



LWARB

London Waste and Recycling Board

Business plan **2020-2025**

March 2020

The London Waste and Recycling Board puts the reduction of consumption-based emissions of CO₂e at its core, enabling an accelerated and just transition to a circular economy and placing a renewed emphasis on reducing waste and increasing recycling.



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1. FOREWORD

This Business Plan is being published at a critical time.

We are living through a climate emergency, and the actions we take now will have a fundamental impact upon us and future generations. The science of climate change is well understood, as is the global consensus that action is needed.

The London Waste and Recycling Board's (LWARB) new Business Plan aims to make sure that the role that consumption plays in contributing CO₂e emissions will be considered in all LWARB's activities. It will provide local authorities and citizens with a narrative that explains why the actions that they take to reduce and recycle waste – either through conscious efforts or through using new circular economy business models like renting, sharing, or repairing - will help reduce London's contribution to dangerous climate change.

LWARB was established 12 years ago. Since then it has helped to provide additional recycling capacity in London; helped boroughs provide efficient waste services; and, against a backdrop of declining recycling rates nationally, helped London maintain its recycling performance. Over the last five years, LWARB has become recognised as a world leader in circular economy thinking and practice. The support it offers London business means that London is considered by many to be the world's circular economy business capital, with a large and diverse range of startups and SMEs delivering circular services: from lending drills to sharing excess food waste; and from renting clothes to replacing single use plastic with seaweed alternatives.

Over the next business plan period LWARB will actively develop a series of its own commercial services, providing expert help and advice to London's local authorities and businesses. The income from these services will be recycled back into the organisation to allow it to keep innovating and providing support to local authorities as part of its core activities. In this way, by 2025, LWARB expects to have a broad funding base to deliver sustained support and leadership in the capital and beyond.

I cannot stress enough the important role that collaboration will play in the success of this Business Plan. LWARB works with a multitude of individuals and organisations in London, across the UK and around the world and we will need to continue this collaborative approach to achieve the impact we set out in this plan.

Above all, LWARB will aim to show impact. We hope that our programmes can save 126,000 tonnes of CO₂e a year by 2025 and contribute 15% of the additional recycling needed to be on track for London's recycling target of 65% by 2030. Overhauling the way we think about and manage waste has the potential to reduce our greenhouse gas emissions by almost 3.5 million tonnes a year in 2050 and this plan will help put London firmly on the path towards that goal.

There is no time to waste: there is no time for waste!

Dr Liz Goodwin OBE
Chair
London Waste and Recycling Board

LWARB aims to save
126,000
tonnes of CO₂e
a year by 2025

London could save
3.5 million
tonnes
of greenhouse gas emissions
a year in 2050

2. STATUTORY CONTEXT

The London Waste and Recycling Board (LWARB) was established under the Greater London Authority Act 2007. The Act sets out LWARB's objectives, which are to promote and encourage, so far as relating to Greater London:

The production of less waste

An increase in the proportion of waste that is re-used or recycled

The use of methods of collection, treatment and disposal of waste that are more beneficial to the environment

In meeting its objectives, LWARB must act in accordance with the provisions of the London Environment Strategy dealing with municipal waste management and act in general conformity with the London Plan so far as relating to the collection, treatment and disposal of waste.

LWARB is required to produce a plan by 31st March each year, setting out its priorities for the coming year.



3. IMPACT

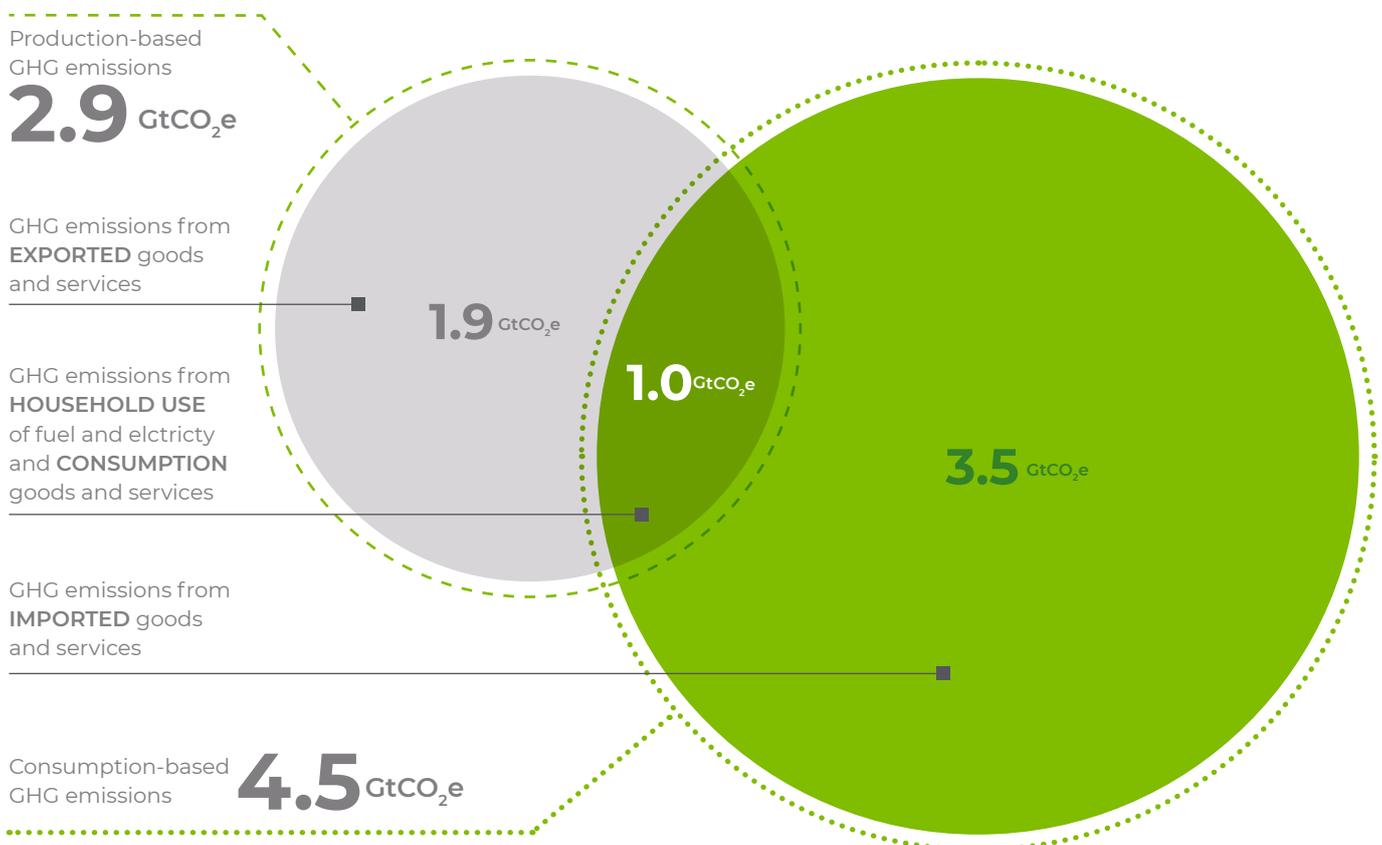
We are living through a climate emergency.

LWARB's business plan for 2020 – 2025 places the reduction of London's consumption-based emissions of CO₂e at its core – aiming to reduce them by identifying leverage points that will enable an accelerated and just transition to a circular economy. To reduce consumption-based emissions, LWARB will place a renewed emphasis on activities that reduce waste and increase recycling.

It is widely acknowledged that the agreed upper limit for increased global temperature that will allow for a climate safe future is 1.5°C. The C40, in the recent report, [The Future of Urban Consumption in a 1.5°C World](#), has

set out a pathway for cities to contribute to achieving this and that identifies the importance of accounting for consumption-based emissions. Figure 1 below shows that total estimated consumption-based emissions for the 94 member C40 cities is 4.5 GtCO₂e, whilst those associated with traditional territorial accounting (i.e. those that occur within the boundary of the city, region or country) are 2.9 GtCO₂e. The report argues that the average per capita impact of urban consumption must decrease by 50% by 2030 and 80% by 2050.¹ Currently Londoners are responsible for an estimated 12 tonnes of consumption-based CO₂e emissions per person per year² and so by 2030 this must fall to around 6 tonnes per person and by 2050 to around 2.5 tonnes.

Figure 1: Consumption-based emissions versus territorial emissions for C40 cities

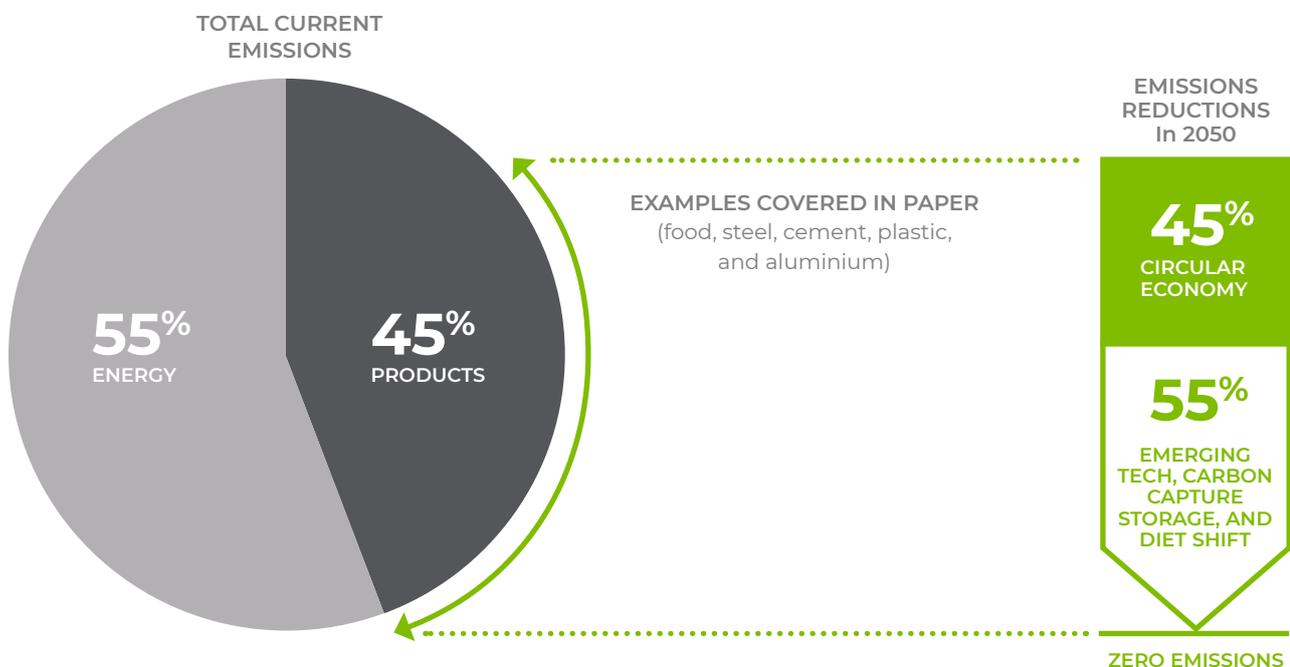


¹ C40 Cities, [The Future of Urban Consumption in a 1.5°C World](#), p17

² Greater London Authority, London's consumption based greenhouse gas emissions 2001 - 2016 [online], 5 March 2020 <https://data.london.gov.uk/dataset/london-s-consumption-based-greenhouse-gas-emissions-2001-2016>

The Ellen MacArthur Foundation³ has also recently published a report showing that 45% of global CO₂e emissions arise from the management of land and the production of goods (in particular the production of cement, steel, plastic and aluminium). These emissions are harder to abate and will instead require a combination of circular economy business models, to reduce production of new materials and increase recycling, and emerging technology to rapidly decarbonise production.

Figure 2: 45% of CO₂e emissions are from products and agriculture



In addition to recycling, circular economy business models offer a set of tools and resources to citizens and businesses in London enabling reduced demand for virgin resources by avoiding the need for new goods. This is achieved by sharing (and using underutilised capacity), leasing and subscribing to services rather than buying goods, and buying things that are designed to be durable, re-usable, repairable or recyclable.

The Mayor and most of London's boroughs have declared a climate emergency and they are committed to increasing their efforts to reduce emissions through their own actions and influencing the actions of others. London is already a leader in the field of carbon and waste. It has introduced carbon accounting through an Emissions Performance Standard.

LWARB's aim is to be the partner of choice for boroughs and businesses that want to reduce waste and increase recycling through the adoption of circular economy principles, and to help citizens embrace these new consumption models.

³ Ellen MacArthur Foundation, Completing the Picture: How the Circular Economy Tackles Climate Change (2019) www.ellenmacarthurfoundation.org/publications

4. EXECUTIVE SUMMARY

The goal of the Business Plan is to set out an ambitious programme of activities consistent with the urgent need for climate action.

This Business Plan is an important document for LWARB. It sets out a series of activities designed to reduce the amount of waste London produces and to recycle more of what remains. These actions are part of a theory of change designed to reduce London's consumption-based emissions, to help address the climate emergency by contributing to capping global temperature rises at 1.5°C.

LWARB's priority is to reduce London's consumption-based CO₂e emissions by focusing

on reducing waste and increasing recycling – it will conduct an analysis on London's materials' inventory to identify leverage points in focus areas⁴. Following the analysis, future LWARB Delivery Plans will be reviewed and revised for Board approval.

The Business Plan will enable LWARB to become a more financially sustainable organisation by adopting a more commercial approach. It sets out changes to the way support is delivered through a combination of paid-for and free services. It also sets out the additional resources needed to become more commercial and provides a budget to deliver our programme over five years.



⁴ Food, textiles, plastics, electricals, built environment

The Business Plan will be kept under review to understand if targets are being met and we will revise and take any necessary action to change course if required. In any event there will be a formal assessment of progress to the Board – reviewed at the end of year 2 – with appropriate recalibration depending on the success of funding and commercialisation.

In developing the Business Plan, particular emphasis has been placed on objectives in the Mayor of London's Environment Strategy to 'significantly reduce waste'⁵, 'maximise recycling rates'⁶ and for London to be a global leader in the transition to a low carbon circular economy.⁷ LWARB has had extensive consultation discussions with London Councils, elected members, borough officer groups (in particular LEDNET and its cluster sub-groups) and has given great consideration to the LEDNET-TEC joint position paper on waste⁸. It has consulted with WRAP and worked closely with the GLA respecting the statutory role of the London Environment Strategy and London Plan. LWARB will continue to work closely with our partners to make best use of the total GLA, borough and LWARB resource pool available – so that we amplify good work that already exists and fill gaps between us where they are identified.



This Business Plan builds upon and complements existing Mayoral policy priorities, relating to job creation, place making and health and equality.

The Business Plan has the following principles:

- All LWARB's core activities will support waste reduction and recycling in London. Commercial activities will have no geographical boundary;
- LWARB's primary (but not exclusive) focus is municipal waste;
- Support for London boroughs will be delivered to implement their Reduction and Recycling Plans (RRPs);
- LWARB's two programmes, Resource London and Circular London, will closely integrate to leverage each other and deliver enhanced benefits for London's citizens and businesses;
- LWARB will broaden its funding base by seeking grant support from public sources, as well as seeking out opportunities to leverage private funding (trusts, philanthropy, corporate);
- LWARB is developing a suite of commercial ventures delivered through a commercial company – LWARB Circular Solutions. Commercial services will not detract from borough support activity but will ideally complement the acceleration of the development of a circular economy in London;
- LWARB will continue to offer free support to London's boroughs but this will be supplemented by an "at cost" service contribution for support in certain areas (detailed in the Delivery Plan due to be published in April 2020).

⁵ [The Mayor of London, London Environment Strategy, Objective 7.1](#)

⁶ [Ibid, Objective 7.2](#)

⁷ [Ibid, Chapter 10](#)

⁸ www.londoncouncils.gov.uk/our-key-themes/environment/london-environment-directors-network/tec-lednet-joint-statement

5. FOCUS AREAS

LWARB has identified five focus areas in its Circular Economy Route Map⁹: food, plastics, electronics and electrical equipment, textiles and the built environment. We will continue to invest in identifying and funding activities that can reduce waste and increase recycling in these areas and accelerate a transition to a circular economy. We will place an emphasis on activities relating to municipal waste¹⁰, and in particular food. Food is both a significant contributor to London's consumption-based emissions, and a large component of the municipal waste stream. Likewise, plastics and textiles have high "carbon footprints" and are material contributors to London's municipal waste.

Actions around the built environment will be largely undertaken through the CIRCUIT programme. Other activities will be developed to support the delivery of Circular Economy Statements under the London Plan.

We will support actions around repair and refurbishment of electrical items.

Table 1 below shows the consumption-based emissions (CBEs) (where known) for each LWARB focus area-related material stream as it comes into London. It also shows estimated waste material leaving London after use.

Table 1: LWARB focus areas

	Materials into London Estimated consumption-based emissions (000 tonnes) CO ₂ e	MATERIAL USE	Waste (000 tonnes)
Built environment	12,100		9,532
Food	14,300		1,696
Plastics	Not known		846
Textiles	4,400		227
Electrical items	3,300		33
Total	34,100		12, 334

The focus areas account for around half of London's municipal waste, but 80% of London's total waste (including construction, demolition and excavation waste (CDEW)). They account for 30% of London's total consumption-based emissions.¹¹

⁹ LWARB, Circular Economy Route Map, 2017

¹⁰ Municipal waste is household or similar and usually arises in households, shops, offices, restaurants and hotels.

¹¹ GLA – awaiting publication reference Greater London Authority, London's consumption based greenhouse gas emissions 2001 - 2016 [online], 5 March 2020 <https://data.london.gov.uk/dataset/london-s-consumption-based-greenhouse-gas-emissions-2001-2016>

6. OBJECTIVES AND OUTCOMES

LWARB's objectives are to reduce waste and increase recycling. This will in turn reduce London's consumption-based emissions contributing to the global ambition to keep temperature rises to 1.5°C.

Table 2 below shows the outcomes we aim to achieve over the course of the business plan period, as well as the contribution we hope that LWARB activities could have. For context the table shows the additional recycling and reduction required under the modelling for the London Environment Strategy (LES). Table 3 shows the estimated emissions reduction associated with LWARB activities.

LWARB has enabled London to become a centre of circular economy business activity. Building upon this success we hope that the promotion and growth of London's low carbon circular economy will have a material effect in significantly reducing the total amount of waste and increasing recycling. A report for LWARB

by Arup¹² indicated that the circular economy could lead to around a 60% reduction in total waste (including construction, demolition and excavation waste), and further work will be undertaken to understand the contribution that an increase in circular economy business models can make to waste arising and recycling in London.

LWARB aims to conduct additional research that will estimate the mass of materials flowing through London and their associated carbon footprint. This data should provide more sectoral detail on London's contribution to consumption-based emissions, and the role that circular economy business models can have on reducing them. We will use this information to fine tune future LWARB delivery plans and to concentrate activities on those focus areas where we believe we can have the greatest impact. We will include our partners in this research and will aim to publish the results later in 2020.



¹² Arup, Report for LWARB, The Circular Economy Effects of Waste Production in London: Impact Assessment Report, June 2017 www.lwarb.gov.uk/news-meetings/reports/

Table 2: Estimated waste reduction and recycling outcomes from LWARB activities

	LWARB activities (000 tonnes)				Reduction and recycling needed under LES modelling scenario (000 tonnes)		
	2025		Cumulative 2020-25		2025		
	Reduction	Recycling	Reduction	Recycling	Reduction	Total recycling	Tonnes of new material (in total recycling)
Food	43	139	115	355	297	344	187
Textiles	7	2	20	5	8	29	5
Plastic	3	17	7	44	29	251	62
Electrical	0	<1	0	<1	2	37	5
CDE	3	1	13	3	1,312	8,725	808

Table 3: CO₂e emissions reduction outcomes

	LWARB activities CO ₂ e savings (000 tonnes)	
	2025	Cumulative 2020-25
Food	58	146
Textiles	36	114
Plastic	30	79
Electrical	<1	2
CDE	Not calculated	Not calculated

7. DELIVERY PROGRAMMES

LWARB has two programmes, Resource London and Circular London. Each programme delivers activities and projects. In order to achieve our desired outcomes, close integration is required between these programmes. While they are described here as separate programmes, operationally there will be a significant overlap, with staff resources allocated according to activity rather than in strict programme silos. The two programmes are described broadly below. A more detailed programme delivery plan will be published annually.

Resource London

Resource London is LWARB's programme for London's local authorities. The programme works with London's waste authorities to reduce the amount of waste London produces and to recycle more of what remains. There will be an emphasis on activities that reduce waste or increase the recycling of food, plastics and textiles. These areas represent the largest contributors to the municipal waste stream as well as significant consumption-based emissions. Across these activities, the programme will deliver:

- **Advice and support:** Supporting the delivery of excellent local authority services remains the core of the Resource London programme. Support for all authorities on service change and service improvement will be guided by actions identified in borough Reduction and Recycling Plans (RRPs) and informed by the knowledge and intelligence we develop through our research projects. In recognition of their strategic importance, actions that increase flats and food waste recycling and tackle contamination will be a particular priority. Resource London will also continue to support boroughs and businesses (including business partnerships and Business Improvement Districts) to improve London's commercial waste recycling provision and reduce waste production.



Support will be provided through a mixture of free, cost recovery and cost-plus services.

- Good practice support will be provided to all authorities at no cost to them. This includes service, communications and behaviour change support based on our extensive knowledge and resources developed through our research projects.
- If authorities want to deliver projects that require detailed borough specific support requiring significant additional input from Resource London, this support will be charged at cost.
- Where support is provided to businesses or where it is provided to boroughs for commercial services that generate an income, Resource London may charge at cost-plus rates.

- **Research, innovation and demonstration (London Lab):** Projects will be supported that develop expertise and provide innovation to waste authorities, including flats recycling, quality of material, hard to reach audience groups, and demonstration of circular economy solutions. Projects will develop good practice that supports the implementation of the London Environment Strategy and helps boroughs to deliver their Reduction and Recycling Plans (RRPs).
- **Behaviour change:** Funding will be provided to continue delivery of London Recycles, #LoveNotLandfill, and activity on sustainable food behaviours for the coming three years; this is to bridge the gap between 2020 and 2023, in anticipation of new funding expected with the introduction of Extended Producer Responsibility in 2023.
- **Capacity building and upskilling:** The outputs of Resource London's research, innovation and demonstration work will be shared with all waste authorities through reports, workshops, webinars, dissemination events, toolkits and subject-specific surgeries. In addition, boroughs have asked for support to help them embrace circular economy business models. LWARB will work through both Circular and Resource London to help boroughs realise circular economy opportunities and develop sector skills. This will be delivered through a new training academy to be launched in 2020. Support will be delivered through a mix of free and paid for content.

Resource London was previously delivered as a partnership between LWARB and WRAP. The intention is to continue a relationship with WRAP in the next business plan period, but it will need to be reviewed in the light of the new government's emerging priorities and funding envelope.



Circular London

Circular London's objective is to accelerate the development of a circular economy in London by promoting circular economy principles and supporting the public sector, SMEs and corporates to transition to, develop and implement circular economy business models. Working closely with Resource London, it will develop and increase knowledge through awareness building, research and analysis.

Subject to a regular assessment of demand and impact, the programme's focus will be:

- **Circular projects:** Over the business plan period Circular London will place particular emphasis on supporting and delivering projects that i) contribute to increase London's municipal waste recycling rate or to reducing municipal waste and ii) prioritise food, textiles or plastic packaging.
- **CIRCUIT:** This is a fully funded EU Horizon 2020 partnership programme in which London, along with Copenhagen, Hamburg and Helsinki's region of Vantaa, are joined in a partnership to pilot smart, eco-friendly, regenerative, and circular practices in the built environment. The London partners, led by LWARB as the City Cluster Coordinator, will run nine demonstration projects which apply circular principles to buildings. The overall aim of the programme is to increase the city's regenerative capacity by reducing the yearly consumption of virgin raw material by 20% in new built environments and showing cost savings of 15%.
- **Circular economy directory:** A directory of circular economy products and services will be developed and promoted to London's citizens and businesses – providing them with tools and resources to help them reduce resource use and recycle more waste. We hope to work closely with London boroughs and the GLA to develop and promote the directory.
- **Circular Economy Week:** Following two successful weeks in 2018 and 2019, we will be expanding CE week to incorporate more cities and activities and include some eye-catching announcements. We will be looking for sponsors and partners for future weeks to build the circular economy community in London and the UK.
- **Capacity building:** Circular economy modules will be developed and delivered through the training academy mentioned earlier, to complement those recycling and waste management modules created by Resource London. The Academy will provide low cost, professional training to borough officers and we will look to extend this commercially to other municipalities and to businesses. It will be delivered in the first instance through a training partner. We will invest our funds in designing the programme, developing the content and getting the programme up and running.
- **Research:** In order to continue to operate the most effective and cutting-edge programmes and maintain our position as thought leaders, we need to conduct world leading research. We will design a programme of research that we can undertake with leading research organisations. We will announce the results of the research at major events to build our profile and promote London.
- **Corporate engagement:** We will take a more focused approach to corporate engagement. A small budget will facilitate our relationship building and serve as a basis for business development of our commercial propositions, learning from organisations that are at the forefront of the circular economy and creating champions for our work.
- **Advance London:** We will continue to support SMEs that are circular and those that wish to transition to a circular business model. We expect that Advance London businesses will create a pipeline for investment that is supported by our investment in the Greater London Investment Fund and Circularity Capital.

Commercialisation

LWARB needs to become more commercial in order to be a financially sustainable organisation. Acting commercially allows LWARB to provide services to businesses and organisations both inside and outside London – helping to accelerate the development of the circular economy more widely.

Commercial work will not interfere with the delivery of the programmes and LWARB's core objectives. Indeed, acting commercially will enable a better delivery of LWARB's objectives, for example by helping to fund free-to-use services to boroughs and investing in research and innovation that will benefit London as a whole.

LWARB has identified a list of areas where we believe we can provide commercial services, and these include consultancy services, accreditation services, a training academy, a circular economy products and services directory for residents and businesses, and a shared workspace.



8. FUNDING & FINANCIAL PLAN

LWARB is budgeting for the period 1 April 2020 – 31 March 2025. The total amount of LWARB budget available for this period is £19.4 million, comprising carry forward of unspent funds, released commitments and recovered funds from previously invested projects, and repayments of interest and principal from loans. Together with external funding from the EU and the private sector, this provides a gross expenditure of circa £21 million.

Over the business plan period we will need to diversify our income base. At the end of the business plan period we are aiming to have a budget where our total cash bank balance plus estimated income over the period is all used. However, by 2025 we should have assets of between £9 million - £20 million in the Greater London Investment Fund and Circularity Capital.

We will supplement income by pursuing a commercialisation strategy and we will also actively seek out public and private funding to amplify our programme activities. A full-time fundraiser will be employed to develop a fundraising strategy and help attract a broader range of public sector funds as well as seek corporate and private trust funding.

LWARB will work with the Mayor of London and London Councils to continue to pursue funding opportunities with government.

Allocation of funds

Table 4 below breaks down the proposed budget for 2020-2025, excluding commitments from external partners.

Table 4: LWARB budget

Budget 2020 - 2025 (£000's)	2020/21	2021/22	2022/23	2023/24	2024/25
Resource London programme	1,683	1,644	1,596	1,356	1,367
Circular Economy programme	812	812	767	627	626
Revenue programme	- 70	- 153	- 260	- 383	- 495
Net programme expenditure	3,958	3,747	3,593	3,124	3,045
Net investment expenditure	2,405	- 426	1,108	- 878	- 279
LWARB net budget spend	6,363	3,321	4,701	2,246	2,766

