLondon and the Ellen MacArthur Foundation, created the **Food Flagship Initiative** to catalyse and oversee London's transition to a low carbon circular economy for food. This has the goal of reducing food waste by 20 per cent per person by 2025; and by 50 per cent by 2030, in line with Sustainable Development Goal 12.3. Working closely with London Councils' One World Living programme, the initiative delivers interventions to reduce food waste and associated consumption-based emissions. Through the FFI the following have been delivered:
  - [London's Food Footprint report](#) published by ReLondon at COP26 in November 2021 showed the potential for London to reduce consumption-based emissions by 31 per cent a year by reducing and making better use of

- food loss and waste and shifting towards a more healthy and sustainable diet.
- Food waste minimisation pilot in Bexley: a pilot project to measure the impact of targeted local promotion of food waste apps OLIO and Kitche on household food waste, running from January 2022 to September 2022. Initial results show that Kitche and Olio saw an increase of more than 1,500 users in the borough compared to the beginning of the project, a 16 per cent increase from the baseline.
  - Circular food procurement working group: established with local authorities to support the development of a shared pan-London carbon reduction and food waste reduction commitment for the food that they directly procure, including schools. Reducing food emissions of meals by 25 per cent and food waste by 50 per cent in all London schools could result in a saving of 50,000 tonnes of carbon dioxide equivalent per year.
  - Higher Education Food Sprint: in collaboration with London Higher the FFI partners hosted representatives of 24 London universities at a day-long workshop to identify opportunities to reduce the environmental impact of food procured on their campuses. Following the event 40 chefs and sustainability officers from across the participating universities have accessed additional support on enhancing plant-based cooking, reducing food waste and delivering nutritious sustainable meals.
  - Circular Food Pioneer Project Status: an initiative launched to recognise innovative, good practice within London. It provides support to small businesses and organisations pioneering ideas in the area of circular food. Nine innovative businesses and food projects have been awarded the status within the first cohort. Applications for the programme will be invited for the second cohort in April 2023.
- London has been an active partner of the **EU-wide Food Wave project** since early 2021, engaging with young people across the capital to tackle the relationship between food and climate change. The focus is on food waste reduction, sustainable diets, food growing and buying more locally sourced food.

### Highlights from GND Fund projects

- The Mayor's Green New Deal fund leveraged **ReLondon's business transformation programme** (part-funded by ERDF) to help SMEs in London cut waste through circular economy business models. By April 2022, ReLondon on behalf of the Mayor disbursed £590,000 in grants and offered free business advice to over 100 businesses in London, prioritizing those disproportionately affected by the pandemic and those new to the circular economy. Nearly 142 jobs have been created as a result, with a range of waste benefits from tackling single-use household packaging to turning surplus food into new revenue streams.

- Beyond Green New Deal-funded activities, ReLondon's business transformation programme has helped over 300 businesses access £5 million in capital and launch over 80 new products and services that reduce waste and increase rates of recycling, reuse, renting and sharing in London.

## 6. Climate Change Adaptation

The Mayor continues to work to ensure London is prepared for the challenges of climate change, as we confront the increasingly regular occurrences of heatwaves and flash flooding; including the heatwaves and flash flooding of 2021, and the record breaking heatwave and drought in summer 2022. These are a stark reminder that climate change is already upon London and the wider world. This will worsen if strong action is not taken to continue to cut emissions but we also need to adapt to these challenges, informing and supporting Londoners to prepare.

Key achievements during May 2021 – May 2022 include:

### Heat risks and keeping Londoners informed

- The Mayor continued **setting out London-wide communications to notify Londoners during heat alerts**. These include advice on how to cope during these periods, particularly for those at risk from extreme heat. It also signposts how to help the most vulnerable, including accessing Cool Spaces, water fountains and Refill sites, and sharing guidance for care homes, schools and early years settings.
- The Mayor has **established a map of the cool spaces in our city** which includes both indoor and outdoor, open green and shaded spaces for Londoners. The total number of indoor and outdoor cool spaces opened this summer was 495, an increase on the number in previous years as a response to the extreme heat event.
- The Mayor commissioned in summer 2022 **research and guidance into retrofit measures for existing homes and buildings in London which would help create cooler homes and buildings for summer**. Approaches to cooling through passive measures will help vulnerable households during extreme heat events as there will be less reliance on mechanical and active measures such as air conditioning (and the associated costs with use).

### Surface water flooding

- The Mayor convened **a series of roundtable meetings** bringing together those with legal duties for surface water flooding (boroughs and the Environment Agency, water companies). These ran through the second half of 2021 to summer 2022 and aimed to support a more co-ordinated approach to managing surface water flooding, help minimise risk and better prepare Londoners. The roundtable also reviewed London's emergency response arrangements to these incidents and the longer-term challenges of prevention and adaptation to surface water flooding.

- The Mayor established in August 2021 **a task and finish group chaired by London Councils and the Environment Agency to address the longer term challenges of adaptation to climate change**. The group has recommended that a surface water flooding strategy be produced for London for the first time, alongside a communications strategy and a specific workstream to identify vulnerable basements.
- Following the publication (in March 2022) of the Mayor's surface water flooding roundtable [progress report](#), **a new pan London group has been established**. Its objective is to improve the governance and management of surface water management in the capital. This includes creating, for the first time, a London-wide strategy and delivery plan to make London better prepared for managing surface water flooding in future. Immediate actions to help reduce risk and raise awareness of surface water flooding also commenced in this period. This included work to improve the preparedness of residents of basement properties to the specific flooding risk they face.
- The Mayor's **London Resilience Forum** prepared in autumn 2021 a multi-agency rapid debrief on the flood incidents with 30 recommendations for the London Resilience Partnership to inform and improve future emergency response arrangements. These recommendations cover improving response plans, communications, situational awareness and access to data, public communications and engagement, roles and responsibilities for operational matters and support to the public.
- The Mayor announced, in March 2022, further details of a £1.5 million **Climate Resilient Schools** Programme. City Hall is working with the Department for Education and Thames Water to enhance the climate resilience of 101 schools. Using data from the Department for Education and the Mayor's Climate Risk Map, the funding has prioritised schools that are at highest risk of surface water flooding. The programme completes in March 2023.
- In November 2021, the Grow Back Greener programme funded projects that addressed climate adaptation and water, joint funded by Thames Water and the GLA. 15 projects were selected under this theme delivering sustainable drainage in schools, highways and other spaces.
- The Mayor launched the Retrofit SuDS map to show locations of sustainable drainage systems in London. This highlights the good work already being delivered to tackle surface water flood risk by boroughs and other delivery organisations.

### **Tidal flood risk from the Thames**

- The Mayor has continued to support the Environment Agency in **ensuring its Thames Estuary 2100 plan is delivered to protect Londoners** as sea levels continue to rise. The Mayor has previously supported the Environment Agency in safeguarding land for a potential new Thames Barrier to the east of London, to help continue to manage the risk of tidal flooding into next century. GLA officers are also members of the Agency's 10-year review senior advisory group, and the 10 year plan review process, to ensure

the long-term plan is up to date and will ensure London's river defenses are fit for the future.

### **Holding water companies to account to ensure resilient water and wastewater infrastructure**

- The Mayor's lobbying of Ofwat and Thames Water was instrumental in Ofwat granting a conditional allowance as part of their final determination at the last price review in 2019. This funding totaling nearly £800m, which includes a ~£300m contribution from Thames Water shareholders, was ringfenced for London, to boost London's water supply resilience and tackle the years of underinvestment. The conditional allowance was agreed for release in autumn 2021.
- His lobbying also resulted in Ofwat requiring Thames Water to instigate performance reporting for their London supply area, as part of the last price review in 2019. Thames Water reported its performance for London for the first time in financial year 2021/22. Prior to this Thames Water reported for its entire operational area. London specific performance data has enabled the GLA to hold Thames Water to account, compare performance between years and also with Thames Water's non London supply area. The Mayor continues to work with Thames and Ofwat to improve the quality of the data it captures for London, including crucially, improving the transparency of financial expenditure in the capital.

### **London Climate Change Partnership**

- The Mayor continues to host the London Climate Change Partnership. The Partnership enables knowledge exchange, supports the development of research partnerships, and ensures priority sectors understand the impacts of severe weather and climate change. In 2021 the LCCP advised on work by CIBSE to develop an urban albedo calculator for London. The outcome of this work will be a mapping tool for local authorities to help target actions to mitigate overheating in London's buildings and public realm. In 2021/22 the LCCP convened a transport adaptation advisory group which supported TfL in the development of their adaptation strategy and plan. Since 2019 the LCCP has sat on DEFRA's local authority advisory panel inputting into the development of the government's National Adaptation Programme and advocates for a specific focus on cities as part of that group. In May 2021 the partnership launched the adaptive pathways starter pack to support adaptation planning. The pack was developed in partnership with the Environment Agency and Thames Estuary Partnership.

## **Other formats and languages**

For a large print, Braille, disc, sign language video or audio-tape version of this document, please contact us at the address below:

### **Public Liaison Unit**

Greater London Authority  
City Hall  
The Queen's Walk  
More London  
London SE1 2AA

Telephone **020 7983 4100**

**[www.london.gov.uk](http://www.london.gov.uk)**

You will need to supply your name, your postal address and state the format and title of the publication you require.

If you would like a summary of this document in your language, please phone the number or contact us at the address above.

---