

# **London Environment Strategy: Second Progress report (2019-2021)**

September 2021

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# 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](#) was published in December 2019, covering the period from the beginning of the Mayor's term (May 2016) to October 2019.

We were not been able to produce a London Environment Strategy Implementation Plan year two report as a result COVID-19 and the impact of the pandemic on the capacity of officers. As a result, this document summarises key actions taken by the Mayor against the policies and proposals in the strategy over his first Mayoral term, covering the period from May 2016 to May 2021, with particular focus on achievements since the 'one year on' report publication, from October 2019 to May 2021.

## **London Environment Strategy background**

For the first time, the strategy brought together approaches to all aspects of London's environment, taking action that will improve the city's environment right away, and setting London on the path to creating a better future. Key areas of focus include:

### **Climate Change and energy**

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

### **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.

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## **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.

## **About this report**

This progress report contains chapters on the key London Environment Strategy policy areas:

- climate change mitigation and energy
- air quality
- green infrastructure
- 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://data.london.gov.uk/>

## 2. Climate Change Mitigation and Energy

There is a climate emergency that requires a step change in our efforts to reduce our greenhouse emissions and to transition our economy. Making London net zero carbon by 2030 will involve transforming the way in which Londoners travel, work and live, including how energy is sourced, generated, managed and used.

This decade will be crucial in determining how successful we are in tackling the climate emergency and that is why the Mayor has brought London's net zero target forward to 2030.

The pandemic has highlighted how the environment can have a disproportionate impact on Londoners, with those living in the most deprived areas most likely to experience poor air quality, cold, damp homes and limited access to green space. This may be worsened by the global economic downturn and the potential of mass unemployment. To deliver a green recovery, the Mayor and London Councils have set up and co-chair the London Recovery Board, which will take an overview of the city's recovery. The Board has developed a missions-based approach to recovery. This will bring together the public, private and voluntary sectors, and involves working with all Londoners to make it a success.

The Green New Deal mission aims to double the size of the green economy in London to £100 billion by 2030, an ambition that will tackle the climate emergency and kick-start growth in good green jobs over the next decade and tackle inequalities exacerbated by Covid-19. By focussing on these challenges, London can build towards a sustainable city that is fairer, greener and healthier while creating and sustaining jobs and economic growth. The pan-London Recovery Board – co-chaired by the Mayor of London and London Councils – coordinates the planning for London's future post-COVID.

The Green New Deal and London Environment Strategy present an opportunity to drive sustainable economic growth which creates and sustains jobs for Londoners, positioning London as a global leader in tackling the climate crisis. During his first term the Mayor has taken bold action to reduce London's carbon emissions and address the climate emergency. These include:

## **Delivering on net zero ambition**

- Being the first Mayor of a C40 megacity to declare a climate emergency in 2018 and followed in 2020 by declaring his **ambition for London to be net zero-carbon by 2030**.
- Delivery against the Mayor's declaration of a climate emergency included the first phase of the **Mayor's Green New Deal fund** to support boroughs, communities and businesses through a range of programmes aligned with the areas of work of the Green New Deal mission. The Fund, launched in November 2020 is already investing £10 million in programmes that support around 1,000 green jobs, while tackling the climate emergency and inequalities in London. The Fund is supporting a range of projects to decarbonise of the built environment, green transport and the public realm and provide business support to cleantech and circular economy businesses (for information on projects supported see Box 1 below).
- The **London Plan** has introduced net zero targets for commercial developments to bring them in line with existing targets for domestic developments, minimum energy efficiency standards and a shift towards renewable heat technologies, heat networks, and integrated energy systems. Compliance with the London Plan carbon and energy policies is seeing a positive response from applicants. In 2019, new developments in London achieved carbon savings 40.6 per cent higher than required by national Building Regulations as a result of the London Plan energy policies. In addition, the new energy efficiency targets have secured carbon savings from energy efficiency measures in the order of 16.7 per cent, the highest reduction we have seen since we started reporting in 2011; the same figure in 2018 was 13.5 per cent. We are also seeing whole life-cycle carbon assessments being submitted for the first time.
- In 2018, the Mayor launched the **£500m Mayor's Energy Efficiency Fund** which provides London's public sector organisations with flexible and competitive finance and funding options to deliver new low carbon projects and upgrade existing low carbon infrastructure. It is the UK's largest ever ERDF dedicated investment fund for urban energy and climate related projects. At the beginning of March 2021, £36.2m of the ERDF had been committed and a further £216m of third-party funding had been mobilised. In October 2020 another £8.2m of ERDF was committed to the fund, as the initial £43m was nearly fully committed, and this will help leverage more private sector finance into projects helping to deliver on London's climate ambitions. In its first two years MEEF, managed by Amber Infrastructure Group, mobilised over £250 million of public and private capital enabling projects including heat networks and electric vehicle charging infrastructure, reducing London's CO2 emissions by more than 12,500 tonnes per year.
- Following his manifesto commitment on divestment the **Mayor has divested GLA cash assets from fossil fuels and worked with the LPFA to develop a climate change policy for the fund that includes divestment**. The LPFA's investments in direct extractive fossil fuel as of February 2021 was just £2.9m (0.05% of Assets Under

Management (AUM)). The percentage has fallen from £43.6m or 1% of AUM to 0.05% (i.e. a reduction of over 90% of AUM).

- **The Mayor has continued collaborating with other cities globally on joint climate solutions through C40 as Vice Chair for Europe since 2016.** Through this global collaboration, the Mayor has been instrumental in establishing global city initiatives to share best practice on climate solutions from London. This includes the work through the C40 Cities Divest/Invest Forum, the global initiative for cities on divestment developed in partnership with Mayor de Blasio of New York. In January 2020 the Mayor, in conjunction with New York, launched a Divestment Toolkit which sets out a clear pathway and guidance to support other cities in their divestment and increasing sustainable investments. Together with Mayor De Blasio, the Mayor launched the C40 Divest/Invest declaration that committed 10 further cities including Oslo, Pittsburgh, Berlin and more to join in divesting from fossil fuels

### **Energy and buildings**

- During the first term the **Mayor's Energy for Londoners programme** helped over 33,000 London homes with energy efficiency measures:
  - Warmer Homes has installed energy efficiency measures in over 1,577 owner-occupied and privately rented fuel poor homes
  - RE:NEW has helped 26,800 London homes to be either retrofitted or in contract to be retrofitted with energy efficiency and renewable measures
  - London Boiler Cashback Scheme and Better Boilers replaced and repaired over 4,170 inefficient and broken boilers in owner occupied and fuel poor homes
  - Solar Together London has installed solar photovoltaic (PV) panels in over 970 homes
- The Mayor's Warmer Homes Advice Service (formerly Fuel Poverty Support Fund) has assisted over 9,905 households with small energy measures (e.g. low energy lighting, radiator panels, draught excluders) and energy bill saving advice
- The Mayor launched his Retrofit Accelerator – Homes programme on 12 February 2020. The programme helps social housing landlords cut carbon and reduce energy bills by radically improving the energy efficiency of their homes. In the past, GLA programmes focussed on light-touch measures (such as draft-excluders or energy saving lightbulbs), however this approach will not deliver net zero carbon. Instead, the Accelerator upgrades old homes with everything they need to be future-proofed including high-spec insulation, renewable heating systems and solar panels which are fitted at the same time. This whole house deep retrofit approach is both innovative and complex, therefore the aim is that initially a minimum of 50 homes will be completed by July 2022. At least 1,678 homes will be contracted by December 2021 to undergo deep retrofit within the next three years through the Retrofit Accelerator-Homes programme. The smaller numbers are proof of concepts to demonstrate that can be done across



London. The programme works with London boroughs and housing associations providing technical expertise to support them to kick-start a new deep retrofit market.

- The Mayor has also supported the retrofit of 302 public sector buildings through his **Retrofit Accelerator – Workplaces programme** (formally RE:FIT London), saving over 12,600 tonnes of carbon and 33MWh of energy each year. The programme helps a range of organisations including London boroughs, NHS bodies, central government departments, schools and other educational establishments, and cultural and heritage organisations to implement retrofit projects.
- The Mayor’s **London Community Energy Fund** supported over 86 projects through four rounds of funding since 2017, with over £1m in grants. Buildings that have benefitted so far include schools, community centres, GP surgeries, churches, and sports centres. The majority of projects are enabling solar PV, alongside energy efficiency retrofit. If all projects proceed to installation, this would save over 2,500 tonnes of carbon a year with up to 8MW of additional solar capacity (equivalent to the area of around 7 football pitches).
- In November 2020, the Mayor launched the £6m **Local Energy Accelerator Programme** alongside the Green New Deal. The LEA aims to transform the way London generates, supplies, integrates and uses clean local energy in buildings and transport. The LEA aims to increase renewable energy capacity by 3MW and save 20,000 tonnes of equivalent carbon dioxide per year by end July 2023.
- The Mayor launched **London Power** on 13 January 2020. London Power is an energy supply company delivered in partnership with Octopus Energy. It aims to offer fair, affordable and green energy plans, specially designed for Londoners. London Power crossed the milestone of 5,000 customers in February 2021. London Power prices vary throughout the year in response to the changing wholesale market. However, as of March 2021 London Power households had each saved an average of 1,120kg of CO<sub>2</sub> and £175 per year, with customers on our cheapest tariff saving an average of £207 per year.

### Working with businesses

- To demonstrate leadership and accelerate action in London, the Mayor continues working with a group of **London Business Climate Leaders**. The group of ten international business leaders are working with each other and City Hall to roll out electric vehicle charging infrastructure, improve their buildings, and invest in renewable projects across the capital. The businesses now disclose their London based emissions, a global first for businesses to report their city level climate impact. In April of 2021 London joined the City Business Climate Alliance Network as a fellow City, due to its leading role in the field of city-business collaboration. The CBCA is a joint initiative of C40 Cities, CDP and the World Business Council for Sustainable Development (WBCSD) aimed at accelerating climate action through city- business collaboration.

- The Mayor's ambitious **Business Climate Challenge programme** was launched in March 2021 to help businesses tackle the climate emergency and achieve London's net-zero target. The Challenge has been developed with support from Bloomberg Associates and piloted with businesses which are part of Better Bankside Business Improvement District (BID) in Southwark. The pilot challenges 20 businesses in the Better Bankside BID to reduce their building energy consumption by 10 per cent in 12 months. The first 20 participants have been confirmed, including Shakespeare's Globe, London Marathon Events and Kubrick Group.
- The Mayor has **several programmes to help London businesses contribute to a low carbon circular economy**. The Better Futures business support programme supports cleantech SMEs to develop and bring to market low-carbon and cleantech products. These will help address climate change, air quality and other environmental issues. The project has supported 116 SMEs so far to develop their business. This six-year programme **aims to give over 150 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. During the first Mayoral term, 175 London-based cleantech businesses have registered on the programme and have accessed one or more elements of support.

#### Box 1 – projects funded through Mayor's £10m GND Fund (November 2020)

##### Decarbonising the Built Environment:

- **North London District Energy** – working with boroughs to ensure the network has the capacity to capture a further 20MW of waste heat from the Edmonton Energy Recovery Facility to enable the supersizing and extension of the heat network from Enfield into Haringey and Hackney to provide near zero carbon heating to a further 8,000 properties.
- **London Community Energy Fund** – delivering the fourth phase of the London Community Energy Fund will support community energy projects such as solar panels on schools and community centres and electric vehicle charge points.
- **Old Oak and Park Royal Solar PV programme** – developing and deliver solar panels on rooftops across the Old Oak and Park Royal industrial estates over a three-year period and creating a scalable model for other industrial estates in London.
- **Solar Together London** - supporting the group-buying model to unlock significant savings from suppliers (up to 35 per cent in previous rounds) and make solar more affordable for Londoners and includes support for installers to boost their training and employment opportunities and grow the supply chain.

**Green Transport and Public Realm:**

- **Bus electrification and electric vehicle charging** - investing in the design and delivery of power infrastructure for bus garages in London, which will ultimately enable the transformation of London's 9,000 buses into a zero-tailpipe emission fleet.
- **2030 Future Neighbourhoods** – supporting London boroughs and local organisations in two to four London neighbourhoods to transform their local environments, tackling London's defining environmental challenges -whilst creating jobs, developing skills and supporting a just transition. The selected Future Neighbourhoods will be located in London's most deprived or climate vulnerable areas and will address defining environmental challenges.

**Green Foundations:**

- **Advance London** – supporting SMEs to transition to circular business models and scale their circular economy ventures and will prioritise support to businesses in either geographic areas or sectors impacted most severely by the pandemic.
- **Better Futures** - Tailored support to SMEs to improve the success rate of startups and the speed that low-carbon enterprises are able to support London's transition. It will provide tailored business and technical development, with a proactive focus on under-represented groups in the cleantech sector.

## 3. Air quality

Air pollution is the biggest environmental risk to health. Poor air quality stunts the growth of children's lungs and worsens chronic illness such as asthma and heart disease, and a study from Imperial College London found that in 2019 toxic air contributed to the premature deaths of more than 4,000 Londoners.

The Mayor is determined to continue to do more to tackle poor air quality for Londoners, particularly around schools. A recent study found that the Mayor's air quality policies and wider improvements in air pollution will increase the average life expectancy of a child born in London in 2013 by six months. Modelling by King's College showed that with the Mayor's interventions, London's air would be within legal limits for NO<sub>2</sub> by 2025 at the latest, whereas based on the trend between 2010 and 2016 meeting legal limits would have taken 193 years.

While significant progress has been made, tens of thousands of Londoners still breathe illegally polluted air and 99 per cent of Londoners live in areas exceeding the World Health Organization (WHO) recommended guidelines for PM<sub>2.5</sub>, which are much tighter than the legal standards. Improving air quality is also a matter of social justice. On average, those exposed to the worst air pollution are more likely to be deprived Londoners and from Black, Asian and Minority Ethnic communities. During his first term the Mayor has taken bold action to cut harmful air pollution emissions. These include:

### Low Emission Zones

- **The Mayor introduced the world's first Ultra Low Emission Zone (ULEZ) in April 2019** and is extending it up to the North and South Circular in October 2021. Compliance has steadily increased since its introduction and as of May 2021, 87 per cent of vehicles seen in the zone on an average day meet the strict ULEZ emissions standards. In its first 10 months (before the pandemic) it helped reduce roadside nitrogen dioxide pollution by 44 per cent in central London.
- **The Mayor introduced tougher standards for heavy vehicles operating in the Londonwide Low Emission Zone (LEZ) in March 2021.** These new standards match the ULEZ emission standards. The tougher LEZ is already having an impact, with data showing compliance with the new standards at 90 per cent by launch, compared to around 70 per cent in May 2019.
- **All 12 Low Emission Bus Zones were completed a year ahead of schedule:** reducing bus-related NO<sub>x</sub> emissions by an average of more than 90 per cent along some of the capital's most polluted routes. At Putney High Street in Wandsworth,

annual mean NO<sub>2</sub> concentrations have reduced by 45 per cent and exceedances of the hourly mean limit have reduced by 99 per cent since 2016.

- **The Mayor funded 21 Low Emission Neighbourhoods (LENs), involving 15 boroughs and a range of local businesses.** Businesses LENs funded in 2020 included projects in the London boroughs of Croydon, Tower Hamlets, Redbridge, Hammersmith and Fulham, Wandsworth, and Waltham Forest. The LENs and the other projects supported by the Mayor's Air Quality Fund and London Economic Action Partnership are helping tackle some of the worst pollution hotspots across London.
- **The Mayor worked with TfL to develop Zero Emission Zones**, with the first one delivered in Hackney, and another introduced in March 2020 in Beech Street, City of London, thanks to support from the Mayor's £22m Air Quality Fund.

### Fleet electrification

- **The Mayor continued transforming London's bus fleet by phasing out pure diesel buses and committing to purchase only hybrid or zero-emission double decker buses from 2018.** As of 1 January 2021, all buses in TfL's 9,000-strong core bus fleet meet or exceed the cleanest Euro VI emission standards. There are currently over 500 zero emission buses in the fleet. London now has the largest zero emission bus fleet in Western Europe.
- **No more diesel taxis are being licensed**, and following **consultation, the Mayor is reducing the age limit** for older, polluting black cabs in order to help reduce taxi based NO<sub>x</sub> emissions by 65 per cent by 2025. The Mayor has also licensed over 4,000 zero emission capable taxis since Jan 2018, supporting jobs and industry across the UK, including over 500 jobs at a new factory which opened in Coventry in 2017.
- The Mayor supported delivery of over 300 **rapid charge points** and over **2,000 standard charge points** up to May 2021. This includes London's first rapid charging hub at Stratford International, with two further hubs planned in City of London and Greenwich. By May 2021, London had over 600 rapid charge points and over 7,500 residential charge points, around 30 per cent of the country's total, delivered through leadership and effective collaboration between the public and private sector.
- **The Mayor has provided £56m for scrappage schemes** to help small business owners, sole traders, charities and low-income and disabled Londoners make the switch to cleaner vehicles and greener forms of transport. As of April 2021, 10,344 applications had been accepted, with a value of £46.9 million and 9,361 vehicles have been scrapped or retrofitted (in the case of heavy vehicles). In July 2021 the Mayor added an additional £5m to help more low income and disabled Londoners scrap their vehicles, bringing the total to £61million.

## **Reducing exposure**

- The Mayor **audited the air quality at 50 London primary schools** in the city's most polluted areas. This came with funding to help schools take action and encourage students to walk and cycle to school along less polluted routes. The Mayor extended the audit approach to 20 nurseries in some of London's most polluted areas. Based on the positive results of these pilot programmes this approach is now being replicated by a number of London boroughs which will increase the total number of audited schools across the city. On February 2021 the Mayor launched the London Schools Pollution Helpdesk to support schools across the city to carry out air quality audits and implement recommendations.
- **The Mayor created healthy streets that encourage walking, cycling and public transport use.** The Mayor adopted the Healthy Streets Approach to improve air quality, reduce congestion and help make London's diverse communities greener, healthier and more attractive places to live, work, play and do business.
- **The Mayor continued to improve air quality alerts to help Londoners take action to reduce their exposure to pollution.** As well as overseeing one of the world's most comprehensive air quality monitoring network, the Mayor operates a system of alerts on the days with the worst air pollution, including providing information on more than 2,500 countdown signs at bus stops. This service also includes direct emails to schools and other Londoners who are the most impacted by air pollution.
- **The Mayor launched a community-focused air quality monitoring network.** Following the successful pilot of the Breathe London network, the Mayor funded 135 new air quality sensors across London, prioritising hospitals, schools and community groups, as well as providing at least one sensor per borough. Air quality data is now available through the Breathe London website which launched in March 2021, making it easier for all Londoners to access reliable, localised, real-time air quality data.

## **Ambient noise policy**

- 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. A further 140km of 20mph speed limits will be delivered on TfL roads by the end of the 2024/25 financial year. TfL is currently looking at how to accelerate this programme. Lowering traffic speeds will make our streets more inviting, less polluted, less noisy, less dominated by motor vehicles, and more attractive for walking and cycling.
- The Mayor launched TfL's Freight and Servicing Action Plan in March 2019. The plan outlines how the Mayor, through TfL, will work with boroughs, businesses, and the industry to transform how deliveries are made in London. A key part of this work is reducing the noise impact of freight and servicing through consolidation, retiming, fleet electrification and zero emission last mile deliveries.

- 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.
- During his first term the Mayor scrutinised airport expansion proposals to understand the noise impact on local residents. In June 2019, he responded to the Government's aviation strategy green paper, calling for a fully independent noise regulator with monitoring and enforcement powers. He also flagged serious concerns with the use of concentrated flightpaths. Finally, he called for the noise reduction benefits of new technology to be shared with communities rather than used by operators to increase flights.
- The Mayor's London Plan embeds key policies addressing noise (policies D12 and D13) to reduce adverse noise and protect London's acoustic environment.

## 4. Green Infrastructure

The past year has reinforced how essential the city's green infrastructure network is to the quality of life of Londoners. The pandemic has also brought into sharp focus the inequalities in access to greenspace across our city and how this disproportionately affects London's most disadvantaged communities.

The London Environment Strategy sets several ambitious targets to tackle these issues. This includes ensuring more than half of London is green in 2050 and increasing existing tree canopy cover by ten per cent. This urban greening is directly helping to improve Londoners' quality of life. It is also helping improve London's air quality and responds to the global climate and ecological emergency. To achieve these, during his first term the Mayor introduced a range of new initiatives and policies:

- In July 2019 London became the **world's first National Park City**, in recognition of the ambitious policies and actions the Mayor has taken to make London greener.
  - Since 2017, the **Mayor's £13m Greener City Fund** has supported green space projects in all 32 boroughs and the City of London, improving or creating over 400 hectares of green space. This includes over 180 community green space projects, and 6 major capital projects. These capital projects provide exemplars of how to create and link green spaces, maximising the benefits for people and wildlife. They include a new swimming lake in Lewisham at Beckenham Place Park, a naturalised watercourse at Albany Park in Enfield and new walking and cycling routes at the Ripple Greenway in Barking and the Gurnell to Greenford Greenway in Ealing.
  - Since 2016 the Mayor has **funded the planting of over 340,000 trees across London**. The Mayor has committed funding to plant a further 65,000 trees by March 2022. This includes completing two major woodland creation projects in Enfield and Havering, creating 84 hectares in the Green Belt.
  - In November 2020 the **Grow Back Greener Fund** awarded £700,000 to 34 community projects to create and improve green and climate resilient spaces. The Fund prioritised projects in neighbourhoods with poor access to green space and high levels of deprivation.
  - **The London Plan** has strong protections for the Green Belt, Metropolitan Open Land and other open space, and introduces a new policy – the Urban Greening Factor – to ensure that all major new developments include greening such as green roofs and walls and trees.
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- The Mayor secured £2.6m of funding from the European Union Horizon 2020 programme to be invested over the next four years to support the **regeneration of Thamesmead** through green infrastructure co-designed by local residents.
- The Mayor is improving **access to green data** by developing new methodologies and mapping to support the greening of London. Some key achievements included:
  - Publishing a green infrastructure focus map to help target future green infrastructure investment.
  - New tree canopy cover and green cover assessments for London using high-resolution aerial imagery. These established that London's green cover is between 48 per cent and 51 per cent and tree cover is at 21 per cent.
- In 2019 the Mayor established the **London Green Spaces Commission** alongside London Councils to help boroughs develop approaches to supporting and financing their parks services. Recommendations from the Commission, published in August 2020, received widespread support from boroughs and the wider greenspace sector. A key recommendation to establish Parks for London as a Centre for Excellence is now being supported by the GLA, London Councils and key borough officer networks.

## 5. Waste and Circular Economy

London has the lowest 'household' recycling rate of any English region with a 2019/20 rate of 33.5% against an England rate of 43.8%. This reflects the challenges such as a high proportion of Londoners live in flats (up to 80 per cent in some areas). London has a highly transient and diverse population with over 100 languages spoken –and the variety of approaches in London has made it difficult to increase recycling rates.

The London Environment Strategy details plans to tackle this by making London become a zero-waste city, with no biodegradable or recyclable waste sent to landfill by 2026. The Mayor has set a London-wide target of recycling 65 per cent of municipal waste by 2030. Key achievements during the Mayor's first term include:

- Tackling the problem of single use plastics. The Mayor installed 82 **drinking fountains** across London. 28 of these were in an initial pilot in 2018 with ZSL and #OneLess. He is now working in partnership with Thames Water and has installed 54 additional fountains with a target of more than 100.
  - The Mayor has supported **Refill London**, a water refill scheme where people can go into shops and businesses and ask for a free water refill instead of buying water in single-use plastic bottles. By the end of the first term there were over 4,000 refill points across the city, up from approximately 200 when the programme started in March 2018.
  - The Mayor approved **Reduction and Recycling Plans** for all boroughs across London. Taken together, if implemented in full by the boroughs as they have committed to do, the RRP's are expected to increase London's household waste recycling rate from 33.5 per cent in 2020 to 40 per cent in 2022. However, the types and quantities of waste that boroughs have to manage has changed due to the initial lockdown and lasting changes are likely due to changes in living and working patterns. The full impact of this will not be known until later this year.
  - He also approved 17 **waste authority contracts** to be in general conformity with the London Environment Strategy.
  - The Mayor's **London Plan** embedded policies to ensure there are sufficient suitable sites to maximise London's waste management capacity and support circular economy outcomes of reuse repair and remanufacture. A key part of this is the requirement for all referable applications to be accompanied by a Circular Economy Statement.
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- Through ReLondon (formerly the London Waste and Recycling Board (LWARB)) the Mayor published a series of reports to improve recycling rates and make waste services more resilient, including:
  - o A report targeting at improving recycling rates at flatted properties
  - o The 'London Learnings' report, looking at how London local authority waste services responded during the March 2020 COVID-19 lockdown.
  - o Three 'Impact of Covid-19 on commercial waste services' reports. One published in summer 2020 focusing on the initial impact of the pandemic on commercial waste services; a second, published in autumn 2020, which helps local authorities understand the longer term impact of COVID-19 on commercial waste tonnages and composition; and a third, which revisits the autumn 2020 report providing predictions for commercial waste in 2021/22. The "Improving the quality of household recycling in London" report, looking at contamination in recycling
  - o The 'Reducing single-use plastic consumption' report, which identifies a series of actions to accelerate efforts to reduce consumption of single-use plastic in London

## 6. Climate Change Adaptation

We know that on current global emissions trends, the impacts from climate change will only get worse and London is now seeing the more frequent and more intense weather events that climate change brings. Projections show that London will experience hotter, drier summers and warmer, wetter, winters. This is already being seen with the surface water floods of July 2021 and the recent heatwaves in 2019 and 2020, when temperatures in London hit 38 degrees Celsius. There are already over 200,000 residential and commercial properties at risk of flooding from heavy rainfall events in London. Equally, hotter drier weather will increase the risk and severity of droughts and pressure on already stressed water resources that supply London will grow. The Mayor is already taking some of the most radical action of any world city to adapt London to our changing climate. Key achievements within the Mayor's first term include:

- The **London Strategic Sustainable Drainage Systems (SuDS) pilot**, where the GLA was a sponsor and key partner, quantifies (through modelling) the collective benefits of multiple small SuDS schemes to demonstrate an aggregated flood risk, and wider natural capital benefits. The approach demonstrates how many small SuDS schemes can perform in a way that is comparable in benefit cost terms to large flood alleviation schemes. This is a major first step in unlocking flood risk funding for SuDS delivery. The projects won first prize at the Environment Agency's National Flood and Coastal Awards for surface water management. The GLA led the submission to the awards on 30 June.
  - Through the Mayor's Grow back Greener programmes, £1.8 million of investment in grant programmes has supported over 40 projects help tackle surface water flood risk.
  - The Mayor has kept Londoners informed during **extreme heat events** last summer by sharing messaging at public locations across London. Since launching the new approach, the Mayor has used these communications five times to protect Londoners. Advice is also provided for groups at risk during a heatwave with more targeted advice for care homes, schools and early years settings.
  - In March 2021, the Mayor launched a **Climate Risk Map for London**, to identify areas of London that are most exposed to climate impacts with high concentrations of vulnerable populations. These maps, produced in collaboration with Bloomberg Associates, will help him and other London-based organisations deliver equitable responses to the impacts of climate change and target resources to support communities at highest risk. The maps are already being used to select and inform the Mayor's Green New Deal programmes including the Future Neighbourhoods and Green, Healthy and Resilient Places programmes to ensure projects and
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interventions are designed to tackle climate risks and target areas of greatest climate risk and vulnerability

- Last year the Mayor published a series of **sector specific sustainable drainage guidance for six sectors (Schools, Social Housing, Parks & Greenspaces, Hospitals, Offices and Retail) under the Reimagining Rainwater series** to help them better adapt to climate change. The Mayor also developed bespoke training on sustainable drainage for highways officers to tackle surface water flooding through their projects. More than 300 officers have been trained to date.
- The Mayor has continued **holding water companies to account** to increase their resilience and that of London's water supplies, plan for new water resources and reduce leakage. The Mayor continues to convene the Water Advisory Group attended by London's four water companies, Ofwat, the EA and Water Resources in the South East to ensure water infrastructure is resilient to the climate impacts we are seeing now and expect in the future.
- The Mayor established the Phase 1 of the **Cool Space initiative** in 2020 which maps outdoor, open green and shaded spaces for Londoners to take respite on hot days. Phase 2 of the project added additional outdoor cool spaces to those mapped for phase 1. It developed a set of tiered criteria of the spaces to provide Londoners with a better understanding of what facilities to expect within the network, and how certain spaces can better fit their needs. Outdoor cool spaces are available from 1 June 2021. 233 outdoor cool spaces have been registered to date on the cool spaces map. Indoor Cool Spaces were made available from 19 July 2021 (in line with Government guidance on the easing of social distancing). Both will be open until 15<sup>th</sup> September 2021.
- The Mayor's **London Plan** introduced policies to manage heat risk, flood resilience and water efficiency to ensure that new developments are fit for London's changing climate. This includes promoting sustainable urban drainage systems (SuDS) and prioritising green SuDS wherever possible. Over the past two years our strong London Plan policy and officer input has seen an average 87% reduction in discharge rates compared to pre-development, reducing surface water flood risk to London's communities.
- The Mayor is **working closely with the Environment Agency** to ensure London remains well defended against tidal flooding. This includes successfully asking neighbouring authorities to ensure there is land for a new Thames Barrier, likely to be needed in the 2070s. The Environment Agency's plan (Thames Estuary 2100) for managing tidal flood risk for London forecast that sea levels could rise up to 2.3 meters by 2100.
- The Mayor completed a **water management strategy** for the Isle of Dogs and has started work on another for the Royal Docks, two of London's key growth locations. These strategies will recommend solutions for tackling flooding, sewer capacity and water scarcity.

- The Mayor working with partners, published first of its kind **road run-off water quality map**. The project modelled vehicle movements and pollutant concentrations to predict road run off pollution after rain. The map shows the roads in London with the highest potential to pollute rivers and streams in London and which are therefore potentially causing the most damage to river health. The findings are being used to identify opportunities to use Sustainable Drainage and wetlands to manage the road run off and reduce the impact of traffic on river health.
- As part of the work of the Water Advisory Group, working in partnership with Waterwise and CIWEM, the Mayor has developed [‘myth busting’ text](#) to improve understanding of **water reuse systems** (greywater and rainwater harvesting) and encourage their use in new development.

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