

# ReLondon

**London's food  
footprint:** progress  
towards a low carbon  
circular food system



---

# Introduction

## **Shirley Rodrigues, London Deputy Mayor for Environment and**

**Energy:** *"Cities can play an influential role in achieving a sustainable future. This is why the Mayor is committed to not only reducing the waste and emissions related to food within London's boundaries, but also that which occurs outside the capital whilst supplying Londoners. The work outlined in this report demonstrates how environmental action can help to cut emissions from food waste whilst supporting Londoners to live healthy, sustainable lives during one of the most trying sociological periods in modern history."*

## **Liz Goodwin, Chair of ReLondon and Senior Fellow and Director, Food Loss And Waste, World Resources Institute:**

*"It's been a year since ReLondon published the 'London's food footprint' report, which mapped the environmental impact of London's food system for the first time; and this new progress report describes the wide range of actions London has developed in recent years to reduce food waste and emissions. It shows that collaboration is essential if we want to achieve change at the scale and pace required to tackle the climate emergency – so we invite partners, government, businesses, charities and Londoners to work with us to create a city where everyone enjoys food that is deeply valued, sustainably produced and never wasted."*

## **Philip Glanville, Mayor of Hackney and chair of London**

**Councils' Transport and Environment Committee:** *"When it comes to the climate emergency and the nature crisis we can't ignore food. The path towards a London food system transformation needs to be based on interconnected networks at all levels. London Councils and boroughs across London are immensely proud to be working with our partners to deliver local and regional change via our One World Living programme. Whilst our ultimate goal is to reduce food emissions, this will in turn create equitable and agroecological local networks and enable Londoners to discover new tastes that are not just healthier, but also climate friendly."*

With a population of over nine million people, London is at the forefront of global efforts from large cities to shift to a low carbon, healthy and fair food system. The catalyst for this effort is a recognition that action on food can help to tackle many of today's biggest health, environmental, economic, social and political challenges, including climate change. Food accounts for almost 10% of London's consumption-based<sup>i</sup> greenhouse gas (GHG) emissions, because of the kinds of food we eat, how and where that food is produced, and the amount of it that is wasted. Many Londoners are also increasingly suffering from food poverty amidst the current cost of living crisis, with an estimated 1.5 million adults experiencing low or very low food security.<sup>ii</sup>

---

The publication of the [‘London’s food footprint’ report](#) at the UN Climate Conference COP26 in November 2021 showed the potential for London to reduce consumption-based emissions by up to 31% per year by reducing food loss and waste and shifting towards a more healthy and sustainable diet. The findings from the report have created a renewed focus on the vital role food has to play in the climate crisis, identifying short-term steps the city can implement now to reduce food-related emissions.

This progress report provides a brief summary of the key interventions currently being led by the Mayor of London and ReLondon to reduce food waste and encourage more sustainable diets, as well as agro-ecologically and locally grown food. The actions are also intended to deliver a range of co-benefits for food access and affordability, helping to reduce household costs<sup>iii</sup> and improve the health of Londoners amidst the current cost of living crisis.

Working in collaboration with actors across London’s food value chain, a range of stakeholders have been involved in the identification and development of the interventions outlined in this report, with more than 200 people from 60 organisations consulted. In particular, interventions have been developed in co-operation with London Councils’ One World Living programme, specifically the food theme working group led by Hackney Council, which aims to reduce consumption-based emissions by two-thirds by 2030.

Each action listed in this progress report has the potential to be strengthened or scaled up significantly with further support and participation from academic and health institutions, private for-profit and philanthropic partners, community-based organisations, advocates, and residents. We’re calling for partners to join us in this collective effort to create a city where everyone enjoys food that is deeply valued, sustainably produced, and never wasted.

## 1.1 Background

Our current food system is ready for change: it doesn’t work for everyone, and it doesn’t work for the environment. Today, **the world’s food system is responsible for more than a third of global greenhouse gas emissions**. Industrial agricultural practices which characterise the modern linear food system has successfully improved productivity but at a cost to human health and biodiversity.

Alongside global threats, London’s own food system faces significant challenges; social, environmental and economic. In a first-of-its-kind report, ‘London’s food footprint’ which tracked the mass of food flowing through London, estimated that consumption-based emissions arising from Londoners’ food consumption is equal to over 15.5 million ktCO<sub>2</sub>eq annually. This represents 10% of London’s overall emissions – the same as the emissions from the energy use of c.1.8 million houses for a year.<sup>iv</sup>

The findings of the report highlighted waste and carbon ‘hot spots’ across London’s food supply chain, indicating that **roughly 2.3 million tonnes of food are lost or wasted across London’s food supply chain each year<sup>v</sup>**. More than two-thirds of the food wasted is edible yet concerningly **less than 0.5% is redistributed<sup>vi</sup>**. The type of food and beverages eaten by Londoners is also a significant driver of greenhouse gas emissions, with meat, dairy products and eggs being responsible for **more than 45% of the emissions from the food consumed by Londoners<sup>vii</sup>**.

London is also highly dependent on imports, with almost all of London’s food and beverages (99%) being imported from outside the capital and local farming production accounting for

---

just 1% of supply<sup>viii</sup>. Whilst London's food supply chains are highly efficient, they rely on a complex set of interdependencies and 'just-in-time' delivery systems. This efficiency has consequences for resilience, as disruption to the supply chain – such as that witnessed during the height of the COVID-19 pandemic – exacerbates food insecurity and disproportionately affects vulnerable Londoners.<sup>ix</sup>

The knock-on effects of the COVID-19 pandemic have also further compounded the structural inequalities and challenges that Londoners face with respect to accessing healthy and sustainable food<sup>x</sup>. Inflation has jumped to its highest levels in a generation in response to supply chain pressures, and the rise in energy bills alongside the war in Ukraine<sup>xi</sup> has seen the price of healthy, nutritious foods sharply increase, leading to a growing number of Londoners experiencing diet-related illnesses and food insecurity during the cost of living crisis. The squeeze on food prices also threatens London's world-leading food service industry, which is under pressure from labour shortages as well as still recovering from lockdown.

With London's population projected to reach 10.8 million by 2041, it is **vital to change the way that food is produced and consumed in and around the city**. Transforming London's food system to one based on circular economy principles, whereby we eliminate waste, circulate resources and nutrients, and regenerate nature, is a powerful way to address the climate emergency and support biodiversity, while providing healthy and nutritious food for all.

---

## 1.2 Existing commitments from the Mayor

While the food system is complex and global, mega cities like London are in a unique position to spark change given that 80% of all food will be consumed in cities by 2050<sup>xii</sup>. Recognising this, the Mayor has set ambitious targets for London to **send no biodegradable waste to landfill by 2026<sup>xiii</sup>, to reduce food waste by 20% per person by 2025 and by 50% by 2030<sup>xiv</sup>**, in line with the United Nations Sustainable Development Goal 12.3, and to become a **net zero-carbon city by 2030<sup>xv</sup>**.

In the run-up to the UN Climate Conference COP26, the Mayor signed the **Glasgow Food and Climate Declaration (2021)** on behalf of London having previously been a **founding signatory to the Milan Urban Food Policy Pact (2015) and C40 Good Food Cities Declaration (2019)**. All three share a common vision of promoting an integrated cross-cutting approach to developing urban food policies that will lead to a more equitable and sustainable food system. London **won the Milan Pact Awards** in the food waste category at the 8th Global Forum of the Milan Urban Food Policy Pact in October 2022, recognising the city's collaborative projects aimed at tackling food waste across the supply chain & reducing emissions.

Through the **London Food Strategy<sup>xvi</sup>**, the Mayor has also prioritised efforts to ensure that all Londoners have access to healthy and sustainable food, with the city being one of the first places in the UK to achieve a Sustainable Food Places Silver Award<sup>xvii</sup>. The London Recovery Board, chaired jointly by the Mayor of London and the Chair of London Councils has committed to taking a missions-based approach to the city's economy and society, building back better in response to the profound impact that the COVID-19 pandemic had on Londoners. This included missions focused around **Healthy Food, Healthy Weight** and creating a **Robust Safety Net** which aim to respond to food poverty and the cost of living crisis by ensuring disadvantaged communities have **access to healthy, culturally appropriate and sustainable food<sup>xviii</sup>**.

Finally, the Mayor signed up to be one of the Strategic Partner cities of the Ellen MacArthur Foundation and together with ReLondon launched the **Food Flagship Initiative**. The partnership aims to design, coordinate and deliver interventions and evidence-based policies to lead London's transition to a low carbon circular economy for food, including the interventions outlined in this progress report, as well as bringing together a consortium of public and private stakeholders to implement pioneering circular food system solutions. Nine innovative businesses and food projects across London tackling food waste and consumption-based emissions have been awarded 'circular food pioneer' status.<sup>xix</sup>

## 1.3 Targeting environmental hotspots in London's food system

ReLondon's recent analysis of food flows into, around and out of London, identified three environmental hotspots in the capital's food system:

1. **Food loss and waste** – 33% of the food produced to supply London is lost or wasted, as are the CO<sub>2</sub>e emissions caused by its production, transportation and disposal.
2. **Diets** – Animal products represent close to 50% of London's food consumption-based emissions.
3. **Land use and production of food** – More than 75% of the food-related emissions occur at the farming stage.

Accordingly, three **pillars of action** have been identified where we can best target interventions. These can in turn contribute to a reduction in consumption-based emissions from food and support London's wider aim to transition to a low-carbon circular economy.



The twenty interventions detailed below address these leverage points and were selected based on their potential impact and cost effectiveness after several rounds of consultation in 2021 and early 2022 with the Greater London Authority, ReLondon, London Councils' One World Living programme food theme group, boroughs and partners. Over £500,000 of funding has been invested by the Greater London Authority, ReLondon and London boroughs to develop new actions that were launched or in the process of being launched in 2022.

A lead organisation has been identified for each intervention and they will drive the delivery and the monitoring and evaluation to measure the impact of the intervention. The coordination of the actions is led by the Food Flagship Initiative partners (Greater London Authority, ReLondon and the Ellen MacArthur Foundation), in close collaboration with London Councils' One World Living programme and Sustain.<sup>xx</sup>

## 2. Detailed list of interventions (2022 – 2024)

**Eliminate avoidable food waste wherever possible and recycle unavoidable food waste back into productive uses within Greater London**

Actions	Status & timeline	Delivery Partners
<b>Food waste reduction and recycling</b>		
<p><b>Food waste minimisation pilot in Bexley</b>            A pilot project to measure the impact of targeted local promotion of food waste apps OLIO<sup>xxi</sup> and Kitche<sup>xxii</sup> on household food waste reduction in the London Borough of Bexley. Full results and learnings will be shared with boroughs through a ReLondon case study and Reduction and Recycling Plans (RRP) borough support. Initial results show that Kitche and OLIO saw an increase of more than 1500 users in the borough compared to the beginning of the project, a 16% increase from the baseline.</p>	<p><b>Ongoing</b>            Pilot phase: January to September 2022            Replication phase: Summer 2023 onwards</p>	<p>ReLondon, London Borough of Bexley, Kitche and OLIO</p>
<p><b>Environmental Health Practitioners training</b>            A pilot programme to train ten environmental health practitioners in the London Borough of Hackney to give advice to more than 200 hospitality businesses on food waste reduction practices. The impact on food waste reduction will be closely monitored and the training will be replicated in the other London boroughs if successful.</p>	<p><b>Ongoing</b>            Pilot phase: October 2022 to March 2023</p>	<p>ReLondon and WRAP in partnership with London local authorities and Greater London Authority</p>
<p><b>Food Waste Reduction Roadmap</b>            A report baselining the current volume of food waste being generated in London, comparing this data against previous baselines conducted. Outlining progress to date and efficacy of previous and existing food waste reduction programmes. Ultimately identifying key actions to take and stakeholders to engage with to deliver the Mayor’s targets of 50% reduction in food waste per person by 2030</p>	<p><b>Planned</b>            The roadmap will be published in Q1 2023</p>	<p>Greater London Authority</p>
<p><b>Reduction and Recycling Plans (RRPs)</b> London boroughs are required to develop RRP which include setting out key actions for cutting food waste and increasing recycling. Borough have just submitted their draft RRP (the deadline for the submission was 30<sup>th</sup> September 2022) for the period of 2022-2025. The GLA has begun to pass feedback commentary back to the</p>	<p><b>Ongoing</b>            RRP will be published in March 2023</p>	<p>Greater London Authority and London boroughs, supported by ReLondon</p>

<p>boroughs. The GLA is working towards a March 2023 deadline to have final sign off for all borough 2022-25 RRP.</p>		
<p><b>The London Environment Strategy</b> published in 2018 includes the requirement for boroughs to introduce separate food waste collections for households. 28 of 33 boroughs now collect food waste for recycling from kerbside properties, increased from 23 when the London Environment Strategy was published.</p>	<p><b>Ongoing</b></p>	<p>Greater London Authority working in partnership with London local authorities</p>
<p><b>Food waste redistribution</b></p>		
<p><b>Food Connect</b>  A pilot project to improve efficiencies in redistributing surplus edible food in Southwark, linking with the community fridge network and local businesses. The project will create 11 new green jobs, save over 445 tonnes of food from going to waste – the equivalent of almost 1.4 million meals – as well as cut 1,115 tonnes of greenhouse gas emissions. Within the first 6 months of operation Food Connect has redistributed over 104 tonnes of food, equivalent to 244,000 meals; supporting 7,110 families; created 7 new green jobs; and saved 259 tonnes of greenhouse gas emissions.  Work is ongoing to assess whether a financially sustainable model can be developed to scale up and expand across London.</p>	<p><b>Ongoing</b>  Pilot phase: April 2022 – March 2023.  Expansion phase: November 2022 – September 2023</p>	<p>Delivered by Hubbub and the Albrighton Centre, funded jointly by the Greater London Authority and Southwark Council, with additional support from the London Food Alliance</p>
<p><b>Food redistribution hubs</b>  The Food Flagship Initiative partners, are working with the London Food Alliance (City Harvest, Felix Project and FareShare) to support their work redistributing edible food waste across London. The GLA will use its convening power to leverage further corporate sponsorship from businesses across the food supply chain. The impact this increased funding facilitates will be monitored with the aim of developing new more long term and sustainable funding mechanisms.</p>	<p><b>Planned</b>  January 2023- December 2024</p>	<p>Greater London Authority, ReLondon in partnership with the London Food Alliance</p>

## Increase the prevalence of healthy and sustainable food items and menus

Actions	Status & timeline	Delivery Partners
<p><b>Healthy Start vouchers</b> As part of the Robust Safety Net Recovery mission, officers conducted analysis to identify why uptake of Healthy Start vouchers has decreased and how the GLA can support an increase in uptake. Learning from this, officers are now redesigning the Food Roots programme to include a training component which will support frontline organisations to assess service users for Healthy Start eligibility, and support applications. This aims to improve the uptake of Healthy Start vouchers while encouraging cash-first approaches in crisis support settings such as food banks.</p>	<p>Ongoing</p>	<p>Greater London Authority</p>
<p><b>Responsible Procurement</b> The Mayor will lead by example and use the purchasing power of the GLA Group to improve the sustainability impact of its food supply chain, working with suppliers, including catering contractors. The GLA Group Responsible Procurement Policy was published in March 2021 and the Responsible Procurement Implementation Plan was published in August 2022. These embed sustainability requirements into GLA Group catering contracts and evaluation criteria, and require engagement with suppliers to identify and develop opportunities to reduce the impact of goods procured.</p>	<p>Ongoing Implementation period of current Responsible Procurement Implementation Plan: August 2022 – July 2024</p>	<p>Greater London Authority</p>
<p><b>Establishment of circular food procurement working group</b> which will support local authorities in developing a shared pan-London carbon reduction and food waste reduction commitment for the food that they directly procure. Reducing food emissions of meals by 25% and food waste by 50% in all London schools could result in a saving of 50,000t CO2 eq /year.</p>	<p>Ongoing Working group launched in May 2022. Joint commitment to be launched in Q1 2023</p>	<p>ReLondon, the London Borough of Hackney (London Councils' One World Living programme food theme lead) and Sustain.</p>

**Land use: Increase the sourcing and potential of food grown using agro-ecological practices and locally where possible within Greater London**

Actions	Status & timeline	Delivery Partners
<p><b>Capital Growth, London’s food growing network</b>, contributes to the creation and continuation of local community food growing spaces through provision of practical support, training and networks to residents in London. Their current focus is on climate and community resilience, and supporting councils through an inter-council network. To date, the Capital Growth network has been responsible for helping support over 3,000 community growing spaces in London. They estimate the network produces over 80 tonnes of food each year, equivalent to more than 1 million meals grown.</p>	Ongoing	Sustain, City Bridge Trust and Greater London Authority
<p><b>The Mayor’s Green and Resilient Spaces Fund and Grow Back Greener Funds</b> provide annual grants to community projects in areas of deprivation that add or extend food growing areas, from community gardens and orchards to the development of more sustainable water infrastructure and edible school playgrounds. The funds have issued 64 grants totaling a combined £5.4 million to projects as varied as expanding city farms, creating community orchards and setting up kitchen gardens.</p>	Ongoing	Greater London Authority, Thames Water and Groundwork London
<p><b>The Fringe Farming project</b> is a collaboration with partners across the UK to understand the barriers to, and identify opportunities for agro-ecological farming at the edge of urban areas. The project intends to identify land and develop local actions in London which will encourage further farming on the peri-urban fringe, as part of a green economy recovery.</p>	Ongoing March 2021 – February 2023	Sustain, Shared Assets

## Cross-cutting: Encourage a vibrant and sustainable food economy across the three pillars

Actions	Status & timeline	Delivery Partners
<b>Communication campaigns</b>		
<p><b>Pan-London food campaign</b> aims to inform and empower citizens to reduce the climate impact of their food choices and the amount of waste in households. Following on from the success of past campaigns such as TRiFOCAL (Small Change, Big Difference) which achieved an 9% reduction in avoidable food waste per household per week (kg/hh/wk) from 2017 to 2019, the aim of this new campaign is to reach 6.5 million Londoners with educational and motivational messaging.</p>	<p><b>Ongoing</b> 2-year campaign - launch in January 2023</p>	<p>ReLondon, Greater London Authority, three Waste Disposal authorities, One World Living programme, Ellen MacArthur Foundation and 24 London local authorities have funded this project</p>
<p><b>Food Wave</b>, a campaign specifically targeting young people (ages 15-35), including those on low incomes, to increase their understanding, engagement, and communication skills around sustainable patterns of food consumption and production. Activities so far have included educational workshops, film-making sessions about the food/climate nexus and a digital campaign co-created with students. To date, Food Wave has delivered activities and events that have provided focused, in-depth engagement to 128 youth and wider, lighter touch in-person engagement with 78,000 youth.</p>	<p><b>Ongoing</b> 2021-2023</p>	<p>ReLondon</p>
<b>Business and community engagement</b>		
<p><b>The Mayor of London will convene a food roundtable with senior executives from large food businesses</b> across the supply chain, with these organisations committing to reduce food waste and consumption-based emissions, as well as to develop new circular food projects specific to London.</p>	<p><b>Planned</b> By end 2023</p>	<p>Led by Mayor of London, supported by Food Flagship Initiative (ReLondon, Greater London Authority, Ellen MacArthur Foundation)</p>

<p><b>The Circular Food Pioneer Project</b> status has been recently launched by the Food Flagship Initiative to formally recognise good practice in London, supporting small businesses and organisations to deliver circular food demonstration projects. Nine innovative businesses or food projects across London have received the status so far.</p>	<p><b>Ongoing</b></p>	<p>Greater London Authority, ReLondon and the Ellen MacArthur Foundation</p>
<p><b>Higher Education food sprint</b> The Food Flagship Initiative partners, in collaboration with London Higher, hosted representatives of 24 London universities at a day-long workshop during Circular Economy Week to identify opportunities to reduce the environmental impact of food procured on campus.</p> <p>40 chefs and sustainability officers have since accessed additional support to enhance plant-based cooking, tackle food waste and deliver nutritious sustainable meals.</p>	<p><b>Ongoing</b></p>	<p>Led by Food Flagship Initiative partner organisation, the Ellen MacArthur Foundation</p>
<p><b>ReLondon's business transformation programme</b> supports the development of an ecosystem of innovative food waste prevention, upcycling and redistribution businesses and helps small food businesses to change their practices. In 2021 alone, six of the innovators supported by the business transformation programme (namely OLIO, Oddbox, Toast Ale, Too Good To Go, Winnow and The Felix Project) have collectively reduced food waste by 28,274t and avoided the emissions of 56,831t of CO<sub>2</sub>e.</p>	<p><b>Ongoing</b> 2017-2023</p>	<p>ReLondon</p>
<p><b>Local authority engagement</b></p>		
<p>The <a href="#">Good Food for All Londoners report</a>, has been published annually by Sustain since 2010, to review and benchmark food-related policy and practice from councils in London. It covers several measures under two key themes: 1) longer term action to tackle food insecurity that goes 'beyond the food bank' and 2) wider action to improve access to healthy and sustainable food for all residents, which since 2021 includes action on climate and food. The report is based on a survey and follow up engagement to all London local authorities' and encourages them to take a number of actions to tackle the climate and nature emergency through food.</p>	<p><b>Ongoing</b> Published every year.</p>	<p>Sustain, with funding from the Greater London Authority</p>

# Endnotes

<sup>I</sup> Consumption-based emissions are those allocated to the final consumers or users of goods or services, rather than the producers of those emissions. They incorporate GHG emissions that occur over the lifecycle of products and services.

<sup>II</sup> GLA survey of Londoners

<sup>III</sup> Research from WRAP estimates that wasting food costs the average UK family more than £700 a year

<sup>IV</sup> ReLondon, 2021. [London's food footprint](#).

<sup>V</sup> Ibid.

<sup>VI</sup> Ibid.

<sup>VII</sup> Ibid.

<sup>VIII</sup> Ibid.

<sup>IX</sup> Food Systems Transformation Group. 2022. Enhancing the resilience of London's food system. Environmental Change Institute, University of Oxford.

<sup>X</sup> Ibid.

<sup>XI</sup> House of Commons Library, 2022. [The effect of the war in Ukraine on UK farming and food production](#)

<sup>XII</sup> Ellen MacArthur Foundation, 2019. [Cities and circular economy for food](#).

<sup>XIII</sup> Greater London Authority, 2018. [London Environment Strategy](#)

<sup>XIV</sup> Ibid.

<sup>XV</sup> Greater London Authority 2022. [Pathway to net zero carbon by 2030](#)

<sup>XVI</sup> Greater London Authority, 2018. [London Food Strategy](#).

<sup>XVII</sup> The Sustainable Food Places Award is designed to recognise and celebrate the success of those places taking a joined up, holistic approach to food and that are achieving significant positive change on a range of key food issues.

<sup>XVIII</sup> Greater London Authority, 2020. [London Recovery Programme](#).

<sup>XIX</sup> <https://relondon.gov.uk/resources/circular-food-pioneer-projects>

<sup>XX</sup> [Sustain: The alliance for better food and farming](#) is a charity that advocates food and agriculture policies and practices that enhance the health and welfare of people and animals, enrich society and promote equity.

<sup>XXI</sup> OLIO is a mobile app for food-sharing, aiming to reduce food waste. It does this by connecting those with surplus food to those who need or wish to consume such food.

<sup>XXII</sup> Kitche is a mobile app designed to save help users save money and reduce food waste at home. The app offers users helpful food reminders, tips, food waste tracking and encourages people to eat what they buy and buy what they'll eat.



[relondon.gov.uk](https://relondon.gov.uk)

The White Collar Factory, 1 Old Street Yard,  
Old Street, London EC1Y 8AF

ReLondon is the operating name of the London Waste and Recycling Board.