

MAYOR OF LONDON



London Environment Strategy

IMPLEMENTATION PLAN

MAY 2018

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Greater London Authority
May 2018

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Purpose of this Implementation Plan

The London Environment Strategy sets out the Mayor's objectives, policies and proposals for protecting and improving London's environment. It provides a vision for London's environment and sets a direction of travel both for the Mayor, and the range of partners who need to collaborate to deliver its ambitions.

This Implementation Plan sets out those actions that the Mayor has prioritised to take forward directly between 2018 and 2023 to help implement the policies and proposals set out in the strategy. It will be updated to show progress each year. The Mayor has limited powers over most environmental policy, and the actions identified in this plan will need to be complemented by work from a wide range of partners and stakeholders to deliver the change required to make London cleaner, greener and ready for the future.

PART 1: FROM POLICY TO ACTION

Part 1 of this Implementation Plan lists the objectives in the London Environment Strategy and sets out the actions that will be taken to deliver against each of them between 2018 and 2023. It also provides delivery timescales and information on how each action will be monitored and reported on. Not all of the actions highlighted in the strategy, or additional actions that may be needed to deliver the objectives of strategy, are listed here. Those wider or future measures that are within the Mayor's control will be set out in future iterations of this Implementation Plan, as meeting the objectives of the strategy will require successive and cumulative activity over the longer term. The impacts of these actions will be monitored and evaluated and actions will be reviewed to take the evaluation into account.

PART 2: REPORTING LONDON-WIDE PROGRESS AGAINST 2050 AIMS

To make the Mayor's vision of transforming the city's environment a reality, the London Environment Strategy establishes some key aims for London as a whole. The Mayor aims:

- for London to have the best air quality of any major world city by 2050, going beyond the legal requirements to protect human health and minimise inequalities
- to make London the world's first National Park City where more than half of its area is green; where the natural environment is protected and the network of green infrastructure is managed to benefit all Londoners
- for London to be a zero carbon city by 2050, with energy efficient buildings, clean transport and clean energy
- to make London a zero waste city. 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
- for London and Londoners to be resilient to severe weather and longer-term climate change impacts, including flooding, overheating and drought

- to improve Londoners' quality of life by reducing the number of people adversely affected by noise and promoting more quiet and tranquil spaces
- for London to transition to a low carbon circular economy

Each of these aims will be measured using different datasets, combinations of datasets or other reporting methods. Information on how these aims will be reported on is provided in the tables in Part 2.

The Mayor cannot deliver the aims and objectives of the London Environment Strategy alone. The targets and ambitions for 2050 monitored in Part 2 of this implementation plan can only be achieved through a combination of the Mayor's actions, many of which are set out in Part 1, and the actions of other stakeholders included government, businesses, NGOs and Londoners. Part 2 therefore sets London-wide trajectories for quantitative targets, where relevant, to demonstrate the progress needed by all relevant parties.

Air quality

PART 1: FROM POLICY TO ACTION

Support and empower London and its communities, particularly the most disadvantaged and those in priority locations, to reduce their exposure to poor air quality

To help achieve this objective the Mayor will take the following actions in the coming years:

- Provide real time alerts during high and very high pollution episodes
- Introduce the world's first Ultra Low Emission Zone (ULEZ) in April 2019, with proposals to extend its boundaries in the future to the North and South Circulars for all vehicles and London-wide for lorries, coaches and buses
- Publish school air quality audits for 50 primary schools located in the most polluted areas in London in 2018 and use the recommendations to provide guidance to other schools on measures to reduce exposure
- Embed policies in the London Plan (due for publication in 2019/20) that reduce exposure to existing poor air quality through design and mitigation strategies. In order to support these embedded policies, guidance on air quality positive, air quality neutral and other planning considerations will be published
- Safeguard and maintain the existing air quality monitoring network whilst expanding its effectiveness and reach using a sensor monitoring trial with C40 Cities Climate Leadership Group
- Publish guidance on citizen-led air quality monitoring in 2018
- Introduce Five Low Emission Neighbourhoods (LENs) spanning eight boroughs and involving a range of local organisations, with funding for a further five business-led LENs. This is in addition to continuing the Mayor's Air Quality Fund and together these targeted actions will tackle some of the worst pollution hotspots across London, with TfL contributing £14m.
- Deliver 12 Low Emission Bus Zones, deploying the greenest buses on the capital's most polluted routes, by 2020

Achieve legal compliance with UK and EU limits as soon as possible, including by mobilising action from London boroughs, government and other partners

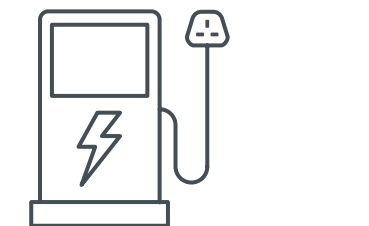
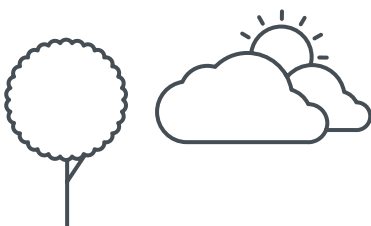
To help achieve this objective the Mayor will take the following actions in the coming years:

- Publish a Cleaner Vehicle Checker online tool in 2018 and lobby government for a car labelling scheme
- Work with the Port of London authority, other regulators and river users to help reduce emissions from the river, including through the London Waterways Forum
- Revise the Non-Road Mobile Machinery (NRMM) Low Emissions Standards by 2020 and roll out the Green Machines positive recognition scheme for best practice in the NRMM sector
- Reduce emissions from homes and workplaces through Energy for Londoners retrofit programmes, including launching a three-year (2018 – 2020) commercial boiler scrappage scheme to incentivise the installation of more efficient gas and renewable heating systems, such as heat pumps.
- Revise and utilise the London Local Air Quality Management (LLAQM) framework in 2018 to ensure boroughs are delivering the most effective measures to improve air quality
- Revise the criteria for 'Cleaner Air Borough' and annually review each borough's status to ensure continuous improvement
- Co-chair a new C40 air quality network in 2018 to share best practice to help accelerate international action on improving air quality
- Work with the European Commission to consider the role for more stringent vehicle emissions standards by 2020

Establish and achieve new, tighter air quality targets for a cleaner London by transitioning to a zero emission London by 2050, meeting World Health Organisation health-based guidelines for air quality

To help achieve this objective the Mayor will take the following actions in the coming years:

- Set new concentration targets for $PM_{2.5}$, with the aim of meeting the World Health Organisation guideline limit by 2030 as part of the BreatheLife initiative
- Call on Government to ensure all new cars and vans being driven in London should be zero emission by 2030 at the latest
- With TfL, establish zero emission zones in town centres from 2020
- Deliver a major expansion in electric vehicle infrastructure, with at least 300 rapid charge points by 2020
- Work with the GLA functional bodies to ensure all cars in GLA group support fleets are zero emission capable by 2025
- Develop a new Combined Heat and Power register to better understand the pollution impacts of existing plant
- Produce guidance on cleaner fuels and stove options for Londoners in 2018
- Produce guidance on the sources of indoor air pollution and how to mitigate them in 2018
- Work with TfL to undertake additional research into the health risks of particulate matter on the London Underground network in 2019



PART 2: REPORTING LONDON-WIDE PROGRESS AGAINST 2050 AIMS

Target	Measure reported on	Dataset/s to be used	Dataset owner	Publication frequency
London will have the best air quality of any major world city by 2050, going beyond the legal requirements to protect human health and minimise inequalities	Number of legal exceedances per year	London Atmospheric Emissions Inventory (LAEI)	GLA/TfL	Every 2 years for full inventory (latest publication 2015)
		London Air Quality Network	King's College	Real-time (with annual reporting and ratification of data). Latest report published in 2017
	Area covered by Air Quality Focus Areas	London Atmospheric Emissions Inventory	GLA/TfL	Every 2 years for full inventory (latest publication 2015)

London-wide trajectory

The Mayor has set a London-wide trajectory for tackling air quality, set out in the table below. The Mayor will contribute to the achievement of this through the actions in this and his other

strategies, many of which are set out in Part 1. However, the London-wide trajectory can only be achieved if other stakeholders, included government, businesses, NGOs and Londoners, play their part and take the necessary action.

Emission reductions compared to a 2013 baseline	
2020	NO _x 40% reduction, PM ₁₀ 16% reduction, PM _{2.5} 28% reduction
2025	NO _x 55% reduction, PM ₁₀ 23% reduction, PM _{2.5} 37% reduction
2030	NO _x 65% reduction, PM ₁₀ 28% reduction, PM _{2.5} 43% reduction (WHO guidelines)
2050	NO _x 82% reduction, PM ₁₀ 38% reduction, PM _{2.5} 52% reduction

Green Infrastructure

PART 1: FROM POLICY TO ACTION

Make more than half of London's area green by 2050

To help achieve this objective the Mayor will take the following actions in the coming years:

- Embed policies in the London Plan (due for publication in 2019/20) that protect the Green Belt, Metropolitan Open Land and public green spaces and ensure no net loss in overall green cover. To support these policies an Urban Greening Factor will be included to accelerate the greening of new development and the All London Green Grid will be reviewed and updated.
- Publish and create a green infrastructure focus map and greenness index in 2018 to help target future green infrastructure investment
- Carry out research to assess the amount of green and blue cover in London, including developing a new methodology for assessing this using higher resolution aerial imagery. This will be made available on the London Datastore in 2018/19
- Work with the Forestry Commission and London Tree Partnership to prepare an Urban Forest Plan in 2019, which will support larger scale woodland creation projects in the Green Belt and other suitable locations, improve the methods and data to identify locations for tree planting and promote best practice in managing and planting trees in the urban environment
- Develop a campaign and toolkit in 2019 to promote better environmental management of domestic gardens to encourage Londoners to do their bit to conserve wildlife, prevent flooding and improve air quality
- Deliver a Greener City grant funding programme of £12m by 2021, including grants for tree-planting, community green spaces and strategic projects
- Research and explore options for improving environmental outcomes in the Green Belt and Metropolitan Open Land.

Conserve and enhance London's wildlife and natural habitats

To help achieve this objective the Mayor will take the following actions in the coming years:

- Embed policies in the London Plan (due for publication in 2019/20) that ensure protection of Sites of Nature Conservation Importance and Regionally Important Geological Sites and encourage a net gain in biodiversity, the protection of trees and woodlands and additional tree planting. To do this a biodiversity net gain approach for London will be developed by 2019
- Update priority habitats and species lists for London and provide guidance on their conservation in 2018
- Produce and publish guidance on improving the ecological value of parks and green spaces by 2019
- Establish a way of monitoring ecological change using consistently collected data by 2019 in order to highlight trends and inform strategic land-management decisions

Value London's natural capital as an economic asset and support greater investment in green infrastructure

To help achieve this objective the Mayor will take the following actions in the coming years:

- Establish a Green Space Commission in 2018 to report on new models for delivery and management of green infrastructure
- Review and update the framework provided by the All London Green Grid Supplementary Planning Guidance in 2020
- Establish National Park City week in summer 2018 and repeat annually thereafter
- In partnership with the National Park City Foundation declare London a National Park City, producing a National Park City Charter and hosting an international summit in 2019

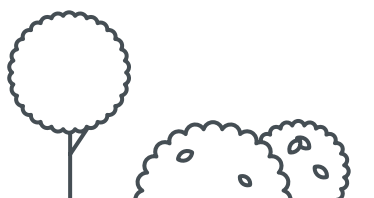
PART 2: REPORTING LONDON-WIDE PROGRESS AGAINST 2050 AIMS

Target	Measure reported on	Dataset/s to be used	Dataset owner	Publication of data frequency
London will be the world's first National Park City, where more than half of its area is green and tree canopy cover will increase by 10 per cent	Tree cover	Near infra-red analysis of aerial imagery	GLA	Every 5 years (to be first published in 2018)
	Green cover	Near infra-red analysis of aerial imagery	GLA	Every 5 years (to be first published in 2018)
	Number of trees planted: a) through Mayoral funding programmes b) by others*	Programme reporting	GLA	Every year from 2018
	Area of green spaces Area of green spaces improved: a) through Mayoral funding programmes b) by others*	Programme reporting	GLA	Every year from 2018

* Including boroughs and London Tree Partnership

It is not possible to set a trajectory for the implementation of tree and green cover to 2050 as this is opportunistic, reliant on the market for

example where we seek to incorporate green infrastructure into large new developments. Our regular monitoring will provide an assessment of progress against the 2050 target.





Climate Change Mitigation and Energy

PART 1: FROM POLICY TO ACTION

Reduce emissions of London's homes and workplaces while protecting the most vulnerable by tackling fuel poverty

To help achieve this objective the Mayor will take the following actions in the coming years through the £34m Energy for Londoners programme:

- Retrofit up to 2,600 homes with energy efficiency measures by 2021, up to 1,000 of which will be fuel poor homes
- Deliver up to ten whole house energy retrofits through the Energy Leap pilot by 2019
- Work with the energy efficiency supply chain on solutions to technical and financial constraints to the take-up of energy efficiency measures, with solutions identified and piloted by 2020
- Implement the recommendations of the Fuel Poverty Action Plan including:
 - Roll-out of the Fuel Poverty Support Fund (for borough fuel poverty advice and referral services) on a London-wide basis by 2020
 - Establish a Fuel Poverty Partnership in 2018
- Deliver an energy supply company for London offering Londoners fairer energy tariffs by 2019/20
- Deliver the current RE:FIT public buildings energy efficiency retrofit programme which aims to deliver savings of 20,000 tCO₂ per year by 2019
- Launch commercial sector energy efficiency support programmes in 2019
- Launch, in 2018, a three-year (2018 – 2020) commercial boiler scrappage scheme to incentivise the installation of more efficient gas and renewable heating systems, such as heat pumps.

- Embed policies in the London Plan (due for publication in 2019/20) that require all new major developments (including non-residential) to be zero carbon, including updating the energy hierarchy and introducing a new energy efficiency target. To help implementation, publish guidance on use of carbon offsetting payments and on whole life cycle building emissions.
- Through the C40 Leadership Group, work with other global cities to support climate action, including promoting C40's independent endorsement of the London Environment Strategy as being consistent with the goals of the Paris Agreement.

Develop clean and smart, integrated energy systems utilising local and renewable energy resources

To help achieve this objective the Mayor will take the following actions in the coming years through the £34m Energy for Londoners programme:

- Maintain the London Heat Map to identify and plan decentralised energy initiatives in priority areas
- Lobby government to deliver improved national standards for decentralised energy
- Implement the recommendations of the Solar Action Plan including:
 - work with the GLA functional bodies to maximise installations across the GLA group, including estimating the potential and providing technical assistance
 - Pilot the Solar Together London collective purchasing scheme in 2018
 - Support community energy groups to develop projects in phase 1 of the London Community Energy Fund in 2018 and establish further support measures for 2019/20



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- Deliver the Decentralised Energy Enabling Project by 2020 to increase renewable generating capacity
 - Investigate a potential successor programme to the Decentralised Energy Enabling Project, including consideration of a heat network delivery body
 - Pilot License Lite as a junior electricity supply project in 2018, buying local low carbon electricity generated across London, and evaluate potential for extension
 - Complete smart, flexible energy system projects, demonstrators and pilots by 2020 to improve London's energy systems, including:
 - Sharing Cities: implementing a sustainable energy management system that will integrate city infrastructure (including electric vehicle charging) and optimise energy supply with the aim of reducing local energy consumption
 - Smart Bunhill: demonstrating smart heating solutions across heat networks, buildings, homes and citizens to reduce the use of peak gas boilers and improve heating supply from the network
 - FlexLondon challenge: developing innovative, flexible approaches for organisations to use and generate energy at optimal times for example where more renewable energy is available. Sites in London with unused flexible demand will be mapped in 2018
 - Smart Meter Rollout: work with smart meter providers to ensure a more effective and inclusive approach by energy companies to smart meter rollout and consumer support and hold a Smart Meter summit for London in 2018
 - Electric Vehicle Trial of Commercial Logistics Vehicles: working with Gnewt, which operates a fleet of zero emission electric vehicles, to gather data on the performance of these vehicles
 - Embed policies in the London Plan (due for publication in 2019/20) on opposing fracking

PART 2: REPORTING LONDON-WIDE PROGRESS AGAINST 2050 AIMS

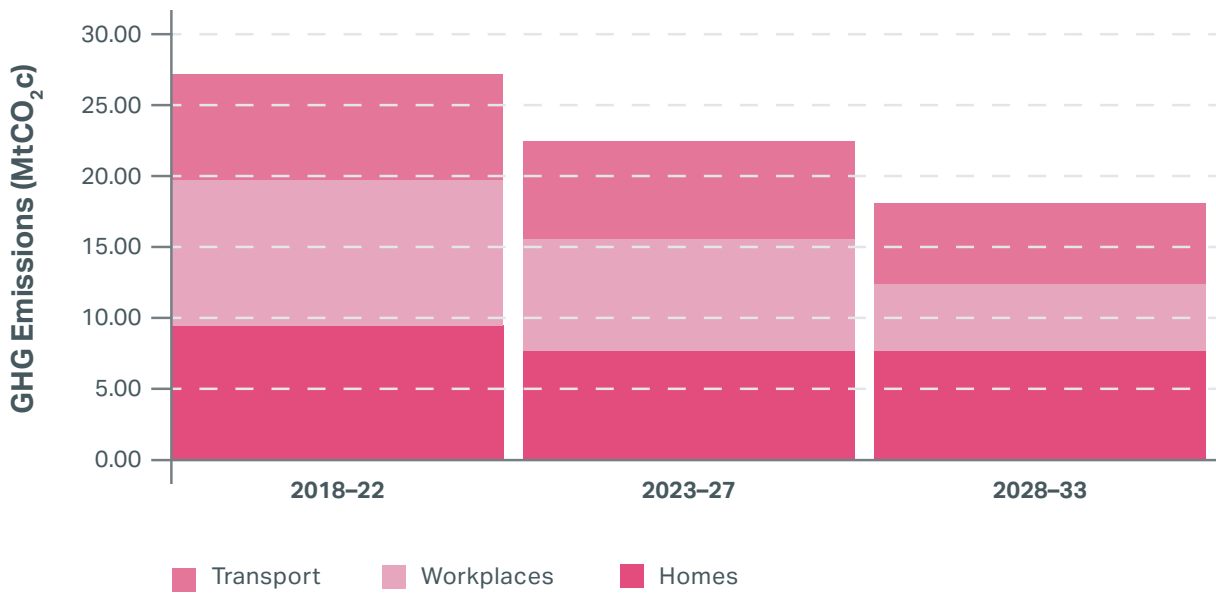
Target	Measure reported on	Dataset/s to be used	Dataset owner	Publication of data frequency
London will be a zero carbon city – with a zero emission transport network and zero carbon buildings	Scope 1&2 greenhouse gas emissions for homes, workplaces and transport	London Energy and Greenhouse Gas Inventory (LEGGI). This uses data compiled by BEIS and TfL	GLA	Annual (last published in 2018)

London-wide trajectory

The Mayor has adopted a system of 5 year carbon budgets to create an emissions pathway to put London on track to achieving zero emissions by 2050. The Mayor will use all his powers, alongside his funded climate and energy programmes and by leading by example in the GLA group, to put London on track

to keeping carbon emissions within these budgets, many of which are set out in Part 1. However, the Mayor's powers and funding are limited, and these are London-wide targets that require a step-change in action from government and London's businesses, boroughs and communities if they are to be achieved.

London's carbon budgets



Budget	Carbon budget level (MtCO ₂ e)			GLA Group	Reduction below 1990 levels	
	Total	Homes	Workplaces			Transport
2015	33.9	12.1	13.5	8.3	0.16	25%
2018-22	27.1	9.5	10.3	7.3	0.13	40%
2023-27	22.4	7.8	7.9	6.7	0.10	50%
2028-32	18.0	6.5	6.0	5.5	0.08	60%

Source: GLA (2017)



Waste

PART 1: FROM POLICY TO ACTION

Drive resource efficiency to significantly reduce waste, focusing on food waste and single use packaging waste

To help achieve this objective the Mayor will take the following actions in the coming years:

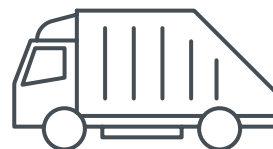
- Deliver a multi-million pound single use packaging reduction programme by 2020. This will include:
 - Refill London: pilot five water refill schemes in 2018 and evaluate these to inform a city-wide roll out; launch a campaign cutting the use of single use plastic bottles and work with local businesses to act as local water refill points
 - Drinking fountains: working with Zoological Society of London (ZSL) to install an initial 20 drinking water fountains for summer 2018; allocating funding to roll out drinking water fountains across the city by 2021 and working with TfL to identify suitable locations on the transport network for installing drinking water fountains
 - Rolling out coffee cup recycling points across London
- Phase out single use plastic bottles, cups, straws and micro-plastics in cafes and welfare areas across the GLA group by 2019
- Lobby government to provide London with its fair share of landfill tax credits to support improvements in recycling performance in London
- Lobby government to take the following priority actions in developing its Waste and Resources Strategy:
 - Strengthen producer responsibilities to design out hard to recycle packaging, including through the introduction of a 'plastics obligation'
 - Introduce tax relief on reused and recycled materials
 - Establish a mandatory municipal waste reporting system
 - Require businesses to separate materials for recycling

- Through LWARB, deliver Recycle for London, Love Food Hate Waste and Trifocal behaviour change campaigns, sharing best practice from the FoodSave programme from 2018
- Through the London Waste and Recycling Board (LWARB), support businesses to scale up and/or adopt circular economy business models through the £1.5m Advance London Programme and through investment in Circularity Capital and the London SME Fund by 2020

Maximise recycling rates

To help achieve this objective the Mayor will take the following actions in the coming years:

- Review new waste contracts as they come up for renewal and strategies by 2020 to ensure they are in general conformity with the policies and proposals in the London Environment Strategy
- Work with LWARB and waste authorities to develop and implement waste reduction and recycling plans - including local recycling targets approved by the Mayor - by 2020
- Work with LWARB and with housing associations and other partners to help improve recycling in purpose built flats including through the use of tailored recycling services and communications support. Case studies on possible interventions will be completed in 2018



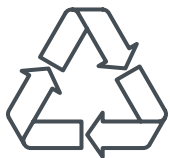
- Develop and maintain a publicly accessible waste contract register in 2018 to encourage joint procurement opportunities across waste authorities and standardise service arrangements across borough boundaries.
- Establish an industry group to improve commercial waste data sharing and establish a baseline figure for London's current commercial waste performance in 2018
- Work with TfL and other partners to roll-out business waste consolidation trials from 2018

Reduce the environmental impact of waste activities

To help achieve this objective the Mayor will take the following actions in the coming years:

- Review new waste contracts using the Mayor's powers under the Greater London Authority Act 1999 ('GLA Act' as amended), under changes made by the Localism Act 2011 to ensure they are in general conformity and work with waste authorities to:
 - Reduce emissions from their waste fleets so that they are ULEZ compliant, zero emission capable by 2025 and zero emission by 2050.
 - Develop waste contract solutions that reduce vehicle movements and increase waste transported by river or rail.
 - Develop waste contract solutions that include KPIs for meeting the Mayor's greenhouse gas emissions performance standard and carbon intensity floor ensuring there are no adverse effects on the environment

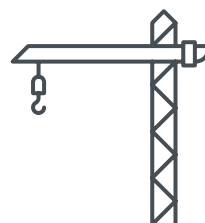
- Produce guidance supporting boroughs to achieve the emissions performance standard, carbon intensity floor and high recycling rates in 2018. This will include:
 - A greenhouse gas calculator for boroughs to model their waste activities around achieving the emission performance standard and carbon intensity floor including encouraging clean, efficient and local energy generation from London's non-recycled waste
 - A user guide to help boroughs understand how to use the greenhouse gas calculator and achieve the highest performance



Maximise local waste sites and ensure London has sufficient infrastructure to manage all the waste it produces

To help achieve this objective the Mayor will take the following actions in the coming years:

- Embed policies in the draft London Plan (due for publication in 2019/20) that ensure there are sufficient suitable waste sites to maximise capacity and support circular economy outcomes of reuse, repair and remanufacture
- Maintain and annually update the London waste map, which shows existing and safeguarded sites for waste management



REPORTING LONDON-WIDE PROGRESS AGAINST 2050 AIMS

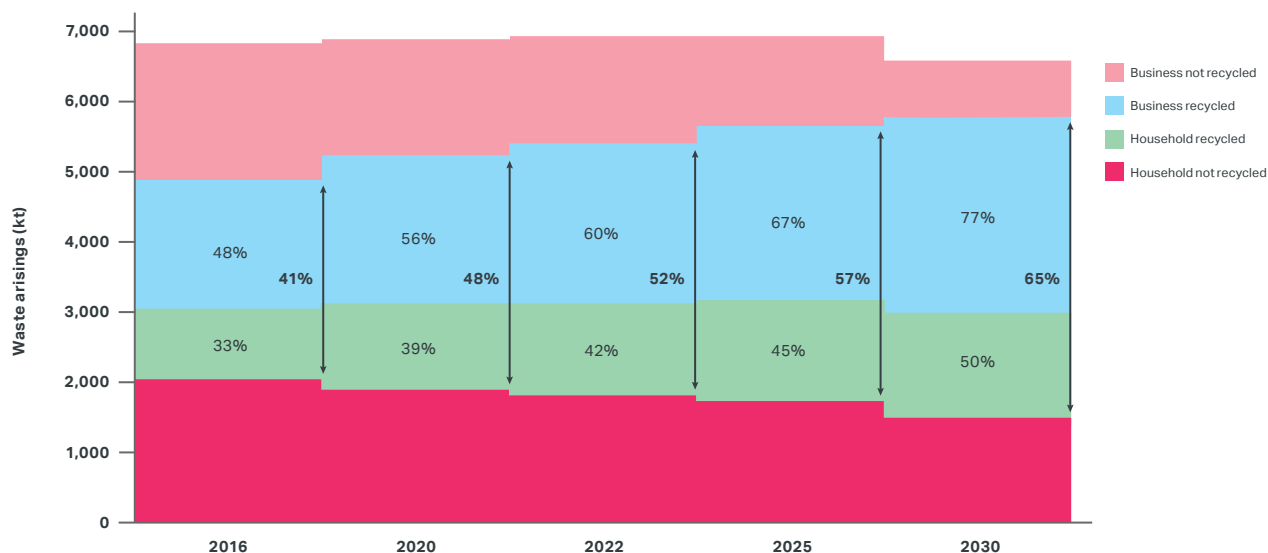
Target	Measure reported on	Dataset/s to be used	Dataset owner	Publication of data frequency
London will be a zero waste city. By 2026 no biodegradable or recyclable waste will be sent to landfill, and by 2030 65% of London's municipal waste will be recycled	Household waste recycling performance	Local authority data returns	DEFRA	Annually (last published in 2017)
	Non-household waste recycling performance	Data provided by waste industry	GLA	Annually from 2019

London-wide trajectory

The Mayor has set a London-wide target for 65 per cent of municipal waste to be recycled by 2030. This milestone can be achieved with the policy framework set out in this and other Mayoral strategies, but relies in particular on significant increases in recycling performance from businesses, from around 48 per cent

today to a minimum of 75 per cent by 2030. The Mayor has very limited direct powers and responsibilities in this area. Therefore, action to deliver on this is required from government, businesses, boroughs and Londoners in order to rise to this challenge

Modelled pathway for achieving a 65 per cent municipal waste recycling rate by 2030





Adapting to climate change

PART 1: FROM POLICY TO ACTION

Understand and manage the risks and impacts of severe weather and future climate change in London on critical infrastructure, public services, buildings and people

To help achieve this objective the Mayor will take the following actions in the coming years:

- Through the London Climate Change Partnership:
 - Convene sector-specific working groups in 2018 to develop sector plans for water, transport and food supply and provide support to implement them
 - Carry out interdependency mapping in 2019 across sectors and identify opportunities for collaboration
- Publish adaptation indicators in 2018 to provide an evidence base for how London is prepared for the impacts of climate change and to monitor progress

Reduce risks and impacts of flooding in London on people and property and improve water quality in London's rivers and waterways

To help achieve this objective the Mayor will take the following actions in the coming years:

- Work with London Resilience and the Environment Agency to raise awareness of flood risk, including surface water flood risk, for Londoners, in particular during London Flood Week in 2018
- Support the Environment Agency in developing its 25-year flood risk management strategies for London's river catchments to put in place long term plans for fluvial flood risk management that will unlock opportunities for growth. The first pilot will be for the River Lee catchment in north London and completed by 2019
- Deliver two Integrated Water Management Strategies in 2018/19 for opportunity areas and major regeneration areas that have flood risk, water supply or wastewater issues. These will be identified and prioritised with boroughs and Thames Water and will allow early implementation of water management systems for developments

- Work with the Environment Agency to safeguard locations for a future Thames Barrier
- Implement the London Sustainable Drainage Action Plan which includes:
 - Mapping opportunities for sustainable drainage systems, prioritising green systems, and provide maps to boroughs in 2018 to identify the most effective systems in different parts of the city
 - Delivering de-paving projects in 2018/19 to increase sustainable drainage
 - Developing guidance for the education, health, housing and retail sectors on how to increase the retrofitting of sustainable drainage in 2018 and 2019
- Working with Thames Water, boroughs and other stakeholders to raise awareness of misconnected drains that lead to significant water pollution from 2018

Ensuring efficient, secure, resilient and affordable water supplies for Londoners

To help achieve this objective the Mayor will take the following actions in the coming years:

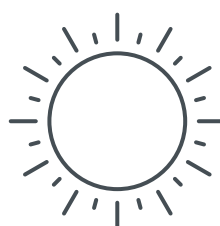
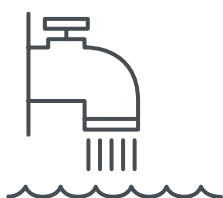
- Increase delivery of water saving measures through Energy for Londoners retrofit programmes from 2018 and work with water companies to promote the roll out of smart water meters
- Ensure planning for a new water resource for London is embedded in water companies' business plans,
- Assess the preferred options for a new strategic water resources for London in 2018 to embed Mayoral priorities and ensure London's priorities are reflected in the chosen option



London's people, infrastructure and public services are better prepared for and more resilient to extreme heat events

To help achieve this objective the Mayor will take the following actions in the coming years:

- Develop and promote a communications plan for severe heat and cold events in 2019 that will provide timely information to Londoners about how to cope during these events
- Together with Public Health England, University College London and boroughs explore how heat risk metrics which combine social, health and climate change impacts can prioritise the delivery of heat risk mitigation measures. The outputs of this research will be promoted to boroughs and other key stakeholders in 2019
- Publish guidance in 2019 on how new developments can be designed to minimise the amount of heat absorbed by the development during the day which is then released at night, warming the surrounding area
- Increase delivery of overheating risk assessments, advice and measures through Energy for Londoners retrofit programmes from 2018



PART 2: REPORTING LONDON-WIDE PROGRESS AGAINST 2050 AIMS

Target	Measure reported on	Dataset/s to be used	Dataset owner	Publication of data frequency
London and Londoners will be resilient to severe weather and longer-term climate change impacts, such as flooding, heat risk and drought	Number of properties affected by surface water flooding	Environment agency	Environment Agency	Annual. Last published in 2017
	Amount of sustainable drainage retrofitted	Thames Water, boroughs, GLA	Thames Water, boroughs, GLA	Every 2 years from 2018
	Number of water efficiency measures installed through Mayoral programmes	Energy for Londoners retrofit programmes	GLA	Annual from 2018
	Green cover – as greening brings a cooling effect	See Green Infrastructure part 2	See Green Infrastructure part 2	See Green Infrastructure part 2

Ambient noise

PART 1: FROM POLICY TO ACTION

Reducing the adverse impacts of noise by targeting locations with the highest noise pollution from transport

To help achieve this objective the Mayor will take the following actions in the coming years:

- Through TfL, encourage mode shift to reduce road traffic and encourage the transition to zero emission vehicles by delivering a major expansion in electric vehicle rapid charging points by the end of 2020 and expanding the Ultra Low Emission Zone in 2021
- Through TfL, reduce noise from freight activity through the development of a Freight, Delivery and Servicing Plan in 2018 and encourage quieter driving styles by implementing 20mph limits on TfL streets in central London as

a priority, with implementation being widened across inner and outer London as soon as is practicably possible, as detailed in the 2018 Vision Zero Action Plan

- Through TfL, take action to manage and monitor the noise impacts of TfL tube and rail services. TfL will report noise complaints and the actions being taken to mitigate the most serious cases annually to the GLA
- Respond to all major aviation consultations to, where relevant, lobby for improved noise mitigation measures and oppose airport expansions where environmental impacts are not fully acknowledged, such as the proposed expansion of Heathrow Airport



Reducing the adverse impacts of noise by targeting non-transport sources that produce the most noise

To help achieve this objective the Mayor will take the following actions in the coming years:

- Produce guidance on mitigating noise from non-transport sources
- Minimise the noise impacts of construction through the Infrastructure and Development Coordination Unit in 2018, which will coordinate the planning and delivery of infrastructure across London

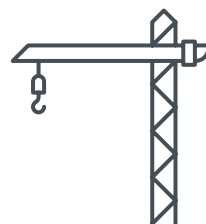
Protect and improve the acoustic environment of London

To help achieve this objective the Mayor will take the following actions in the coming years:

- Work with TfL to compile appropriate data on noise from road and rail sources by 2022
- Work with the Department for Food and Rural Affairs (Defra) to include more London-specific data in the updated noise maps in 2023
- Embed policies in the London Plan (due for publication in 2019/20) that will protect and enhance green spaces in London and encourage the recognition and protection of tranquil spaces, leading to boroughs identifying and nominating new quiet areas with Defra or in their borough local plans
- Embed policies in the London Plan (due for publication in 2019/20) that balance the needs of night time economy stakeholders, including residents, by applying the Agent of Change Principle and promoting good acoustic design

PART 2: REPORTING LONDON-WIDE PROGRESS AGAINST 2050 AIMS

Target	Measure reported on	Dataset/s to be used	Dataset owner	Publication of data frequency
The number of people adversely affected by noise will be reduced and more quiet and tranquil spaces will be promoted.	Number of people adversely affected by noise	DEFRA Noise Implementation Plan	DEFRA	Every 5 years (Next publication expected 2019)





RAPID ELECTRIC
CHARGING POINT
CLEANER AIR
FOR LONDON

MAYOR OF LONDON  TRANSPORT FOR LONDON



Low Carbon Circular Economy

PART 1: FROM POLICY TO ACTION

Enabling the transition to a low carbon circular economy

To help achieve this objective the Mayor will take the following actions in the coming years:

- Work with the cleantech business community to develop a cleantech innovation cluster in west London, identifying a suitable site and mapping the sector in 2018
- Implement London's Circular Economy Route Map, with a focus on the built environment, plastics and textiles
- Support at least 150 businesses to create solutions to London's environmental challenges through the Mayor's Growth Hub, London SME Fund, Better Futures Project and Advance London Programme by 2021
- Promote the Responsible Procurement Policy through local authority waste contracts
- Work with boroughs and significant new developments in 2018 to develop a range of low carbon projects, financed through existing and new funding streams such as carbon offset funds and a new Mayoral Energy Efficiency Fund
- Work with the London Sustainable Development Commission and others to identify and lobby for policy changes required to create demand for low carbon projects and provide options to finance these and wider environmental programmes
- Support students and young entrepreneurs to think about new business opportunities within the low carbon and environmental goods and services sector, including through the Mayor's Entrepreneur programme each year

PART 2: REPORTING LONDON-WIDE PROGRESS AGAINST 2050 AIMS

Target	Measure reported on	Dataset/s to be used	Dataset owner	Publication of data frequency
London's low carbon circular economy (LCCE) sector continues to grow	Value of sales and Gross Value Added in the low carbon and environmental goods and services sector	National and local data sets on the sector	GLA	Every 2 to 3 years from 2019
	Number of Circular Economy of businesses in the low carbon and environmental goods and services sector	National and local data sets on the sector	GLA	Every 2 to 3 years from 2019
	Number of employees in the low carbon and environmental goods and services sector	National and local data sets on the sector	GLA	Every 2 to 3 years from 2019

Leading by example – GLA Group operations

The GLA group will lead by example in its own operations by tackling environmental challenges and procuring responsibly – delivering, driving and enabling best practice. The GLA group can be powerful demonstrators of best practice or new technologies and use their scale to help drive down costs to enable others to follow suit.

Specific examples within the strategy where the GLA group will show leadership include, but are not limited to:

- Developing implementation plans in 2018 for the GLA Group Responsible Procurement Policy
- Improving the GLA Fleet by:
 - All cars in GLA support fleets being zero emission capable by 2025
 - All new cars and vans (less than 3.5 tonnes) in GLA fleets, including response vehicles, being zero emission capable by 2025
 - All heavy vehicles (greater than 3.5 tonnes) in GLA fleets fossil fuel-free by 2030
 - GLA fleets being zero emission by 2050
- Identifying and mapping potential sites for electric vehicle charging and/or hydrogen refuelling locations across the GLA Group in 2018
- Mapping the solar energy potential (existing and new installations) on GLA land and buildings in 2018
- Working with the London Climate Change Partnership to develop plans for addressing severe weather and long-term climate risks, particularly through TfL
- Developing a plan of action for each member of the GLA Group, starting with TfL, to contribute to delivering net positive outcomes for biodiversity and increased greening across their estates
- Mapping heat potential (existing and new installations) on GLA land and buildings, starting with TfL in 2018, to identify opportunities to deliver large scale district heating network projects
- Cut unnecessary use of single use plastic bottles and disposables across the GLA Group estate by 2019
- Provide water refill points across the GLA Group by 2020
- GLA Group to reduce carbon emissions by 60 per cent on 1990 levels by 2025

