PAPER NO. WRWA 24-12

WESTERN RIVERSIDE WASTE AUTHORITY

MEETING	29th July 2024
REPORT AUTHOR/DATE	Interim Deputy General Manager *(Contact Trevor Pugh - Tel. 020 8871 2788)* 15th July 2024
SUBJECT	Report by the Interim Deputy General Manager on the draft Joint Municipal Waste Management Strategy and proposed public consultation.
CONTENTS	
STATUS	**OPEN**
BACKGROUND PAPERS	None

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EXECUTIVE SUMMARY

1. This report outlines the development of a draft Joint Municipal Waste Management Strategy (JMWMS) for the Western Riverside Waste Authority (WRWA) and the Constituent Councils (CCs), to provide a vision and strategic direction for waste management from 2025-2040. The draft JMWMS identifies strategic themes where focussed effort is required to meet the vision and priorities.

2. Based on these themes, actions are proposed in 4 areas:

    a) Transitioning to a Circular Economy;
    b) Achieving Net Zero;
    c) Collaborating and communicating to amplify our impact; and
    d) Delivering Best Value and preparing for the future.

3. Public and stakeholder consultation, based on the draft JMWMS, is proposed as a next step, with a view to adopting the agreed Final JMWMS at WRWA and Constituent Council meetings in the Autumn. Subject to this, detailed action plans for the key areas of focus will be developed and monitored annually and the strategy will be reviewed every 5 years.

4. Appended to this report are the following documents:

    a) Draft JMWMS full document (Appendix 1)
    b) Draft Non-technical summary for public consultation (Appendix 2)
    c) Draft public consultation survey questions (Appendix 3)
    d) Log of comments received from consultation with the CCs (Appendix 4)
    e) Technical report (Appendix 5)
    f) Strategic Environmental Assessment screening opinion report (Appendix 6)
    g) Equalities Impact Assessment (appendix 7)

RECOMMENDATIONS

5. The Authority is recommended to:

    a) Approve the draft JMWMS;
    b) Approve the draft non-technical summary and consultation survey attached as appendices 2 and 3 and proceed to consult with the public and stakeholders using these consultation materials;

c) Delegate responsibility to the Interim General Manager, in consultation with the Chair, to make any further minor amendments to the draft JMWMS arising from Constituent Council inputs received after this report was published and before the start of the public consultation exercise;
d) Endorse the provisional recycling targets set out in paragraph 18 and confirm the draft vision set out in paragraph 16.
e) Otherwise note the contents of this report.

INTRODUCTION

6. WRWA and the CCs are preparing a new Joint Municipal Waste Management Strategy (JMWMS) for the period 2025-2040. An update is required because of important changes in legislation and government policy that are now becoming clearer and to plan responses to the results of demographic change and forecast waste arisings.

7. A new JMWMS is also necessary to inform the development of a Procurement Strategy for the successor arrangements to the current Waste Management Services Agreement (WMSA) when it expires in 2032. A key stage in this is the production of a draft JMWMS document as the basis for public and other stakeholder consultation.

8. Ricardo Energy and Environment are providing technical support to the development of the draft JMWMS and the Authority has engaged additional support to finalise an agreed draft JMWMS document and associated public consultation material.

ADDITIONAL INFORMATION

Forecasting, Performance Benchmarking and Analysis

9. To plan for future waste management activity, waste quantities were forecast over the 2025-2040 strategy period and the impact of the current waste collection and treatment arrangements and options for developing them were analysed.

10. Population and household growth is forecast to increase the amount of household waste collected at the kerbside by c10%. The combined effects of the introduction of two key government policies, Extended Producer Responsibility (EPR) for packaging and a Deposit Return Scheme (DRS) for drinks cans and plastic bottles could reduce this forecast growth by 2.8%.

11. Extensive data gathering and analysis work has been carried out over the course of the last twelve months. Reconciliations, quality assurance and in some cases, remodelling has been required to ensure confidence in the quality and accuracy of data. This has included the baseline modelling and the forecasting, which have been amended following identification of errors and corrections of the same.

12. The modelling and analysis reported below and in the Technical Report (Appendix 5) is based on the remodelled baseline and forecasting data.

Draft vision and actions on the priorities

13. Early workshops with Members and Officers identified a draft vision and priority areas for the strategy to address. The analysis carried out since concludes that action is needed in a number of areas to meet the draft vision and the challenges within the previously identified priorities.

14. The draft JMWMS sets out a number of proposals for action areas against each of the nine priorities and groups them into 4 themes:

- Transitioning to a Circular Economy
- Achieving Net Zero
- Collaborating and communicating to amplify our impact
- Delivering Best Value and preparing for the future

15. The proposed action areas are set out in detail in section 4 of the draft JMWMS. Detailed action plans will be developed for each area, once the Strategy is finalised. Actions under the Delivering Best Value and Preparing for the Future theme will be incorporated into the authorities annual review process rather than as a stand-alone action plan. The action plans will be co-produced with the CCs identifying responsibilities and any additional costs that will subsequently need to be considered for approval.

16. Performance against the action plans will be monitored annually and a full review of the strategy will be carried out every 5 years or sooner if there are significant changes that need to be taken into account:

17. The workshops identified a draft vision for the strategy: **"The Western Riverside partners will work together with our residents and businesses to prioritise waste prevention, reduce our carbon emissions and environmental impacts, and provide customer-focussed waste and recycling services that maximise value for the materials we manage".**

18. The workshops also identified an ambition to reach a Local Authority Collected Waste (LACW) recycling target of 35% by 2030, with a stretch target of 50%. LACW includes all of the waste collected by the councils including commercial waste plus HWRC waste and other sources through the council's services for example bring banks.

19. Analysis of the performance of existing collection and treatment arrangements and options to vary them has since informed this to check the deliverability of the draft vision and targets. The analysis supports the draft vision and shows that it would be reasonable to set a WRWA recycling target for **LACW of 35% by 2030 with a stretch target of 50% by 2040 and a WRWA recycling target for Household Waste of 30% by 2030 with a stretch to 45% by 2040** as contributions to regional and national targets.

20. **Table 1** and **Figure 1** below set out the modelled LACW recycling rates for 2027/28 that could potentially be achieved across the WRWA area. **Table 2** and **Figure 2** set out the equivalent performance expressed as Household waste only.

Table 1. LACW Recycling Rates %

	LACW %	**WRWA Tonnages**	**Recycling rate contribution %**
Recycling	Comingled DMR	49,086	13.53
	Food	21,079	5.81
	Garden	3,687	1.02
	C&I	42,899	11.82
	HWRC	8,461	2.33
	3rd party recycling	7,115	1.96
			36.4
All waste streams	Household	268,512	
	C&I	70,327	
	HWRC	16,891	
	3rd party waste	7,115	
TOTAL	**LACW**	**362,846**	

Figure 1. LACW Recycling Rates breakdown

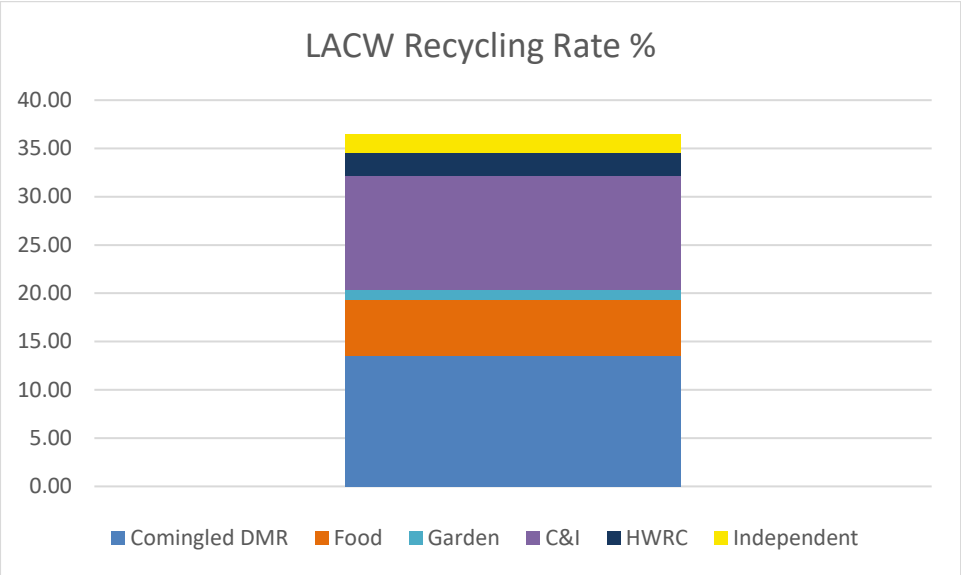
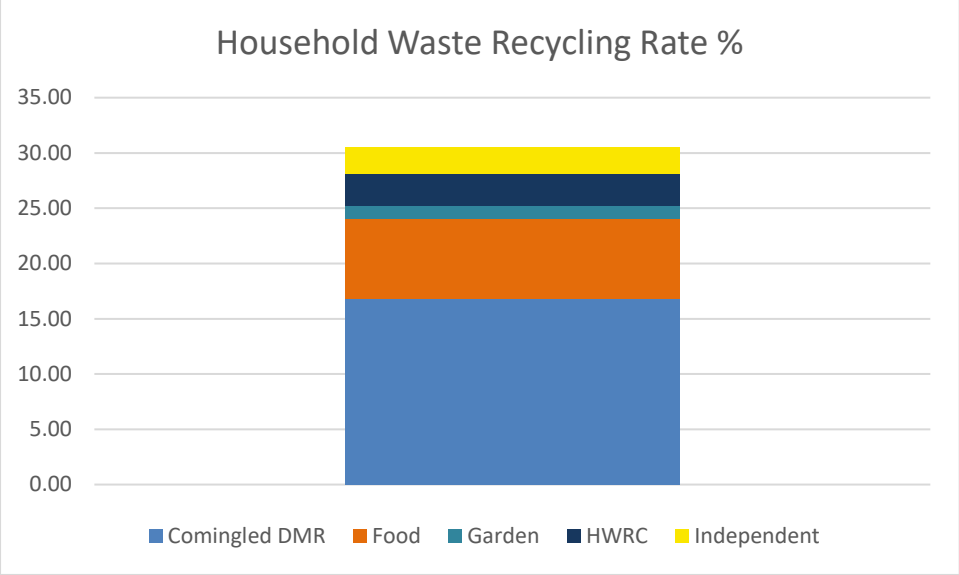


Table 2. Household Waste Recycling Rates %

	Household %	**WRWA Tonnages**	**%**
Recycling	Comingled DMR	49,086	16.78
	Food	21,079	7.21
	Garden	3,687	1.26
	HWRC	8,461	2.89
	3rd party recycling	7,115	2.43
			30.5
All waste streams	Household	268,512	
	HWRC	16,891	
	3rd party waste	7,115	
TOTAL	**HOUSEHOLD**	**292,519**	

Figure 2. Household Waste Recycling Rates breakdown



21. The key difference between the two recycling rates is the inclusion of business waste (C&I) in the LACW model. All modelling assumptions are detailed in the accompanying Technical Report appended to this report (Appendix 5).

Environmental Assessment, Equalities Impact Assessment and Social Value

22. A screening process has been undertaken to decide whether a full Strategic Environmental Assessment (SEA) is necessary for the draft JMWMS. The screening has concluded that a full SEA is not required. The SEA Screening Opinion report is attached as Appendix 6 to this report.

23. The screening has been subject to the legally required consultation with the Environment Agency, Natural England and Historic England and none of those agencies have submitted any comments.

24. An Equalities Impact Assessment of the draft strategy has been carried out that shows potential impacts are being managed and is attached as appendix 7.

25. A Social Value Policy will be developed through one of the action plans outlined in paragraph 15 above.

Stakeholder involvement:

26. The CCs have been closely involved in developing the draft JMWMS from the outset in 2023 through both officer and member workshops, briefing and discussion meetings and the circulation and commentary on draft documents.

Copies of the most recent draft Strategy document were circulated to the CCs on 22nd April to allow for their consideration and comments. A summary of the comments received from CCs and the changes made to the draft JMWMS is included as Appendix 4.

27. In addition, two meetings have been held with Greater London Authority (GLA) officers to explain how the draft JMWMS has been developed and to seek their early views for conformity with the London Environment Strategy (prior to formal consultation).

NEXT STEPS

Public Consultation

28. An important part of the development of a final strategy is formal consultation with the public and other stakeholders. The public consultation exercise will utilise a specially designed Non-technical Summary setting out the vision and proposed actions of the draft JMWMS (Appendix 2), complemented by a survey to gather stakeholder views (Appendix 3).

29. Open public consultation is proposed to take place over 6 weeks during September and October. Focus groups of invited individuals, that are representative of the make-up of local populations will also be held in each Borough. The draft consultation survey and non-technical summary are included as Appendices 2 & 3. The results of the public consultation are planned to be reported to the Board in November.

Finalising the strategy

30. The results of the consultation will be analysed and the consultation results will be reported to the next appropriate meeting of this Authority, with recommendations on how the public feedback could be incorporated into the draft JMWMS.

31. Following that, the draft strategy document will be revised and the Final JMWMS will be presented to a further meeting of this Authority for formal adoption. The CCs will be asked to formally endorse and adopt the Final JMWMS at their own Council meetings prior to this.

TREASURERS COMMENTS

32. The work needed on technical and additional support for the development and finalisation of the agreed draft JMWMS is met from within existing approved budgets which is a total annual budget of £900,000 per year for consultants/ legal fees which is charged to boroughs via the Levy mechanism.

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T. Pugh
INTERIM DEPUTY GENERAL MANAGER

15th July 2024

DRAFT
Joint Resources and Waste Strategy

DRAFT VERSION FOR CONSULTATION

FINAL VERSION TO CONTAIN:

- **Foreword from the Chair**
- **Supporting Reports (stand-alone appendices):**
  - **Technical Report**
  - **Strategic Environmental Assessment (SEA) Screening Statement**
  - **Equalities Impact Assessment**
  - **Non Technical Summary document produced for the public consultation**

NOTES ON THIS DRAFT:

- **This document remains in Draft form until it is formally adopted following the conclusions of a full public consultation exercise.**
- **The content is therefore subject to additions and amendments until that process has concluded.**
- **Dates for the public consultation are: Monday 2nd September – Monday 14th October (6 weeks).**
- **The document has the working title of 'Joint Municipal Waste Management Strategy', which will be updated to Joint Resources and Waste Strategy for the public consultation.**

EXECUTIVE SUMMARY

Introduction

This Strategy defines a collective ambition for waste management services for the Western Riverside Partners – the London Borough of Hammersmith & Fulham, the London Borough of Lambeth, the Royal Borough of Kensington and Chelsea, the London Borough of Wandsworth and Western Riverside Waste Authority (the Partner Authorities). In order to reach the ambitions for better waste management in the future, the Partner Authorities will need to work as a collective to prevent waste, enhance resource efficiency and minimise greenhouse gas emissions.

Why Action is Needed

In the next few years, the UK Government plans to implement schemes which will change the way in which waste is currently managed, which will lead to significant changes for local authorities. This includes the initiatives outlined in the Resources and Waste Strategy (2018) which aim to minimise waste, promote resource efficiency and move towards a circular economy model. The Government plans to introduce Extended Producer Responsibility for packaging and a Deposit Return Scheme on drinks cans and plastic bottles, which will shape the volume and type of material required for collection and processing in the future.

In addition to national legislative change, the London Environment Strategy (2018) sets the Mayor's ambitions to reduce waste, boost recycling and provide consistent collection services to residents, with contributions towards the Mayor's recycling targets expected from the boroughs. The Mayor has also set a target for London to be net zero carbon by 2030.

Current Context

This Strategy sets out the strategic aims and aspirations of the Western Riverside Partners in reducing the environmental impact in light of future changes and policies, and outlines how the Partner Authorities will work together to manage resources and waste within their boundaries between 2025 and 2040.

The Western Riverside Partners are responsible for collecting around 370,000 tonnes of municipal waste per annum (2022/23) through household and commercial collections and receipt of items at the Household Waste and Recycling Centre (HWRC) in Wandsworth and Vale Street Lambeth. Approximately 287,000 tonnes of household waste was collected at the kerbside, with around 23% sent for recycling or composting through the various dry recycling, garden waste and trial food waste collection schemes. Studies on the composition of WRWA's household waste show that nearly a quarter of sack/bin collections contain waste that could be recycled or composted through services that are currently provided to residents. A further 40% comprises of food waste. The Western Riverside Partners aspire to further reduce waste and improve recycling rates in the future with the support of the community and businesses.

The key to providing an affordable service is through the prevention of waste altogether. A significant proportion of the costs for managing waste are associated with residual waste treatment. For 2022/23 the combined collection and treatment costs for the Western Riverside Partners totalled £62 million, and approximately 53% of this was for residual waste treatment. The cost (£/tonne) of residual waste processing is likely to increase significantly in coming years, while

the UK Emissions Trading Scheme (UK ETS) will apply to waste incineration from 2028, meaning that there will be a 'cost of carbon' which will need to be taken into account for residual waste processing. The Western Riverside Partners will aim to reduce the cost of residual waste treatment by encouraging residents and businesses to reduce waste, repair and reuse items and recycle more, which will have the benefit of reducing both collection and disposal costs.

Vision, Themes and Actions

A collective draft vision statement for the Strategy has been agreed:

"The Western Riverside partners will work together with our residents and businesses to prioritise waste prevention, reduce our carbon emissions and environmental impacts, and provide customer focused waste and recycling services that maximise value from the materials we manage."

To achieve the Vision of this Strategy, the Western Riverside Partners, residents and businesses will need to work together to drive change. Four dedicated action plans will be developed within which a number of individual actions can sit, and progress can be monitored against the vision and a number of targets that will help the Partners support Government and Regional Targets, these include:

- Work towards a target of recycling 35% of Local Authority Collected Waste by 2030, with a stretch target of 50% by 2040.
- Work towards a target of recycling 30% Household Waste by 2030, with a stretch target of 45% by 2040
- Halving residual waste by 2042 (reducing municipal waste to 333 kg/capita per year)
- Supporting the Mayor of London's target to reduce food waste by 50% by 2030

Action Plans

Transitioning to a circular economy – Adopting circular economy thinking involves sharing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible to extend their lifespan.

Actions include:

- Developing a circular economy action plan, to investigate and plan for all identified waste prevention, reuse, repair and recycling actions.
- Expanding food waste collection services to all households by 31st March 2026 in line with the Environment Act 2021.
- Identify opportunities to extract more recyclable material from kerbside collections, bulky waste, street cleansing waste and fly tipped materials.

Achieving Net Zero - Reducing the environmental impact of collecting and treating WRWA's waste is important in reducing carbon emissions, mitigating the risks of climate change and reaching net zero goals.

Actions include:

- Identifying key areas of focus to reduce emissions through the development of a Net Zero action plan.
- Continuing to send all residual waste to energy-from-waste (EfW), with no waste sent to landfill.
- Exploring options to transition to low carbon fuels and electricity sources where infrastructure allows.

Collaborating and Communicating to amplify our impact - The key to success is through knowledge sharing, participation and engagement, which can only be achieved through collaborative efforts.

Actions include:

- Providing easy-to-use and clearly defined services, that respond to local resident needs, and encourage participation.
- Undertaking education activities to support residents to reduce their waste and increase what can otherwise be recycled or composted from the residual waste stream.
- Maximise social value benefits through waste and resource management, by encouraging upskilling and the creation of new job opportunities within the sector.

Delivering Best Value and preparing for the future - It is of utmost importance that the Western Riverside Partners deliver value for money for customers through services delivered, taking into account changing consumer habits, forthcoming regulations, and climate change that will influence the waste we generate as well as the future service costs.

Actions include:

- Maximise the value from the existing waste treatment contract through increased capture of re-useable and recyclable material.
- Demonstrate to residents and businesses the economic value in preventing/minimising waste, repairing items and buying reused through signposting to local resources including the reuse workshop located at Smugglers Way.
- Ensure services and infrastructure / assets meet all future needs including regulatory changes and increases in housing and population.

Monitoring Progress and Next Steps

Prior to implementation, the Western Riverside Partners will seek to garner the views of residents, local businesses and communities on waste and the environment and the strategic vision via a public consultation process. The strategy will be updated to take on board this feedback.

Working together, the Western Riverside Partners will carry out annual reviews and progress monitoring through the lifespan of the Strategy to measure progress against strategy priorities and ensure WRWA remains on track with achieving its goals. A full review will be undertaken every 5 years to ensure the Strategy remains flexible and appropriate to current circumstances. Results of the annual review will be published on the Western Riverside Waste Authority website.

Contents

INTRODUCTION

WHAT IS A JOINT RESOURCES AND WASTE STRATEGY?

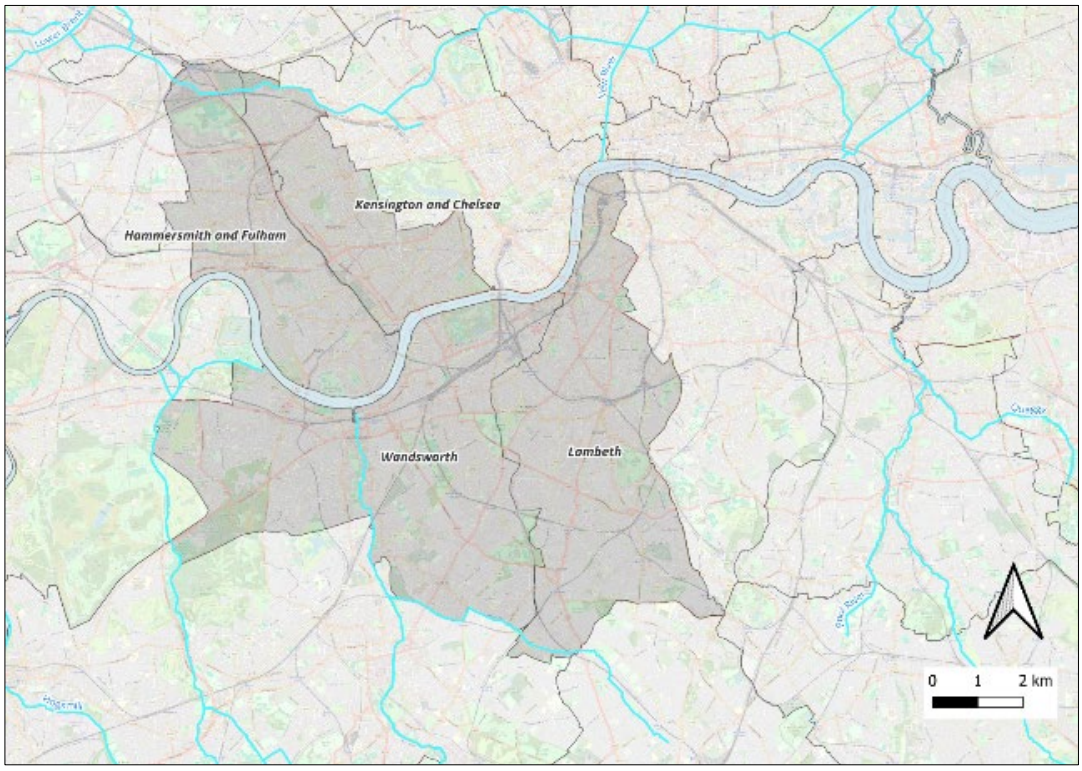
Western Riverside Waste Authority (WRWA) is the statutory Waste Disposal Authority (WDA) for the London Borough of Hammersmith & Fulham, the London Borough of Lambeth, the Royal Borough of Kensington and Chelsea and the London Borough of Wandsworth. WRWA provides a range of waste services for the treatment and disposal of Local Authority Collected Waste (LACW) from the four Councils. The Councils, as statutory Waste Collection Authorities (WCAs) provide a range of waste collection services to residents and businesses across their Boroughs.

Under the Waste and Emissions Trading (WET) Act 2003, authorities in two-tier areas (Where WCAs and WDAs work together) are obliged to develop and maintain a joint strategy for the management of household and business waste across the area.

The strategy sets the strategic direction for resources and waste services in the light of Government policies and forthcoming legislation to reduce waste, maximise recycling and eliminate waste disposal to landfill.

This Strategy defines a collective ambition for waste management services from 2025 to 2040 for the Western Riverside Partners – WRWA, London Borough of Hammersmith & Fulham, the London Borough of Lambeth, the Royal Borough of Kensington and Chelsea and the London Borough of Wandsworth (the Partner Authorities).

Figure 1: Western Riverside partners - Council areas

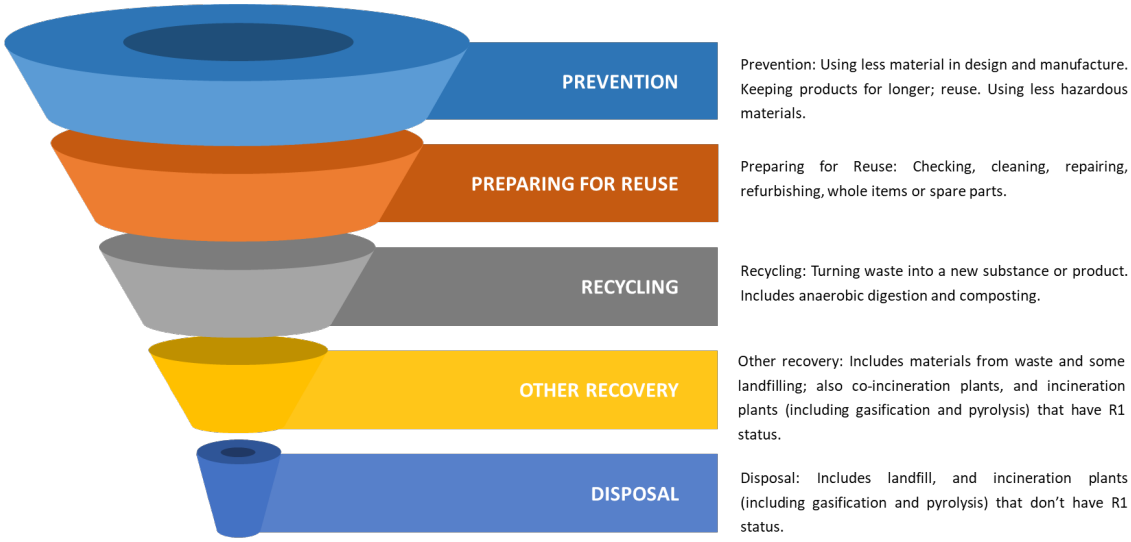


CONTEXT

The development of a Strategy provides an opportunity for the Partner Authorities to explore ways they can work together and with their local communities to deliver more sustainable resources and waste services, in accordance with national and regional policy and legislation.

The strategy focuses on actions that align with the principles of the waste hierarchy. This includes prioritising ways to prevent waste, divert more materials for reuse, repair and recycling, and reduce the environmental impact associated with the generation and management of waste. Disposal is the last resort for waste.

Figure 2: The Waste Hierarchy



The Western Riverside Partners adopted a Joint Strategy and Waste Management Policy in 2006. In 2013, a new joint high-level Waste Management Policy was agreed with the Councils to guide future service provision and demonstrate continued partnership working. In 2017, it was decided that a new Joint Waste Management Policy would be developed, to take account of new and proposed waste prevention initiatives. However, the development of significant new legislative and policy drivers by the UK Government, notably the publication of the Resources and Waste Strategy in 2018 and subsequent consultations, resulted in further consideration of the Joint Strategy. Following clarification of UK Government policy, the Western Riverside Partners have taken the decision to review, update and develop the Strategy now to ensure it better reflects current needs and legislative requirements.

Summary of Strategy Content

The aim of this Strategy is to provide a framework for the strategic management of resources and waste in the Western Riverside area, including setting targets and ambitions for performance improvements. To successfully deliver the targets and ambitions of this Strategy, the Partner Authorities need to review how they currently manage the waste generated in their area and identify any changes that may be needed in the future. To support the review, an analysis of different approaches has been investigated to help inform future decision making. This includes comparing different ways of doing things, looking at the experiences of other local authorities and understanding the potential impacts of how things could be done differently in the future. A summary of the review outcomes can be found in the supporting Technical Report.

The conclusions from the review have been used, together with our knowledge of the wider context of the boroughs within London, in order to set an achievable future vision for the Western Riverside Partners.

This Strategy is set out according to the following structure:

- **Introduction** - this chapter introduces the Strategy and its context and provides a summary of the content of this document
- **Why action is needed** - identifies the relevant drivers, targets and legislation in relation to this Strategy and what those mean for the Western Riverside Partners
- **Current Context in Western Riverside Partnership area** - presents the current context of the Western Riverside Partners, including local demographics, practical barriers, current services and performance and how these may change in the future due to variables such as household growth
- **Vision, Themes and Action** - sets out the vision of the Strategy together with the proposed approach to meeting the aligned targets, ambitions and actions
- **Monitoring Progress** - identifies how the actions outlined will be monitored
- **Next steps** – indicated how the Strategy will be consulted on

A Strategic Environmental Assessment (SEA) Screening Statement for the Strategy has been conducted in tandem with this Strategy. The scope of the Strategy was considered against the criteria from the Practical Guide to SEA and the SEA Regulations. The SEA screening found that the Strategy is not likely to have any significant environmental effects, and therefore a full SEA is not required.

An Equalities impact assessment has also been developed and will be available for the Public Consultation period.

The Strategy will undergo a public consultation in Autumn 2024.

WHY ACTION IS NEEDED

SUMMARY OF KEY DRIVERS

This Strategy sets the strategic direction for resources and waste management over the next 15 years, from 2025 to 2040. The Western Riverside Partners recognise that to reach the ambitions for better waste management in the future, they will need to work as a collective to prevent waste, enhance resource efficiency and minimise greenhouse gas emissions.

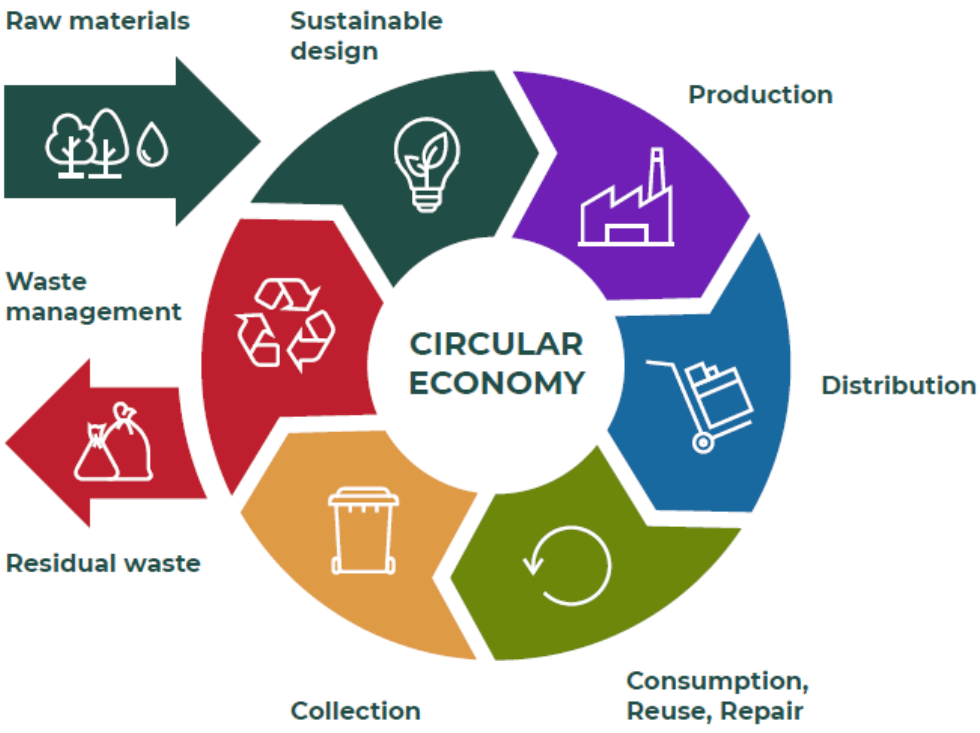
The main drivers, below, are described in more detail in the following sections:

- Environmental impacts
- Societal impacts
- National policy
- Local policy
- Affordability

ENVIRONMENTAL IMPACTS

In order to drive change, the Partner Authorities its residents and businesses will need to adopt Circular Economy thinking. The circular economy is a model of production and consumption, which involves sharing, reusing, repairing, refurbishing and recycling existing materials and products as long as possible to extend their lifespan. This provides a sustainable alternative to the traditional, linear economic model, which is based on a take-make-use-dispose pattern. Embracing the principles of the Circular Economy supports society in a transition from unsustainable levels of consumption and towards a model which values and conserves our natural resources.

Figure 3: The Circular Economy



SOCIETAL IMPACTS

There is growing concern throughout society about climate change and our impact on the environment. An increasing number of people are now aware of how the types of products we purchase and consume ultimately end up as waste, leading to loss of materials that could be used again, and production of greenhouse gas emissions which contribute to global warming. The public are beginning to adopt lifestyle changes that help to minimise their environmental impact, such as reducing food waste and incorporating reusable cups and containers.

There is also growing public interest in how brands, retailers, other organisations and the Government can support their individual efforts through reducing the amount of single-use packaging on the market, minimising plastic pollution, and creating products which are designed to last. New policies that focus on the principles of the waste hierarchy and circular economy, along with pressure from consumers, are driving innovation and change in manufacturing and retailing, leading to new technologies for managing waste products.

It is important that the Partner Authorities' waste services respond to these changing trends, attitudes and behaviours.

NATIONAL POLICY

In the next few years, the UK Government plans to implement schemes which will change the way in which waste is currently managed, which will lead to significant changes for local authorities.

The Resources and Waste Strategy 2018

The Resources and Waste Strategy was released in 2018 to outline the UK Government's plans for minimising waste, promoting resource efficiency and moving towards a circular economy – i.e. minimising waste and promoting a sustainable use of natural resources, through smarter product design, repair, reuse and recycling to keep products in the in use for longer.

The Resources and Waste Strategy includes the following targets:

- recycling at least 65% of municipal waste by 2035;
- no more than 10% of municipal waste ending up in landfill;
- zero avoidable waste by 2050;
- zero plastic waste by 2042; and,
- zero food waste to landfill by 2030.

The Resources and Waste Strategy put forward the following initiatives:

Simpler Recycling: a requirement for the separate collection of each of the major dry recycling materials (paper, card, glass, metal cans and plastics) and food waste from households and all appropriate businesses.

Extended Producer Responsibility (EPR) for packaging: manufacturers will pay the full costs of managing and recycling their packaging waste, with higher fees being levied if packaging is harder to reuse or recycle.

Deposit Return Scheme (DRS): for plastic and metal drinks containers, where consumers will be financially incentivised to return their used containers for recycling.

The Environment Act 2021

The Environment Act 2021 passed into UK Law in November 2021. The Act contains several provisions for secondary legislation including EPR, DRS and Simpler Recycling which have been undergoing consultation.

The implications of these policy proposals for the Western Riverside Partners and the potential changes required to the current collection, management and disposal services for local authority collected waste (LACW) are set out below.

Simpler Recycling

The Environment Act 2021 sets out the materials that are required to be collected by all WCAs:

- **Glass bottles and containers** – including drinks bottles, condiment bottles, jars
- **Paper and card** – including newspaper, cardboard packaging, writing paper (but excluding disposable paper cups as these items are largely consumed 'on-the-go' or away from home)
- **Metal packaging** – steel and aluminium tins and cans
- **Plastic bottles** – including clear drinks containers, high-density polyethylene (HDPE; e.g. milk containers), detergent, shampoo and cleaning products
- **Food waste** – to be collected from all households by March 2026

The UK Government has proposed that some additional material streams are included in the dry recyclable waste streams, such as plastic pots, tubs and trays, food and drink cartons which are already collected by the Councils, and items which are currently not, such as textiles, batteries, plastic film and waste electricals.

In November 2023, Defra recognised that co-mingled collections are an acceptable collection methodology in line with the Environment Act (2021)'s legislative requirements. This is how the Partner Authorities collect and manage dry mixed recyclable materials from residents and businesses.

Under the new requirements:

- Co-mingled collection of dry recyclables is allowed (households and businesses)
- By 31st March 2026, all local authorities in England must collect the same recyclable waste streams for recycling or composting from households. The recyclable waste streams include paper and card, plastic, glass, metal, food waste, and garden waste.
- All non-household municipal premises in England (such as businesses, schools and hospitals), must make arrangements to have the same set of recyclable materials (with the exception of garden waste) collected for recycling or composting.
- Weekly food waste collections must be in place by 31st March 2026 from all households (with anaerobic digestion the preferred treatment option).
- Weekly food waste collections from all appropriate businesses must be in place by 31st March 2025, although not necessarily collected by Council-run collection services.
- Recyclable plastic film to be collected by 31st March 2027 (households and businesses).
- Cartons for food, drink and other liquids to be collected by 31st March 2026 (households and businesses).
- Garden waste collections must be offered by all councils (by 31st March 2026) – but can still be charged for.

At the time of writing this strategy (April 2024), Defra are currently seeking views on statutory guidance including service standards for collection arrangements and frequency. The consultation states that Defra *"will consider whether a recommended minimum service standard of alternate weekly collection for residual waste (alongside weekly food waste collection) might be appropriate, subject to an assessment of affordability and value for money".* This proposal is subject to consultation with local authorities and will be confirmed in the statutory guidance. Defra have confirmed that a consultation on Statutory Guidance will be issued in the near future.

Extended Producer Responsibility

Extended Producer Responsibility (EPR) is a policy approach, designed to shift the responsibility for managing and financing the handling of post-consumer waste from local authorities (and therefore taxpayers) to producers. The current EPR proposals are focused on packaging, although in future it is expected that this policy approach may also be implemented to other waste types. The packaging EPR framework aims to encourage packaging producers to take greater responsibility for the environmental impact of their products throughout their lifecycle, including the end-of-life stage. EPR will work on the 'polluter pays' principle and is likely to be implemented through fiscal incentives.

Under the packaging EPR system, producers are required to take specific actions to minimise the environmental impact of their products, such as reducing waste, increasing the recyclability of packaging, and promoting eco-design principles. This includes placing the financial responsibility for the collection, processing, and disposal of the products once they become waste.

EPR is a policy approach through which producers are responsible for a product throughout its lifecycle, including post-use. The EPR scheme for packaging is designed to incentivise producers in designing products which make it easier for them to be reused, repaired or recycled, moving waste up the hierarchy.

The UK Government's response to the Extended Producer Responsibility consultation was published in March 2022. The response confirmed the original consultation proposal that *"Payments to local authorities for the cost of managing packaging waste generated by households, both packaging waste that is collected for recycling and packaging waste disposed of in residual waste, will be made under the packaging Extended Producer Responsibility scheme".* The amount of money available to Local Authorities to deliver efficient and effective recycling services will be confirmed in November 2024

EPR is set to be implemented from October 2025. Local authorities are likely to begin to see a reduction in overall volumes of packaging waste as well as a change in formats of packaging that are easier to reuse and/or recycle, helping to reduce waste and boost participation in recycling from residents.

Deposit Return Scheme

The Deposit Return Scheme (DRS) proposal is a system designed to encourage the return and recycling of beverage containers, such as bottles and cans. The proposed scheme involves charging a small deposit fee on each container at the point of purchase, which is refunded to the consumer when they return the empty container to a designated collection point.

The main objective of DRS is to reduce litter, increase recycling rates, and promote a circular economy by incentivising consumers to return their containers for closed loop recycling.

The scheme aims to create a financial incentive for individuals to participate in recycling efforts and ensure that containers are not discarded in the environment. The scheme aims to ensure that 85% fewer drinks containers are discarded as litter after three years following launch.

In January 2023, Defra published its response to the latest round of consultations on the DRS. Defra confirmed the ability for local authorities and waste operators to redeem deposits on items collected through kerbside collection systems, separated and returned to the scheme. Following announcements in late April 2024 the scheme for England, Wales and Northern Ireland will be delayed until 2027.

With high levels of participation for DRS, the amount of drinks cans and plastic bottles entering kerbside collections and street litter bins should fall significantly. Along with overall reduced volumes of packaging through EPR, this has the potential to impact the volume of material required for collection and processing, which in turn may impact on fleet efficiency and contractual arrangements through the waste transfer stations (WTS) and the materials recovery facility (MRF). It is therefore important to factor these potential changes into any future strategy.

Circular Economy Package 2020

In 2020, the UK approved its own Circular Economy Package (CEP), implementing many of the measures adopted by the European Commission to deliver circular economy led improvement measures in waste management across the EU. Key proposals were transposed into UK law through amending existing waste management legislation, particularly the Waste Framework Directive, the Landfill Directive, the Packaging and Packaging Waste Directive and the various pieces of legislation pertaining to End-of-Life Vehicles (ELV), and batteries collection, treatment and disposal.

The CEP recommits the UK to mandatory recycling targets, transposed into law through the Waste Framework Directive. These include:

- 55% municipal re-use and recycling target by 2025;
- 60% municipal re-use and recycling target by 2030; and
- 65% municipal re-use and recycling by 2035

The CEP introduces "*a revised legislative framework, identifying steps for the reduction of waste and establishing an ambitious and credible long-term path for waste management and recycling".* This includes strengthened provisions on waste prevention, specific food waste prevention (Articles 9 & 29), and preparing for re-use (Article 11(1)), again legislated through the Waste Framework Directive.

Environmental Improvement Plan 2023

The 25 Year Environment Plan was adopted in 2018, setting out the UK Government's 10 environmental goals, focussing on biodiversity, clear air, clean water, protecting wildlife, reducing Environmental Hazards, minimising waste and combatting climate change. The Environmental Improvement Plan was released in February 2023, to review the goals of the 25-Year Environment Plan 2018 and set out further plans for delivering those goals.

The plan outlines a number of interim, non-statutory targets that underpin the waste reduction target to halve residual waste produced per person by 2042. This includes the following interim targets by 31 January 2028:

- Reducing total residual waste (excluding major mineral waste) to 437 kg/capita per year maximum
- Reducing municipal residual waste to 333 kg/capita per year maximum
- Reducing municipal food waste to 64 kg/capita per year maximum
- Reducing municipal plastic waste to 42 kg/capita per year maximum
- Reducing municipal paper and card waste to 74 kg/capita per year maximum
- Reducing municipal metal waste to 10 kg/capita per year maximum
- Reducing municipal glass waste to 7 kg/capita per year maximum

Carbon reduction targets

In 2019, the UK Government became the first major economy in the world to set a legally binding target to achieve Net Zero Greenhouse Gas (GHG) emissions from across the UK economy by 2050. Through the Climate Change Act, the UK Government is committed by law to reducing GHG emissions by at least 100% of 1990 levels (net zero) by 2050.
In 2019, the Councils each declared the ambitious target of achieving net zero emissions by 2030. Lambeth Council was the first London Borough to declare a climate emergency in response to the threat of global warming.

In July 2023, the UK Government published their intention to include energy from waste (EfW) facilities in the UK Emissions Trading Scheme (ETS) from 2028. This was in response to the Climate Change Committee's 2021 progress report which stressed that the Government needs to address emissions from EfW. The inclusion of EfW in the UK ETS will take effect from 1st January 2028 and it is anticipated that it will support the UK Government's target to halve residual waste arisings per capita by 2042 (from 2019 levels).

The UK Government is currently exploring new ways to monitor the performance of resources and waste management. This could include a move away from weight-based performance metrics (such as tonnage-based recycling rates) and towards impact-based targets and reporting, focusing initially on carbon and natural capital accounting (i.e. value of available natural resources). The benefit of this is to remove an incentive for the recycling of heavier materials over those that may offer greater environmental benefits through recycling. It is important therefore for the Partner Authorities to work together to develop suitable measuring and monitoring frameworks for the Strategy so that the impacts of resources and waste management can be appropriately reported at a local level.

REGIONAL POLICY

The Mayor of London is required by the Greater London Authority (GLA) Act 2007 to produce a municipal waste management strategy for London. Since 2018 this requirement has been fulfilled through the London Environment Strategy (LES)[1], the first integrated environment strategy for London.

The LES is based on four main objectives for waste:

- To reduce waste and the use of single-use packaging;
- To ensure valuable resources are kept in use for as long as possible through reuse or recycling;

[1] London Environment Strategy | London City Hall

- To maximise the availability of recycling facilities and reuse services to ensure there is enough infrastructure in London to support the shift towards a circular economy;
- To make the most of those materials that can't be reused or recycled, by using them to generate low carbon energy.

Within the LES, the Mayor has set targets for the consistent collection of certain material streams, landfilling and recycling of municipal waste and reduction in food waste. These have been set at a London-wide level and the Mayor has chosen not to set individual waste management targets for individual boroughs, instead expecting each of them to provide consistent collection services to residents and continually improve performance to contribute to London-wide targets.

The LES sets the ambition for London to be a zero-waste city, sending no biodegradable or recyclable waste to landfill by 2026 and achieving a 65% municipal waste recycling rate by 2030. As an interim target the Mayor expects waste authorities to collectively achieve a LACW (i.e. all waste collected by local authorities) recycling target of 50% by 2025. Authorities should also make a fair and proportionate contribution to the collective target of 45% household waste recycling rate by 2025 and 50% household waste recycling rate by 2030.

The LES also sets out that by 2020 all London boroughs should collect the six main dry recyclables (glass, cans, paper, card, plastic bottles and mixed rigid plastics (tubs, pots and trays)) from all households. A separately collected weekly food waste collection service should also be provided, including from flats where practical and cost effective. It is noted that more support and funding is needed to increase recycling performance in flats.

With regard to food waste reduction, the Mayor has set a target to reduce food waste by 20% per person by 2025 in line with the Courtauld Commitment and by 50% by 2030, in line with the United Nations Sustainable Development Goal (SDG) 12.3[2].
The LES also has a strong focus on the reduction in single use plastic waste and the Mayor has installed drinking fountains and supported other initiatives to reduce single use water bottles across the city.

Each London borough is expected to demonstrate, through their Waste Reduction and Recycling Plans (RRPs)[3], their actions for cutting waste and boosting recycling and contributing to London's overall performance over a four-year period. The RRPs are used to drive and promote local activity and are individually approved by the Mayor. The current RRPs focus on a two-year period from April 2023 to the end of March 2025, with authorities expected to continue to work on their identified RRP actions until a new RRP is approved.

The GLA has developed the emissions performance standard (EPS) to assess the GHG emissions associated with the collection, treatment, energy generation, and final disposal of LACW. Meeting the EPS is best achieved by:

- reducing waste and increasing reuse
- maximising recycling rates, targeting materials with high embodied carbon (plastics, metals, and textiles)
- generating low carbon energy from organic waste (for example anaerobic digestion of food waste)

[2] UN Sustainable Development Goals, Goal 12: Ensure sustainable consumption and production patterns
[3] Waste Reduction and Recycling Plans (RRPs) - London Datastore

- using waste derived fuels (as a transition fuel) and other low CO_2 transport options
- making sure only truly non-recyclable waste is going for energy generation; and
- avoiding landfill

Boroughs are asked to report this on progress within their RRP updates but no specific targets are set within the LES for GHG reduction associated with waste management. In addition, a minimum carbon emissions performance standard has been set to help decarbonise London's energy supply through incineration of non-recyclable waste.

In 2022, the GLA released a report *Analysis of a Net Zero 2030 Target for Greater London*[4] to reflect the growing national ambitions for tackling climate change. In the report, the Mayor commits to a net zero target for London for 2030, bringing forward the original deadline of 2050 set by the *Zero Carbon London: A 1.5°C Compatible Plan*[5] in 2018.

AFFORDABILITY

Partner Authorities recognise the importance of delivering the waste collection and treatment services in the most cost-effective way. The key to providing an affordable service is through the prevention of waste altogether. This reduces the cost of collecting waste and the processing and treatment fees paid by the Western Riverside Partners to its contractors. Alternatively, diverting more materials for repair and reuse will provide economic benefit.

Without changing current operations or behaviours, the increase in households will lead to **more waste** produced in the future, which will continue to drive up costs. It is therefore imperative that Western Riverside Partners, residents and businesses implement the principles of the waste hierarchy to reduce pressure on future council budgets and therefore its taxpayers.

[4] Element Energy (for GLA), 2022, Analysis of a Net Zero 2030 Target for Greater London

[5] GLA, 2018, Zero Carbon London: A 1.5°C Compatible Plan

CURRENT CONTEXT IN WESTERN RIVERSIDE PARTNERSHIP AREA

LOCAL AREA AND DEMOGRAPHICS

Demographics and the nature of the local area are important factors in understanding the current context for resource and waste management, and to help define future strategic aims and what may be possible. This is because data and research consistently demonstrate trends in waste management performance which are linked to key attributes such as how urbanised or rural an area is, or the demographics of a population. For example, areas that are very densely populated often have fewer gardens, meaning lower amounts of garden waste collected which can then result in lower recycling rates as garden waste collected for compost counts towards recycling figures (and generally weighs more than other recyclables like paper and plastic, which means it accounts for a larger proportion of the weight of the waste).

Understanding the specific context of the area enables the Western Riverside Partners to set realistic but ambitious targets and ambitions for improving their waste and resources management services within their own specific limitations.

The Western Riverside Area i.e. the London Boroughs of Hammersmith & Fulham, Lambeth and Wandsworth and the Royal Borough of Kensington and Chelsea have a combined population of 975,000[6], with 496,000 households covering an area of 35 square miles, making it one of the highest population density areas in England with around 29,000 people per square mile. Of these households, 75% reside in flats, maisonettes or apartments and it is therefore unsurprising that the Partner Authorities are among the most densely populated boroughs in London.

The area consists of a diverse mix of cultures and backgrounds, with some extremely affluent areas intertwined with areas of high poverty and social housing.

Further details on deprivation, occupancy rates for bedrooms and household composition, economic activity, ethnicity and household tenure across the Western Riverside Partners and in comparison to London can be found in Appendix 2

PRACTICAL BARRIERS AND LIMITATIONS

A number of studies have identified common barriers to recycling, many of which are applicable to the Western Riverside area. Within the WRAP Barriers to Recycling at Home[7] study the following universal barriers were identified:

Situational barriers – including not having adequate containers, a lack of space for storage, unreliable collections, unable to get to bring sites;

- Lack of space for storage within a property is a common challenge for those residents living in flats or in Houses of Multiple Occupancy (HMOs)

Behaviour – for example household disorganisation, being too busy with other preoccupations, difficulties in establishing routines for sorting waste and remembering to put it out on collection day;

- Examples of behavioural barriers include putting things in the recycling even if the resident is unsure it can be recycled, which can cause contamination of the recycling

[6] ONS 2022

[7] Barriers to recycling at home | WRAP

Lack of knowledge – such as knowing what materials to put in which container, and understanding the basics of how the scheme works; and

- High levels of transience (residents moving often), combined with a lack of information provided to tenants about services, can limit recycling

Attitudes and perceptions – such as not accepting there is an environmental or other benefit, resistant to householder sorting, and not getting a personal motivational reward from recycling.

- Ease of throwing everything into one bin combined with not having anywhere to store recycling can limit recycling

WRAP's Recycling Tracker[8] (Spring 2023) identifies that age profiles and home ownership affects recycling rates. Residents between 18-35 record lower rates of recycling, and home owners tend to recycle more than people who rent their homes.

ReLondon has produced a report about recycling in flats[9], which noted that people who live in these types of property recycle much less than those who live in houses.

However, despite the barriers identified, the Western Riverside Partners aspire to improve recycling rates in the future with the support of the community and businesses.

The Partner Authorities have identified measures that they will adopt to reduce waste, maximise recycling and reduce their environmental impact within their RRPs.

Key collaboration areas such as the standardisation of the waste collection system and the management of food and garden waste have been considered for the Partner Authorities.

As the Partner Authorities currently provide different collection schemes and as each Partner Authority has its own unique make-up of properties leading to differing constraints, it is noted that changes towards standardisation in current collection schemes are not practicable in some areas. For example, in households with a high level of deprivation, more challenging behaviour is typical with regard to recycling as sorting waste is not a high priority compared to putting food on the table.

Due to space limitations in parts of each of the Boroughs, particularly in areas with narrow streets and flat housing types, there is a lack of space for larger household and/or communal containers to be stored, which leads to a preference for more frequent collections to avoid the presence of overfilled containers and/or side waste on the residential streets. Likewise, these constrained properties are less likely to have the space needed to store food waste containers – either a smaller internal container or the larger external caddy – and they are less likely to have a need for garden waste collection or space to store a garden waste container or sacks.

In addition, typically poor performance observed in flats means recycling performance in the Western Riverside area is likely to be lower when compared to areas with more street-level houses. However, there will be a need to provide food waste collections and garden waste collections under the Simpler Recycling initiative – this will mean that food waste collections will need to be rolled out or expanded in to all properties (including flats) and garden waste collections will need to be introduced in Hammersmith & Fulham and Wandsworth.

[8] Recycling Tracker survey: Spring 2023 | WRAP
[9] Report - Making recycling work for people in flats - ReLondon

The nature of Inner London Boroughs, means that there are many narrow streets with heavy traffic to contend with. This makes it a priority to use services in these areas that will not cause further congestion. In some cases, this might limit the size of collection vehicle that is able to access certain areas.

While the Western Riverside Partners are keen to encourage behaviour change through initiatives such as reuse projects, it is noted that the current Smugglers Way and Cringle Dock WTS facilities are very much constrained in terms of space for these, both being bordered by the River Thames to the north, a road to the south and other occupied residential developments to the east and west.

Likewise, finding additional space will be extremely challenging due to the high population densities and lack of available land, unless there are opportunities to work with businesses/initiatives that already exist within the area.

All of the potential barriers and limitations set out in this section have been considered as part of this Strategy and have informed the ambitious, but realistic targets developed for the Western Riverside Partners.

CURRENT SERVICES

The Western Riverside Partners are responsible for collecting around 370,000 tonnes of municipal waste per annum (2022/23) through household and commercial collections and receipt of items at the Household Waste and Recycling Centre (HWRC) at Smugglers Way Waste Transfer Station (WTS) in Wandsworth. A second WTS is situated at Cringle Street in Battersea. Lambeth Council also has a dedicated Reuse and Recycling Centre for its residents at Vale Street[10].

Under current contractual arrangements, in place until 2032, all co-mingled dry recycling collected is handled through the Materials Recycling Facility (MRF) located at Smugglers Way Waste Transfer Station (WTS). Any non-recyclable waste is processed at the Riverside Resource Recovery Limited (RRRL) Energy-from-Waste (EfW) Facility in Belvedere. The waste is compacted into containers and transported to the site from the transfer stations by the river on barges. This provides a low emission method of transporting waste which helps to reduce traffic congestion and air pollution.

Figure 4: A barge transporting waste from WRWA to the EfW

[10] Reuse and recycling centres | Lambeth Council

Collections

In the financial year **2022/23**, approximately 287,000 tonnes of household waste was collected at the kerbside. Of this, around 65,000 tonnes (or 23%) were sent for recycling or composting through the various dry recycling, garden waste and trial food waste collection schemes.
Each Partner Authority provides its own collection system. The table below provides a summary of the standard household collection schemes for residual waste, dry recycling, food waste and garden waste in each of the Councils in 2022/23.

Table 1: 2022/23 Household Waste Collection Configurations of WRWA Partner Authorities

	Residual waste		Dry recycling		Food waste		Garden waste	
Authority	**Scheme**	**Frequency**	**Scheme**	**Frequency**	**Scheme**	**Frequency**	**Scheme**	**Frequency**
Hammersmith & Fulham	Sack collections	Weekly	Co-mingled	Weekly	Prototype scheme (~6000 properties)	Weekly	N/A	N/A
Kensington and Chelsea	Sack collections	Twice-weekly	Co-mingled	Twice-weekly	Prototype scheme (~6000 properties)	Weekly	Chargeable (£75.90/yr)	Fortnightly
Lambeth	Wheeled bin collections	Weekly	Co-mingled	Weekly	Co-collected with Garden Waste	Weekly	Chargeable (£75.80/yr)	Weekly
Wandsworth	Sack collections	Weekly	Co-mingled	Weekly	Prototype scheme (~2000 properties)	Weekly	N/A	N/A

Several schemes have changed this year (2024), including Lambeth moving to an alternate weekly collection of residual waste.
In 2022/23 only Kensington and Chelsea and Lambeth provided a garden waste service on a charged basis, although in July 2024 Hammersmith & Fulham will also be starting a garden waste collection service.

Waste Composition

A waste composition analysis was conducted on the collected residual waste sacks/bins in 2022, illustrating the typical make-up of waste thrown away by residents across the area (Table 7). Disposing of residual waste cost more than recycling so it's important to understand what's in the residual waste bin that could be recycled.
The analysis found that food waste comprises nearly 40% of the bin. Of the remaining items, approximately 25% comprised of items which could have been recycled either through the dry recycling and garden waste collection schemes from home, or through the HWRC (6% paper and card, 4% plastics, 4% glass, 4% textiles, 1% WEEE and 6% garden waste). 6% of the residual waste stream is currently made up of plastic films, which are not currently accepted through the dry recycling collection scheme, and 30% made up of other general waste such as nappies, tissues and smaller fractions.

Table 2: Average Waste Composition across the Western Riverside Partners

Category	Average composition across boroughs
Paper & card	5.9%
Dense plastic	3.7%
Plastic films	6.2%
Glass	3.5%
Metal	0.6%

Category	Average composition across boroughs
Textiles	4.0%
WEEE	0.6%
Garden waste	5.7%
Food waste	39.4%
Other (residual) waste	30.3%

CURRENT INITIATIVES

Alongside the delivery of collection treatment and disposal services the Western Riverside Partners deliver a wide range of initiatives to reduce waste, facilitate reuse, encourage repair, boost recycling and support the transition to a more circular economy. Initiatives are delivered locally by individual Councils or collectively as partners.

Supporting the Circular Economy

The circular economy is a system where materials never become waste and nature is regenerated. In a circular economy, products and materials are kept in circulation through processes like maintenance, reuse, refurbishment, remanufacture, recycling, and composting.
The four Partner Authorities each produce RRPs, to support the Mayor of London's strategies. These explain how they will prevent waste, increase reuse and improve recycling, supporting the transition to a more circular economy. The actions included within the RRPs will contribute to the goals and targets in the London Environment Strategy.
Examples of initiatives to prevent waste include:

- Home composting schemes – to promote reducing waste at source by offering subsidised home composting bins to residents through the 'Get Composting' scheme.
- Real nappies schemes – providing residents with free and discounted reusable nappy vouchers to promote the use of reusable nappies.
- Library of Things – a place where you can borrow useful household items for DIY, such as tools, cleaning equipment, gardening implements, events equipment, entertainment and more for a small hire fee per day.
- Contributing to London Councils One World Living (OWL) programme[11] – a collaborative scheme for local authorities within London to change residents' attitudes around sustainability, with a goal to reducing London's consumption emissions by two thirds by 2030. The programme focusses food, textiles, electricals and plastics.
- Developing Circular Economy Strategies to support the Councils, residents and businesses adopt and embed circular activities.

Residents are also encouraged to donate good quality items for reuse. Local outlets and organisations including Emmaus[12], Traid[13] and British Heart Foundation[14]are signposted on the Partner Authorities' websites as well as online platforms such as Freegle and Gumtree. Residents can also bring items to the HWRC located at Smugglers Way and deposit them in the reuse space where they can be accessed by the ReWork reuse project.

[11] One World Living | London Councils
[12] Donate goods - Emmaus UK | recycle your unwanted furniture
[13] Book a Free Clothes Collection to Donate to Charity Retailer TRAID
[14] Book a free furniture and electrical goods collection near me - BHF

The ReWork reuse project

The 'ReWork' reuse project[15] was established at Smugglers Way Transfer Station in 2011, following a successful funding application submitted to the London Waste and Recycling Board (LWaRB) and in partnership with Cory Riverside Energy. A workshop is based on site that is used to refurbish and test reusable large electrical appliances, bicycles and other household goods.

The project provides affordable items for people who need them and back-to-work opportunities for people who are long-term unemployed – delivering social value. It encourages the reuse of most easily reusable, repairable or recyclable bulky items which should be in good condition or in a repairable state.

It's operated by Groundwork London and with the support of WRWA and Cory, delivers three aims:

- Refurbishing and reusing unwanted domestics items, particularly white goods
- Providing training and paid work experience to disabled and long term unemployed local people. There are now fifteen full-time members of staff in post and six trainees on waged work experience.
- Providing high quality affordable large electrical appliances to low-income families.

Reusable items are distributed through a wide variety of London charities and it is this access to a large number of varied outlets that is one of the major strengths of the scheme and what sets it apart from others.

In 2022/23, 4,500 electrical items were refurbished in the workshop including washing machines, fridges, cookers, microwaves and other household electrical goods. These appliances that would have been scrapped, recycled or sent to landfill, are returned to full working order and given a second life.

Education programme

The Western Riverside Partners place great importance on education, and deliver a range of behaviour change activities encouraging residents to recycle more and waste less. Education specific activities are delivered on site at the Smugglers Way Visitors Education Centre or as part of a schools outreach programme, which include:

- Free class trips for Key Stage 1 and above

[15] Reuse Workshop - WRWA

Pupils and staff groups from the Western Riverside Partners are able to visit the Waste Education Centre to see what happens to their waste and recycling and learn the importance of the 3 R's – Reduce, Reuse and Recycle. Visitors can observe the unloading of collection lorries, see the cranes which lift containers of waste onto barges on the Thames, watch the machine sorting of recyclables and meet the composting worms.

- Adult group tours

  Open to residents and businesses of the Western Riverside area, tours of the Smugglers Way site are provided with regular free daytime tours running throughout the year on request.

Online resources are also available including:

- Food waste reduction in schools - A series of resources are available online to support schools with tackling food waste, including ideas for engaging children in reducing their food waste and support with setting up 'cook-to-order' systems.
- Home learning - WRWA's website provides worksheets for Key Stage 1 and 2 to learn about reducing, reusing and recycling their waste.

Supporting Education

The education officers have responsibility for using the Visitors Education Centre to host and conduct educational talks and tours for schools, colleges, community groups, residents' associations and other interested parties based in the Western Riverside area, with particular emphasis on the three R's and the importance of recycling correctly. Their responsibilities also include the promotion of these education services and outreach work in schools within the area.

By the end of the 2022/23 school year 114 class visits had been hosted at Smugglers Way and 31 in-school workshops had been provided. In addition to their work with schools, the Team also worked with local residents, community groups and universities and the Team have continued to run regular visits to site. In 2022/23, there were 24 on-site Adult tours and three off-site visits.

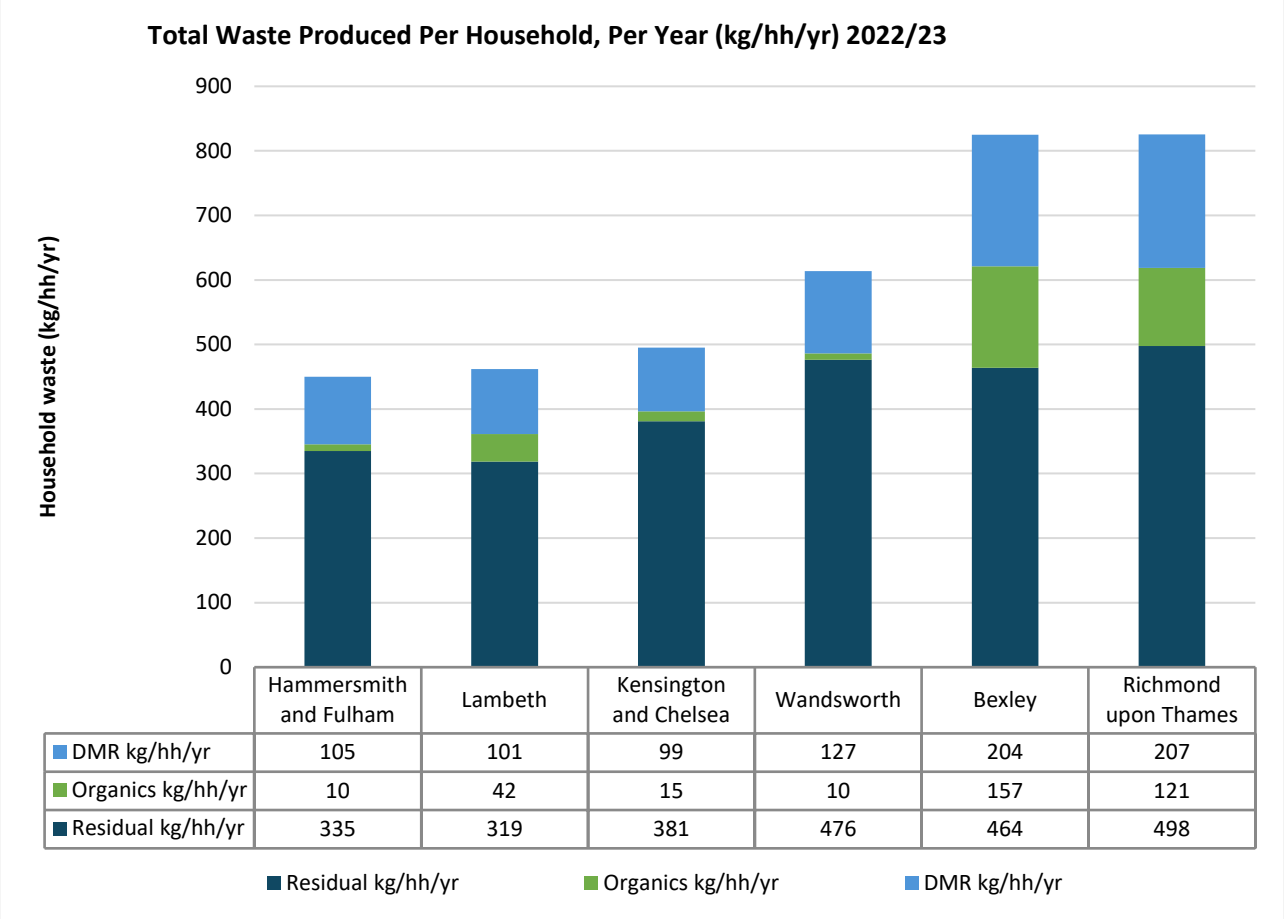
CURRENT PERFORMANCE

Leading the way

The Western Riverside Partners are leading the way on reducing residual waste. There has been a steady decline in residual waste collected per household, falling from 462.9 kg/hh/yr in 2018/19 to 408.5 kg/hh/yr in 2022/23. This is amongst the **lowest level of waste generation** of all local authorities in England and in terms of the waste hierarchy is the best possible approach to managing waste.

Figure 7 below, shows the lower levels of residual waste arisings compared to two outer London Boroughs where gardens are more plentiful and garden waste is collected.

Figure 5: Total Waste Produced Per Household, Per Year (kg/hh/yr)



	Hammersmith and Fulham	Lambeth	Kensington and Chelsea	Wandsworth	Bexley	Richmond upon Thames
DMR kg/hh/yr	105	101	99	127	204	207
Organics kg/hh/yr	10	42	15	10	157	121
Residual kg/hh/yr	335	319	381	476	464	498

The Western Riverside Waste Authority had a household recycling rate of 24.3% in 2022/23, placing it collectively in 334th place out of 343 English local authorities. The collective recycling rate is significantly below England's average of 43.3% and the lowest among the London joint waste disposal authorities; West London Waste Authority (36.1%), East London Waste Authority (31.0%) and North London Waste Authority (30.6%) for the same year.

In the past five years, recycling rates across England have declined slightly, including in London, but the Western Riverside Partners remain comparable with other London local authorities (Figure 5) for dry mixed recycling, featuring in the top 50% overall and amongst the best inner London boroughs. Performance improvements could be made on organics in terms of food waste, but as previously discussed garden waste contributions are reliant on households having gardens and 75% of households in the areas are flatted properties.

Figure 6: 2022/23 Recycling Rates for dry recycling and organics, London Authorities

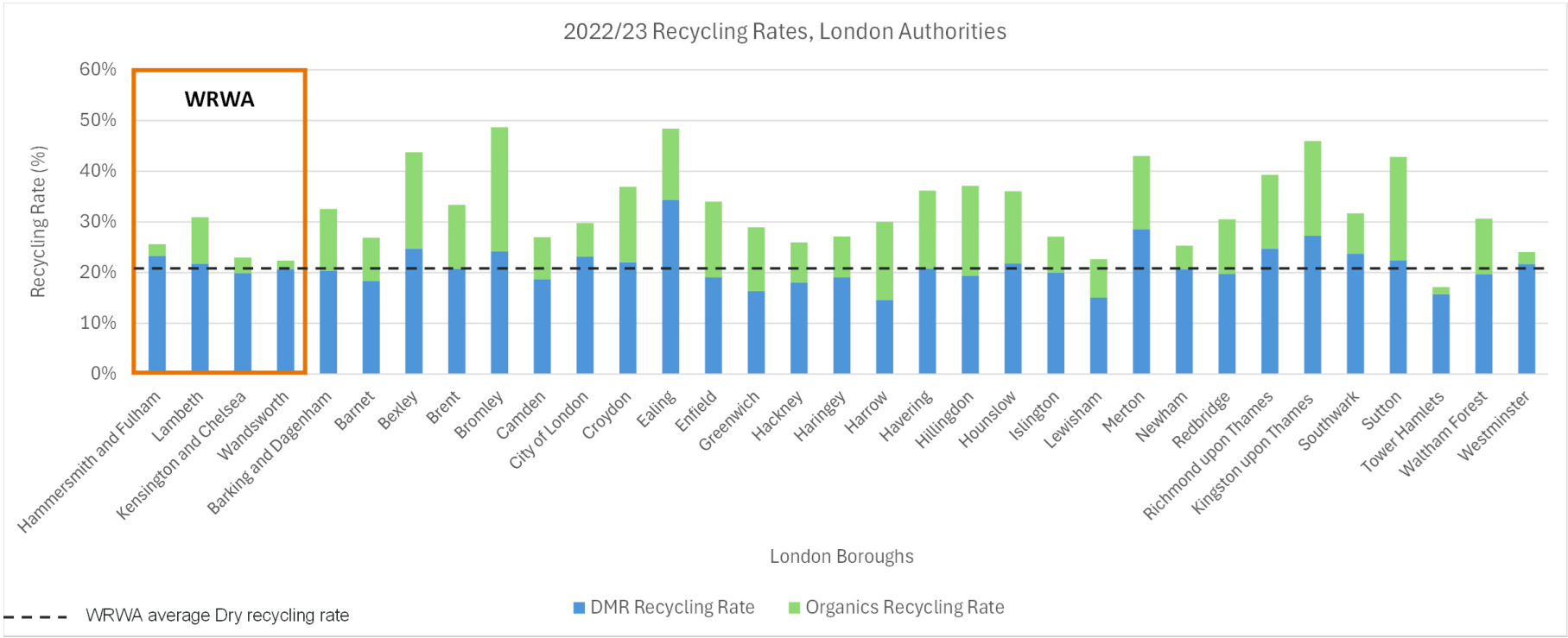


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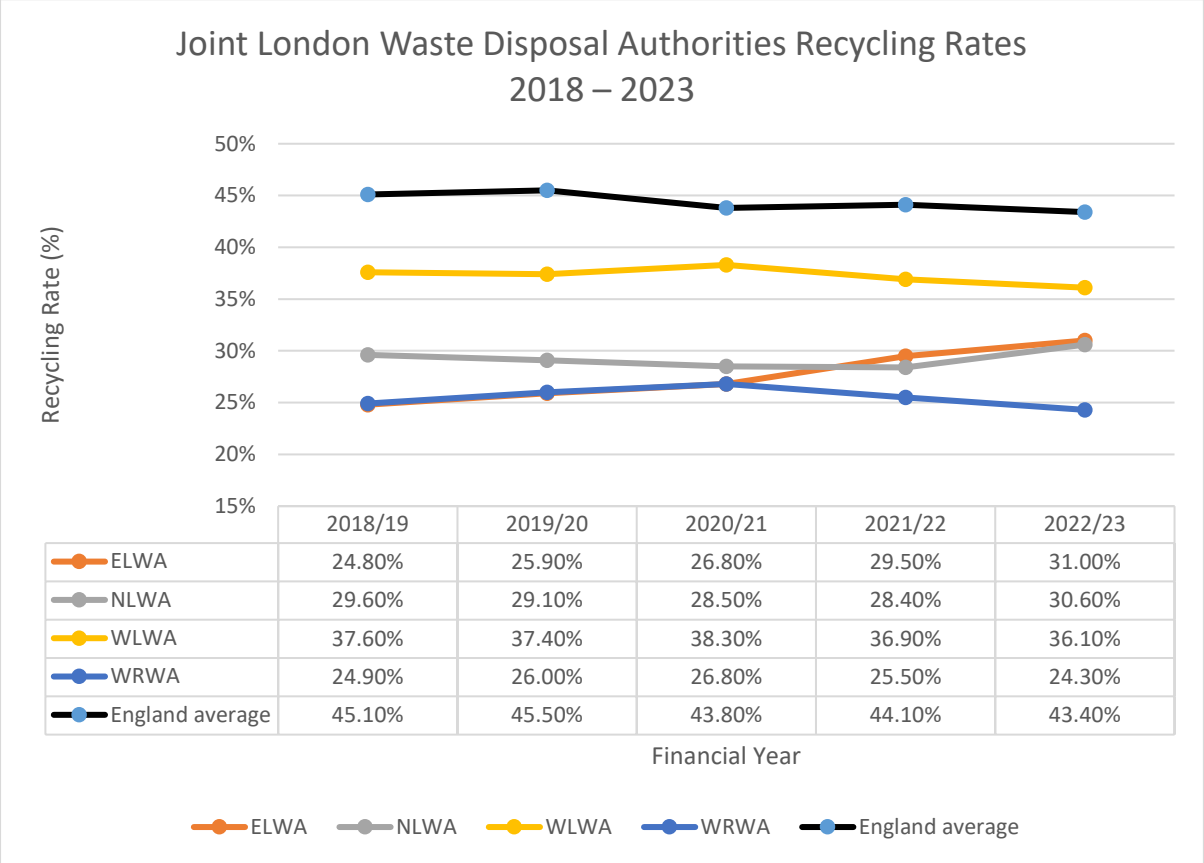
Figure 6 shows the recycling rate for the Western Riverside Partners over the last five years, compared with the same data for the other London joint waste disposal authorities.

Figure 7. WRWA and other joint London waste disposal authority recycling rates 2018 – 2023[16].



	2018/19	2019/20	2020/21	2021/22	2022/23
ELWA	24.80%	25.90%	26.80%	29.50%	31.00%
NLWA	29.60%	29.10%	28.50%	28.40%	30.60%
WLWA	37.60%	37.40%	38.30%	36.90%	36.10%
WRWA	24.90%	26.00%	26.80%	25.50%	24.30%
England average	45.10%	45.50%	43.80%	44.10%	43.40%

Recycling capture rates

Based on waste collections in 2022/23, the capture rates for each recyclable material are presented below (Table 7). The capture rate represents how much of the recyclable material has been captured in the recycling bin and how much remains in the residual bin.

The Western Riverside Partners have high recycling capture rates for recyclable card and cardboard of 78%. Recyclable glass also has a high capture rate of 66%. These materials are closely followed by recyclable steel, aluminium and paper which have capture rates of between 57% and 60%.

As previously mentioned, only one Partner Authority out of the four has a food collection service for all street-level properties (although others are conducting trials), this reflects the opportunity to increase the food waste capture rate from 7%. Similarly, for garden waste, only two of the four Partner Authorities offer a garden waste collection service, which is reflected in the capture rate of 15%. For textiles as well, although each of the Partner Authorities have bring banks for clothes (and shoes) these aren't captured at the kerbside. Residents are advised to check their Local Authority's website for the latest updates on what can be recycled.

[16] https://www.letsrecycle.com/councils/league-tables/

Table 3: Material Capture Rates

Material	Capture rate (%)	Remaining in residual (%)
Recyclable paper	57%	43%
Recyclable card & cardboard	78%	22%
Liquid cartons	36%	64%
Plastic bottles	47%	53%
PTTs	35%	65%
Recyclable glass	66%	34%
Steel	60%	40%
Aluminium	60%	40%
Textiles	7%	93%
WEEE	17%	83%
Garden waste	15%	85%
Food waste	7%	93%

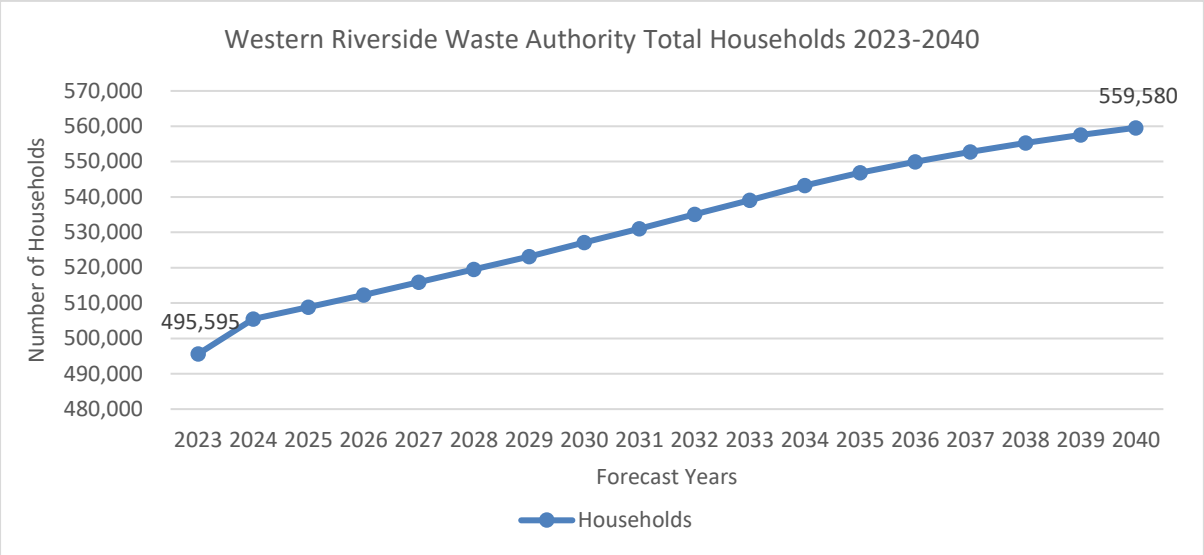
PREPARING FOR THE FUTURE

In order to prepare for the future, there is a need for this Strategy to consider how key factors may change over time, including population growth and the amount of waste which is produced within the Western Riverside area. This section looks at future projections to help understand the challenges that will be faced, and to inform the development of the Strategy so that it takes into consideration these key factors.

Household growth

The graph below shows the projected total number of households for the Partner Authorities for 2023 to 2040.

Figure 8. Projected total number of households for WRWA 2023-2040

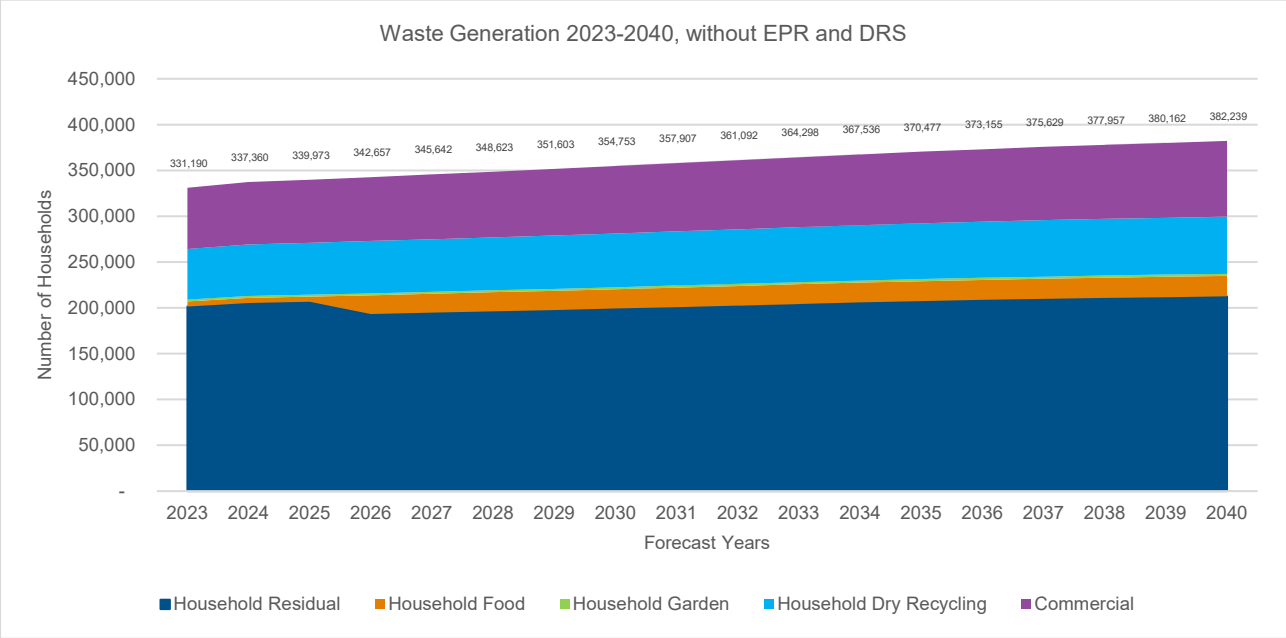


The total number of households is expected to increase by 13% from 495,595 households in 2023 to 559,580 households in 2040.

Waste arisings

It is reasonable to expect that the population within the Western Riverside area will increase along with this projected increase in the number of households, which means there will be more people producing waste. Figure 9 shows the projected waste arisings, assuming that the amount of waste generated per household remains the same – i.e. that there is no change in waste generation as a result of policy changes such as Simpler Recycling, EPR and DRS. The graph below also takes into account the rollout of food waste borough-wide in 2026 in accordance with policy requirements.

Figure 9. Waste generation 2023-2040, without EPR and DRS



Key forecast headlines

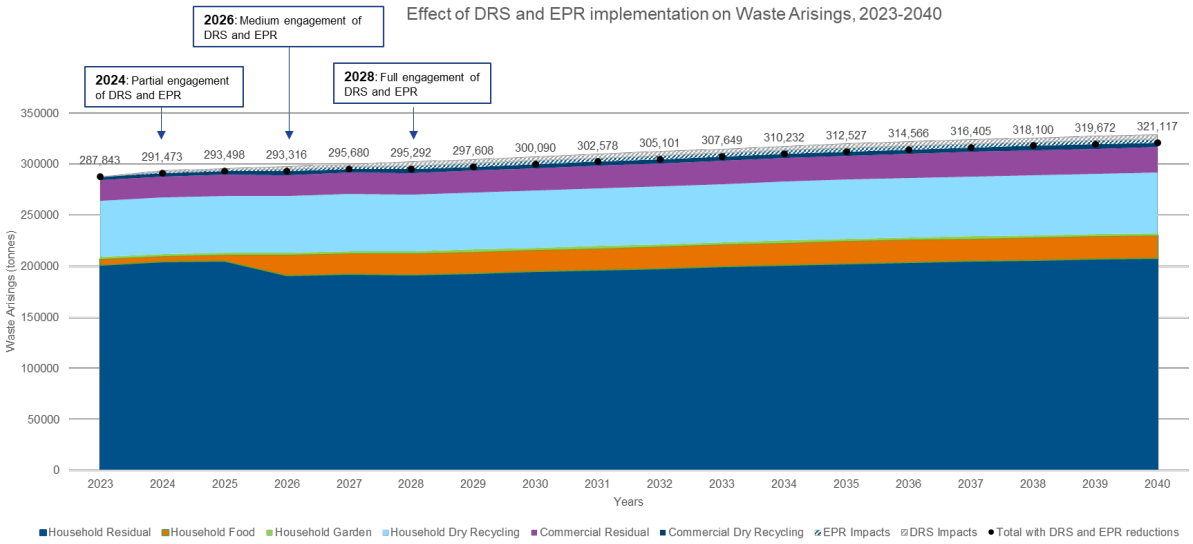
The above graph shows that, without changes to policy, it is likely that there will be an increase in waste arisings as a result of population growth.

The increase in the number of households and associated increase in waste arisings as well as the roll out of new collections such as food waste, will result in increased requirements for waste collections and processing. As a result, more vehicles and staff will be required to collect waste within the Western Riverside area, which will result in additional costs for waste collections and may place pressure on depots for vehicle parking.

There will also be a requirement for additional capacity for handling and processing this waste, which would place additional demands on existing infrastructure including the Smugglers Way and Cringle Dock waste transfer stations, the HWRC, and other processing infrastructure such as residual waste processing at the EfW and dry recycling processing at the MRF.

Figure 10 provides a forecast of municipal waste arisings taking into account projected impacts of policy changes.

Figure 10. Projected impact of EPR and DRS on Waste Generation 2023-2040



The graph shows that the combined effects of DRS and EPR could lead to an estimated 2.2% reduction in household residual waste and 4.7% reduction in household dry recycling waste in 2040. Some waste streams including household food and garden waste will not be affected by the EPR and DRS policies.

Overall, there could be an average reduction of 2.5% in total household waste generated in 2040 if EPR and DRS are implemented.

Costs associated with waste management

A significant proportion of the costs for managing waste are associated with residual waste treatment. For 2022/23 the combined collection and treatment costs for the Western Riverside Partners totalled £61 million, and approximately 52% of this was for residual waste treatment. The balance of costs consisted of waste collections and the processing of recyclables.

The cost (£/tonne) of residual waste processing is likely to increase significantly in coming years. From 2028, the UK Emissions Trading Scheme (UK ETS) will apply to waste incineration, meaning that there will be a 'cost of carbon' which will need to be taken into account for residual waste processing. The intention of the UK ETS applying to waste incineration is to financially incentivise the reduction of residual waste arising (particularly plastic waste) and to promote decarbonisation of the energy from waste sector through initiatives such as Carbon Capture and Storage. As such, it will be important for the Western Riverside Partners to reduce residual waste arisings in order to mitigate the potential cost increases. Early estimates by the Environmental Services Association put the price of carbon to be between £40 - £150/tonne, which would mean significant additional costs for the Western Riverside Partners. In the context of increasing households / population, this will mean reducing the amount of residual waste generated in each household which can be achieved either by reducing overall waste arisings through waste prevention and reuse initiatives and by increasing the proportion of material which is recycled. Implementing circular economy principles, introducing new recycling services, expanding existing recycling

services, and undertaking communications with residents and business are ways in which this could be achieved.

Funding for waste management services

The packaging EPR initiative has a core theme to implement the 'polluter pays' principle, which will mean passing the cost of dealing with packaging waste on to the producers of the packaging material. At present, local authorities pick up the cost of dealing with this packaging waste through waste management services. Whilst the details of the mechanics for the EPR cost system are currently being worked up by Government, it is understood that the intention will be to provide EPR payments to local authorities to help pay for the costs of managing the packaging waste. This should mean that the Western Riverside Partners will be financially compensated for managing these wastes, although the value of these payments is not yet clear.

Based on this knowledge, the Western Riverside Partners will aim to reduce the cost of residual waste treatment by encouraging residents and businesses to reduce waste, repair and reuse items and recycle more, which will have the benefit of reducing both collection and disposal costs.

VISION, THEMES AND ACTION

Vision setting is a key step in the development of the Strategy. The vision sets the level of ambition and the collective priorities of the Western Riverside Partners to drive change while ensuring that these changes can be realistically achieved.

Officers and Elected Members from the Western Riverside Partners collectively developed a vision and selected 9 strategic themes reflecting the high ambitions of the WRWA Partners. In general Officers and Elected Members believe that current performance is good in terms of waste reduction and performing in line with that of similar authorities and partnerships within London for recycling, but that additional efforts need to be made so that it can become a leading example of good waste management practices of all similar authorities in the UK.

The Western Riverside Partners recognise that more can be done to minimise waste arisings, maximise reuse opportunities and divert more recyclables from residual waste into recycling. Unavoidable waste will be converted into heat and power through EfW treatment in preference to other disposal options.

A collective draft vision statement for the Strategy has been agreed:

"The Western Riverside partners will work together with our residents and businesses to prioritise waste prevention, reduce our carbon emissions and environmental impacts, and provide customer focused waste and recycling services that maximise value from the materials we manage."

ACTIONS TO MEET PRIORITIES

To achieve the Vision of this Strategy, the Western Riverside Partners, residents and businesses will need to work together to drive change.
Through engagement with Officers and Elected Members, a set of strategic themes and actions, aligned to aspirations have been identified to help achieve the Vision, focusing on key areas including waste prevention, enhanced customer service and a reduction in environmental impact.
The actions have been grouped under four areas, which will have dedicated action plans within which the individual actions can sit, and progress can be monitored. The action plans will be developed following adoption of the Strategy. Actions under 'Delivering Best Value and preparing for the future' will be monitored as part of the WRWA annual review process.

- Transitioning to a circular economy
- Achieving Net Zero
- Collaborating and Communicating to amplify our impact
- Delivering Best Value and preparing for the future

Actions will also cross-reference to existing actions outlined in the boroughs Waste Reduction and Recycling Plans (RRPs).
Each of the actions link to one (or more) of the nine strategic themes:

1. Customer Service
2. Low Carbon
3. Financial Considerations
4. Waste Prevention
5. Flexibility
6. Deliverability
7. Increased Recycling
8. Meeting Government Changes
9. Collaboration

TRANSITIONING TO A MORE CIRCULAR ECONOMY

Waste prevention, reuse, repair and recycling all form part of the circular economy, with reducing the amount of waste produced providing the greatest environmental and cost benefits. Through making considered choices when purchasing items, waste can be reduced. This includes buying items with longer lifespans, choosing items which can be easily repaired, avoiding food leftovers and using refillable containers.

Donating items for reuse and buying reused items also provides environmental and cost savings with the additional benefits of social value including job creation and skills development.

For those items that can't easily be prevented or reused then recycling is the next best option and there are opportunities to increase recycling levels across the Western Riverside Partners. Studies on the composition of the residual waste generated in the area show that nearly a quarter of sack/bin collections contain waste that could be recycled or composted through services that are currently provided to residents. Further participation from our residents to capture these valuable materials and ensure that the right items are being placed in the right container, reducing contamination.

Actions to support the transition to a more circular economy	Linked themes
Develop a circular economy action plan, which will allow the Western Riverside Partners to investigate and plan for all identified waste prevention, reuse, repair and recycling actions.	4
Develop a social value policy and investigate options for measuring social value across the range of activities the Western Riverside Partners deliver	
Continue to promote existing waste prevention activities and promote / signpost new activities across a range of areas including (but not limited to) real nappy schemes, sanitary wear, textiles repair, repair cafes, give and take days, swishing events for clothes, toy libraries, home and community composting.	4
Support the Mayor's target to reduce food waste by 50% by 2030, through promotion of food waste reduction initiatives and support of local and national food waste reduction campaigns.	4
Maximise and promote opportunities to reuse items in good cosmetic condition, encouraging residents to book a reuse collection	4

Actions to support the transition to a more circular economy	Linked themes
service for items that are in good condition, rather than Bulky Waste collection service for disposal of items they no longer need or want.	
Seek opportunities to adjust Bulky Waste collection services to enable more reuse of bulky household items.	4
Investigate opportunities to set up and operate one or more 'reuse hubs / shops' located in the Western Riverside area to provide more sites for repair and reuse where residents can 'bring and buy' a range of household goods delivering cost savings and social value.	4
Engage with Partner Authority planning teams to identify opportunities where circular economy can be embedded into planning policy	
Expand food waste collection services to non-domestic premises by 2025 by 31st March 2025 and all households by 31st March 2026 in line with the Environment Act 2021. Explore the provision of food waste collections for businesses.	7, 8
Explore opportunities to expand household collections to include: • Aluminium foil, food trays and aerosols • A wider range of packaging and containers • Textiles, small WEEE and batteries • Recyclable plastic film (required by March 2027) Where economic to do so and where relevant markets exist for recycling.	7, 8
Identify opportunities to extract more recyclable material from bulky waste, street cleansing waste and fly tipped materials and investigate options for recycling other materials such as mattresses.	7
Identify opportunities to increase recycling rates in flats, utilising ReLondon's Toolkit - Flats Recycling Package, or other suitable approaches.	7
Meet a minimum performance of 35% LACW by 2030, with a stretch target of 50% by 2040. Meet a minimum performance of 30% HHW recycling by 2030, with a stretch of 45% by 2040	7
Work towards the Government target for reducing municipal residual waste to 333 kg/capita per year by 2042, as outlined in the Environmental Improvement Plan 2023.	7, 8
Identify options for a garden waste collection service for those areas that have gardens but don't currently have access to a service.	7, 9

ACHIEVING NET ZERO

The reduction of carbon emissions is crucial to mitigating the risks and impacts of global warming. Reuse and recycling of items removes the need to produce further products from precious raw materials, while preserving the energy embedded in them during production. Reducing the environmental impact of collecting and treating WRWA's waste is important in reaching net zero goals. By adopting circular economy principles, maximising resources and ensuring no waste is sent to landfill, the environmental impacts of the waste service can be reduced.

Actions to achieve Net Zero	Linked themes
Identify key areas of focus to reduce emissions through the development of a Net Zero action plan.	2
Quantify the GHG emissions across the whole service in a clear, transparent and accountable way.	2
Contribute towards the Mayor's net zero plan for London for 2030 by reducing waste emissions, adopting the principles of the waste hierarchy.	2, 4, 7
Continue to send all truly non-recyclable waste to EfW, with no waste sent to landfill and incorporate the assessment of carbon emissions performance into the procurement criteria for any new waste disposal contract, ensuring best available technology is available for reduction in air pollution emissions. This supports the Mayor's ambition for a zero-waste London, sending no biodegradable or recyclable waste to landfill by 2026.	2, 8
Continue to reprocess the by-products of the EfW process, for example by extracting metals from incinerator bottom ash and using the ash for construction aggregate.	2, 7
Reduce the environmental impact of our waste collection and treatment activities by adopting strategies to minimise emissions from waste service operations, transport, transfer and treatment, including supporting the development of carbon capture and storage for managing emissions from EfW and ULEZ and LEZ compliant fleet.	2, 3
Explore options to transition to low carbon fuels and electricity sources where infrastructure allows.	2, 6

COLLABORATING AND COMMUNICATING TO AMPLIFY IMPACT

The key to success is through knowledge sharing, participation and engagement, which can only be achieved through collaborative efforts.

It is important that partnership arrangements with community organisations, housing associations, local authorities, and other key stakeholders are developed to enhance work on waste prevention, reuse and recycling. It's also important that the waste and recycling services the Western Riverside Partners deliver are customer-focused, cost-effective, effectively communicated and reliable so that residents and businesses have the confidence that their individual actions are impactful within the local and wider environment.

Action to amplify impact through collaboration and communication	Linked themes
Develop a collaboration and joint communications plan to amplify the impact of the Western Riverside Partners activity.	1, 9
Review how the Western Riverside Partners work together and ensure structures are fit for purpose to deliver the strategy and work effectively	
Provide easy-to-use and clearly defined services, that respond to local resident needs, and encourage residential participation. Consider co-production approach, working with residents and other service users in the development of new service offerings.	1
Monitor customer satisfaction with our services including: • customer surveys at our HWRC • feedback from our customer call centres Ensure customer service and feedback is an integral part of new service design to support service optimisation	1
Undertake education activities including school visits to the education centre and behaviour change to support residents to: • reduce their waste • increase the capture of materials that can otherwise be recycled or composted from the residual waste stream. Studies on the content of the residual waste bins/sacks shows that paper and card, garden waste and textiles are areas of particular focus.	7, 4
Ensure effective signposting to charities that reuse household goods, such as the British Heart Foundation, Emmaus, ReWork for furniture and electrical and electronic equipment and TRAID textiles.	4
Work collaboratively with other authorities to maximise our efforts in moving the world to a more circular economy	9, 4
Investigate ways to work closely with ReLondon, e.g. through communications campaigns which play an active engagement role to promote resident behaviour change and increase participation in reuse, recycling and the circular economy.	9

Action to amplify impact through collaboration and communication	Linked themes
Support national and regional campaigns on waste prevention, and develop local campaigns to support projects and services.	9, 7, 4
Maximise social value benefits through waste and resource management, by encouraging upskilling and the creation of new job opportunities within the sector. This includes the provision of opportunities for long-term unemployed through the reuse and repair projects and outreach work.	9, 4
Engage residents, community groups, and local business in the development and implementation of the strategy and action plans, primarily through the public consultation process and then through the ongoing reviews.	1

DELIVERING BEST VALUE AND PREPARING FOR THE FUTURE

It is of upmost importance that the Western Riverside Partners deliver value for money for customers through services delivered. The Western Riverside Partners are required to ensure that business is conducted so that public money is safeguarded and properly accounted for and used economically, efficiently and effectively to achieve best value. Budgets are monitored and regular reports are presented to Members four times per year. An annual review demonstrating performance is also published.

In order to deliver best value, future changes that may affect services and infrastructure must be understood and where possible planned for so that flexibility and resilience can be built-in to operations. Changing consumer habits and behaviours, forthcoming regulations, even climate change will influence the types of materials collected, the way in which they're collected, treated and processed as well as the future service costs. The Western Riverside Partners want to ensure that they are compliant with any forthcoming regulations but are also strategically poised to capitalise on the benefits and mitigate challenges brought by policy shifts.

Actions to Deliver Best Value and Prepare for the Future	Linked themes
Undertake annual progress monitoring through the lifespan of the Strategy to measure progress against strategy priorities and ensure WRWA remains on track with achieving its goals. A full review will be undertaken every 5 years to ensure the Strategy remains flexible and appropriate to current circumstances.	1
Review progress against the action plans every four months to ensure the Western Riverside Partners are delivering on the actions which support the strategy.	
Continue to provide financial incentives for the Western Riverside Partners to reduce overall costs of treatment and disposal by moving waste up the waste hierarchy and maximising diversion of recycling and food waste from residual waste	3
Maximise the value from the existing waste treatment contract through increased capture of re-useable and recyclable material.	3
Ensure future contractual arrangements are comprehensive, competitive and affordable across their lifespan.	3
Demonstrate to residents and businesses the economic value in preventing/minimising waste, repairing items and buying reused through signposting to local resources including the reuse workshop located at Smugglers Way	3, 2, 4
Seek to maximise the value of existing assets through intensification of use and redevelopment, where viable.	3
Review existing assets to understand potential requirements for futureproofing e.g. through changes to waste composition driven by consumer habits and regulatory changes (EPR and ETS)	3

Actions to Deliver Best Value and Prepare for the Future	Linked themes
Pursue a progressive and innovative approach to waste management where waste prevention is prioritised and recycling maximised.	5
Ensure services and infrastructure / assets meet all future needs including regulatory changes and increases in housing and population	6
Seek opportunities to work more closely with neighbouring Waste Disposal Authorities (beyond regular scheduled meetings) to enhance resilience and provide flexibility	5, 9
Explore opportunities to expand the existing reuse workshop located at Smugglers Way (ReWork) space to increase the items that can be reused and the amount of goods that can be repaired	5
Undertake a review of HWRC provision at Smugglers Way, including site layout and signage and a review of information provided on the Authority's website to ensure it maximises recycling on site.	7, 1, 4

MONITORING PROGRESS

This Strategy sets out the framework for a long-term approach to managing resources and waste across the Western Riverside area from 2025 to 2040. In order to assess whether the aims and priorities of this Strategy are being met and to ensure it remains appropriate to evolving national and regional policy (including the London Environment Strategy), it is important to establish clear measures which can be monitored and reported on.

Working together, the Western Riverside Partners will carry out annual reviews (subject to resources and individual council activities) to monitor performance and ensure the approach continues to be relevant, appropriate and effective. This includes monitoring specific contributions to the Mayor of London's targets in any future update of the LES. Results of the annual review will be published on the Western Riverside Partners websites.

Once the Strategy has been adopted, actions within the following areas will be further developed:

1. Transitioning to a circular economy
2. Achieving Net Zero
3. Collaborating and Communicating to amplify our impact
4. Delivering Best Value and preparing for the future

Three action plans will be created covering areas 1-3 and actions relating to 'Delivering Best Value and preparing for the future' will be incorporated into the WRWA annual monitoring and review process.

Actions within the plans will incorporate those listed within the Strategy, they will also cross-reference to existing actions outlined in the Partner Authorities Waste Reduction and Recycling Plans (RRPs).
Each action will have a defined owner and timeframe for delivery.

Review cycle

- Strategy adopted
    - Action plans developed
    - Formal review cycle for the strategy set
    - Review of WRWA's Joint Waste Management Policy
- Every 4 months
    - Progress against actions reviewed
- Annually
    - Progress against actions reviewed
    - Actions reviewed to ensure that they remain fit for purpose
    - Plans updated to incorporate new actions to support delivery of the Strategy
    - Annual review of progress against the strategy published on the WRWA website
- Every five years OR more frequently where a substantial change occurs
    - Strategy review

PERFORMANCE INDICATORS

This section identifies the performance indicators that will be used to monitor progress against the aims and objectives of the Strategy.

The Western Riverside Partners continually monitor their performance, through daily collation of waste tonnage data to establish trends for each type of recycling or waste received. This information is reported on a quarterly basis to the Government (via Waste Data Flow), while the performance of each Council is reported as part of the RRP requirements set out by the Mayor of London.

The following weight-based key measures are currently reported to the GLA and the UK Government:

Metric	Meaning	Link to Action (s)
Total residual (non-recycled) waste per household (kgs/household) **Total annual household waste per person (kgs/capita):**	This is the amount of residual household waste that residents dispose of, either through their kerbside collections, at the HWRC or through street litter bins. A positive performance is indicated by a reduction in these figures.	These measures will allow monitoring against the Environmental Improvement Plan's target for reducing municipal residual waste to 333 kg/capita per year.
Total annual household avoidable (edible) food waste per person (kgs/capita):	This is based on estimated avoidable food waste produced which was once edible (e.g. slices of bread, apples, meat). Each Borough is expected to estimate this figure based on either their own composition data or through WRAP[17]'s food waste guidance. A positive performance is indicated by a reduction in these figures	These measures will allow monitoring against the Mayor's target to reduce food waste by 50% by 2030.
Annual household waste recycling rate and annual LACW recycling rate (% by weight):	In addition to continuing to use the existing measure of household waste reused, recycled or composted, an expanded metric which covers all LACW (i.e. including household and commercial waste collected by the authority). Use of these metrics is in line with the LES, which has set reuse, recycling and composting targets for both LACW and household waste.	This Strategy has set a minimum performance of 35% LACW by 2030, with a stretch target of 50% by 2040, and a minimum performance of 30% HHW recycling by 2030, with a stretch of 45% by 2040

[17] WRAP is a climate action NGO working with businesses, individuals and communities to achieve a circular economy, by helping them reduce waste, develop sustainable products and use resources in an efficient way.

Metric	Meaning	Link to Action (s)
Proportion (%) of properties receiving the Mayor's minimum level of service for household recycling:	This is disaggregated by property type (i.e. kerbside, flats, flats above shops) and concerns the six main dry recycling materials (glass, cans, paper, card, plastic bottles and mixed rigid plastics (pots, tubs and trays)) and separate food waste collections.	These measures will allow monitoring against the Environment Act 2021, in which a core set of dry recyclables, and food waste must be collected from all households by 31st March 2026.
Proportion (%) of waste fleet heavy vehicles that are ULEZ compliant	To align with the Mayor's ambition that all new vehicles under 3.5 tonnes are zero emissions capable by 2025, all heavy vehicles are fossil-free from 2030, and for zero emission fleets by 2050.	These measures will help to reduce the environmental impact of waste collection and treatment activities through the adoption of strategies to minimise emissions from waste service operations, transport, transfer and treatment
Performance of LACW activities against the Mayor's EPS (tonnes of CO2eq per tonne of waste managed):	GLA has provided an online calculator whereby boroughs can upload waste tonnage data to determine the emissions performance of their waste management service.	This measure and the preceding one demonstrate the contribution of waste collection and treatment activities towards the Mayor's net zero plan for London for 2030.

NEXT STEPS

PUBLIC CONSULTATION

Stakeholder engagement is a key component of the Strategy development and adoption process. Prior to implementation, we will seek to garner the views of our residents, local businesses and communities on waste and the environment and our strategic vision. The public consultation offers the public the opportunity to get involved and have their say on the proposed implementation of the Strategy.

The consultation on the Strategy will open on Monday 2nd September and closes 6 weeks later on Monday 14th October. To find the Strategy consultation documents, visit www.wrwa.gov.uk/strategy , your local library or Tel: 0208 871 2788 Email: Strategies@wrwa.gov.uk to request copies.
After the consultation is complete and the responses have been analysed, a summary of the consultation feedback will be published on www.wrwa.gov.uk/strategy . The feedback will be incorporated into the Final Strategy and the Western Riverside Partners will take local decisions regarding adoption of the Final Strategy.

GLOSSARY

Term	Acronym	Description
Anaerobic digestion	AD	The process by which organic matter is broken down, in the absence of oxygen. The biogas created by the process can be used as a fuel to generate renewable energy i.e. electricity and heat, and as a bio-fertiliser for farmland.
Circular economy	CE	A system where resources are maximised and kept in the system as long as possible through processes such as reuse, repair, recovery and recycling.
Commercial waste	CW	Commercial (or business) waste is any waste that comes from a commercial activity including waste that comes from retail, construction, demolition, industry, agriculture,
Constituent Councils	CCs	The Councils that make up Western Riverside Waste Authority, namely London Borough of Hammersmith & Fulham, Royal Borough of Kensington and Chelsea, London Borough of Lambeth and London Borough of Wandsworth.
Deposit return scheme	DRS	A recycling scheme in which consumers pay a small deposit upon purchase of drinks containers, which is refunded upon receipt of the empty container at designated return points.
Energy from Waste	EfW	Energy from waste facilities generate renewable energy in the form of electricity or heat through incineration of residual waste.
Extended producer responsibility	EPR	A policy in which producers are responsible for the products they create throughout its lifecycle. The scheme aims to create a more circular economy and increase recycling by making individual businesses responsible for the full net cost of managing packaging waste, with higher modulated fees applied to items which are harder to recycle.
UK Emissions Trading Scheme	ETS	Waste Management is a regulated sector under the UK ETS. A cap is set on the total amount of GHGs that can be emitted by the waste sector. The ETS covers the burning of fossil material by all EfW (e.g. plastic).
Greenhouse Gas	GHG	Greenhouse gases (such as carbon dioxide and methane) absorb solar radiation and trap heat in the atmosphere, creating a 'greenhouse effect' which results in global warming. It is common for

Term	Acronym	Description
		the measurement of different greenhouse gas emissions to be standardised into 'carbon equivalent' emissions, allowing for easier comparisons of the many types of activity that produce these emissions.
Household Waste	HHW	All waste collected by Waste Collection Authorities under section 45(1) of the Environmental Protection Act 1990, plus all waste arisings from Civic Amenity sites (HWRCs) and waste collected by third parties for which collection or disposal credits are paid under Section 52 of the Environmental Protection Act 1990. Household waste includes waste from collection rounds of domestic properties (including separate rounds for the collection of recyclables), schools, public buildings, street cleansing and litter collection, beach cleansing, bulky household waste collections, hazardous household waste collections, household clinical waste collections, garden waste collections, Civic Amenity/Household Waste and Recycling Centre wastes, drop-off/'bring' systems, clearance of fly-tipped wastes, weekend skip services and any other household waste collected by the waste authorities. Household waste accounts for approximately four fifths of London's municipal waste.
Household Waste and Recycling Centre	HWRC	A facility where the public can dispose of household waste and recycling, including garden waste, electrical, textiles and bulky waste. While some sites accept commercial waste, the Smugglers Way HWRC is for resident use only.
Local Authority Collected Waste	LACW	All waste collected by the local authority, including household waste and household-like waste from businesses and non-municipal fractions such as construction and demolition waste.
Materials Recycling Facility	MRF	A MRF is a processing plant for recyclables. It uses a combination of mechanical and technical equipment to separate co-mingled recyclables into single stream materials.
Municipal waste	MSW	Household waste and waste similar in nature produced by businesses and composition to household waste which is managed by a waste collection or waste disposal authority.

Term	Acronym	Description
		Sometimes also referred to as Municipal Solid Waste.
Natural capital accounting	NCA	A tool to define the value of natural assets, such as soil productivity, access to clean water and recreational green space, and what it could provide for future generations.
Waste Collection Authority	WCA	A local authority responsible for collecting waste from households and certain commercial premises where required (e.g. the Constituent Councils).
Waste Disposal Authority	WDA	A local authority responsible for the treatment and disposal of waste collected by Waste Collection Authorities (e.g. WRWA).

APPENDIX ONE – DEMOGRAPHIC INFORMATION

According to the 2021 census[18], between 50% and 58.4% of households are not deprived in any dimension, with 27.9% to 31.7% deprived in one dimension, as set out in Table 1. The dimensions of deprivation used to classify households are indicators based on four selected household characteristics: education; employment; health; and housing. Further details of each of these dimensions are provided on the ONS Census Dictionary[19].

Table 4. Levels of deprivation in the Councils and London. Source: 2021 Census

Category	Hammersmith & Fulham	Lambeth	Wandsworth	Kensington and Chelsea	London
Not deprived in any dimension	51.4%	50.0%	58.4%	52.6%	48.1%
Deprived in one dimension	31.1%	31.7%	27.9%	30.3%	32.9%
Deprived in two dimensions	13.0%	13.8%	10.5%	12.1%	14.4%
Deprived in three dimensions	4.1%	4.1%	3.0%	4.4%	4.3%
Deprived in all four dimensions	0.5%	0.4%	0.3%	0.6%	0.4%

Table 2 sets out the occupancy rating (according to bedrooms) and the composition of households (according to the relationships between members) in the Partner Authorities and London.

Whether a household's accommodation is overcrowded, ideally occupied or under-occupied is calculated by comparing the number of bedrooms the household requires to the number of available bedrooms. A negative occupancy rating implies a household has fewer bedrooms than required (overcrowded) while a positive occupancy rating implies a household has more bedrooms than required (underoccupied).

[18] https://www.datawand.info/census-2021/

[19] https://www.ons.gov.uk/census/census2021dictionary/variablesbytopic/demographyvariablescensus2021/householddeprivation

Table 5. Occupancy rating for bedrooms and household composition in the Partner Authorities and London. Source: 2021 Census

Category	Hammersmith & Fulham	Lambeth	Wandsworth	Kensington and Chelsea	London
Overcrowded households	9.1%	10.6%	7.6%	8.1%	11.1%
Ideally occupied households	48.2%	47.4%	42.8%	46.8%	40.0%
Underoccupied households	42.7%	42.0%	49.7%	45.1%	48.9%
One person household	36.1%	32.0%	29.9%	43.7%	29.3%
Single family household	47.6%	47.6%	54.1%	44.1%	58.0%
Other household types	16.4%	20.4%	16.0%	12.2%	16.0%

Table 3 displays the levels of economic activity within the Partner Authorities and London. Economically active means people aged 16 years and over who, between 15 March and 21 March 2021, were:

- in employment (an employee or self-employed)
- unemployed, but looking for work and could start within two weeks
- unemployed, but waiting to start a job that had been offered and accepted

Economic inactivity includes those who were: retired; students; looking after home or family; long-term sick or disabled; and others aged 16 or over who did not have a job between 15 and 21 March 2021 and had not looked for work between 22 February to 21 March or could not start work within 2 weeks.

Note that due to the year of the census, there are pandemic-related quality considerations for this variable.

Table 6. Economic activity in the Partner Authorities and London (% of people aged 16 or over). Source: 2021 Census

Category	Hammersmith & Fulham	Lambeth	Wandsworth	Kensington and Chelsea	London
Economically active: in employment (including full-time students)	63.4%	68.0%	69.6%	56.4%	61.4%
Economically active: Unemployed (including full-time students)	5.0%	5.3%	4.0%	4.6%	4.8%
Economically inactive	31.6%	26.7%	26.4%	39.0%	33.8%

Table 4 provides the stated ethnic group of residents within the Partner Authorities and London identified as part of the 2021 Census.

Table 7. Ethnicity in the Partner Authorities and London. Source: 2021 Census

Category	Hammersmith & Fulham	Lambeth	Wandsworth	Kensington and Chelsea	London
Asian, Asian British or Asian Welsh	10.5%	7.3%	11.7%	11.9%	20.7%
Black, Black British, Black Welsh, Caribbean or African	12.3%	24.0%	10.1%	7.9%	13.5%
Mixed or Multiple ethnic groups	6.7%	8.1%	6.3%	6.6%	5.7%
White	63.2%	55.0%	67.8%	63.7%	53.8%
Other ethnic group	7.3%	5.7%	4.1%	9.9%	6.3%

Table 5 shows the tenure of households in each Partner Authority as well as for London overall according to the 2021 census data. All Partner Authorities except Wandsworth have a higher proportion of social rented housing than London as a whole. Despite having the highest proportion of social housing, Kensington and Chelsea also has the highest

proportion of properties that are owned outright (19.9%), although this is still slightly lower than the figure for London (20.7%).

Table 8 Household tenure in Partner Authorities and London. Source: 2021 Census

Category	Hammersmith & Fulham	Lambeth	Wandsworth	Kensington and Chelsea	London
Social rented	29.8%	33.6%	19.3%	27.6%	23.1%
Private rented or lives rent free	36.6%	31.6%	36.4%	39.8%	30.1%
Owns with a mortgage or loan or shared ownership	18.2%	22.8%	26.5%	12.8%	26.0%
Owns outright	15.4%	12.0%	17.8%	19.9%	20.7%

WESTERN RIVERSIDE WASTE AUTHORITY

Joint Resources and Waste Strategy

2025-2040

h&f hammersmith & fulham

Lambeth

THE ROYAL BOROUGH OF KENSINGTON AND CHELSEA

THE BRIGHTER BOROUGH Wandsworth

W·R·W·A

We are the Western Riverside Partners

We are local authorities that work together to reuse, collect, sort, recycle, treat and dispose of waste in your area. Our Partners include the London Borough of Hammersmith & Fulham, the London Borough of Lambeth, the Royal Borough of Kensington and Chelsea, the London Borough of Wandsworth and Western Riverside Waste Authority.

WE WANT TO REDUCE OUR ENVIRONMENTAL FOOTPRINT BY:

Producing less waste.

Moving to a Circular Economy by keeping stuff in use for as long as possible through repairing, sharing and reuse.

Making it easier for our residents and businesses to recycle more.

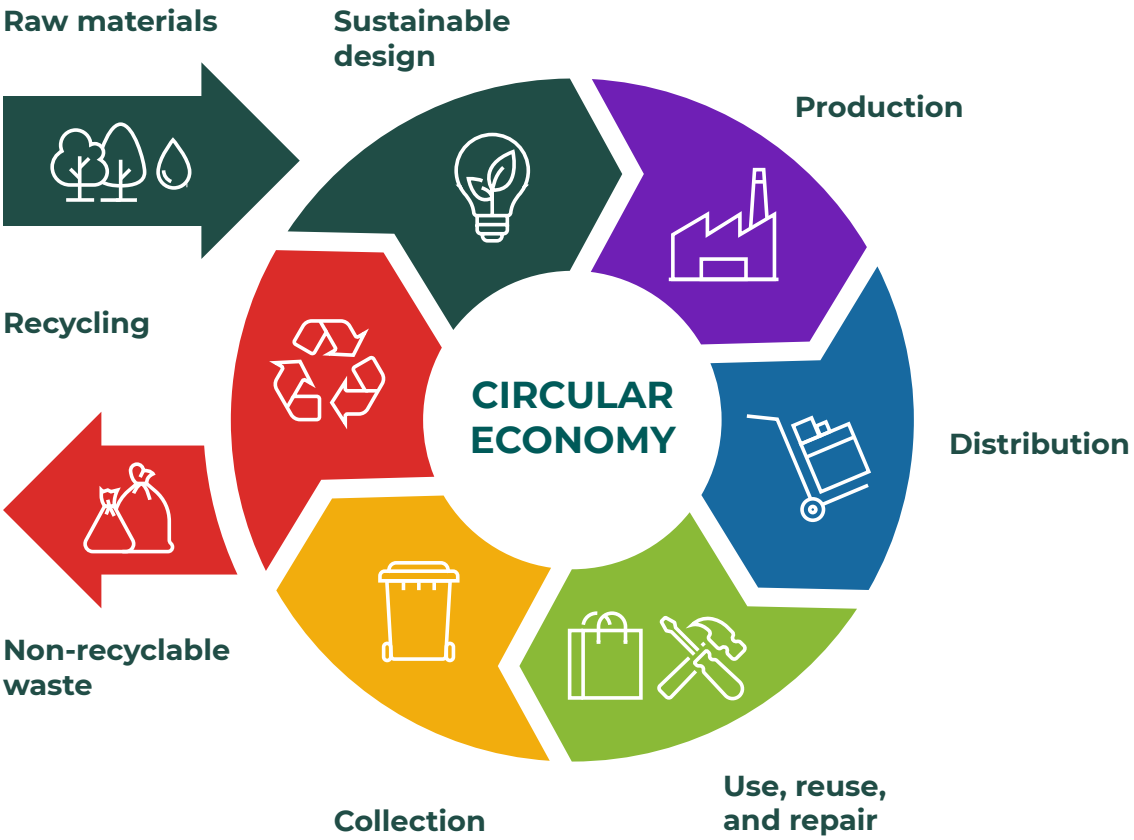
This is why we're developing a plan – a Joint Resources and Waste Strategy – which will start in 2025 and last until 2040.

Our Vision

“The Western Riverside partners will work together with our residents and businesses to prioritise waste prevention, reduce our carbon emissions and environmental impacts, and provide customer focused waste and recycling services that maximise value from the materials we manage.”

WHAT IS A CIRCULAR ECONOMY?

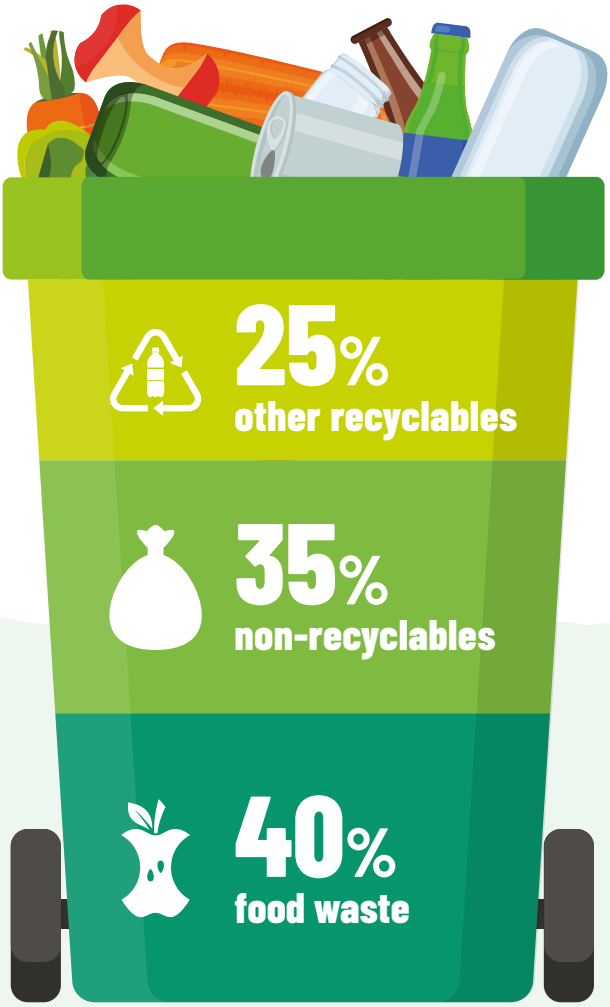
The goal of a Circular Economy is to minimise waste and promote sustainable use of natural resources. This involves smarter product design, repair, reuse and recycling to keep materials in use for longer.



So where are we now?

We're reusing and recycling a lot of materials – but we need to do better.

Most of what we throw away can be avoided, reused, recycled or composted. About 40% is food waste and 25% is other kinds of waste that could be recycled.



Once collected, your recycling is separated into different materials and then sent to specialist organisations to be turned back into the raw materials needed to make new products.

Separately collected food and garden waste is composted or turned into heat, energy and fertiliser.

Larger items that are in good condition can be taken to our Household Waste and Recycling Centre at Smugglers Way, Wandsworth, where our charity partner ReWork repairs and refurbishes them and gives them a second life. Items that cannot be given a second life are sent for recycling.

Anything that can't be recycled is transported down the River Thames by barge (helping to reduce traffic and air pollution on our roads) and transformed into energy at the Belvedere Energy from Waste facility.

Currently, across the area we recycle almost a quarter (24.3%) of our waste, but need to do more. We have some practical challenges which can make recycling difficult. Three quarters of our homes are flats, where there's often not a lot of space to store our waste and recycling. Land in the area is in high demand and short supply so we don't have a lot of additional space for reuse, recycling or waste sites. We also have a lot of people moving in to the area that need to be educated on what can be reused and recycled.

Where do we need to get to?

National Government and the Greater London Authority have laws, policies and targets we need to follow and plan for. These focus on reducing waste, reusing items, collecting more materials for recycling (including food waste and plastic film), encouraging businesses to recycle, making packaging more recyclable and providing a deposit return scheme for bottles and cans.

TARGETS WE NEED TO AIM FOR INCLUDE:

- **Halving waste that is not reused, recycled or composted by 2042** – UK Government
- **Recycling half of the waste collected from households and businesses by 2030** – Greater London Authority
- **Recycling 65% Local Authority Collected Waste by 2035** – UK Government

The Western Riverside Partners will need to contribute towards these collective targets by reducing, reusing and recycling our waste as much as we can.

How do we succeed?

We need to work together – residents, businesses and the Western Riverside Partners. To do this we've developed our Joint Resources and Waste Strategy. In it, we've put together four action plans that will help us achieve our vision:

TRANSITIONING TO A CIRCULAR ECONOMY

We want to be smarter about using things again and again, repairing and refurbishing them, and recycling more, so we waste less and save more.

Actions include:

- Promote activities that prevent waste, reuse materials and increase recycling.
- Support the Mayor of London's goal to cut food waste by 50% by 2030 and start food waste collections for all homes (and businesses).
- Expand recycling collections to include more items like textiles, batteries, plastic film and a wider range of packaging.
- Work towards a target of recycling 35% of LACW by 2030 and 50% by 2040.
- Work towards a target of recycling 30% Household Waste by 2030 and 45% by 2040.
- Halving our rubbish (waste that can't be recycled) by 2042 (reducing our municipal waste to 333 kg/capita per year).

ACHIEVING NET ZERO

We're aiming to do our part for the climate by being efficient, reducing our carbon emissions and not wasting resources.

Actions include:

- Understand our emissions and reduce them by using cleaner fuels and capturing carbon.
- Keep converting unavoidable waste to energy and continue to send no waste to landfill.
- Recycle waste by-products, like turning ash into building materials.

COLLABORATING AND COMMUNICATING TO AMPLIFY OUR IMPACT

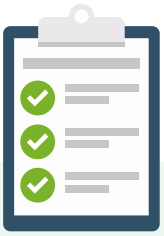
We believe in working with everyone involved to come up with better ways to reduce, reuse, and recycle.

Actions include:

- Work with communities, businesses, local authorities and charities to increase our impact.
- Keep track of how satisfied people are with our services.
- Provide education on reducing waste and recycling more.
- Provide benefits to our communities through increasing skills and creating job opportunities.

DELIVERING BEST VALUE AND PREPARING FOR THE FUTURE

We're focusing on giving you the best service for your money while getting ready for new challenges that may come up.



Actions include:

- Regularly monitor and report on our progress.
- Ensure contracts offer good value and meet future needs.
- Show the economic benefits of reducing waste and reusing materials.

We'll review our work regularly to make sure we're progressing towards our vision and targets. We'll also report every year and publish any new actions we're adding to the plans.

Working together we can achieve our vision.

Be Part of the Change

Tell us what you think of our strategy and action plans.

Please join in our consultation from **September 2nd to October 14th 2024** through online surveys, meetings, or by contacting us directly.

If you would like to request a hard copy of this document please contact the Western Riverside Waste Authority on:

Tel: 0208 871 2788

Email: strategies@wrwa.gov.uk

If you'd like more detailed information please read our draft Strategy document: www.wrwa.gov.uk/strategy

Your feedback will help us improve our Strategy and better serve our community.

h&f hammersmith & fulham

Lambeth

THE ROYAL BOROUGH OF KENSINGTON AND CHELSEA

THE BRIGHTER BOROUGH Wandsworth

W·R·W·A

JOINT RESOURCES AND WASTE STRATEGY ONLINE SURVEY

Western Riverside Waste Authority Joint Resources and Waste Strategy

Report for: Western Riverside Waste Authority (WRWA)

Ricardo ref. ED17666 Issue: 1 09/07/2024

Customer:
Western Riverside Waste Authority

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Abbie Cosslett

Signed

Ricardo reference:
ED17666100

Date:
09/07/2024

DRAFT VERSION FOR CONSULTATION

This survey will be available online.

A draft online version is available here at the link below. The survey is reproduced here for ease of reading.

Link to survey - https://survey.alchemer.eu/s3/90700357/Your-Voice-on-Improving-Our-Community-s-Waste-Management

SHARE YOUR IDEAS ON OUR PLANS FOR REDUCING, REUSING AND RECYCLING OUR WASTE

1. INTRODUCTION TO PARTICIPANTS:

Hello!

We're the Western Riverside Partners. We are local authorities that work together to reuse, collect, sort, recycle, treat and dispose of waste in your area. Our Partners include the London Borough of Hammersmith & Fulham, the London Borough of Lambeth, the Royal Borough of Kensington and Chelsea, the London Borough of Wandsworth and Western Riverside Waste Authority.

As Local Authorities we want to reduce our environmental footprint by:

- Producing less waste.
- Moving to a Circular Economy by keeping stuff in use for as long as possible through repairing, sharing and reuse.
- Making it easier for our residents and businesses to recycle more.

This is why we're developing a plan – a Joint Resources and Waste Strategy – which will start in 2025 and last until 2040. We want your thoughts on our plan – how can we make it better?

Please fill out our short survey.

Thank you for helping us work towards a greener future!

If you'd like to read more about our plans you can read the Non-Technical Summary Report, or detailed Joint Resources and Waste Strategy here: www.wrwa.gov.uk/Strategy Please note you do not have to read these reports before completing this survey. If you have any queries please contact the Western Riverside Waste Authority on:

Tel: 0208 871 2788

Email: Strategies@wrwa.gov.uk

Confidentiality

Your responses are private and will help us improve. Your identity will not be shared.

2. SURVEY QUESTIONS

1. Individual/ Organisation

Who are you answering as?

Respondent Type	Check Here
Myself *[checking this response will open the common questions 2, 4-7 and 16-17 and socio-demographic questions 8-13]*	[ ]
I'm completing it on behalf of someone else *[checking this response will open the common questions 2, 4-7 and 16-17 and socio-demographic questions 8-13]*	[ ]
A business/ organisation *[checking this response will open questions 2-7 and 16-17 and socio-demographic questions 14-15]*	[ ]

2 We'd like to understand what sort of activities you do at home or work to reduce waste, reuse or recycle. Please tick all that apply

Actions	Checkbox
Buy less stuff	[ ]
Choose items with less packaging	[ ]
Buy second-hand	[ ]
Donate or sell items for reuse	[ ]
Reduce food waste	[ ]
Borrow/ rent instead of buying.	[ ]
Repair items at home e.g.: clothes	[ ]
Take items to a shop for repair e.g.: electronics	[ ]
Learn about the environment.	[ ]
Recycle at home	[ ]
Recycle at work	[ ]
None of the above	[ ]
Other (please specify):	[ ]

3. How is your waste collected?

Does your waste and recycling get collected by your local council, or do you have an independent waste contractor? [Business only question]

Option	Waste	Recycling	Food Waste
By local council	[ ]		
By a private company	[ ]		
Not sure	[ ]		

3. Vision for the Strategy

The Western Riverside Partners have worked together to develop a draft Vision for the Strategy. It highlights the issues we think are important.

> "The Western Riverside partners will work together with our residents and businesses to prioritise waste prevention, reduce our carbon emissions and environmental impacts, and provide customer focused waste and recycling services that maximise value from the materials we manage."

Do you agree with our draft Vision for the Strategy?

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Please indicate your level of agreement with the Strategy Vision.	[ ]	[ ]	[ ]	[ ]	[ ]

Any suggestions for improvement?

Please let us know how you feel the Strategy Vision could be improved.	

4. What should the Strategy focus on?

Pick 3 issues that are most important to you:

	Please select 3
Better customer service	[ ]
Reducing carbon emissions	[ ]
Keeping costs down	[ ]
Preventing waste	[ ]
Being flexible	[ ]
Meeting our targets	[ ]
Recycling more	[ ]
Adapting to new government rules	[ ]
Working together	[ ]

Is there anything else we should add to the list?

Options	Response
Yes	[ ] Please specify: _____
No	[ ]

5. Strategy Action Plans

To succeed in delivering our Strategy, we need to work together—residents, businesses, and the Western Riverside Partners. To do this we've developed four action plans that will help us achieve our vision:

- Use resources better and recycle more (**Transitioning to a Circular Economy**)
- Reduce our carbon footprint (**Achieving Net Zero)**
- Work together to make a bigger impact (**Collaborating and Communicating to Amplify Impact)**
- Provide value for money and prepare for future challenges (**Delivering Best Value and Preparing for the Future)**

We will show you more details on what we plan to do for each of these action plans. Let us know what you think, and add your ideas.

Transitioning to a Circular Economy

We want to be smarter about using things again and again, repairing and refurbishing them, and recycling more, so we waste less and save more.

Actions include:

- Promote activities that prevent waste, reuse materials and increase recycling.
- Support the Mayor of London's goal to cut food waste by 50% by 2030 and start food waste collections for all homes (and businesses).
- Expand recycling collections to include more items like textiles, batteries, plastic film and a wider range of packaging.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Do you agree with this plan?	**[ ]**	**[ ]**	**[ ]**	**[ ]**	**[ ]**

Do you have any suggestions for improvement?

Please give us your comments.	

National Government and the Greater London Authority have laws, policies and targets we need to follow and plan for. These focus on reducing waste, reusing items, collecting more materials for recycling (including food waste and plastic film), encouraging businesses to recycle, making packaging more recyclable and providing a deposit return scheme for bottles and cans.

The Western Riverside Partners will need to contribute towards these collective targets by reducing, reusing and recycling our waste as much as we can. We've set some targets to help us achieve this:

- Work towards a target of recycling 35% of LACW by 2030 and 50% by 2040.
- Work towards a target of recycling 30% Household Waste by 2030 and 45% by 2040.
- Halving our rubbish (waste that can't be recycled) by 2042 (reducing our municipal waste to 333 kg/capita per year)
- Support the Mayor of London's target to reduce food waste by 50% by 2030

	Strongly Agree	Agree	Neutral	Disagree	Strongly disagree
Do you agree with these targets?	[ ]	[ ]	[ ]	[ ]	[ ]

Do you have any suggestions for improvement?

Please give us your comments.	

Achieving Net Zero

We're aiming to do our part for the climate by being efficient, reducing our carbon emissions and not wasting resources.

Actions include:

- Understand our emissions and reduce them by using cleaner fuels and capturing carbon.
- Keep converting unavoidable waste to energy and continue to send no waste to landfill.
- Recycle waste by-products, like turning ash into building materials.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Do you agree with this plan?	[ ]	[ ]	[ ]	[ ]	[ ]

Do you have any suggestions for improvement?

Please give us your comments.	

Collaborating and Communicating to Amplify Impact

We believe in working with everyone involved to come up with better ways to reduce, reuse, and recycle.

Actions include:

- Work with communities, businesses, local authorities and charities to increase our impact.
- Keep track of how satisfied people are with our services.
- Provide education on reducing waste and recycling more.
- Provide benefits to our communities through increasing skills and creating job opportunities.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Do you agree with this plan?	[ ]	[ ]	[ ]	[ ]	[ ]

Do you have any suggestions for improvement?

Please give us your comments.	

Delivering the Best Value and Preparing for the Future

We're focusing on giving you the best service for your money while getting ready for new challenges that may come up.

Actions include:

- Regularly monitor and report on our progress.
- Ensure contracts offer good value and meet future needs.
- Show the economic benefits of reducing waste and reusing materials.

	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Do you agree with this plan?	[ ]	[ ]	[ ]	[ ]	[ ]

Do you have any suggestions for improvement?

Please give us your comments.	

6. Learning More

Would you like to learn more about waste prevention, reuse and recycling through activities and information?

Level of Interest	Check Here
Very interested	[ ]
Somewhat interested	[ ]
I already receive information from my local authority	[ ]
Not interested	[ ]

What would encourage you to participate?

Factors	Check Here
Understanding what I will gain	[ ]
Convenient times	[ ]
Online options	[ ]
Rewards or incentives	[ ]
Not interested	[ ]
Other (please specify): _____	[ ]

7. Being Part of the Change

To achieve our Vision we need everyone to take part. How willing are you to make lifestyle changes such as buying less, reusing, repairing, sharing and recycling to help support the environment?

	Checkbox
I'm willing to make a lot of changes	[ ]
I'm willing to make some changes	[ ]
I might be able to do a little bit more	[ ]
I'm already doing everything I can	[ ]
I'm not interested	[ ]
Other (please specify):	[ ]

Do you have any other feedback on the Strategy?

Do you have additional ideas or comments?	Check Here
Yes (please specify): _____	[ ]
No	[ ]

Individual Socio-Demographic Questions

We have just a few more questions to understand a little more about you. Answering these questions will help us to understand whether we're hearing from a range of people in the area.

8. Living and Working

[include a map of boroughs at a suitable scale]

Regarding your living and working situation, please indicate for each London Borough listed below whether you live there, work there, or both live and work there. If you reside or are employed outside of these boroughs, please select 'Other' and specify.

Borough	I Live Here	I Work Here
Hammersmith & Fulham	[ ]	[ ]
Lambeth	[ ]	[ ]
Royal Borough of Kensington and Chelsea	[ ]	[ ]
Wandsworth	[ ]	[ ]
Other (please specify):	[ ]	[ ]
None of the above	[ ]	[ ]

9. Gender

Please indicate your gender by checking the appropriate box. If you prefer to self-describe, please fill in the space provided.

Gender	Check Here
Male	[ ]
Female	[ ]
Prefer to self-describe: _____	[ ]
I prefer not to say	[ ]

10. Age Group

Please indicate your age range by checking the appropriate box.

Age Group	Check Here
Under 25	[ ]
25 to 34	[ ]
35 to 44	[ ]
45 to 54	[ ]
55 to 64	[ ]
65 and over	[ ]
I prefer not to say	[ ]

11. Health Conditions

Do you consider yourself as having any physical or mental health conditions or illnesses lasting or expected to last 12 months or more?

Option	Check Here
Yes *[opens up next question]*	[ ]
No	[ ]
I prefer not to say	[ ]

If yes, what type?

Disability Status	Check Here
I have a physical impairment	[ ]
I have a mental health condition (including depression, dementia, obsessive-compulsive disorder and other mental health conditions)	[ ]
I have a mobility impairment	[ ]
I have another illness or disability, e.g.: hidden impairment (diabetes, epilepsy, etc.)	[ ]
I am a wheelchair user	[ ]
I use medical equipment requiring an electricity supply	[ ]
I have a hearing impairment	[ ]
I have a visual impairment	[ ]
I have a learning difficulty	[ ]
I prefer not to say	[ ]
Prefer to self-describe (please specify): _____	[ ]

12. Ethnicity

How would you describe your ethnic origin?

Ethnicity	Check Here
Asian or Asian British – Indian	[ ]
Asian or Asian British – Pakistani	[ ]
Asian or Asian British – Bangladeshi	[ ]
Asian or Asian British – Chinese	[ ]
Any other Asian background (please specify): _____	[ ]
Black or Black British – African	[ ]
Black or Black British – Somali	[ ]
Black or Black British – Caribbean	[ ]
Any other Black background (please specify): _____	[ ]
Mixed or multiple ethnic groups	[ ]
White – English/Welsh/Scottish/Northern Irish/British	[ ]
White – Irish	[ ]
White – Gypsy or Irish Traveller	[ ]
White – Other European	[ ]
Any other White background (please specify): _____	[ ]
Mixed/multiple ethnic groups – White and Black Caribbean	[ ]
Mixed/multiple ethnic groups – White and Black African	[ ]
Mixed/multiple ethnic groups – White and Asian	[ ]
Any other mixed background (please specify): _____	[ ]
Another ethnic group – Moroccan Arab	[ ]
Another ethnic group – Other Arab	[ ]
Other ethnic group – Filipino	[ ]
Any other ethnic group (please specify): _____	[ ]
I prefer not to say	[ ]

13. Religion

What is your religion?

Religion	Check Here
No religion/belief	[ ]
Christian	[ ]
Buddhist	[ ]
Hindu	[ ]
Jewish	[ ]
Muslim	[ ]
Sikh	[ ]
Any other religion (please specify): _____	[ ]
I prefer not to say	[ ]

Organisation Questions

14. Location and Operations

Where is your organisation based, and do you operate in any of the Partner areas?

London Boroughs	Located Here	Operate Here
Hammersmith & Fulham	[ ]	[ ]
Lambeth	[ ]	[ ]
Royal Borough of Kensington and Chelsea	[ ]	[ ]
Wandsworth	[ ]	[ ]
Other (please specify):		
None of the above	[ ]	[ ]

15. Type of Organisation

What type of organisation do you represent?

Please select one main category:	Applicable
Private Sector	[ ]
Government/ Public Sector	[ ]
Non-Profit and NGOs	[ ]
Other (please specify): _____	[ ]

What best describes your organisation?

Type of Organisation	Applicable
Greater London Authority (GLA)	[ ]
Local Authority or Waste Collection Authority	[ ]
Government Department	[ ]
Central Government Advisory Committee or Commission	[ ]
Waste Collector/ Waste Management Company	[ ]
Educational Institution (university, college, or school)	[ ]
Healthcare Sector (hospital, clinic, or other healthcare provider)	[ ]
Hospitality and Leisure (hotel, restaurant, leisure centre, or tourism-related business)	[ ]
Retail Sector (store or shopping centre)	[ ]
Construction and Real Estate	[ ]
Transportation and Logistics	[ ]
Utilities and Energy Providers	[ ]
Financial Institution (bank or insurance company)	[ ]
Technology Company	[ ]
Cultural Institution (museum or gallery)	[ ]
Business Improvement District	[ ]
Industry Association	[ ]
Waste Management Industry Representative	[ ]
Charities, Non-Profits or NGO	[ ]
Expert or Consultant	[ ]
Other (please specify): _____	[ ]

16. Thank you very much for taking the time to complete this survey. Is there anything else you would like to tell us?

Do you have additional ideas or comments?	Check Here
Yes (please specify): _____	[ ]
No	[ ]

Further contact information

If you have any queries please contact the Western Riverside Waste Authority on:
Tel: 0208 871 2788
Email: Strategies@wrwa.gov.uk

Confidentiality

We are collecting your data in line with our privacy policy and UK data protection regulations. For the survey on the Western Riverside Waste Authority Resources and Waste Strategy, your data will be collected via Alchemer (survey tool) and processed on behalf of WRWA by our partner Ricardo. Your data will not be shared with any other third parties. To view our privacy policy, click here WRWA Privacy Policy.

We appreciate your time and input!

Thank you for helping us work towards a greener future!

JMWMS Comment Log

Listed below are the comments received by email with feedback on the Joint Resources and Waste Strategy. Please note that page numbers and table/figure numbers have been updated during iterations and so do not now directly translate to the final version of the Strategy. A 'tracked change' version of the Strategy has been circulated to Technical Officers showing what updates have been made following written feedback but also verbal feedback arising during joint meetings. Duplication of similar comments has been removed and general formatting is not noted.

Thank you to everyone for providing feedback.

- Wandsworth
- Kensington and Chelsea
- Hammersmith & Fulham
- Lambeth

Wandsworth

Wandsworth Comment	**Response / Change**
Thanks for sending this through. I think there is quite a lot of demographic information that could be presented in an appendix rather than the body of the report	Agree – transferred to an appendix
I like the chart on P11 – shows DMR is comparable	Thank you – further commentary added around this
Figure 6 needs some work to adjust the scale as you can't see the WRWA line as it is the same as ELWA	Amended so WRWA is in front
Figure 7 I can see the value in comparing to Richmond but don't see how Bexley or St Albans is useful, surely other London/Manchester	I've removed St Albans and have commented on Richmond and Bexley being outer London Boroughs, picking up food waste

Wandsworth Comment	Response / Change
authorities would be more relevant, plus we know smaller households with limited/no gardens are the main factor	
Table 7 I think it is worth discussing there is no collection of textiles – hence low capture	Comment added
P14 food waste roll out is putting more pressure on vehicle parking than property growth – we have only factored in 2 more RCV's for the next 5 years. But 6 food waste vehicles (and possibly another if participation is high)	I've added a comment on food waste vehicles needing space
Table 9 should probably include the need to have food waste in non domestic locations by 2025	Added
P40 there is a mixture of KG per household and per capita – think we should be consistent if possible	I've updated some of the language but it's a bit difficult as some of the targets are for household waste and some are per household and some per person
P41 Not sure how the % of waste fleet ULEZ compliant is a suitable metric for the mayors ambition? Plus there is an e missing from emissions in the middle cell	Within the LES it states that waste fleets are expected to comply with ULEZ – a percentage demonstrates working towards this. It's also a performance target in the RRPs

Kensington and Chelsea

Kensington and Chelsea Comment	Response / Change
Page 4: The sixth paragraph down explains EPR. However, it doesn't elaborate on the payments that local authorities will receive via the scheme. Would it be worth mentioning local authorities will be given an indication of how much money they will receive from packaging producers in November 2024, based on an estimate of obligations due under EPR when the scheme goes live in 2025/26?	Comment added

Kensington and Chelsea **Comment**	**Response / Change**
Page 5: The fifth paragraph explains the CEP mandatory recycling targets for 2025, 2030 and 2035. Do these targets acknowledge and reflect the introduction of DRS and EPR?	Yes – the targets were part of the CEP when it was transposed from the EU. The Resources and Waste Strategy already took into consideration the CEP which contained EPR. DRS was a consideration if countries weren't hitting their packaging targets. No amends to the strategy
Under the heading 'Current Context in Western Riverside Partnership Area' on page 7, the top paragraph. Plastic film is mentioned, and it is stated that it is not currently accepted through the dry recycling collection scheme. During yesterday's meeting it was confirmed that Cory have reviewed the future MRF and believe that the changes needed to the MRF to accept plastic film are not that complicated, nor expensive. Would it be prudent to insert a sentence in this paragraph to that effect?	Good point, however we don't yet know when this could be implemented practically so we'll leave it out for the moment. We can add more content to the action plans once developed
Under 'Current Performance' on pages 12 and 13, it explains how we lead on residual waste arisings. This is a really fantastic achievement and, in many ways, the most important waste stream to have high performance results in. It's the core principle of the waste hierarchy in achieving prevention. Is there any way this can be amplified?	Great point – I've added some text around this and will revisit the non-technical summary to see if we can bring it out more.

Hammersmith & Fulham

Hammersmith & Fulham **Comment**	**Response / Change**
On p6 of the intro, how does our current data compare to the list of targets from the environment improvement plan? – if we are already achieving any of these it might be good to note this.	We've reported our figures on per household but not per capita for residual waste. Targets: Reducing total residual waste (excluding major mineral waste) to 437 kg/capita per year maximum

Hammersmith & Fulham Comment	**Response / Change**
	Reducing municipal residual waste to 333 kg/capita per year maximum I've updated the commentary to reflect high performance but haven't commented on whether individual Boroughs are achieving the targets.
Current context section (No page number on this page as I think the page numbering restarts here?) – could move some of the data into an appendix and summarise the positions if this helps make the document an easier read?	Amended
Current services, p6 of this section – LBHF is starting a garden waste service from July of this year (and Lambeth frequency info may need updating?)	Amended – table was confusing as it should refer to baseline year but is called current services. Have added Lambeth and H&F
Current Services section: no mention here of our relatively high waste disposal costs, can this be included, in a way which doesn't include giving commercially sensitive information? There is no mention of the constraints on the site that tie us to using river transport – may also be worth including info on the positives of using the barges?	I've added a line that residual waste disposal is more expensive than recycling and mentioned low emissions in reference to the barges. I haven't mentioned the site constraints at this point as not all waste is transported by the River off the site
Current performance (p10) – might it be more positive to lead with the low waste arisings rather than the recycling rates? And perhaps introduce the recycling rates by talking about our levels of dry recycling which are comparatively better (see next point)	Agree – I've reordered this section
Current performance (p11) – Figure 5 is great! Can we add some more positive commentary on our dry recycling rates? It looks like only 2 inner London boroughs (plus CoL) outperform the WRWA average, so we are amongst the best inner London dry-recyclers, and Hammersmith and Fulham dry recycling rate is 9th in London which	Added

Hammersmith & Fulham Comment	Response / Change
tells quite a different story to the overall recycling rates once food and especially garden is added in.	
Page 14 – fig. 8 – can this be graph be zero based so that the predicted growth is better seen in context? Could easily be misunderstood as it is.	Amended
Page 16 – fig 10 – this graph also not zero based – may need to have this adjustment to see the difference between the lines but perhaps show the overall picture with the axis from zero as well for context?	Amended graph
Page 20 – The target references Local Authority Collected Waste (LACW) which is different to Household Waste (which is the Oflog measure and how LAs have been compared in the past under BVPI reporting etc), what is the rationale for using LACW and could this cause confusion? WCAs might have different	LACW and HHW now included. LACW is a specific target under the LES and it has been highlighted by Defra that following Simpler Recycling LACW will be more of a focus
In terms of education, please can we see a greater focus in the strategy to schedule with authorities' Schools to visit, or indicate all schools should be encouraged to visit the Waste disposal Centre.	Included reference to school visits to the education centre

Lambeth

Lambeth Comment	Response / Change
P3 For the benefit of the stakeholders, this should confirm what the treatment needs to be (AD/IVC etc)	Within Simpler Recycling and the LES AD is a preference - focus on generating low carbon energy. Line added
P6 There is no reference to Vale Street	Apologies - now added
P6 Collection table. Current collection now fortnightly	I've retitled this table - it should be for the baseline year. I've added a note underneath referencing Lambeth changes.
P11 The WRWA avg recycling rate looks too low in this graph	It's the dry recycling rate that has the dotted line. No amends

Lambeth Comment	**Response / Change**
P16 Funding for EPR. Expected to be in 2025/26	Updated in this section and the later section mentioning EPR
Check visits to the MRF are included	Yes – included under the education activities action
P27 We could have a link on our website (to the strategy and consultation documents)	Thank you. We will also be creating a page on the WRWA website for the strategy and online survey www.wrwa.gov.uk/strategy
P27 Will WRWA expect the partner boroughs to handle phone calls and email inbox?	No - we've provided the WRWA phone number and email
P27 Consultation feedback report - Who will be doing this	The consultant will write a report post consultation

Technical response to Western Riverside Waste Authority Draft Joint Municipal Waste Management Strategy – London Borough of Lambeth

The London Borough of Lambeth has reviewed the Draft Joint Municipal Waste Management Strategy (JMWMS) provided by Western Riverside Waste Authority (WRWA) and has the following comments. In general, there are no particular issues with the format and layout of the Strategy. There are some minor comments and formatting notes, which we enclose in a marked-up document.

Internally we have consulted stakeholders including the sustainability team, management team and Cllr Jackie Meldrum who is on the WRWA board. Their comments are summarised below:

Thank you for taking the time to provide feedback. WRWA comments are written in dark red for ease of reading.

General Comments

The language should try to minimise jargon and be more concise – e.g. not needing to mention the borough names in full or just by referring to them as 'the councils' Separately, there should be a summary in easy-to-read language for the consultation and for those that find reading the whole document challenging.

We have produced a Non-Technical Summary to accompany the strategy which provides an easy to read overview of the strategy and accompanies the online consultation survey.

It should be made clear at the beginning of the document in simple language what the role of the WRWA is and how it intersects with the boroughs and waste collection - allied with this, there needs to be some reference to bin waste as that is where resident's experience starts off.

On p3 of the strategy under 'what is a joint waste strategy' we set out the roles of the Joint Partners (WCAs and WDA). We also mention waste collection services.

In terms of how the strategy is presented, more should be made of how the river is used to move waste and how this reduces the carbon footprint.

We have added a picture of a barge and note underneath it the benefits of river transport.

Careful cost benefit analysis will need to be done for all the actions in and arising from the strategy.

Noted – this will take place during the development of the action plans.

Theme areas

Circular economy

There needs to be more emphasis on small and large businesses as well as the partnerships with charities and social enterprises already mentioned. What is being done in terms of collaborating on setting up local facilities to recycle more niche materials such as mattresses? Are there any actions to look at collaboration with businesses in terms of low waste/ zero waste products offered?

Engaging with local businesses is mentioned within the communications and collaboration action plan and will be considered during the development of the circular economy action plan. Borough officers have already highlighted circular economy opportunities and strategies under development and the action plan will identify areas where existing activities and relationships can be amplified.

A specific comment has been added to investigate options for recycling other materials such as mattresses.

They may need to be more content on how residents and councils will be supported with any service changes arising from the strategy – e.g. kerbside textile collections.

Engaging residents and supporting them with services is mentioned under the communications and collaboration action plan. All actions taken forward will be fully reviewed and plans for supporting residents outlined.

Net Zero

Our sustainability colleagues noted the importance of monitoring and reporting from WRWA on emissions from waste treatment. They are currently updating the corporate carbon reduction plan and estimate emissions of waste treatment to be 50,000 tCO2 for 2021-22. This is more than double the estimated emissions for all of Lambeth's other third-party contracts.

Sustainability colleagues also highlighted the targets in our climate action plan:

- Increase the diversion rate away from landfill and incineration to at least 70%

- Reduce organics disposal to landfill and incinerators by 25%

- Enable 3-stream segregated waste collection including food/ recyclables/ residual by 2026

Lambeth also has a target to achieve a reduction of consumption-based emissions by 2/3rds which is in line with waste prevention / actions around circular economy and repair.

Actions included within the Joint Strategy will help to contribute to National, Regional and Local carbon reduction plans and targets and consumption based emissions in general. We have already been in touch with your sustainability colleagues to provide some updated emission data on waste treatment (16,280 tonnes of fossil carbon dioxide for Lambeth is the

figure provided by Cory based on waste composition analysis). If there's any further specific data requirements that may support their plan please let us know.

Action to amplify impact through collaboration and communication

As mentioned above, there should be simplified language in documents, the annual report was cited as a best practice document in terms of the information given and its presentation.

Thank you for the feedback. Our Non-Technical Summary provides an easy to read version of the summary. The final design of the strategy (post consultation) will also help to improve presentation.

It was felt that communications should align with the rest of London, possibly by using ReLondon as a lead so that comms matches up over London boroughs. Below this sits WRWA and then Lambeth for local communications. These should all dovetail.

An action identified is to work more closely with ReLondon on communications campaigns and to support National and Regional campaigns. We'd welcome greater consistency of approach and will embed this within the action plan.

There should be a comprehensive schools programme and also increased visits to the MRF where people can see how the waste is processed – there should be headphones available to visitors because of the high level of background noise in the facility. This should be a priority for the WRWA.

Educational visits are included as an action. Development of this action will include the Education team and we'll pass on these comments to them – thank you.

Delivering best value and preparing for the future

The main thing here is to ensure that transparent modelling and monitoring is carried out throughout the life of the strategy and within the review process to ensure informed decisions are being made and best value achieved for the boroughs.

We've outlined monitoring frequency and have committed to publish annual action plan reviews.

The consultation process

It needs to be clear how the consultation will be managed by WRWA including how queries will be fielded in terms of emails and phone numbers. It will be beyond the resources of the borough to take on any of this response activity but we can promote the consultation on the Lambeth website and push it out to our networks.

Thank you for the offer to promote. All enquiries will come via WRWA for action. We have liaised with Borough communication teams and they have kindly agreed to publicise the consultation via their social media channels.

Please note that this page has been left blank intentionally.

WRWA TECHNICAL APPENDICES

Western Riverside Joint Resources and Waste Strategy

Report for: Western Riverside Waste Authority (WRWA)

Ricardo ref. ED17666 Issue: 4 25/06/2024

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Western Riverside Waste Authority

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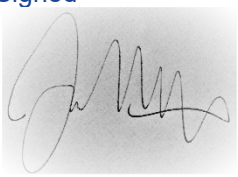

Ricardo reference:
ED17666100

Date:
25/06/2024

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1. OVERVIEW

These technical appendices provide a detailed overview of the workshops and technical analyses conducted in support of the Western Riverside Joint Resources and Waste Strategy for the London Borough of Hammersmith & Fulham, the London Borough of Lambeth, the Royal Borough of Kensington and Chelsea, the London Borough of Wandsworth and Western Riverside Waste Authority (WRWA).

The sections of these technical appendices include:

- Strategy Workshops
- Benchmarking
- Forecasting
- Baseline Modelling
- Options Modelling and
- Options Appraisal including Environmental Assessments

The workshops and data analysis in support of the Strategy were conducted during 2023 and 2024, and as such reflect the local and national waste landscape and the future legislative changes expected at this time. Where possible the latest data available has been used to inform the analysis undertaken for the Strategy.

2. STRATEGY WORKSHOPS

This section provides a detailed overview of the workshops conducted in support of the Strategy.

Throughout the course of the Strategy development, a series of workshops were held to gain insight and direction from key stakeholders on the vision, priorities, and collection options to be explored.

At the early stages of the process, a series of three workshops were held to understand the stakeholders' vision, level of ambition and to set the boundaries for the Strategy. The first two workshops took place in April 2023 and aimed to engage different groups of participants from within the WRWA authorities. Following these workshops, a joint workshop took place in July 2023 to bring together the participants from Workshops 1 and 2. Finally, Workshops 4 – 6 consisted of meeting with the WRWA Partners to agree upon the options to be modelled and the criteria used to evaluate each option. Table 1 summarises the dates and duration for each session, as well as the targeted groups of stakeholders.

This document collates the outcomes of the workshops held for the Strategy and highlights areas of consensus and areas where views on priorities differed.

Table 1: Schedule of Workshops for the Strategy Development

Workshop	Title	Stakeholders	Dates and duration
1	Vision, Priorities and Ambition	Officers	13/04/2023 – 2.5 hours
2	Vision, Priorities and Ambition	Elected Members	24/04/2023 – 2.5 hours
3	Joint Vision, Priorities and Ambition	Elected Members, Directors, Technical Officers	10/07/2023 – 1 hour
4	Options Longlisting	Officers	19/10/2023 – 2 hours
5	Options Shortlisting	Officers	30/11/2023 – 1 hour
6	Evaluation Criteria	Officers	22/02/2024 – 2 hours

2.1 WORKSHOPS 1 & 2: VISION SETTING AND PRIORITIES

The aims of these workshops were to shape and guide the vision, objectives, and priorities for the Strategy, with the goal of understanding and capturing the diverse views across the WRWA Partners to identify areas where there is consensus already within and across the groups.

During the workshops, the following points were discussed to identify areas of agreement and areas of divergence, to enable progress with the development of the Strategy:

- Priorities and objectives;
- Vision and target setting;
- Option boundaries;
- Partner Authorities attitude to conformity within Waste Collection Authorities (WCAs);
- Constraints on options (e.g. frequency of collections, technology types);
- Environmental performance;
- Attitude to risk;
- Treatment and disposal technology constraints – what technologies would be problematic on the basis of preference or pre-conceived opinions; and
- Cost of changes to collection and treatment options.

2.2 VISION SETTING

2.2.1 Level of ambition

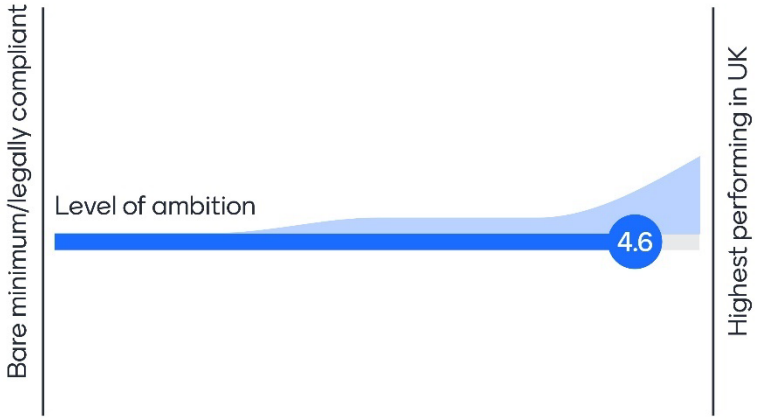
During the Officer and Member Workshops, stakeholders were asked for their views about how the current performance of the services delivered by their Council and WRWA and what the level of ambition should be for this strategy. The gathered views are represented in Figure 1 and Figure 2.

Stakeholders believe that they are currently performing well and most agreed that WRWA as a whole should be aiming to be the highest performing of similar local authorities (LAs), whereas others would like the WRWA to go beyond that, being amongst the highest performing in the UK.

During the Workshop, the practicality of achieving these ambitions was discussed and it is possible that different views around limitations such as property types and costs may have been an influential factor on Stakeholders' responses.

Please note that this question was altered after feedback during the Officer Workshop and therefore the results for the Member Workshop use an amended scale.

Figure 1: Level of Ambition for the Strategy - Officers Vision Workshop



Scale:

1 = Bare minimum/legally compliant

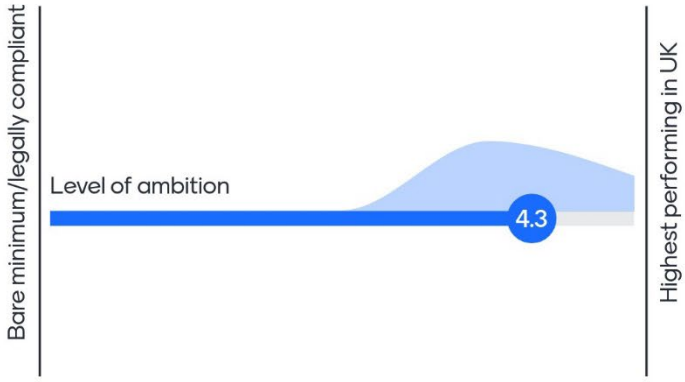
2 = Aligned with similar LAs

3 = Highest performing in England

4 = Highest performing in UK

5 = Best in the world

Figure 2: Level of Ambition for the Strategy - Members



Scale:

1 = Bare minimum/legally compliant

2 = Aligned with similar LAs

3 = Best of similar LAs

4 = Best dry recycling rate

5 = Best performing in the UK

As part of setting the level of ambition for the Strategy, stakeholders were invited to express their views on the recycling target goals that the Strategy should aim to achieve. The stakeholders expressed a range of ambitions with respect to the recycling performance, with a clear difference between the views expressed by Officers versus Members. In the Officer workshop, the primary reason for this was practicality of recycling and

the fact that householders and businesses in Central London produce lower amounts of organic waste due to fewer and smaller gardens in those areas, which is a key constraint that cannot be changed.

In 2021/22, WRWA Partner Authorities achieved an average household waste recycling rate (including reuse and composting) of **27%**. The borough recycling rates varied between **23% and 35%.** This information was included in the benchmarking section of the workshops.

During the Member Workshop views were expressed about the importance of achieving high recycling levels, with a general view that even if a higher recycling rate wasn't met, the ambition to achieve higher rates could contribute to improving performance compared to aiming for a lower target.

2.2.2 Vision Statement

The Vision should be a simple statement of what the Strategy aims to achieve. During the Officer and Members Workshops, stakeholders were invited to express three key words to be included in the Vision Statement, by means of the 'word cloud' tool on Menti. The results of this exercise are shown in Figure 3 and Figure 4.

The word cloud presents all the inputs given by the stakeholders, words that have been entered multiple times will appear in a larger font size, indicating their relative importance. As shown by the figure, the words put forward the most were "zero waste", "environment/environmental" and "carbon" (net zero carbon/reduced carbon impact), with greater emphasis on reducing carbon impacts while also gaining value and being resilient/flexible towards future changes.

Figure 3: Vision Statement Word Cloud - Officers Vision Workshop

Figure 4: Key words to include in the vision statement - Members

2.2.3 Priorities

Following the discussion around establishing a Vision, it was essential to understand what stakeholders envisaged as priorities for the development of the Strategy. During the Officer Workshop, stakeholders were asked to type what issues the Strategy should prioritise by means of a Menti word cloud. The outcome, in Figure 5 provided below, shows priorities on reducing waste, increasing recycling, ensuring value for money, decreasing carbon emissions and Simplicity for residents.

The same word cloud exercise was proposed to Elected Members. The outcome in Figure 6 presented below differs slightly from those discussed with Officers, however moving up the waste hierarchy and environmental impact were still identified as high priorities. Other priorities expected to play an important role in the Strategy included collaborating across London, providing a framework for future procurement and making sure the Strategy aims to meet the needs of all four Partner Authorities.

Figure 5: Priorities for the Strategy - Officers

Figure 6: Priorities for the Strategy - Members

2.2.4 Ranked Priorities

Using the word cloud exercise a list of priorities was agreed in each workshop. From this list, Stakeholders were asked to rank their top priorities. This exercise showed that top priorities for Officers were low carbon, deliverability and waste minimisation. In addition, having flexible systems, being customer-focussed and value for money were also ranked highly in the relative priorities.

Similarly, during the Member Workshop it was identified that customer focus should be the top priority in the Strategy. Other priorities included Low carbon, collaboration and waste prevention (subbed for waste minimisation after feedback from Officers), followed by meeting government changes and having a flexible system.

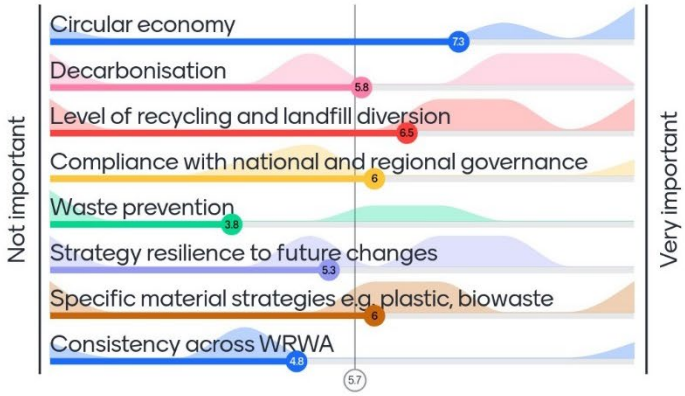
Overall, waste prevention, carbon reduction and customer focus were identified as broad areas of consensus between Officers and Members.

2.2.5 Driving issues and areas of focus

Stakeholders were invited to provide their insight about what issues should be driving the development of the Strategy. For this task, stakeholders in Workshops 1 and 2 were requested to rank a list of issues proposed by Ricardo. The results are shown in Figure 7 and Figure 8 for Workshops 1 and 2, respectively. During the first session, the driving issues identified as most important were the decarbonisation of waste management practices, waste minimisation and strategy resilience, in line with the priorities identified. Circular economy was identified as the main driving issue for the Strategy during Workshop 2, together with recycling and landfill diversion rates. Another key issue identified during the Workshops was specific material strategies i.e. having a defined approach to focus on a specific material.

Figure 7: Importance of Driving Issues - Officers Vision Workshop

Figure 8: Importance of Driving Issues - Members



2.2.6 Key collaboration areas

Enhanced collaboration across the WRWA Partners has the potential to provide opportunities to both Borough residents and businesses. During Workshop 1, stakeholders expressed their views on what benefits could be achieved from collaboration. The benefits raised included procurement benefits, better value for money, consistent outcomes, greater efficiencies, better customer experience as well as sharing of resources, experience and knowledge.

During the Workshops, stakeholders were asked to express their views on key collaboration areas, such as:

- The standardisation of collection systems;
- The preferred approach to food waste collections; and
- Their views on residual waste treatment.

These topics are key in the current national Resources and Waste Strategy and have recently been the subject of government consultations. These proposed the introduction of a weekly separate food waste collection for all households and appropriate businesses with the goal of reducing greenhouse gas emissions, and the introduction of consistent collections in England.

2.2.6.1 Standardisation of collection systems

Waste collections across the Partner Authorities differ from one Council to another. In particular, Kensington & Chelsea and some areas of Hammersmith & Fulham have twice weekly residual waste collections for some, or all properties.

As previously seen, stakeholders expressed their views on what benefits could be achieved by increasing collaboration across the Partnership. They were also specifically asked about their appetite for the

standardisation of collection systems. The outcomes in Figure 10 and Figure 11 show a general resistance to change regarding the current twice weekly residual waste collection system for certain properties as seen below.

There were mixed views on segregating dry mixed recyclables (DMR), as shown in Figure 9. It was considered impractical to introduce further segregation, particularly due to space constraints, but that it might be possible to introduce further segregation in some areas.

Figure 9: View of continuing with DMR or moving to more segregation - Officers & Members

Stick with DMR

More segregation is not practicable

Continue with DMR at least until we know how DRS and EPR have embedded and what the impact has been on the current collections and MRF processing arrangements

Keep DMR.

Most likely to stick with DMR, only option might be twin stream, but may be less important after DRS has full effect

Space constraints mean separate containers for each type of recyclate is not viable in inner London

Wherever we can, we should segregate. This may only be for street properties with external space for full separation, but even on estates facilities have been successfully installed outside blocks

The WRWA MRF will need a rebuild to segregate more material types - .hopefully by robot

Segregate as much as practicable

Continuing with the easiest way to collect recycling is best

More kerb side/household segregation would be difficult to achieve with our highly diverse & often transient inner city communities. Most dry waste is collected from street properties.

more separation is very difficult

Figure 10: Appetite for Fortnightly or Weekly Frequency of Residual Collections - Officers

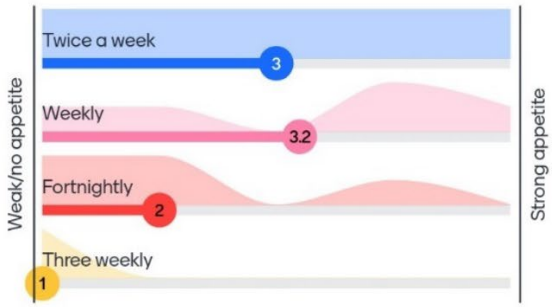
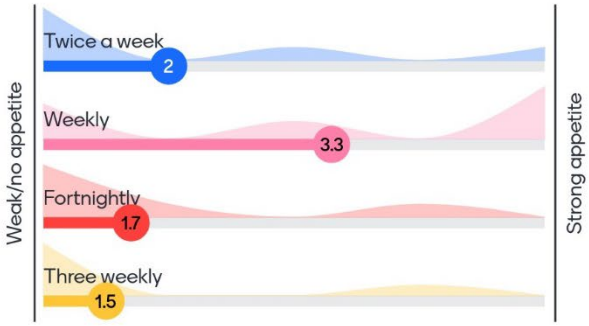


Figure 11: Appetite for Fortnightly or Weekly Frequency of Residual Collections - Members



2.2.6.2 Approach to the management of organic waste

As part of the Government consultation on Simpler Recycling across England, the weekly separate collection of food waste has also been proposed.

During the Officer and Member Workshops, stakeholders were invited to rank three collection options for food waste:

- Separate food collection, on a weekly basis;
- Mixed garden and food waste collection, on a weekly basis; and
- Mixed garden and food waste collection, on a fortnightly basis.

The preference of Officers and Members is presented in Figure 12 and Figure 13, with weekly, separate food waste collections being the preferred option. As most of the Partner Authorities in WRWA are currently operating separate food waste collections for at least some properties under this scheme and it is expected to be required by incoming legislative changes, this was the anticipated outcome.

Figure 12: Food waste method of collection - Officers

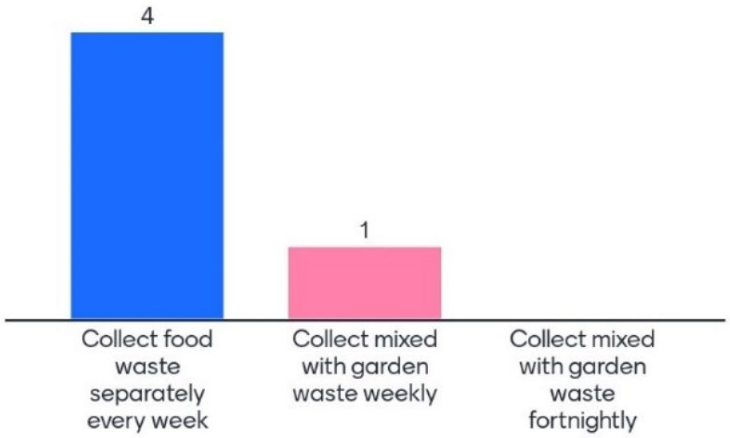
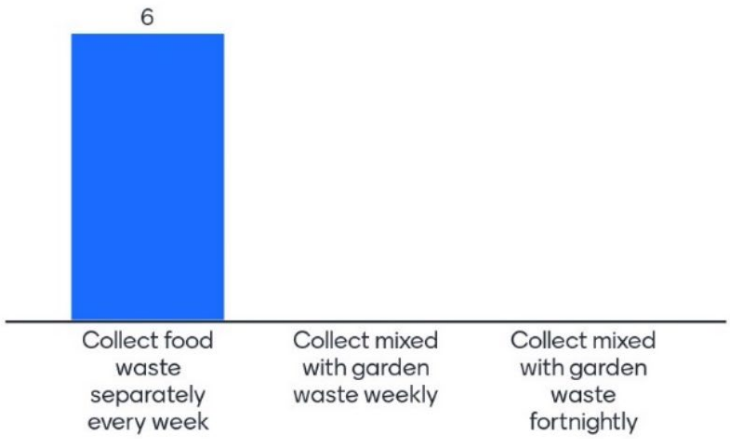


Figure 13: Food waste method of collection - Members



2.2.6.3 Boundaries for the Management of Residual Waste

Stakeholders were invited to provide their views on what options should be included in the Strategy in terms of residual waste management. Across all workshops, there was unanimous agreement of the need to avoid landfill disposal as a main residual waste treatment option. Energy from Waste (EfW) was discussed in detail and the conclusion was that it has a role to play and should be considered as part of the Strategy, in particular where combined heat and power is included in the solution. As such, both Officers and Members agreed that it should be a key technology to be included in the new Strategy.

EfW was selected as the preferred option, with MBT ranked in second place but with some uncertainty expressed regarding how this works and its feasibility.

Through these workshops, it was recognised that residual waste will require treatment/disposal and EfW was identified as the best available solution, after preventing waste in the first place.

2.3 JOINT VISION WORKSHOP

In July 2023, Ricardo held a Joint Vision Workshop. This workshop was a follow-up to Officer and Member workshops delivered in April and a subsequent meeting with Directors held in May 2023, to discuss the Vision and ambition of the new Strategy. The workshop was aimed at Officers, Members and Directors from WRWA and the Partner Authorities. Prior to the workshop, invitees were provided with a concise briefing note on the key issues to be considered during the session. This briefing note informed stakeholders of the key aspects for consideration, to help them develop their thinking in advance and to aid greater interaction during the session.

During this meeting the following points were covered:

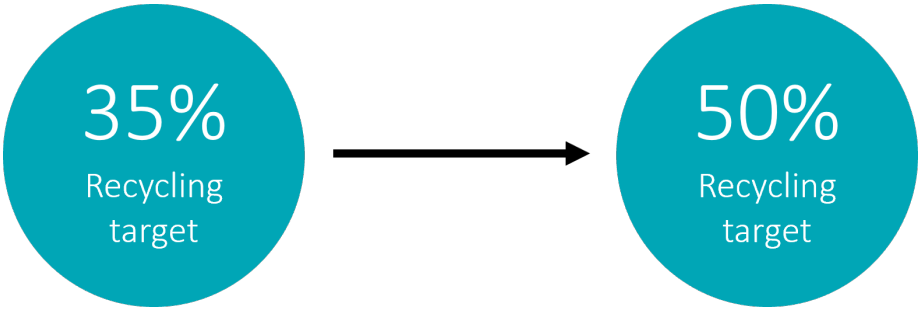
- Level of ambition regarding recycling targets
- Priorities
- Draft Vision Statements

2.3.1 Level of Ambition

Following a discussion around the divergences of the views expressed between the Officers and Members for recycling rates in the previous vision workshops, Stakeholders were invited to reshare their views on the level of ambition for the strategy. Taking into account the limitations caused by a high proportion of flats and limited

garden space, Stakeholders collectively agreed on a draft Local Authority Collected Waste (LACW)[1] recycling target of 35% with a stretch target of 50% in line with the Greater London Authority (GLA) target, as shown in Figure 14.

Figure 14: Proposed LACW Recycling Target and Stretch Target



2.3.2 Ranked Priorities

During this section of the workshop, the stakeholders reviewed the previous ranked priorities, and it was discussed how these priorities would be used to evaluate the modelled options for the Strategy. Following this discussion, Stakeholders were invited to jointly agree on a ranked order of Priorities, shown in Figure 15.

Overall, it was found that customer service was jointly ranked as the highest priority, followed by low carbon and financial considerations. This was also seen in the Officer and Member workshops in April where customer focus and value for money, and environmental impact were also ranked highly in the relative priorities.

Figure 15: Joint Vision Workshop ranked priorities

2.3.3 Vision statement

As mentioned in section 2.1.2, the vision should be a simple statement of what the WRWA Joint Waste Strategy aims to achieve. During the Joint Vision Workshop, the stakeholders reviewed a selection of draft Vision Statements, and were invited to share their views.

Following a planned discussion with the Directors, the most popular entries in the word clouds created by Officers and Members were organised and summarised into a working Draft Vision Statement:

[1] LACW waste includes all household and commercial waste collected by the Local Authority.

“The Western Riverside partners will work together to prioritise waste prevention, reduce our carbon emissions and environmental impacts, provide resilient, customer focused waste and recycling services that are future-proof and maximise value from the materials we manage, for the benefit of residents and local businesses.”

This was later revised in October 2023 with the WRWA Members to the current working Draft Vision Statement below. Please note that this draft may still be altered at any time up until the final strategy is published.

“The Western Riverside partners will work together with our residents and businesses, to prioritise waste prevention, reduce our carbon emissions and environmental impacts, provide customer focused waste and recycling services that maximise value from the materials we manage.”

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2.4 OPTIONS SHORTLIST WORKSHOPS

During a series of meetings in Autumn 2023, officer stakeholders agreed upon a shortlist of collection and treatment options to be modelled. This process began with a review and discussion around a longlist of options presented in Table 2, followed by a second Officer meeting with WRWA where the final options to be modelled were agreed upon. Table 3. It should be noted that Options were developed for modelling purposes only, to support understand of potential performance ranges and to inform target development. Collection systems are the responsibility of the individual Councils.

Table 2: Collection and Treatment Options Longlist

Dry mixed recyclables (DMR)

Method	Frequency	Container	Vehicle	Treatment	Delivery	Other
Comingled	Weekly	Wheeled bins	Twin-pack	MRF / bulk bays	Bulked/hauled	Textiles & WEEE & flexible plastics to be considered
	Fortnightly	Disposable sacks	Single compartment (RCV)			
	Twice Weekly					
		Communal/bulk bins (1100L, 660L)				

Residual Waste

Method	Frequency	Container	Vehicle	Treatment	Delivery	Other
	Twice weekly	Wheeled bins	Twin-pack	EfW	Bulked/hauled	
Separate residual	Weekly	Disposable sacks	Single compartment (RCV)			
	Fortnightly	Communal/bulk bins (1100L, 660L)				

Food

Method	Frequency	Container	Vehicle	Treatment	Delivery	Other
Separate food	Weekly	Indoor & outdoor caddies	7.5t single chamber	Anaerobic digestion	Bulked/hauled	
Mixed food and garden		Wheeled bins	12t single chamber	In-vessel composting	Direct delivery	
			Standard RCV			

Garden Waste

Method	Frequency	Container	Vehicle	Treatment	Delivery	Other
Separate garden (free)	Weekly	Wheeled bins	Standard RCV	Open windrow	Bulked/hauled	
Separate garden (subscription)	Fortnightly (separate garden only)	Disposable sacks		In-vessel composting		
		Reusable sacks				

Table 3: Shortlist Options

	Residual Waste	Dry Recycling	Food Waste	Garden Waste
Baseline +	Same as Baseline but with waste arisings and housing projected for future year – **2028**			
Option 1	Separate collection, frequency to stay the same as baseline +	Separate collection, frequency to stay the same as baseline +	Borough-wide, separate weekly collection	Separate, fortnightly, charged
Option 2	Separate collection, frequency to stay the same as baseline +	Separate collection, frequency to stay the same as baseline +	Borough-wide, mixed weekly collection, GW charged	
Option 3	Co-collection of residual with DMR – frequency to stay the same as baseline +		Borough-wide, separate weekly collection	Separate, fortnightly, charged
Option 4	Co-collection of residual with DMR – frequency to stay the same as baseline +		Borough-wide, mixed weekly collection, GW charged	
Option 5	Separate collection, fortnightly, 140L bins (where possible), no side waste	Comingled, weekly, 240L bins (where possible)	Borough-wide, separate weekly collection	Separate, fortnightly, charged

Taking into account, the current collection systems of each borough, Options 1 - 4 maintain the current frequency and containers utilised by each of the Partner Authorities. Options 1 - 4 explore the rollout of a weekly food waste collection service boroughwide and the introduction of a charged garden waste scheme.

To consider the views of the Officers regarding their current collection systems and existing vehicle fleet both co-collection (a split-back vehicle which allows residual waste and recycling to be collected on the same vehicle in separate compartments) and separate collection of materials have been explored in the 5 Options. Options 3 and 4 model the co-collection of residual and DMR waste using split body vehicles and Options 2 and 4 model the co-collection of food and garden waste using a single chamber vehicle. Option 5 explores measures to increase recycling performance. These include a move to fortnightly residual waste collections and weekly dry mixed recycling collections, and the introduction of wheeled bins. To represent Lambeth's current system of co-collection of food and garden as a high performing option, Lambeth's option 2, moves to a fortnightly residual collection, whereas for the three other Partner Authorities, it remains the same as their Baseline service.

At the request of the Officers, a 'Baseline +' option was also agreed upon to take into account of any changes to collection systems that had been implemented by the Partner Authorities since the beginning of the development of the Strategy. The Baseline + also models the impact of DRS and EPR in the year of 2027/2028. . The year 2027/2028 because it represents the first point in time when the impacts from the implementation of legislative changes should be apparent and measurable.

2.5 EVALUATION CRITERIA WORKSHOP

Once the Options to be modelled were agreed, Ricardo held an Evaluation Criteria workshop with Officers. The purpose of this meeting was to agree a list of evaluation criteria and the Red, Amber, Green (RAG) ratings for each criteria.

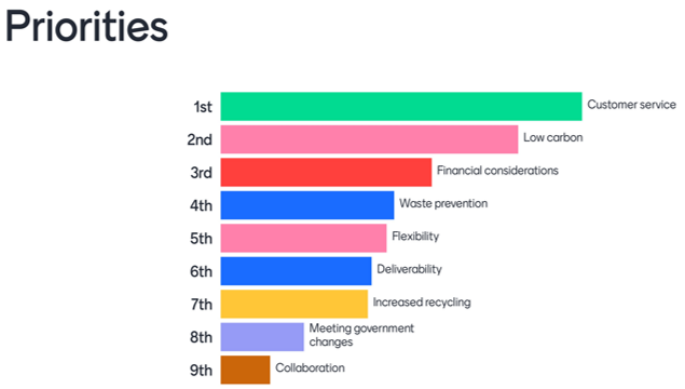
2.5.1 Evaluation Criteria

After revisiting the previous priorities agreed at the Joint Vision Workshop, the Stakeholders were asked to discuss and collectively agree on a list of Evaluation Criteria to be used to evaluate each modelled option as part of the options appraisal process. The final list of Evaluation Criteria can be seen in Figure 16, compared against the ranked priorities agreed in the Joint Vision Workshop.

Figure 16: Revised list of Evaluation Criteria compared to Ranked Priorities from July 2023

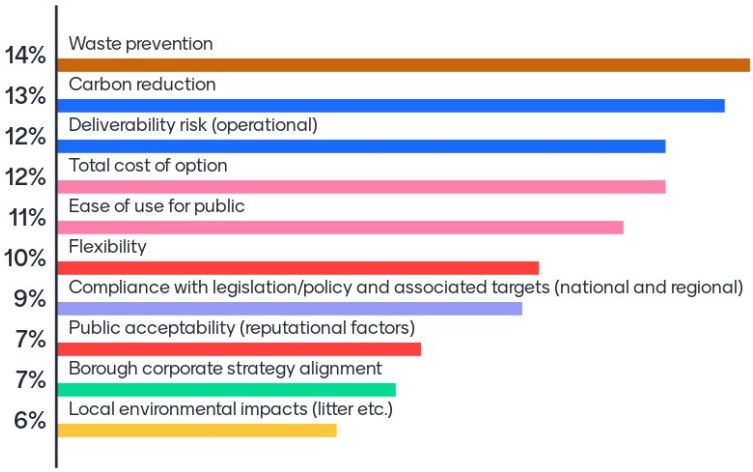
Revised list

- Deliverability risk (operational)
- Ease of use for public
- Public acceptability (reputational factors)
- Local environmental impacts (noise, litter, odour etc)
- Borough corporate strategy alignment
- Compliance with legislation/policy and associated targets (national and regional)
- Waste prevention
- Carbon reduction
- Total cost of option
- Flexibility



Stakeholders were asked to share their views on the weightings for each Evaluation Criteria as shown in Figure 17. Using the Menti tool, Stakeholders were asked to assign a total of 100 points across the agreed Evaluation Criteria.

Figure 17: Weighted Evaluation Criteria - Officers



2.5.2 Rag Ratings

The Options evaluation was undertaken using RAG ratings, with each option being scored with the aim of identifying a preferred option. Once the Evaluation Criteria were weighted, Stakeholders were invited to share their views on what the RAG ratings should be for each Evaluation Criterion. The final rag ratings are presented in Table 4.

Seven of the criteria were classified as “qualitative criteria” and the remaining 3 were classified as “quantitative criteria”. It was agreed that for one criterion, Local environmental impact, it would be a joint qualitative and quantitative evaluation so that qualitative elements such as litter and odour could be assessed and quantitative elements such as human toxicology, and acidification could be assessed using environmental impact modelling software WRATE (Waste and Resource Assessment Tool for the Environment). For the qualitative criteria, red, amber and green descriptions for each criterion were provided, whereas for the quantitative criteria it was proposed for the options to be ranked based on quantitative results of the modelling.

Table 4 Evaluation Criteria RAG Ratings

Criteria	Assessment	Red (0)	Amber (2)	Green (3)
Deliverability Risk (performance)	Qualitative assessment of deliverability of achieving performance of targets	Does not achieve targets	Achieve some/ close to targets	Achieves targets
Ease of use for public	Qualitative assessment of ease of use for the householders	Completely new system which is more difficult for the majority of householders	The same as the current system for the majority of householders	Easier to use than the current system for the majority of householders
Public acceptability (reputational factors)	Qualitative assessment of public perception of option	Unacceptable to public	Acceptable to some groups of public (e.g. people in certain housing types)	Acceptable to majority of public
Local environmental impact (litter, noise, odour)	Qualitative assessment (litter, noise, odour)	Higher environmental impact than Baseline	Similar environmental impact than Baseline	Lower environmental impact than Baseline
	WRATE quantitative assessment: Human toxicology, acidification etc.	Ranked based on quantitative results.		
Borough corporate Strategy alignment	Qualitative assessment against key relevant targets/objectives	Not compliant with corporate strategy	Partially compliant with corporate strategy	Fully compliant with corporate strategy
Compliance with legislation/policy and associated targets (national and regional)	Qualitative assessment against key relevant targets/objectives	Not compliant with current nor incoming legislation	Compliant with current legislation. Partially compliant with incoming legislation, requiring exemptions	Compliant with current and incoming legislation
Waste prevention	Quantitative assessment of recycling rate and EfW diversion.	Ranked based on quantitative results.		
Carbon reduction	WRATE Quantitative assessment: Climate change	Ranked based on quantitative results.		
Cost	Quantitative assessment: total cost of option – (collection and treatment costs)	Ranked based on quantitative results.		
Flexibility	Qualitative assessment of flexibility to changes (i.e. vehicle types, container types)	No flexibility	Some flexibility	Complete flexibility to changes

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2.6 NEXT STEPS

The workshops played a pivotal role in advancing the development of the Strategy, facilitating the sharing of crucial insights and fostering collaborative decision-making. Detailed findings, including options analyses and evaluations, are documented in these technical appendices.

Stakeholder engagement will continue to be carried out through the public consultation process which involves both a survey and focus groups. In addition, collaboration with WRWA Partners will continue to be integral to the ongoing development of the Strategy until adoption.

3. BENCHMARKING

This section provides a detailed overview of the performance benchmarking conducted in support of the Strategy.. The primary aim was to compare the current household waste collection performance of the WRWA Partners to other authorities in England of a similar nature to provide a comparative measure of recycling performance. The benchmarking has been conducted at a high level for WRWA as a whole and a detailed analysis for each WRWA Partner for **household** arisings only.

3.1 WRWA BENCHMARKING

As part of the high-level benchmarking, the performance of WRWA was compared against three high performing authorities including: the London Borough of Bexley, the London Borough of Richmond upon Thames and St Albans City and District Council. The benchmarking was undertaken using 2022/23 data from Waste Data Flow. Table 5 presents the waste collection schemes and 'WRAP Ruralities[2]' of each of the WRWA Partners and the benchmarked authorities for household waste arisings.

Please note that some schemes may have changed since the date range selected for the high level benchmarking exercise (2022/23).

Table 5: Benchmarked Authorities Overview of Schemes

Local Authority	WRAP Rurality	Residual Scheme	Dry Recycling Scheme	Food Waste Scheme	Garden Waste Scheme
Hammersmith & Fulham	Rurality 3: Predominantly urban, low deprivation	Weekly	Weekly	Food waste trials	No scheme
Kensington and Chelsea	Rurality 3: Predominantly urban, low deprivation	More than weekly	More than weekly	Food waste trials	Fortnightly Charged
Lambeth	Rurality 3: Predominantly urban, low deprivation	Weekly	Weekly	Weekly, standard properties only	Weekly Free
Wandsworth	Rurality 3: Predominantly urban, low deprivation	Weekly	Weekly	Food waste trials	No scheme
Bexley	3: Predominantly Urban, low deprivation	Fortnightly	Fortnightly	Weekly	Fortnightly Charged
Richmond Upon Thames	3: Predominantly Urban, low deprivation	Weekly	Weekly	Weekly	Fortnightly Charged
St Albans	Rurality 6: Mixed urban/rural, low deprivation	Fortnightly	Fortnightly	Weekly	Fortnightly Charged

Table 6 presents the household recycling rates of each of the WRWA Partners and the benchmarked authorities. As shown below, overall, the benchmarked authorities have higher overall recycling rates compared to the WRWA Partners.

[2] Level of rurality and deprivation defined by the Waste & Resource Action Programme (WRAP) https://www.wrap.ngo/ .

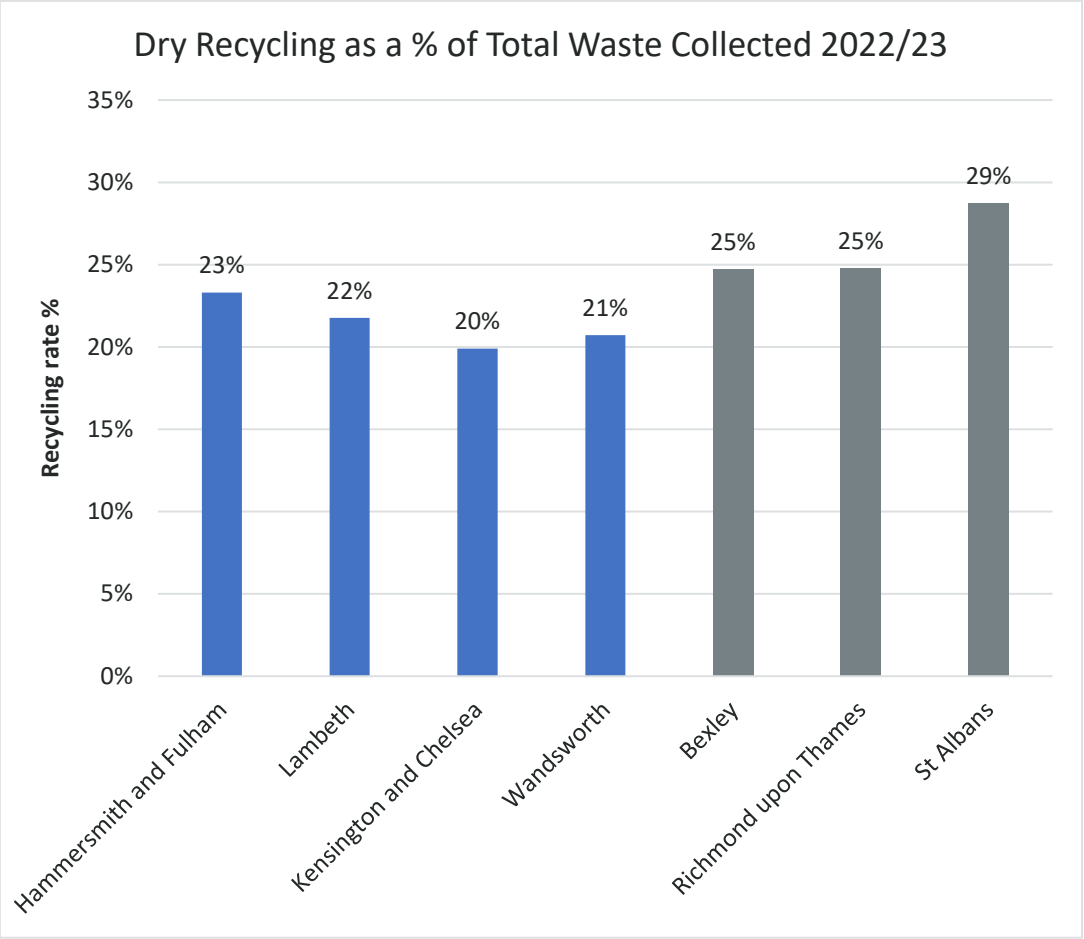
Table 6: Benchmarked Authority Recycling Rates

Local Authority	Household Recycling Rate
Hammersmith & Fulham	26%
Kensington and Chelsea	23%
Lambeth	31%
Wandsworth	22%
Bexley	44%
Richmond Upon Thames	40%
St Albans	60%

3.1.1 Dry Recycling Benchmarking

The intensely urban and flatted nature of the housing mix in the WRWA Partner areas (~75% flats) means that the opportunities for the generation and subsequent collection of green garden waste are extremely limited. To explore the impact of this on the overall recycling rates for the WRWA Partners, in Figure 18, the dry recycling rates across the seven authorities are presented. Despite having a lower overall recycling rate than the higher-performing authorities of Bexley, Richmond and St Albans, the WRWA Partners rank similarly to them, when considering dry mixed recycling. These rates range between 20% and 23%, which is comparable to Bexley's 25%. This suggests that while there is room for improvement, WRWA is in line with other high-performing regions in terms of its dry recycling efforts.

Figure 18: WRWA Dry Recycling Benchmarking

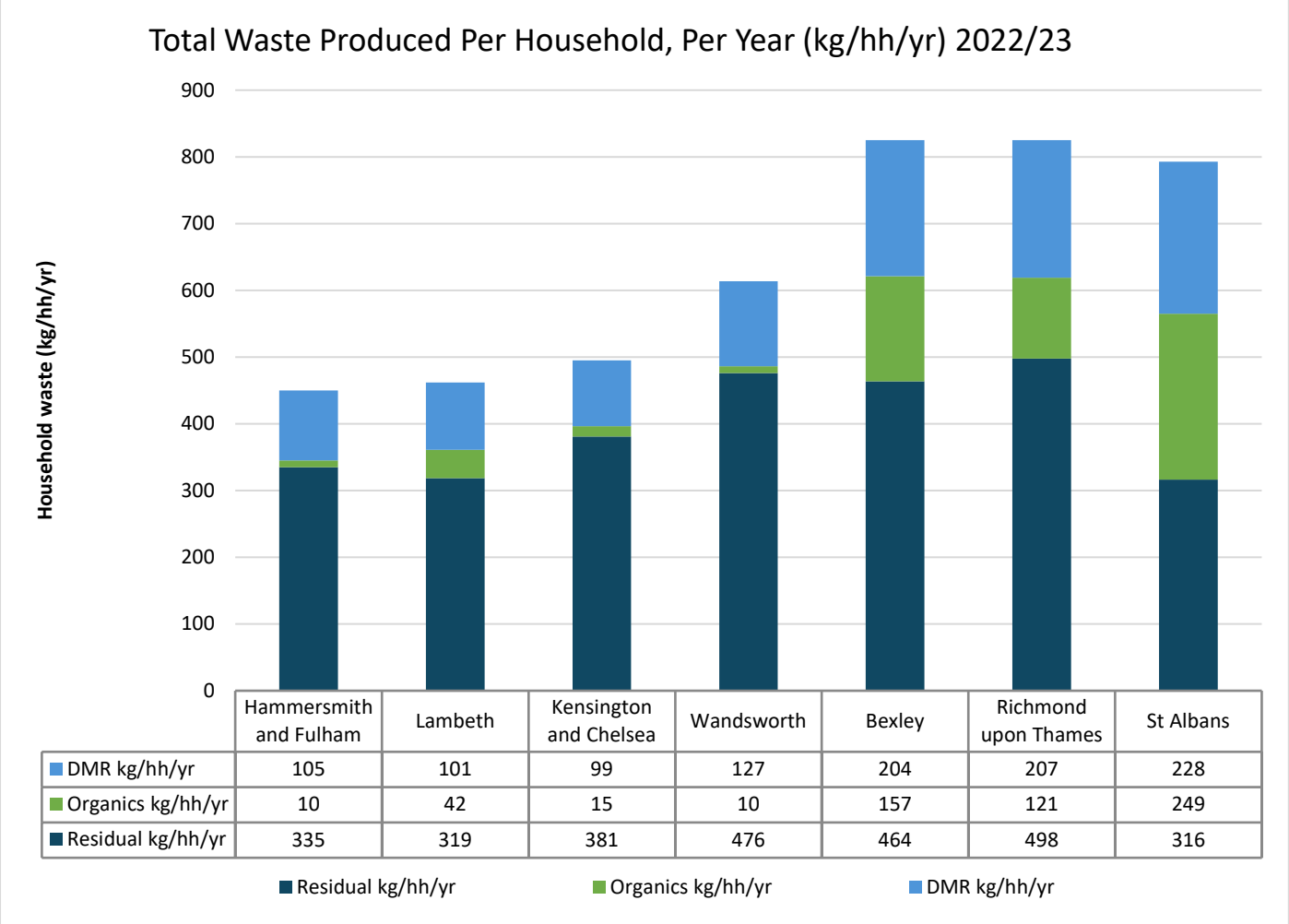


3.1.2 WRWA Waste Produced Per Household Benchmarking

Figure 19 shows the total waste produced in kilograms per household per year, broken down by waste type. It's clear that WRWA collects much less organic waste compared to the three benchmarked high-performing authorities. This is largely because the WRWA Partners are located in inner London, where there are fewer gardens and more households residing in flats. These properties typically have a lower recycling performance when compared to street level properties. Furthermore, only one of the Partner Authorities currently offers a comprehensive food waste collection, with three of the WRWA Partners running food waste trials, and just two currently offering a garden waste collection service.

In addition, Figure 19 shows that residual household waste produced per year is mostly lower or similar to that of the high performing authorities. This reflects the nature of the property mix across the WRWA Partners.

Figure 19: WRWA Waste Produced per Household Benchmarking

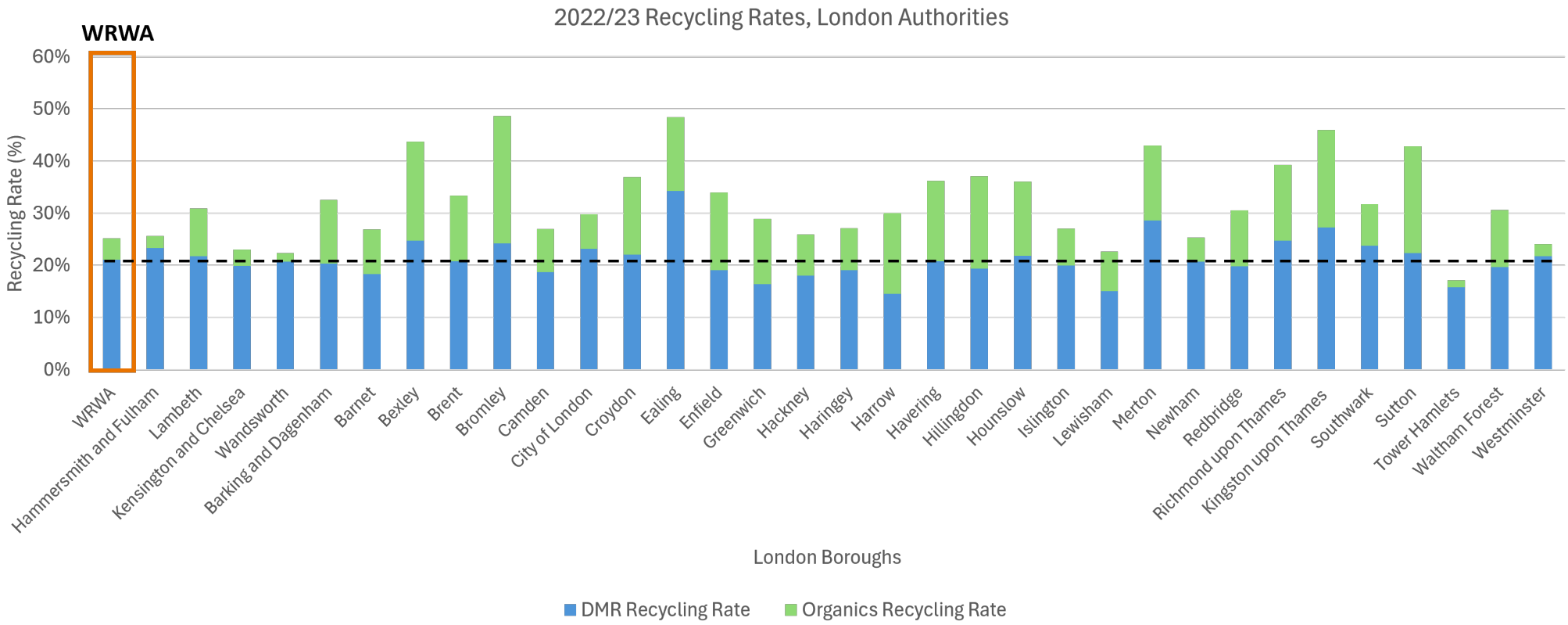


	Hammersmith and Fulham	Lambeth	Kensington and Chelsea	Wandsworth	Bexley	Richmond upon Thames	St Albans
DMR kg/hh/yr	105	101	99	127	204	207	228
Organics kg/hh/yr	10	42	15	10	157	121	249
Residual kg/hh/yr	335	319	381	476	464	498	316

3.1.3 London Recycling Rates Benchmarking

Figure 20 compares the performance of WRWA Partners with all London authorities, focusing on the dry mixed recycling rate and the organics recycling rate. It's evident that many London authorities have dry recycling rates below the WRWA average. Moreover, many London authorities with high overall recycling rates show a significant proportion of the performance is due to organics, as indicated by the green bar. This trend is notable in outer London authorities like Bromley, Merton, and Kingston Upon Thames. , Tthis reflects the recycling performance constraints associated with the urban nature and high proportion of flats in the WRWA area that means that the opportunities for the generation and subsequent collection of green garden waste are extremely limited.

Figure 20: Household Recycling Rates of London Authorities, Split by Dry Recycling and Organics



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3.2 WRWA BOROUGH BENCHMARKING

The benchmarking analysis of each WRWA Partner has been undertaken using Ricardo's proprietary Benchmarking Tool. The Benchmarking Tool compares the WRWA Partner's residual waste and recycling performance with authorities on similar collection schemes and neighbouring authorities.

The local authority comparator data in the WRAP LA Portal[3] has been used to benchmark each authority's performance on a per material basis for dry mixed recycling and residual waste for Financial Year 2021/22[4]. Each authority's performance has been compared to the performance of local authorities with the following characteristics:

- Ruralities 3 (Rurality 3: Predominantly urban, low deprivation).
- Dry Recycling Scheme.
- Residual Frequency; and
- Dry Recycling Frequency.

Please note that some schemes may have changed since the date range selected for the Borough benchmarking exercise (2021/22).

3.2.1 Recycling and Residual Waste Benchmarking

The results of the Baseline recycling and residual waste benchmarking are presented using quartiles. The description of the quartiles is given in Table 7. For recycling, the higher the tonnage of recycling collected, the higher the quartile performance, but for residual waste, the reverse is true.

Table 7: Benchmarking Quartile Descriptions

Q1 Upper Limit	Performance places authority in bottom 25% of authorities
Q2 Upper Limit	Performance places authority in lower half (26%-50%) of authorities
Q3 Upper Limit	Performance places authority in upper half (51%-75%) of authorities
Q4 Upper Limit	Performance places authority in top 25% of authorities

[3] https://laportal.wrap.org.uk/
[4] WRAP LA Portal FY2021/22 data was the latest data available at the time this benchmarking analysis was undertaken.

3.3 HAMMERSMITH & FULHAM

3.3.1 Baseline Benchmarking - Similar collection systems

Table 8 presents the benchmarked authorities with similar collection schemes to Hammersmith & Fulham, based on WRAP Rurality, dry recycling collection scheme and frequency and residual waste collection frequency.

Table 8: Hammersmith & Fulham, Authorities with Similar Collection Schemes

Local authorities	WRAP Rurality	Residual Collection	Recycling	
			Collection scheme	Frequency
Hammersmith & Fulham	**3**	**Weekly**	**Co-Mingled**	**Weekly**
Camden	3	Weekly	Co-Mingled	Weekly
Lambeth	3	Weekly	Co-Mingled	Weekly
Wandsworth	3	Weekly	Co-Mingled	Weekly
Oadby and Wigston	3	Weekly	Co-Mingled	Weekly
Leicester	1	Weekly	Co-Mingled	Weekly

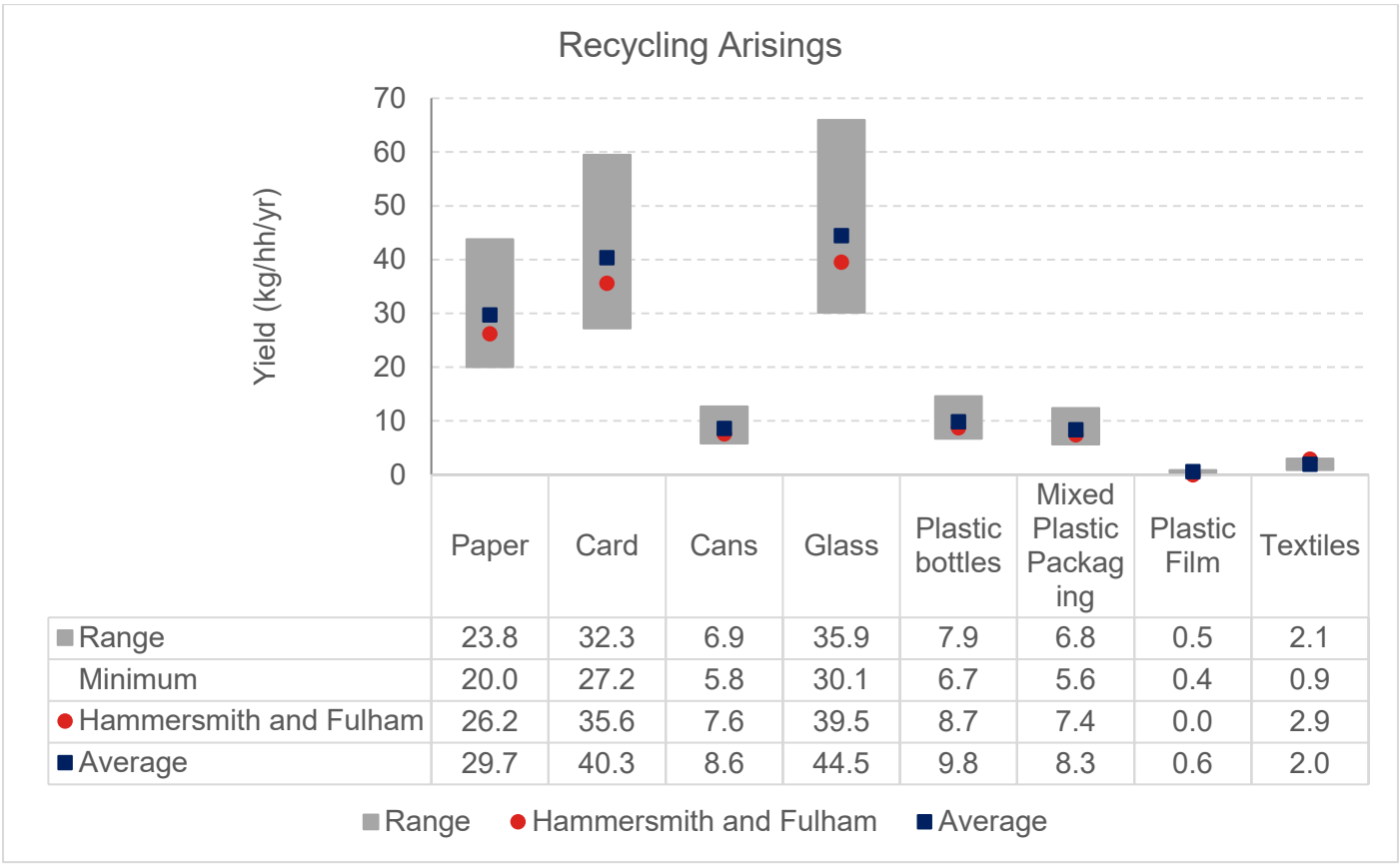
Table 9 shows the average performance data for Hammersmith & Fulham. The results show that, for the dry recycling categories, Hammersmith & Fulham's performance lies within the lower half (Q1) when compared to authorities on similar collection schemes. With regard to textile waste, the authority's performance lies in the top 25% of authorities. Residual waste lies within the top 25% of authorities (Q1).

Table 9: Hammersmith & Fulham Performance Compared with Similar Collection Schemes

Yields (kg/hh/yr)	Paper	Card	Cans	Glass	Plastic bottles	Mixed plastics	Plastic film	Textiles	Total including plastic film and textiles	Residual waste
Q1 Upper Limit	25.7	35.0	7.5	38.8	8.6	7.3	0.0	0.0	123.4	405.5
Q2 Upper Limit	28.0	38.1	7.9	40.9	9.0	7.7	0.4	0.0	131.6	460.9
Q3 Upper Limit	30.9	41.9	9.0	46.5	10.3	8.7	0.5	0.9	147.3	514.4
Q4 Upper Limit	43.8	59.5	12.7	66.0	14.6	12.4	0.9	3.0	209.9	597.3
Hammersmith & Fulham	26.2	35.6	7.6	39.5	8.7	7.4	0.0	2.9	125.0	359.1

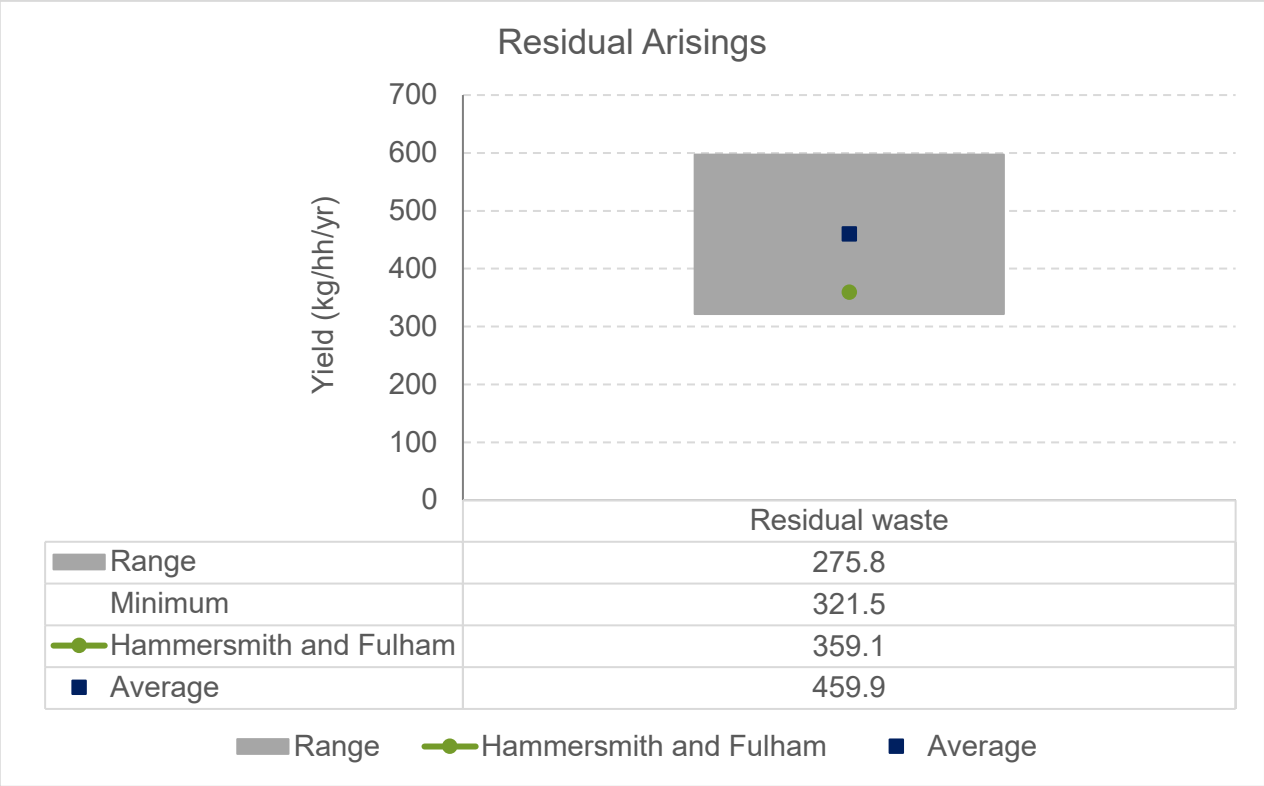
Figure 21 and Figure 22 show the performance range for the analysed local authorities, the average yields (per kilograms per household per year) and Hammersmith & Fulham's performance when compared to other local authorities with similar collection schemes.

Figure 21: Hammersmith & Fulham Recycling Arisings (kg/hh/yr)



	Paper	Card	Cans	Glass	Plastic bottles	Mixed Plastic Packaging	Plastic Film	Textiles
Range	23.8	32.3	6.9	35.9	7.9	6.8	0.5	2.1
Minimum	20.0	27.2	5.8	30.1	6.7	5.6	0.4	0.9
Hammersmith and Fulham	26.2	35.6	7.6	39.5	8.7	7.4	0.0	2.9
Average	29.7	40.3	8.6	44.5	9.8	8.3	0.6	2.0

Figure 22: Hammersmith & Fulham Residual Arisings (kg/hh/yr)



Compared to other local authorities with similar collection systems, Hammersmith & Fulham's performance falls in the lower half of benchmarked authorities, with the majority dry recycling yields falling in the second quartile (Q2). With regard to textile waste, Hammersmith & Fulham performs relatively well as its yields lie in the top 25% of authorities. Similarly, Hammersmith & Fulham perform in the top 25% of benchmarked authorities for residual waste (Q1).

3.3.2 Baseline Benchmarking – Neighbouring Authorities

Table 9 shows the waste collection schemes of Hammersmith & Fulham's neighbouring authorities.

Table 10: Hammersmith & Fulham Neighbouring Authorities

Local authorities	WRAP Rurality	Residual Collection	Recycling	
			Collection scheme	Frequency
Hammersmith & Fulham	**3**	**Weekly**	**Co-Mingled[5]**	**Weekly**
Wandsworth	3	Weekly	Co-Mingled	Weekly
Lambeth	3	Weekly	Co-Mingled	Weekly
Kensington and Chelsea	3	More Than Weekly	Co-Mingled	More Than Weekly
Richmond upon Thames	3	Weekly	Two-Stream[6]	Weekly
Hounslow	2	Fortnightly	Multi-stream[7]	Weekly

[5] Co-Mingled recycling is the combination of all recyclable materials into a single container prior to waste collection.
[6] Two-Stream recycling is the separation of recyclable materials into two containers prior to waste collection.
[7] Multi-Stream recycling is the separation of recyclable materials into more than two containers prior to waste collection.

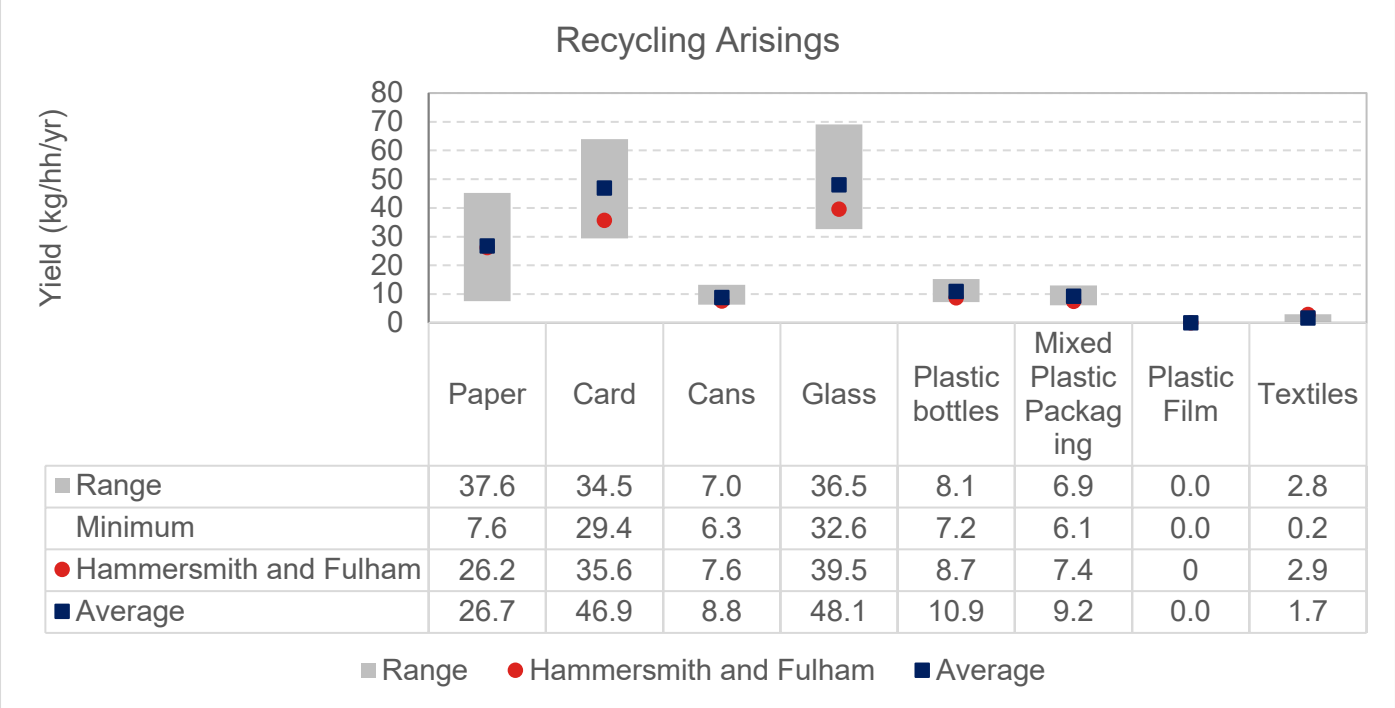
Table 11 shows the average performance data for Hammersmith & Fulham compared to its neighbouring authorities. The results show that, for the dry recycling categories, Hammersmith & Fulham's performance lies within the lower half (Q2 and Q1). With regard to textile waste and residual waste, the authority's performance lies in the top 25% of benchmarked authorities.

Table 11: Hammersmith & Fulham Neighbouring Authorities Performance

Yields (kg/hh/yr)	Paper	Card	Cans	Glass	Plastic bottles	Mixed plastics	Plastic film	Textiles	Total including plastic film and textiles	Residual waste
Q1 Upper Limit	21.7	38.1	7.4	40.9	9.0	7.7	0.0	0.0	131.6	406.6
Q2 Upper Limit	28.0	41.9	7.9	46.5	10.3	8.7	0.0	0.2	147.3	509.6
Q3 Upper Limit	30.9	61.4	9.0	51.2	12.6	10.7	0.0	1.8	153.4	514.4
Q4 Upper Limit	45.2	63.9	13.3	69.1	15.3	13.0	0.0	3.0	217.3	557.4
Hammersmith & Fulham	26.2	35.6	7.6	39.5	8.7	7.4	0.0	2.9	125.0	359.1

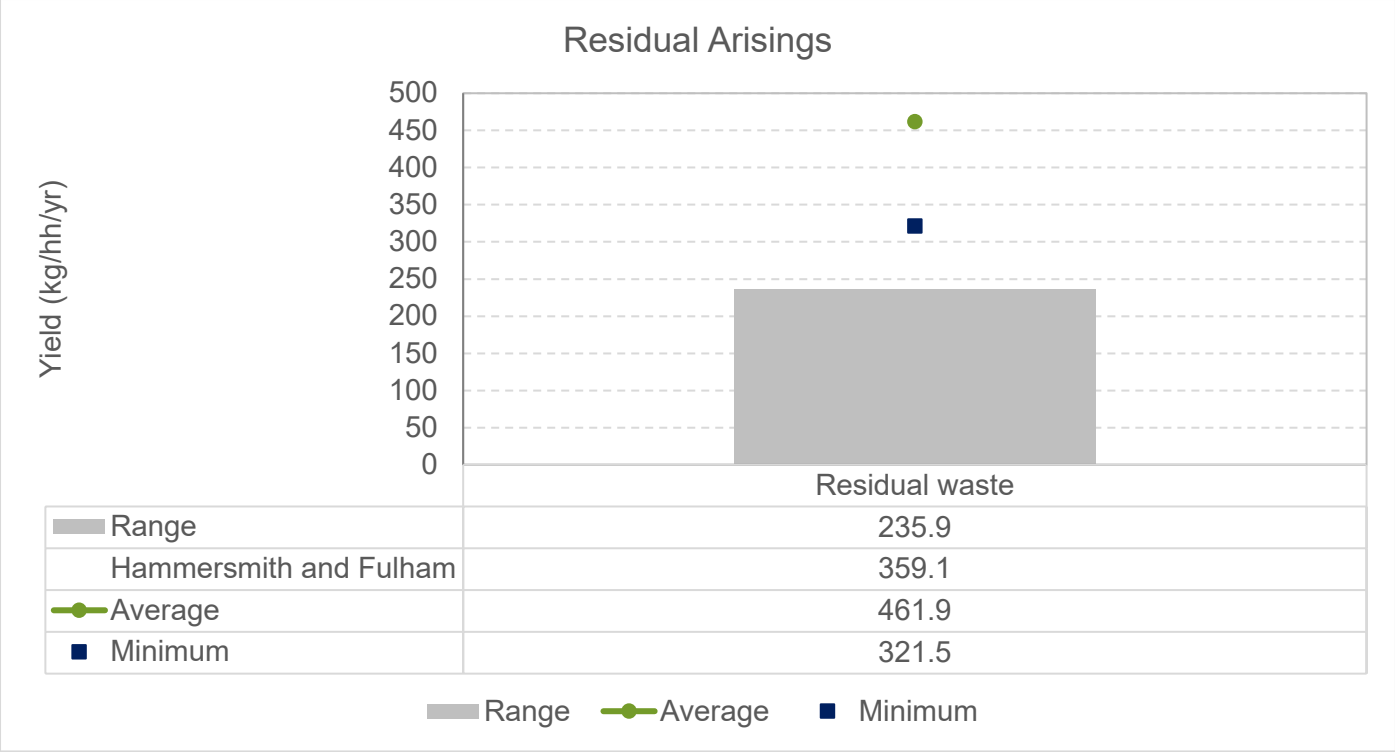
Figure 23. and Figure 24. below show the performance range for the analysed local authorities, the average yields and Hammersmith & Fulham's performance when compared to its Neighbouring Authorities.

Figure 23: Hammersmith & Fulham Recycling Arisings Neighbouring Authorities



	Paper	Card	Cans	Glass	Plastic bottles	Mixed Plastic Packaging	Plastic Film	Textiles
Range	37.6	34.5	7.0	36.5	8.1	6.9	0.0	2.8
Minimum	7.6	29.4	6.3	32.6	7.2	6.1	0.0	0.2
Hammersmith and Fulham	26.2	35.6	7.6	39.5	8.7	7.4	0	2.9
Average	26.7	46.9	8.8	48.1	10.9	9.2	0.0	1.7

Figure 24: Hammersmith & Fulham Residual Arisings Neighbouring Authorities (kg/hh/yr)



	Residual waste
Range	235.9
Hammersmith and Fulham	359.1
Average	461.9
Minimum	321.5

3.4 KENSINGTON AND CHELSEA

3.4.1 Baseline Benchmarking - Similar collection systems

Table 12presents the benchmarked authorities with similar collection schemes to Kensington and Chelsea, based on WRAP Rurality, dry recycling scheme and collection frequency and residual waste collection frequency. .

Table 12: Kensington and Chelsea, Authorities with Similar Collection Schemes

Local authorities	WRAP Rurality	Residual Collection	Recycling	
			Collection scheme	Frequency
Kensington and Chelsea	**3**	**More Than Weekly**	**Co-Mingled**	**More Than Weekly**
City of London	6	More Than Weekly	Co-Mingled	More Than Weekly
Westminster	3	More Than Weekly	Co-Mingled	Weekly
Islington	3	More Than Weekly	Multi-stream	Weekly
Southwark	2	More Than Weekly	Multi-stream	Weekly
Hammersmith & Fulham	3	Weekly	Co-Mingled	Weekly

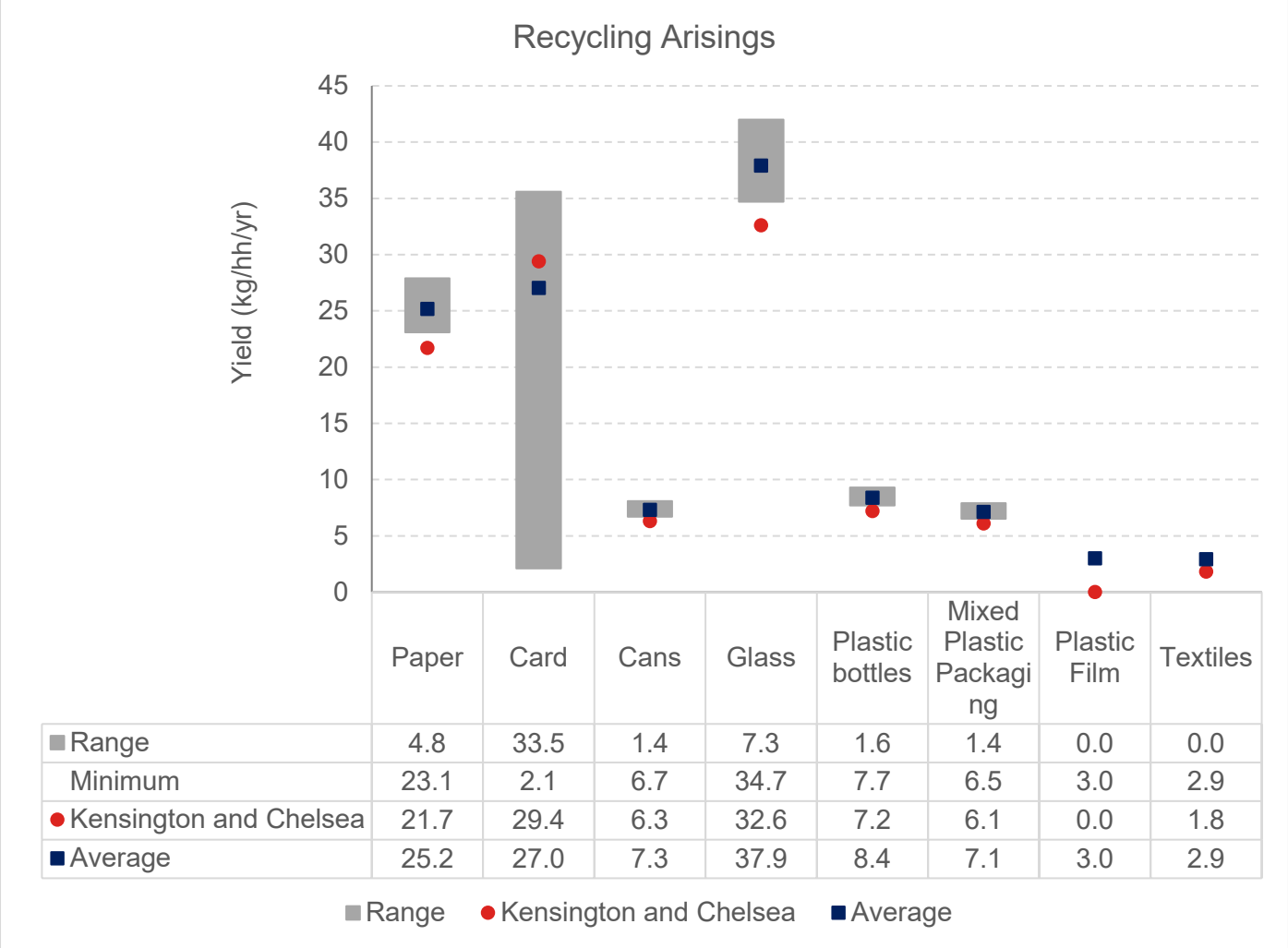
Table 13 shows the average performance data for Kensington and Chelsea compared to the benchmarked authorities. The results show that, for the dry recycling categories, Kensington and Chelsea's performance lies in the bottom 25% of benchmarked authorities. Residual waste lies within the lower half (Q3) and textiles lie in the top 25% of benchmarked authorities.

Table 13: Kensington and Chelsea Performance Compared with Similar Collection Schemes

Yields (kg/hh/yr)	Paper	Card	Cans	Glass	Plastic bottles	Mixed plastics	Plastic film	Textiles	Total including plastic film and textiles	Residual waste
Q1 Upper Limit	23.2	31.3	6.7	35.0	7.7	6.6	0.0	0.0	110.0	359.1
Q2 Upper Limit	25.4	31.6	7.4	38.3	8.5	7.2	0.0	0.0	113.8	367.5
Q3 Upper Limit	26.2	34.5	7.6	39.5	8.7	7.4	0.0	0.0	121.3	448.9
Q4 Upper Limit	27.9	35.6	8.1	42.0	9.3	7.9	3.0	2.9	125.0	498.2
Kensington and Chelsea	21.7	29.4	6.3	32.6	7.2	6.1	0.0	1.8	103.3	406.6

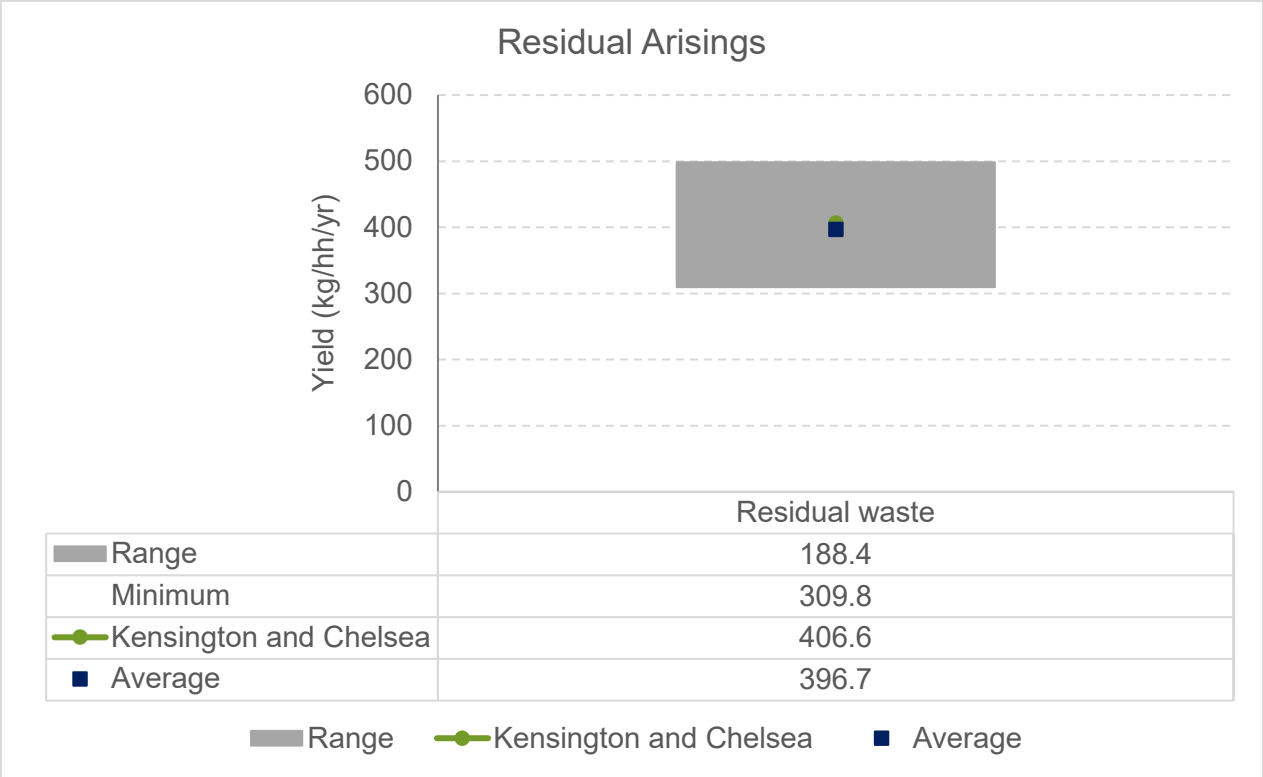
Figure 25 and Figure 26 show the performance range for the analysed local authorities, the average yields and Kensington and Chelsea's performance.

Figure 25: Kensington and Chelsea Recycling Arisings (kg/hh/yr)



	Paper	Card	Cans	Glass	Plastic bottles	Mixed Plastic Packaging	Plastic Film	Textiles
Range	4.8	33.5	1.4	7.3	1.6	1.4	0.0	0.0
Minimum	23.1	2.1	6.7	34.7	7.7	6.5	3.0	2.9
Kensington and Chelsea	21.7	29.4	6.3	32.6	7.2	6.1	0.0	1.8
Average	25.2	27.0	7.3	37.9	8.4	7.1	3.0	2.9

Figure 26: Kensington and Chelsea Residual Arisings (kg/hh/yr)



3.4.2 Baseline Benchmarking - Neighbouring Authorities

Table 14 shows the waste collection schemes of Kensington and Chelsea's neighbouring authorities.

Table 14: Kensington and Chelsea Neighbouring Authorities

Local authorities	WRAP Rurality	Residual Collection	Recycling	
			Collection scheme	Frequency
Kensington and Chelsea	**3**	**More Than Weekly**	**Co-Mingled**	**More Than Weekly**
Westminster	3	More Than Weekly	Co-Mingled	Weekly
Hammersmith & Fulham	3	Weekly	Co-Mingled	Weekly
Lambeth	3	Weekly	Co-Mingled	Weekly
Wandsworth	3	Weekly	Co-Mingled	Weekly
Camden	3	Weekly	Co-Mingled	Weekly

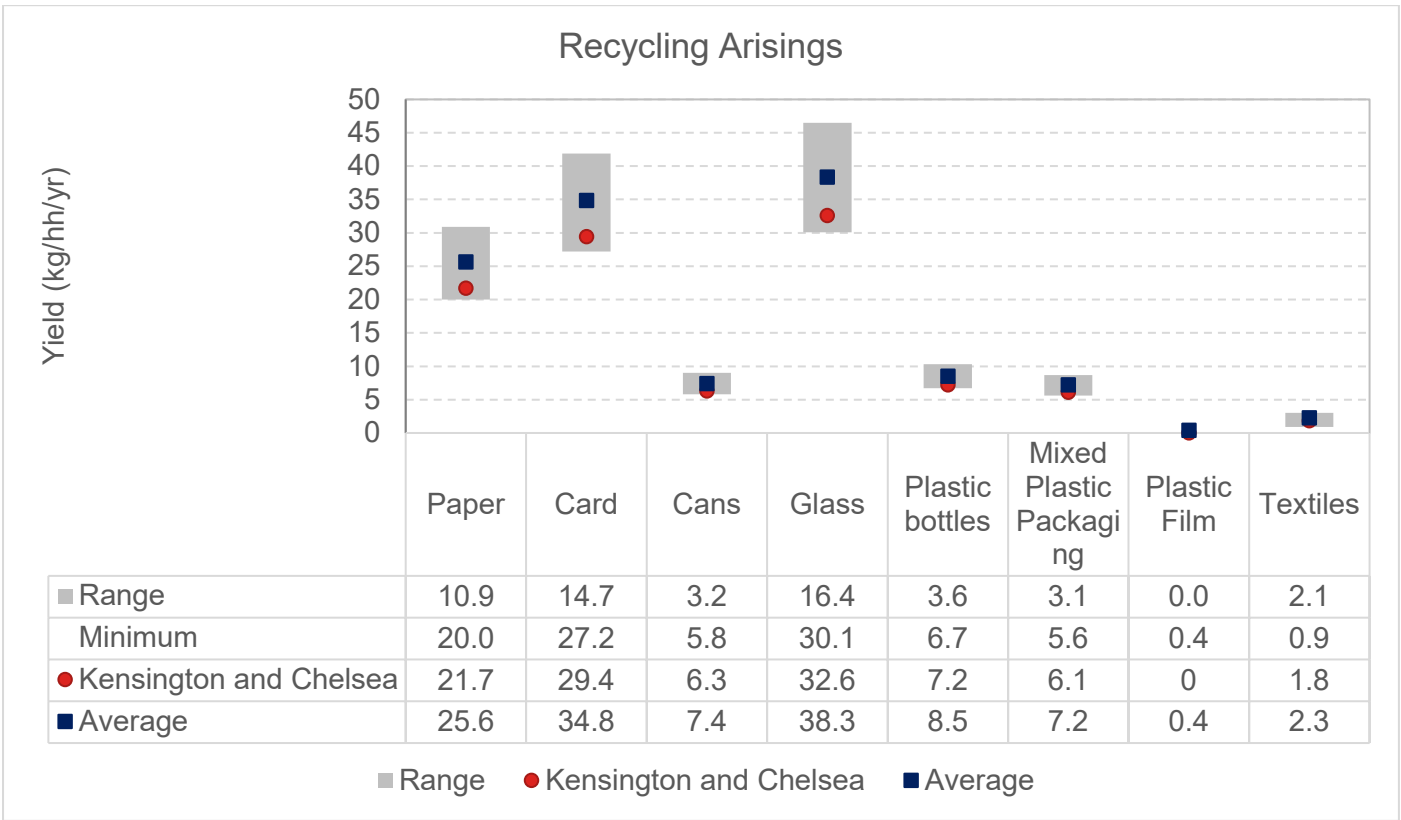
Table 15 shows the average performance data for Kensington and Chelsea compared to its neighbouring authorities. The results show that, for the dry recycling categories, Kensington and Chelsea's performance lies in the bottom 25% of authorities (Q1). Residual waste lies within the bottom 50% of authorities (Q3) and textiles lie in the top half of authorities (Q3).

Table 15: Kensington and Chelsea Neighbouring Authorities Performance

Yields (kg/hh/yr)	Paper	Card	Cans	Glass	Plastic bottles	Mixed plastics	Plastic film	Textiles	Total including plastic film and textiles	Residual waste
Q1 Upper Limit	23.1	31.3	6.7	34.7	7.7	6.5	0.0	0.0	110.0	359.1
Q2 Upper Limit	26.2	35.6	7.6	39.5	8.7	7.4	0.0	0.9	125.0	405.5
Q3 Upper Limit	28.0	38.1	7.9	40.9	9.0	7.7	0.0	2.9	131.6	448.9
Q4 Upper Limit	30.9	41.9	9.0	46.5	10.3	8.7	0.4	3.0	147.3	514.4
Kensington and Chelsea	21.7	29.4	6.3	32.6	7.2	6.1	0.0	1.8	103.3	406.6

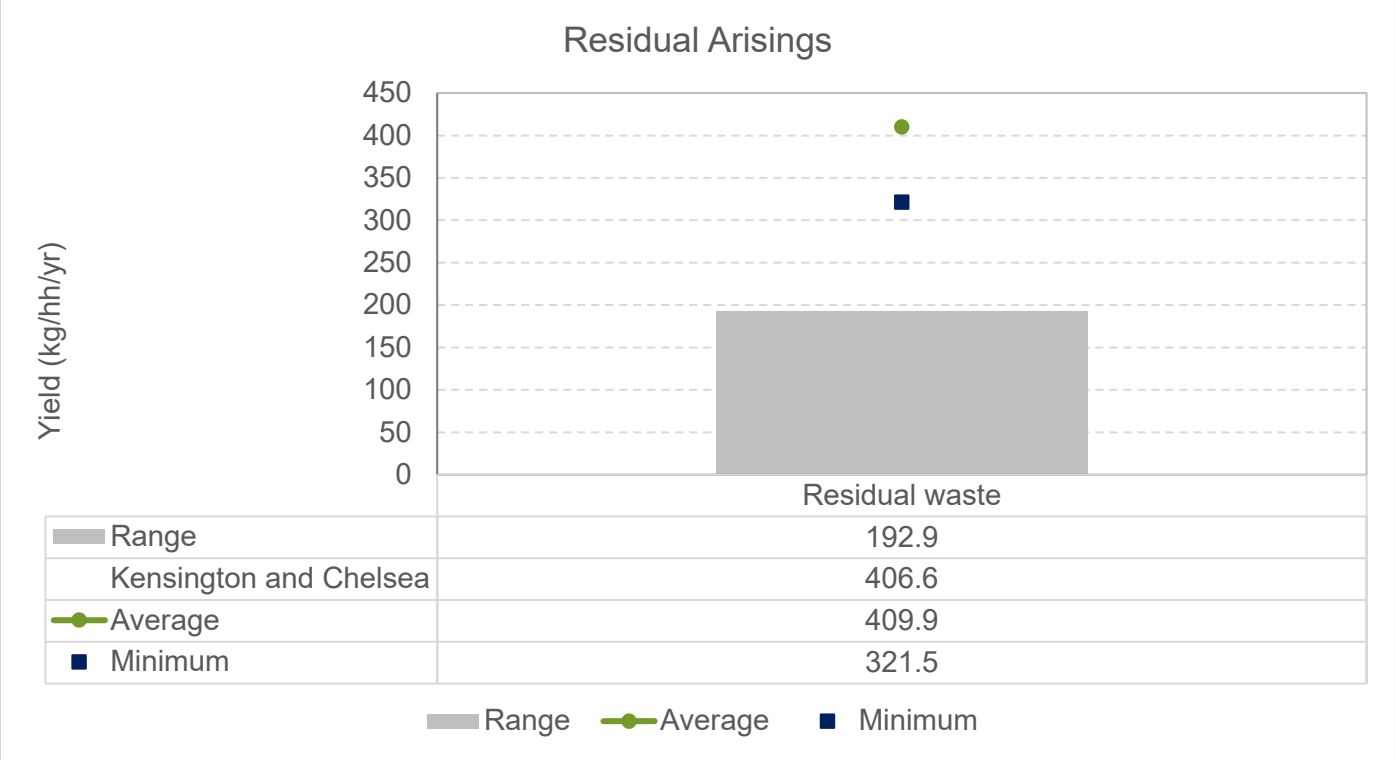
Figure 27 and Figure 28 show the performance range for the analysed local authorities, the average yields and Kensington and Chelsea's performance when compared to its neighbouring authorities.

Figure 27: Kensington and Chelsea Neighbouring Authorities Recycling Arisings (kg/hh/yr)



	Paper	Card	Cans	Glass	Plastic bottles	Mixed Plastic Packaging	Plastic Film	Textiles
Range	10.9	14.7	3.2	16.4	3.6	3.1	0.0	2.1
Minimum	20.0	27.2	5.8	30.1	6.7	5.6	0.4	0.9
Kensington and Chelsea	21.7	29.4	6.3	32.6	7.2	6.1	0	1.8
Average	25.6	34.8	7.4	38.3	8.5	7.2	0.4	2.3

Figure 28: Kensington and Chelsea Neighbouring Authorities Residual Arisings (kg/hh/yr)



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3.5 LAMBETH

3.5.1 Baseline Benchmarking - Similar collection systems

Table 16 presents the benchmarked authorities with similar collection schemes to Lambeth.

Table 16: Lambeth, Authorities with Similar Collection Schemes

Local authorities	WRAP Rurality	Residual Collection	Recycling	
			Collection scheme	Frequency
Lambeth	**3**	**Weekly**	**Co-Mingled**	**Weekly**
Wandsworth	3	Weekly	Co-Mingled	Weekly
Hammersmith & Fulham	3	Weekly	Co-Mingled	Weekly
Camden	3	Weekly	Co-Mingled	Weekly
Oadby and Wigston	3	Weekly	Co-Mingled	Weekly
Leicester	3	Weekly	Co-Mingled	Weekly

Table 17 shows the average performance data for Lambeth compared to benchmarked authorities. The results show that, for the dry recycling categories, Lambeth's performance lies in top 50% of authorities (Q3) except for plastic film

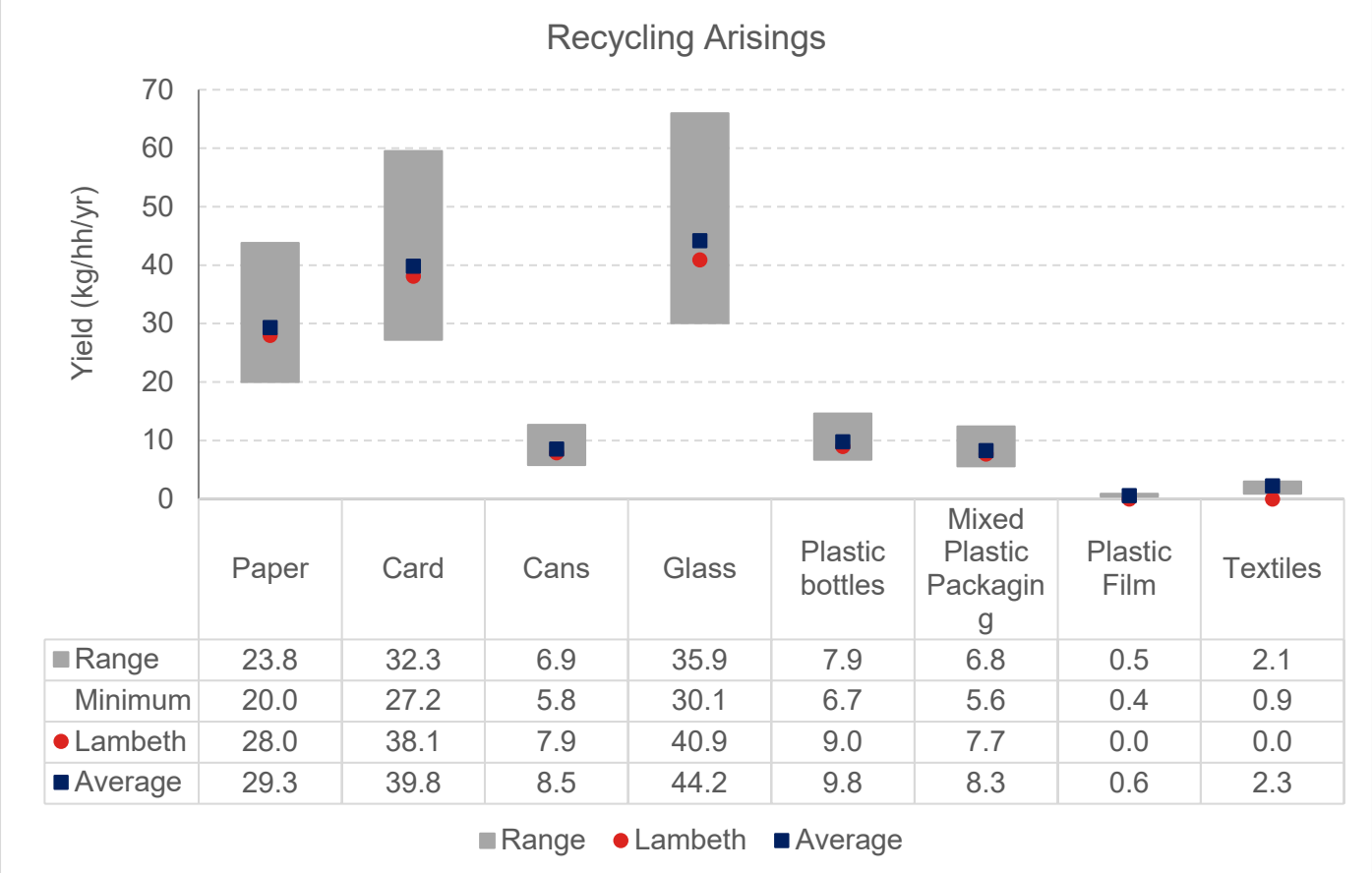
and textiles which falls in the bottom 50% of benchmarked authorities (Q2). Residual waste lies in the top 25% of authorities (Q1).

Table 17: Lambeth, Similar Collection Scheme Performance

Yields (kg/hh/yr)	Paper	Card	Cans	Glass	Plastic bottles	Mixed plastics	Plastic film	Textiles	Total including plastic film and textiles	Residual waste
Q1 Upper Limit	25.7	35.0	7.5	38.8	8.6	7.3	0.0	0.0	123.4	405.5
Q2 Upper Limit	26.2	35.6	7.6	39.5	8.7	7.4	0.4	0.9	125.0	460.9
Q3 Upper Limit	30.9	41.9	9.0	46.5	10.3	8.7	0.5	2.9	147.3	514.4
Q4 Upper Limit	43.8	59.5	12.7	66.0	14.6	12.4	0.9	3.0	209.9	597.3
Lambeth	28.0	38.1	7.9	40.9	9.0	7.7	0.0	0.0	131.6	321.5

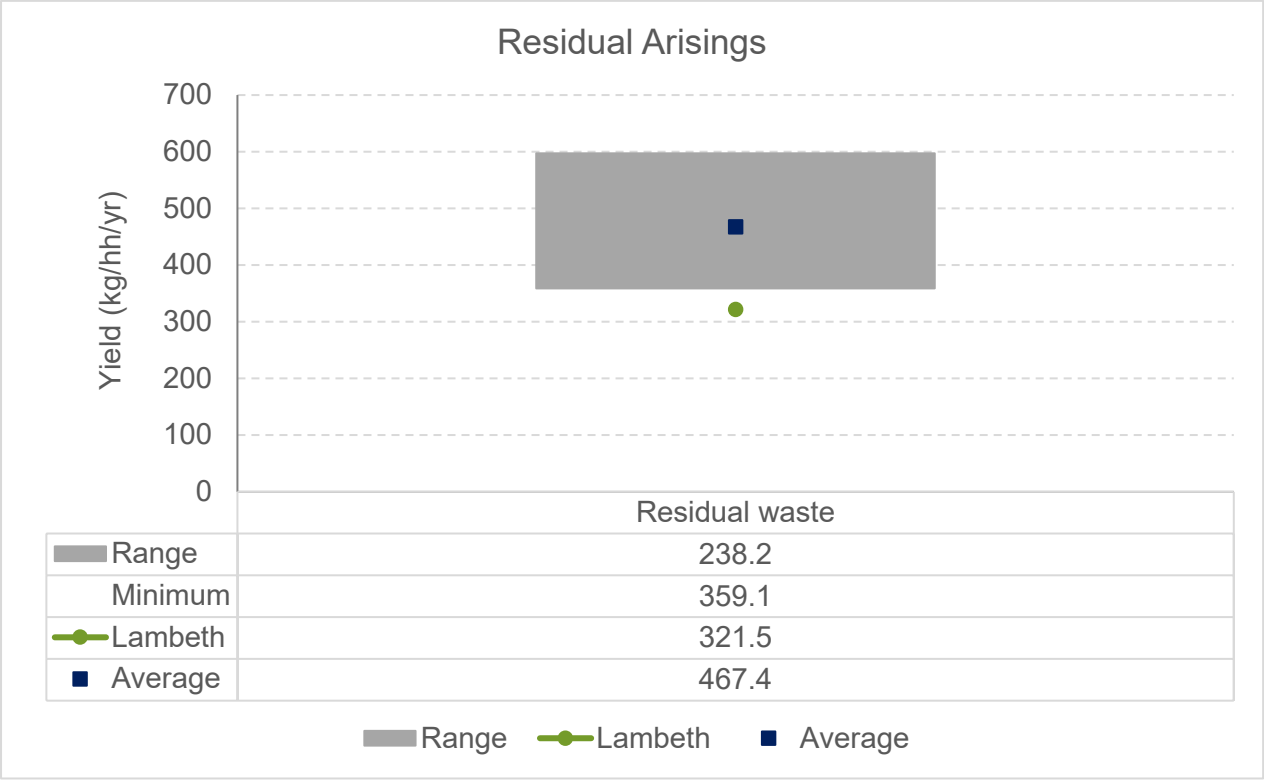
Figure 29 and Figure 30below show the performance range for the analysed local authorities, the average yields and Lambeth's performance.

Figure 29: Lambeth Recycling Arisings (kg/hh/yr)



	Paper	Card	Cans	Glass	Plastic bottles	Mixed Plastic Packaging	Plastic Film	Textiles
Range	23.8	32.3	6.9	35.9	7.9	6.8	0.5	2.1
Minimum	20.0	27.2	5.8	30.1	6.7	5.6	0.4	0.9
Lambeth	28.0	38.1	7.9	40.9	9.0	7.7	0.0	0.0
Average	29.3	39.8	8.5	44.2	9.8	8.3	0.6	2.3

Figure 30: Lambeth Residual Arisings (kg/hh/yr)



3.5.2 Baseline Benchmarking - Neighbouring Authorities

Table 18 shows the waste collection schemes of Lambeth's Neighbouring Authorities.

Table 18: Lambeth Neighbouring Authorities

Local authorities	WRAP Rurality	Residual Collection	Recycling	
			Collection scheme	Frequency
Lambeth	**3**	**Weekly**	**Co-Mingled**	**Weekly**
Southwark	2	More Than Weekly	Multi-stream	Weekly
Wandsworth	3	Weekly	Co-Mingled	Weekly
Westminster	3	More Than Weekly	Co-Mingled	Weekly
Camden	3	Weekly	Co-Mingled	Weekly
Islington	3	More Than Weekly	Multi-stream	Weekly

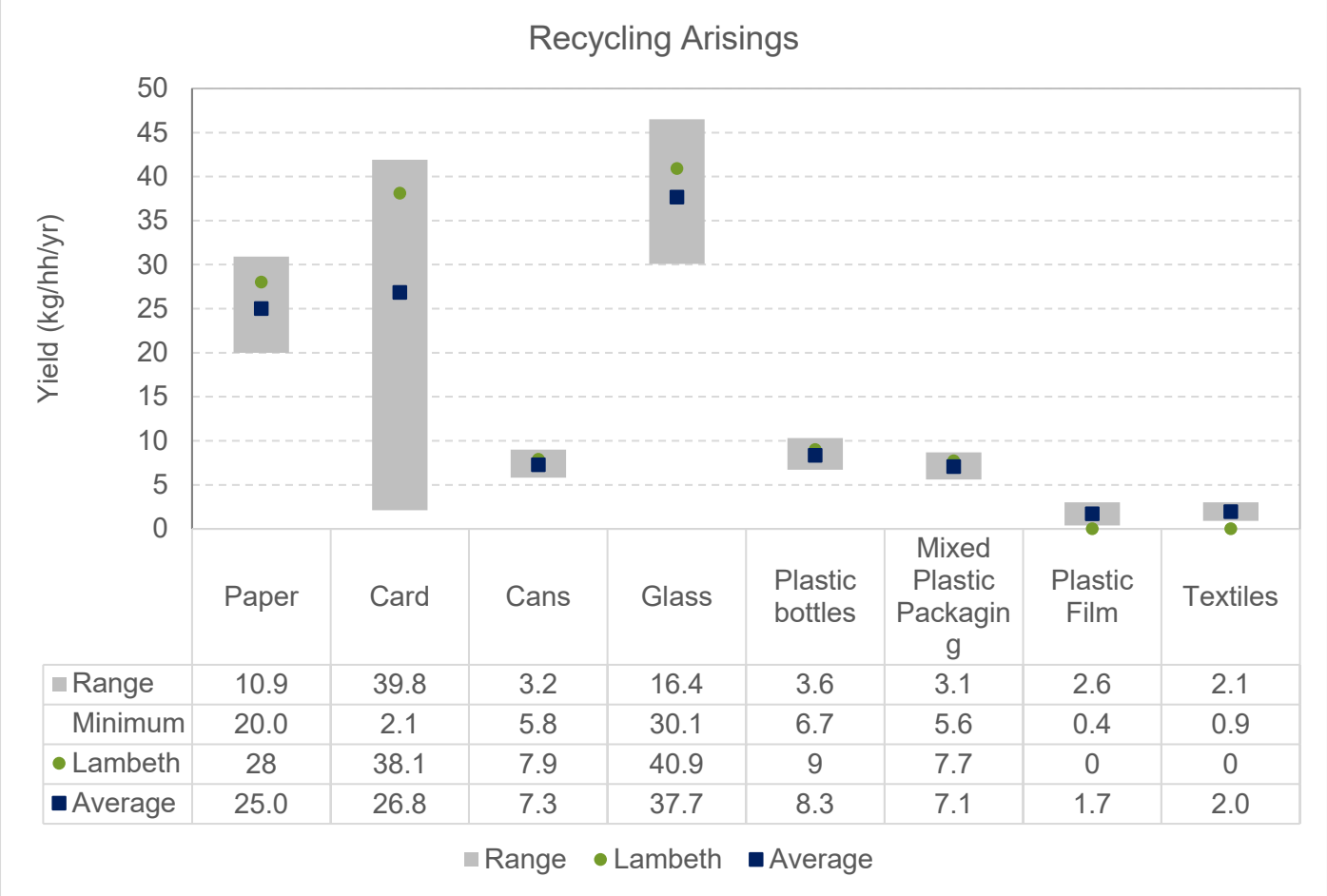
Table 19 shows the average performance data for Lambeth compared to its neighbouring authorities. The results show that, for the dry recycling, Lambeth's performance mostly lies within top 50% of benchmarked authorities, the exception of paper and card which lie in the top 25% of benchmarked authorities (Q1). In addition, the residual waste yield also lies in the top 25% of benchmarked authorities.

Table 19: Lambeth Neighbouring Authorities Performance

Yields (kg/hh/yr)	Paper	Card	Cans	Glass	Plastic bottles	Mixed plastics	Plastic film	Textiles	Total including plastic film and textiles	Residual waste
Q1 Upper Limit	23.1	27.2	6.7	34.7	7.7	6.5	0.0	0.0	97.3	405.5
Q2 Upper Limit	23.2	31.3	6.7	35.0	7.7	6.6	0.0	0.0	110.0	448.9
Q3 Upper Limit	27.9	31.6	8.1	42.0	9.3	7.9	0.4	0.9	113.8	498.2
Q4 Upper Limit	30.9	41.9	9.0	46.5	10.3	8.7	3.0	3.0	147.3	514.4
Lambeth	28.0	38.1	7.9	40.9	9.0	7.7	0.0	0.0	131.6	321.5

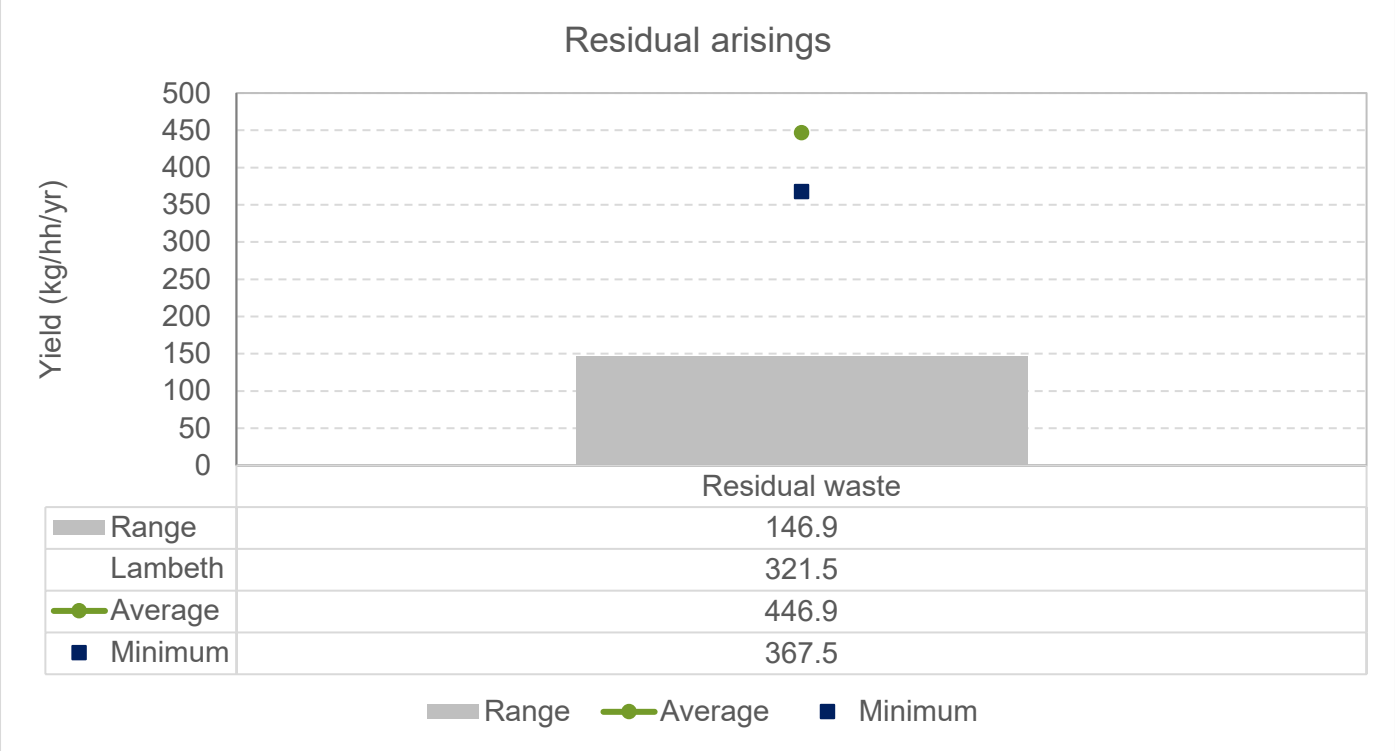
Figure 31 and Figure 32show the performance range for the analysed local authorities, the average yields and Lambeth's performance when compared to its Neighbouring Authorities.

Figure 31: Lambeth Neighbouring Authorities Recycling Arisings (kg/hh/yr)



	Paper	Card	Cans	Glass	Plastic bottles	Mixed Plastic Packaging	Plastic Film	Textiles
Range	10.9	39.8	3.2	16.4	3.6	3.1	2.6	2.1
Minimum	20.0	2.1	5.8	30.1	6.7	5.6	0.4	0.9
Lambeth	28	38.1	7.9	40.9	9	7.7	0	0
Average	25.0	26.8	7.3	37.7	8.3	7.1	1.7	2.0

Figure 32: Lambeth Neighbouring Authorities Residual Arisings (kg/hh/yr)



3.6 WANDSWORTH

3.6.1 Baseline Benchmarking - Similar collection systems

Table 20presents the benchmarked authorities with similar collection schemes to Wandsworth.

Table 20: Wandsworth, Similar Collection Scheme Authorities

Local authorities	WRAP Rurality	Residual Collection	Recycling	
			Collection scheme	Frequency
Wandsworth	**3**	**Weekly**	**Co-Mingled**	**Weekly**
Lambeth	3	Weekly	Co-Mingled	Weekly
Hammersmith & Fulham	3	Weekly	Co-Mingled	Weekly
Camden	3	Weekly	Co-Mingled	Weekly
Oadby and Wigston	3	Weekly	Co-Mingled	Weekly
Leicester	1	Weekly	Co-Mingled	Weekly

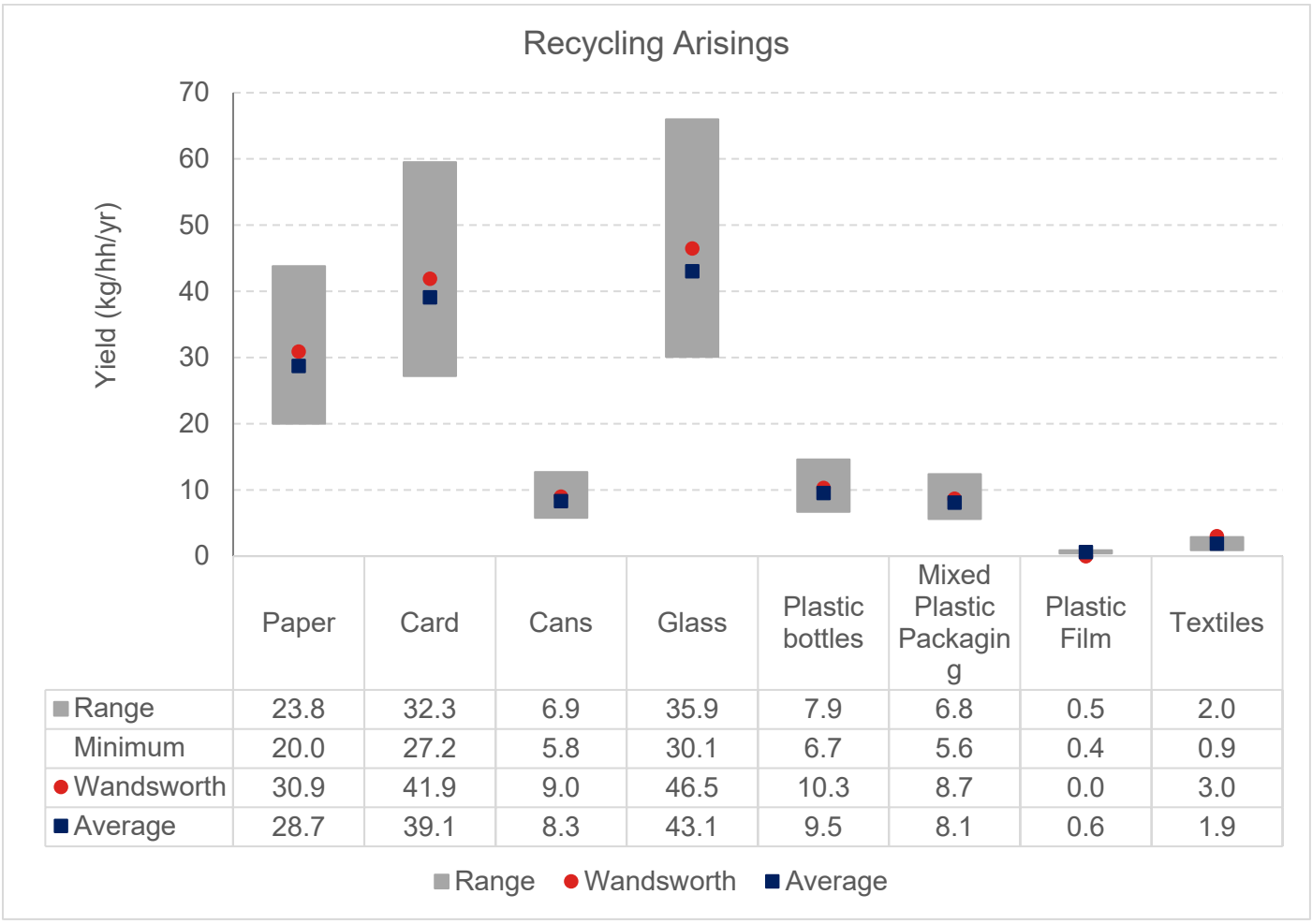
Table 21 shows the average performance data for Wandsworth. The results show that, for the total of the dry recycling categories, Wandsworth's performance mostly lies in top 25% of authorities (Q1). Wandsworth's performance in regard to residual waste lies in the bottom 25% of authorities.

Table 21: Wandsworth, Similar Collection Scheme Performance

Yields (kg/hh/yr)	Paper	Card	Cans	Glass	Plastic bottles	Mixed plastics	Plastic film	Textiles	Total including plastic film and textiles	Residual waste
Q1 Upper Limit	25.7	35.0	7.5	38.8	8.6	7.3	0.0	0.0	123.4	359.1
Q2 Upper Limit	26.2	35.6	7.6	39.5	8.7	7.4	0.4	0.0	125.0	405.5
Q3 Upper Limit	28.0	38.1	7.9	40.9	9.0	7.7	0.5	0.9	131.6	460.9
Q4 Upper Limit	43.8	59.5	12.7	66.0	14.6	12.4	0.9	2.9	209.9	597.3
Wandsworth	30.9	41.9	9.0	46.5	10.3	8.7	0.0	3.0	147.3	514.4

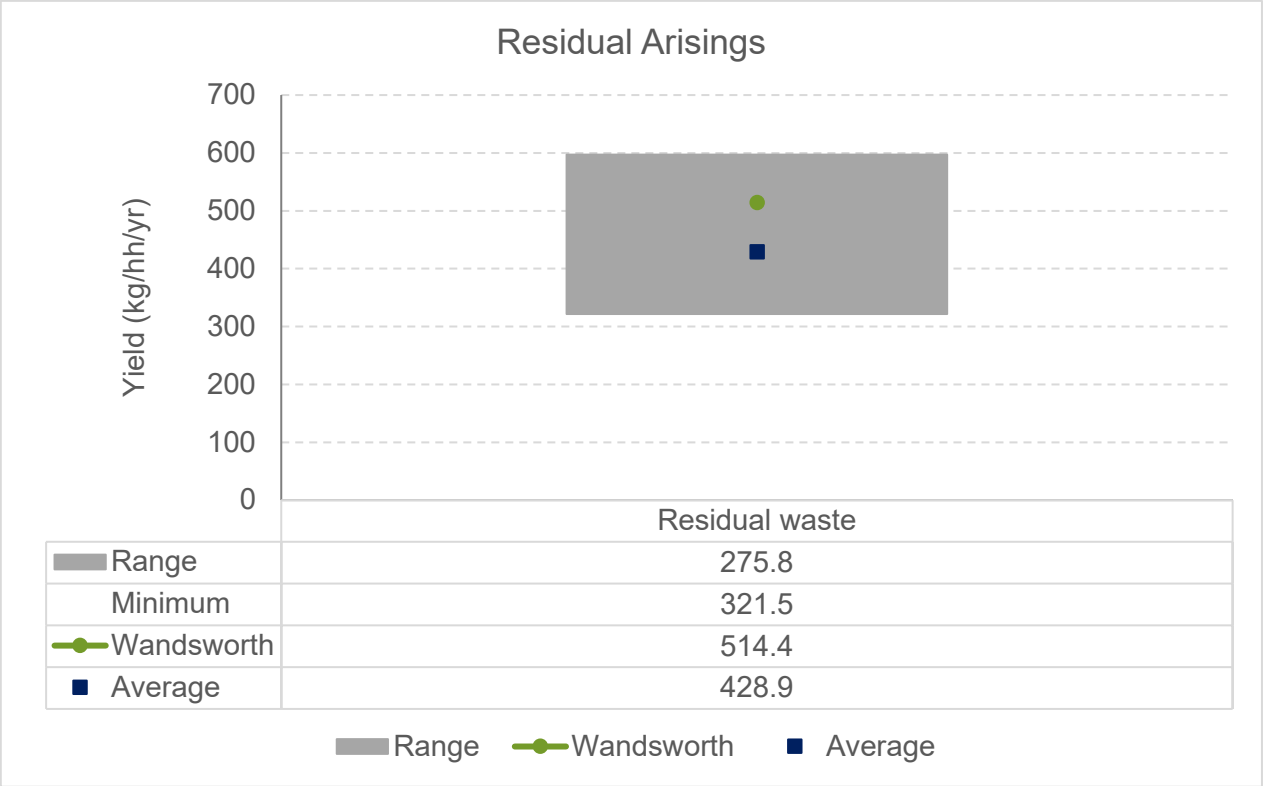
Figure 33 and Figure 34show the performance range for the analysed local authorities, the average yields and Wandsworth's performance.

Figure 33: Wandsworth Recycling Arisings (kg/hh/yr)



	Paper	Card	Cans	Glass	Plastic bottles	Mixed Plastic Packaging	Plastic Film	Textiles
Range	23.8	32.3	6.9	35.9	7.9	6.8	0.5	2.0
Minimum	20.0	27.2	5.8	30.1	6.7	5.6	0.4	0.9
Wandsworth	30.9	41.9	9.0	46.5	10.3	8.7	0.0	3.0
Average	28.7	39.1	8.3	43.1	9.5	8.1	0.6	1.9

Figure 34: Wandsworth Residual Arisings (kg/hh/yr)



3.6.2 Baseline Benchmarking - Neighbouring Authorities

Table 22 shows the waste collection schemes of Wandsworth's Neighbouring Authorities.

Table 22: Wandsworth Neighbouring Authorities

Local authorities	WRAP Rurality	Residual Collection	Recycling	
			Collection scheme	Frequency
Wandsworth	**3**	**Weekly**	**Co-Mingled**	**Weekly**
Westminster	3	More Than Weekly	Co-Mingled	Weekly
Hammersmith & Fulham	3	Weekly	Co-Mingled	Weekly
Lambeth	2	Weekly	Co-Mingled	Weekly
Kensington and Chelsea	3	More Than Weekly	Co-Mingled	More Than Weekly
Richmond Upon Thames	3	Weekly	Two-stream	Weekly

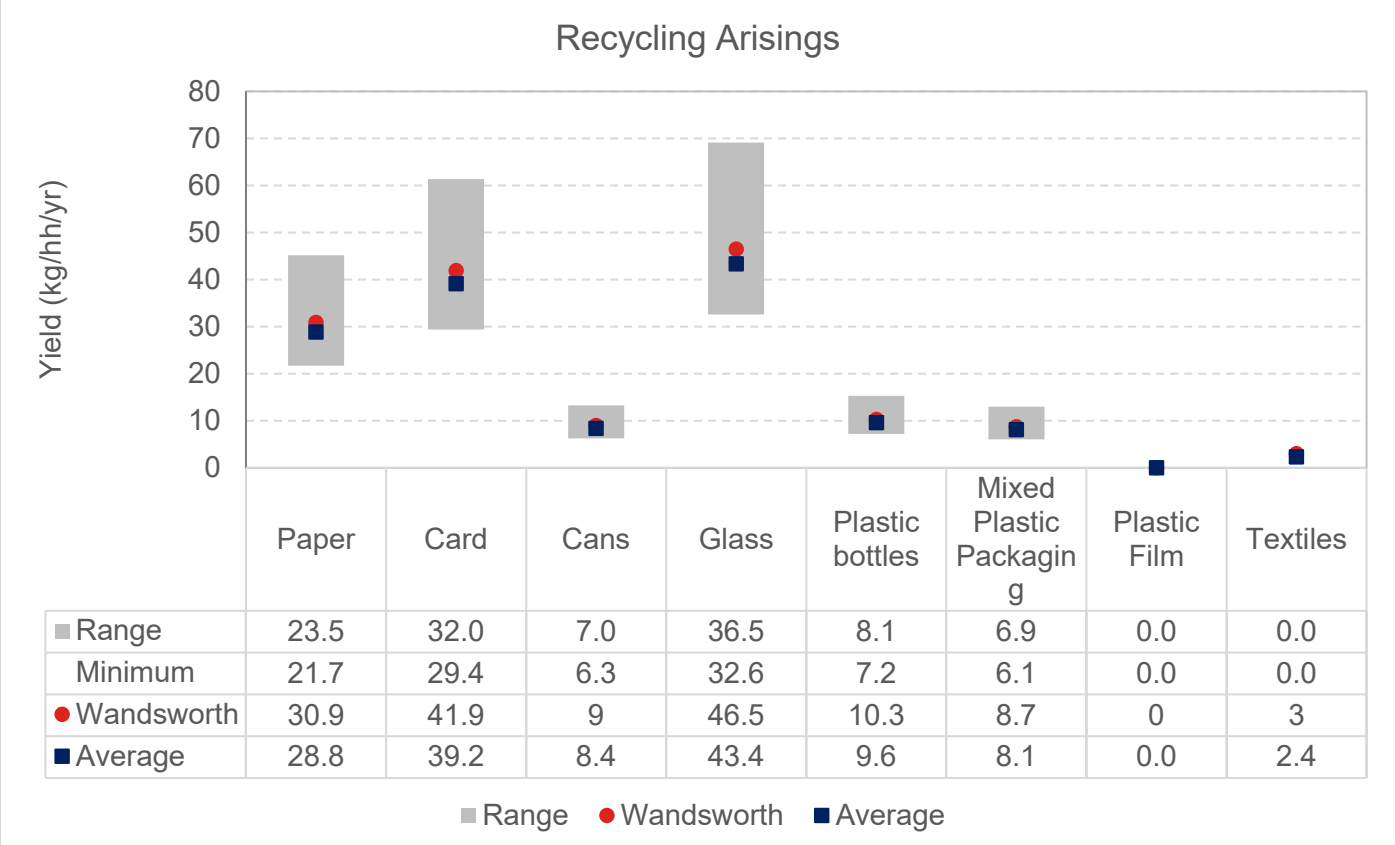
Table 23 below shows the average performance data for Wandsworth compared to its neighbouring authorities. The results show that, for the majority of dry recycling and textile waste categories, Wandsworth's performance lies within the top 25% of neighbouring authorities. The performance regarding residual waste is poor as it lies in the bottom 25% of authorities.

Table 23: Wandsworth Neighbouring Authorities Performance

Yields (kg/hh/yr)	Paper	Card	Cans	Glass	Plastic bottles	Mixed plastics	Plastic film	Textiles	Total including plastic film and textiles	Residual waste
Q1 Upper Limit	23.1	31.3	6.7	34.7	7.7	6.5	0.0	0.0	110.0	359.1
Q2 Upper Limit	26.2	35.6	7.6	39.5	8.7	7.4	0.0	0.0	125.0	406.6
Q3 Upper Limit	28.0	38.1	7.9	40.9	9.0	7.7	0.0	1.8	131.6	448.9
Q4 Upper Limit	45.2	61.4	13.3	69.1	15.3	13.0	0.0	2.9	217.3	509.6
Wandsworth	30.9	41.9	9.0	46.5	10.3	8.7	0.0	3.0	147.3	514.4

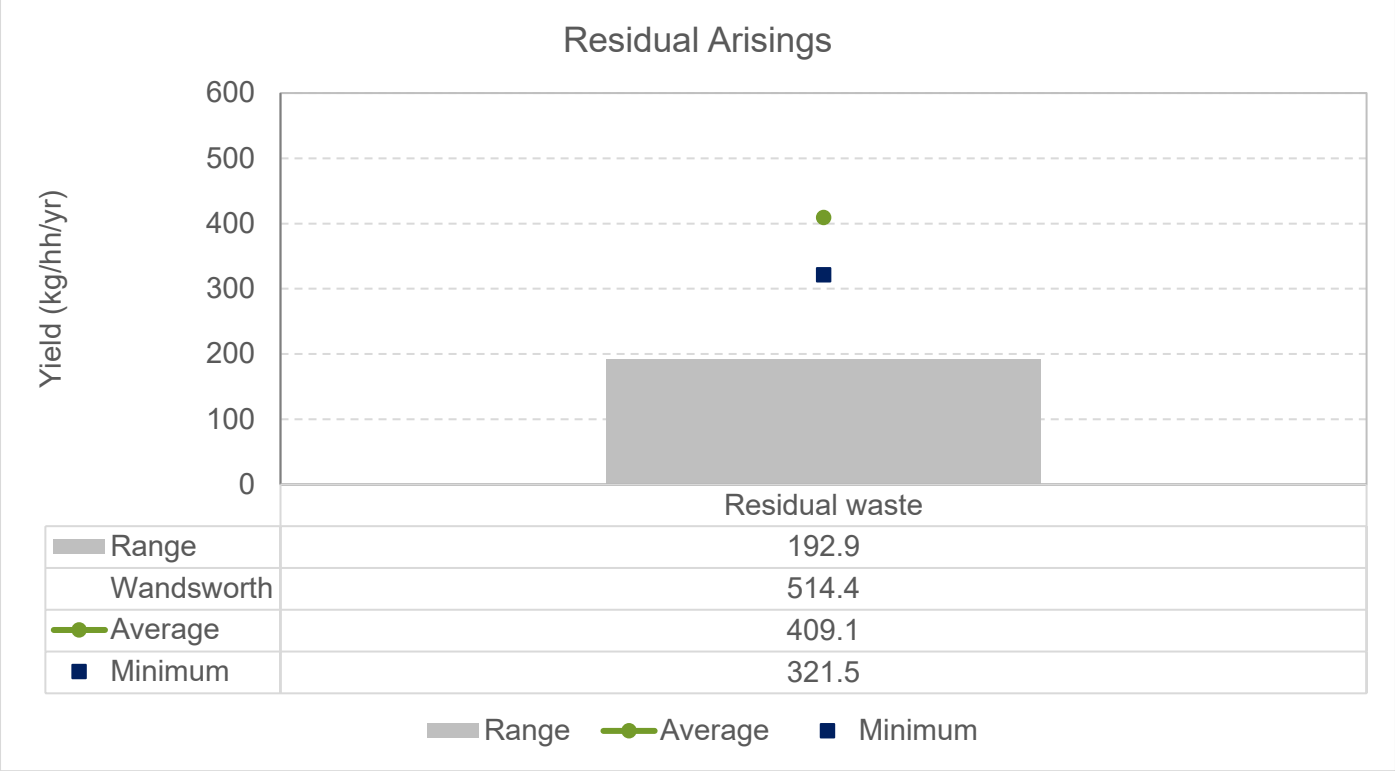
Figure 35 and Figure 36 show the performance range for the analysed local authorities, the average yields and Wandsworth's performance when compared to its Neighbouring Authorities.

Figure 35: Wandsworth Neighbouring Authorities Recycling Arisings (kg/hh/yr)



	Paper	Card	Cans	Glass	Plastic bottles	Mixed Plastic Packaging	Plastic Film	Textiles
Range	23.5	32.0	7.0	36.5	8.1	6.9	0.0	0.0
Minimum	21.7	29.4	6.3	32.6	7.2	6.1	0.0	0.0
Wandsworth	30.9	41.9	9	46.5	10.3	8.7	0	3
Average	28.8	39.2	8.4	43.4	9.6	8.1	0.0	2.4

Figure 36: Wandsworth Neighbouring Authorities Residual Arisings (kg/hh/yr)



4. FORECASTING

This section details the forecasting analysis undertaken to project the future waste arisings for Western Riverside Waste Authority (WRWA). The forecast time period selected was from 2023 to the end of the WRWA Joint Resources and Waste Strategy in 2040.

These forecasting results feed into the collections options modelling. For the Baseline + and Options modelling, the year FY2027/28 was selected as the modelling year because it represents the first point in time when the impacts from the implementation of DRS/EPR/National Waste Strategy legislative changes should be apparent and measurable. It therefore represents a sensible 'stable system' point against which to assess the Options.

4.1 METHODOLOGY AND ASSUMPTIONS

The forecasting process aimed to project future waste arisings as accurately as possible. Utilising Ricardo's Forecasting Model, the household waste arisings provided by the WRWA partners for FY2022/23 were forecast to 2040, in line with estimated housing growth. The key assumption being that waste arisings per household remain stable with increases in waste generation due to increased housing development within the Partner Authorities. For commercial waste the gross domestic product (GDP) was used as a proxy to estimate commercial waste growth.. This process generated four distinct scenarios for waste arisings:

- without EPR and DRS;
- with EPR;
- with DRS;
- and with both EPR and DRS.

These forecasts cover the following waste streams: household residual, dry recycling, food, garden waste, and commercial that is co-collected with household waste. Whilst there are some co-collections of commercial dry recycling

and residual with household waste, a breakdown of commercial residual and dry recycling was excluded from this analysis as a reliable source of information for the composition of commercial waste was not available.

4.1.1 Housing Growth

Housing growth assumptions are based on data provided by the WRWA Partner Authorities. It is assumed that the household types projected follow the existing household configurations in the WRWA area. In cases where such data is unavailable, GLA population data serves as a substitute to estimate household growth. The GLA population growth rate is then applied to the household growth for each subsequent year.

4.1.2 Deposit Return Scheme (DRS) and Extended Producer Responsibility (EPR)

The impact of DRS is applied on the targeted containers (for England), plastic bottles and aluminium cans in both the household residual and household dry recycling streams.

To reflect the phased implementation of DRS, a staged approach has been adopted, with a gradual percentage increase. It is assumed that there will be partial engagement in 2024, medium engagement in 2026, and full engagement in 2028.

Similarly, EPR impacts have been implemented for recyclable materials within the dry mixed recycling and residual compositions of WRWA Partner Authorities. This staged engagement mirrors that of DRS, with partial implementation in 2024, medium in 2026, and full engagement in 2028.

DRS and EPR assumptions are based on Ricardo's expertise to determine the likely level of diversion of material from dry recycling collections and from residual waste and changes in composition. For DRS, yield and participation assumptions are based on existing trial schemes across Wales and Defra's own assumptions to determine the likely level of diversion of material from dry recycling collections and from residual waste. Defra suggests an 85% capture rate assumption, and the proportion of eligible containers will be dependent on each WRWA Borough's composition data.

For commercial waste, the impacts of EPR remain uncertain and challenging to quantify at this stage. While some minor changes in packaging composition, particularly a reduction in 'difficult to recycle' packaging, are anticipated over the long term, no specific impacts have been assumed for the purpose of this project.

4.1.3 Food waste

In line with the Simpler Recycling legislation[2], it has been assumed that all WRWA Partner Authorities will roll out food waste collections to all properties. It was assumed that all WRWA Partner Authorities that currently do not collect food waste boroughwide will have fully implemented food waste collections by 31st March 2026 for all properties. It is expected that these services will be implemented throughout the course of the year of 2025 and hence the impact from the first full year of separate collections will be seen from April 2026 onwards. The food waste yield per household is based on estimates provided by the WRWA Partner Authorities on expected food waste arisings, supported by WRAP Ready Reckoner.

4.1.4 Garden waste

The forecast for garden waste has been assumed to maintain the same yield per household as the Baseline. Accordingly, garden waste projections have been adjusted to align with household growth rates.

4.1.5 Commercial waste

Commercial waste has been forecast based on the gross domestic product (GDP) Long-Term Forecast provided by OECD data[8].

[8] https://data.oecd.org/gdp/real-gdp-long-term-forecast.htm

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4.2 FORECASTING RESULTS

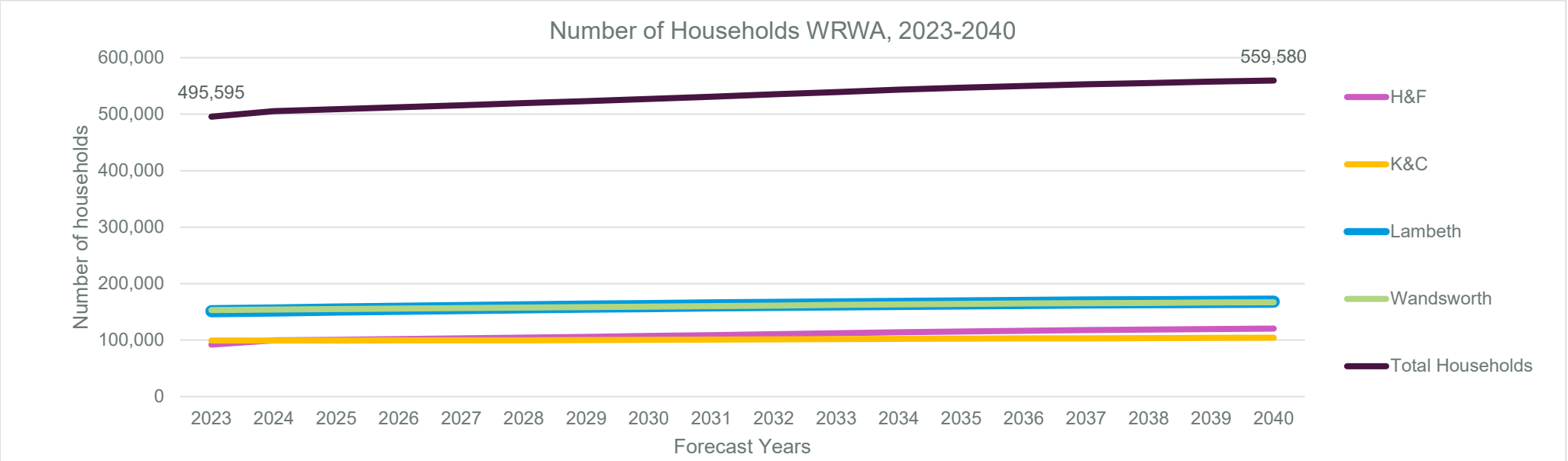
4.2.1 Household Growth

Table 24 and Figure 37 show the estimated number of households in WRWA from 2023-2040. Overall, there is an expected increase in households of 13% from 2023-2040.

Table 24: WRWA Number of Households 2023-2040

	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
WRWA Number of Households	495,595	505,499	508,802	512,243	515,929	519,569	523,187	527,113	531,051	535,058	539,119	543,246	546,849	549,985	552,755	555,260	557,537	559,580

Figure 37: WRWA Number of Households 2023-2040



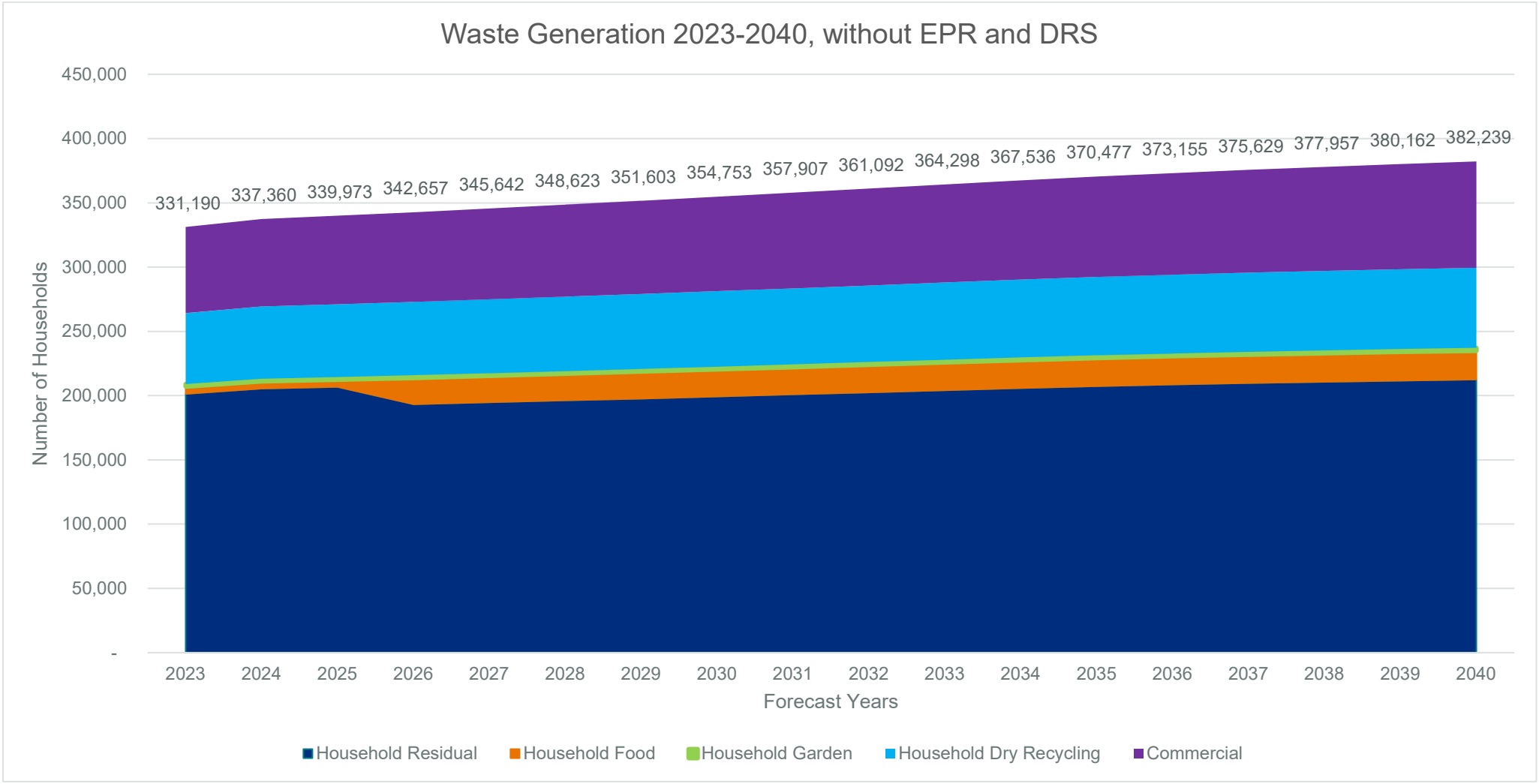
4.2.2 Forecast Waste Generation: No Impacts

Table 25 and Figure 38 present the waste arisings by year for each waste stream from 2023-2040. These results follow the household increase forecast. There is an expected increase in residual waste produced of 6%. This is lower than the 13% household increase because it is assumed that there will be greater food waste tonnes diverted from residual waste due to the roll-out of food waste collections area-wide. Dry recycling and garden waste are expected to increase by 13% by 2040 in line with housing growth. For food waste, there is a 297% increase in separately collected waste arisings, which have been diverted from residual waste. For commercial waste, there is an increase of 24% by 2040.

Table 25: Forecast Waste Generation per Waste Stream, without EPR and DRS (2023-2040)

Waste Stream	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Household Residual	201,389	205,413	206,755	193,277	194,774	196,253	197,724	199,319	200,919	202,548	204,198	205,875	207,339	208,613	209,739	210,757	211,682	212,512
Household Food	5,631	5,631	5,631	20,508	20,658	20,806	20,952	21,106	21,262	21,421	21,580	21,742	21,883	22,006	22,114	22,212	22,300	22,380
Household Garden	2,010	2,050	2,063	2,077	2,092	2,107	2,122	2,138	2,154	2,170	2,186	2,203	2,218	2,231	2,242	2,252	2,261	2,269
Household Dry Recycling	55,201	56,304	56,672	57,056	57,466	57,872	58,275	58,712	59,150	59,597	60,049	60,509	60,910	61,259	61,568	61,847	62,101	62,328
Commercial	66,959	67,962	68,851	69,739	70,651	71,585	72,531	73,479	74,421	75,357	76,285	77,208	78,127	79,046	79,966	80,890	81,817	82,750
Total Waste Generation (household waste + commercial waste co-collected with Household waste)	**331,190**	**337,360**	**339,973**	**342,657**	**345,642**	**348,623**	**351,603**	**354,753**	**357,907**	**361,092**	**364,298**	**367,536**	**370,477**	**373,155**	**375,629**	**377,957**	**380,162**	**382,239**
Total Household Waste	**264,231**	**269,399**	**271,122**	**272,918**	**274,991**	**277,038**	**279,072**	**281,274**	**283,486**	**285,735**	**288,013**	**290,328**	**292,350**	**294,109**	**295,663**	**297,068**	**298,344**	**299,490**
Number of Households	**495,595**	**505,499**	**508,802**	**512,243**	**515,929**	**519,569**	**523,187**	**527,113**	**531,051**	**535,058**	**539,119**	**543,246**	**546,849**	**549,985**	**552,755**	**555,260**	**557,537**	**559,580**

Figure 38: Waste Generation without EPR and DRS impacts, 2023-2040



4.2.3 Forecast Waste Generation DRS Impact

Table 26 presents the waste arisings by year for each waste stream from 2023-2040, with the expected impacts of DRS applied. For residual waste, this is expected to result in a 1% reduction in waste in 2040 when compared to the 2040 residual waste arisings without DRS impacts, and for dry recycling, a 3% reduction is forecast when compared to 2040 arisings with no DRS impacts. Food, garden and commercial waste are unaffected by DRS due to the target materials involved. Overall by 2040, the impact of DRS is expected to result in a reduction of 3,857 tonnes compared to 2040 total waste arisings without DRS impacts, with the greatest impacts on dry recycling materials.

Table 26: Forecast Waste Generation per Waste Stream with DRS Impact, 2023-2040

Waste Stream	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Household Residual	201,389	204,823	206,161	192,165	193,655	194,544	196,001	197,583	199,169	200,783	202,419	204,081	205,533	206,796	207,912	208,921	209,838	210,661
Household Food	5,631	5,631	5,631	20,508	20,658	20,806	20,952	21,106	21,262	21,421	21,580	21,742	21,883	22,006	22,114	22,212	22,300	22,380
Household Garden	2,010	2,050	2,063	2,077	2,092	2,107	2,122	2,138	2,154	2,170	2,186	2,203	2,218	2,231	2,242	2,252	2,261	2,269
Household Dry Recycling	55,201	55,706	56,070	55,844	56,246	56,009	56,399	56,822	57,247	57,679	58,117	58,562	58,950	59,288	59,587	59,857	60,102	60,322
Commercial	66,959	67,962	68,851	69,739	70,651	71,585	72,531	73,479	74,421	75,357	76,285	77,208	78,127	79,046	79,966	80,890	81,817	82,750
Total Waste (household + co-collected commercial)	**331,190**	336,172	338,777	340,334	343,301	345,051	348,005	351,127	354,254	357,410	360,587	363,796	366,711	369,367	371,820	374,131	376,319	378,383
Total Household Waste	**264,231**	**268,210**	**269,926**	**270,595**	**272,651**	**273,466**	**275,474**	**277,649**	**279,832**	**282,053**	**284,302**	**286,588**	**288,584**	**290,321**	**291,854**	**293,242**	**294,502**	**295,633**
Net Reduction in Waste compared to Baseline		**-1,188**	**-1,196**	**-2,323**	**-2,340**	**-3,572**	**-3,598**	**-3,626**	**-3,654**	**-3,682**	**-3,711**	**-3,741**	**-3,766**	**-3,789**	**-3,808**	**-3,826**	**-3,842**	**-3,857**

4.2.4 Forecast Waste Generation EPR Impact

Table 27 presents the waste arisings by year for each waste stream from 2023-2040, with the changes in composition from EPR applied. Residual waste is expected to result in a 1% reduction of waste in 2040 when compared to the 2040 residual waste arisings without EPR impacts. Similarly for dry recycling, there would be a 2% reduction when compared to 2040 arisings with no EPR impacts. Food, garden and commercial are unaffected by EPR, because only household residual and dry recycling compositions have been impacted by the target materials included in EPR. Overall, by 2040, the impact of EPR is expected to result in a reduction of 3,696 tonnes compared to 2040 total waste arisings without EPR impacts.

Table 27: Forecast Waste Generation per Waste Stream with EPR Impact, 2023-2040

Waste Stream	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Household Residual	201,389	204,874	206,213	191,952	193,440	193,679	195,129	196,704	198,283	199,890	201,518	203,174	204,618	205,876	206,987	207,992	208,905	209,724
Household Food	5,631	5,631	5,631	20,508	20,658	20,806	20,952	21,106	21,262	21,421	21,580	21,742	21,883	22,006	22,114	22,212	22,300	22,380
Household Garden	2,010	2,050	2,063	2,077	2,092	2,107	2,122	2,138	2,154	2,170	2,186	2,203	=2,218	2,231	2,242	2,252	2,261	2,269
Household Dry Recycling	55,201	56,140	56,507	56,509	56,916	57,029	57,426	57,857	58,289	58,729	59,175	59,628	60,023	60,368	60,672	60,947	61,197	61,421
Commercial	66,959	67,962	68,851	69,739	70,651	71,585	72,531	73,479	74,421	75,357	76,285	77,208	78,127	79,046	79,966	80,890	81,817	82,750
Total Waste (household + co-collected commercial)	**331,190**	336,657	339,266	340,786	343,757	345,206	348,160	351,283	354,410	357,567	360,745	363,954	366,870	369,526	371,980	374,292	376,480	378,544
Total Household Waste	**264,231**	**268,696**	**270,415**	**271,047**	**273,106**	**273,620**	**275,629**	**277,805**	**279,989**	**282,210**	**284,460**	**286,746**	**288,743**	**290,480**	**292,015**	**293,402**	**294,663**	**295,794**
Net Reduction in Waste compared to Baseline		**-703**	**-708**	**-1,871**	**-1,885**	**-3,417**	**-3,443**	**-3,470**	**-3,497**	**-3,525**	**-3,553**	**-3,582**	**-3,607**	**-3,629**	**-3,648**	**-3,666**	**-3,681**	**-3,696**

4.2.5 Forecast Waste Generation DRS and EPR Impacts

Table 28 presents the waste arisings by year for each waste stream from 2023-2040, with the impacts of DRS and EPR applied respectively. Figure 39 shows the EPR and DRS forecast for household waste and Figure 40 includes both household waste and commercial waste which is co-collected with household waste. For residual waste, there would be a 2% reduction of waste in 2040 when compared to the 2040 residual waste arisings without DRS and EPR impacts. For dry recycling, there would be a 5% reduction when compared to 2040 arisings with no DRS and EPR impacts. Food, garden and commercial are unaffected by DRS and EPR, because only household residual and dry recycling materials are targeted by the two schemes. Overall, by 2040, the impact of DRS and EPR is expected to result in a reduction of 7,552 tonnes compared to 2040 total waste arisings without the policies.

Table 28: Forecast Waste Generation per Waste Stream, with Impact of EPR and DRS, 2023-2040

Waste Stream	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Household Residual	201,389	204,283	205,618	190,841	192,320	191,969	193,407	194,967	196,533	198,126	199,740	201,380	202,812	204,059	205,160	206,156	207,061	207,873
Household Food	5,631	5,631	5,631	20,508	20,658	20,806	20,952	21,106	21,262	21,421	21,580	21,742	21,883	22,006	22,114	22,212	22,300	22,380
Household Garden	2,010	2,050	2,063	2,077	2,092	2,107	2,122	2,138	2,154	2,170	2,186	2,203	2,218	2,231	2,242	2,252	2,261	2,269
Household Dry Recycling	55,201	55,542	55,905	55,297	55,695	55,167	55,551	55,968	56,386	56,811	57,242	57,681	58,063	58,396	58,690	58,956	59,198	59,415
Commercial Residual	66,959	67,962	68,851	69,739	70,651	71,585	72,531	73,479	74,421	75,357	76,285	77,208	78,127	79,046	79,966	80,890	81,817	82,750
Total Waste (household+ co-collected commercial)	331,190	335,469	338,070	338,463	341,416	341,634	344,563	347,658	350,756	353,884	357,034	360,214	363,104	365,738	368,172	370,466	372,638	374,687
Total Household Waste	**264,231**	**267,507**	**269,218**	**268,724**	**270,766**	**270,049**	**272,032**	**274,179**	**276,335**	**278,528**	**280,749**	**283,006**	**284,977**	**286,692**	**288,206**	**289,576**	**290,821**	**291,937**
Net Reduction in Waste compared to Baseline	**-1,891**	**-1,904**	**-4,194**	**-4,225**	**-6,989**	**-7,040**	**-7,095**	**-7,151**	**-7,207**	**-7,264**	**-7,323**	**-7,373**	**-7,417**	**-7,456**	**-7,492**	**-7,524**	**-7,552**	

Figure 39: Forecast Household Waste Generation, with EPR and DRS impacts, 2023-2040

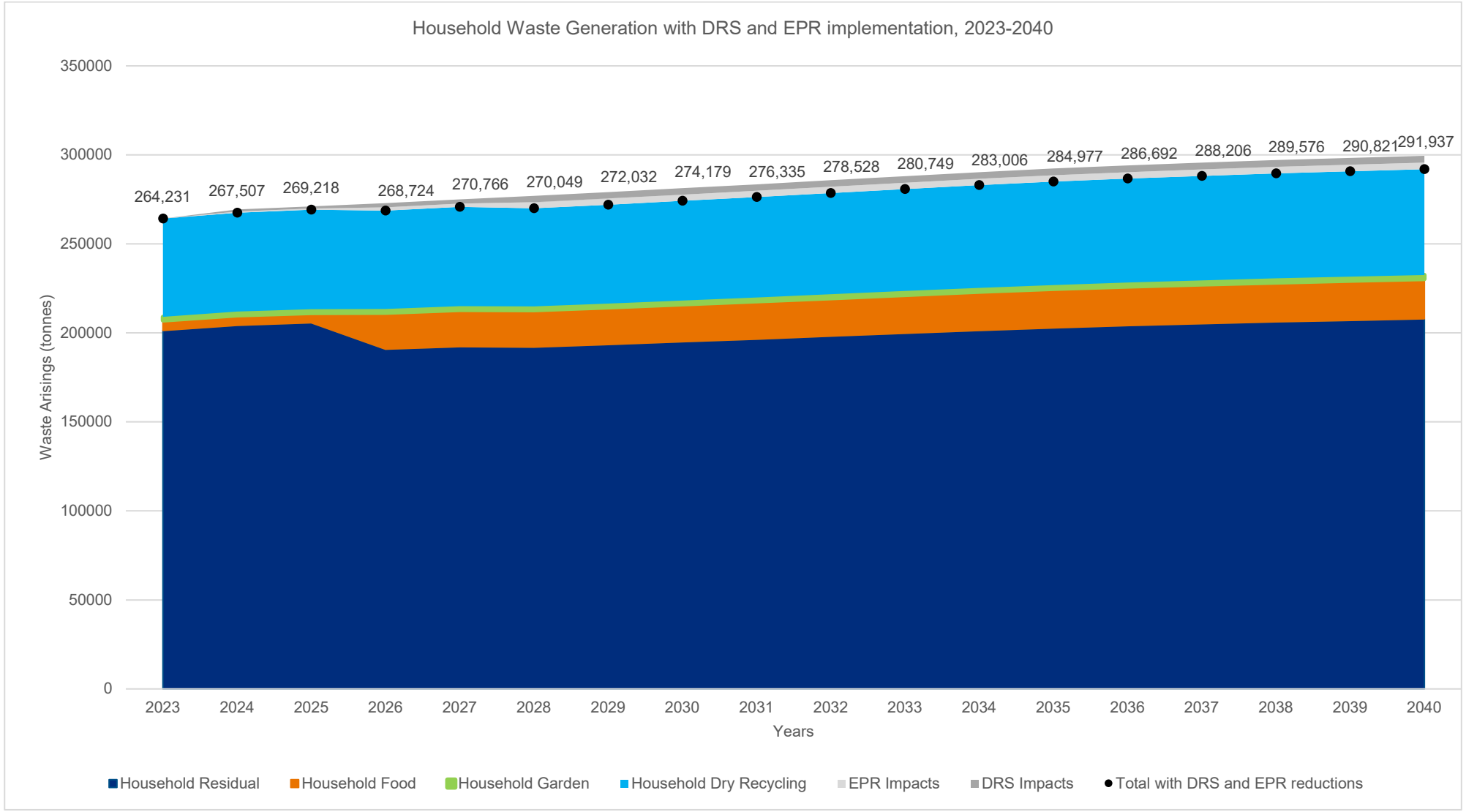
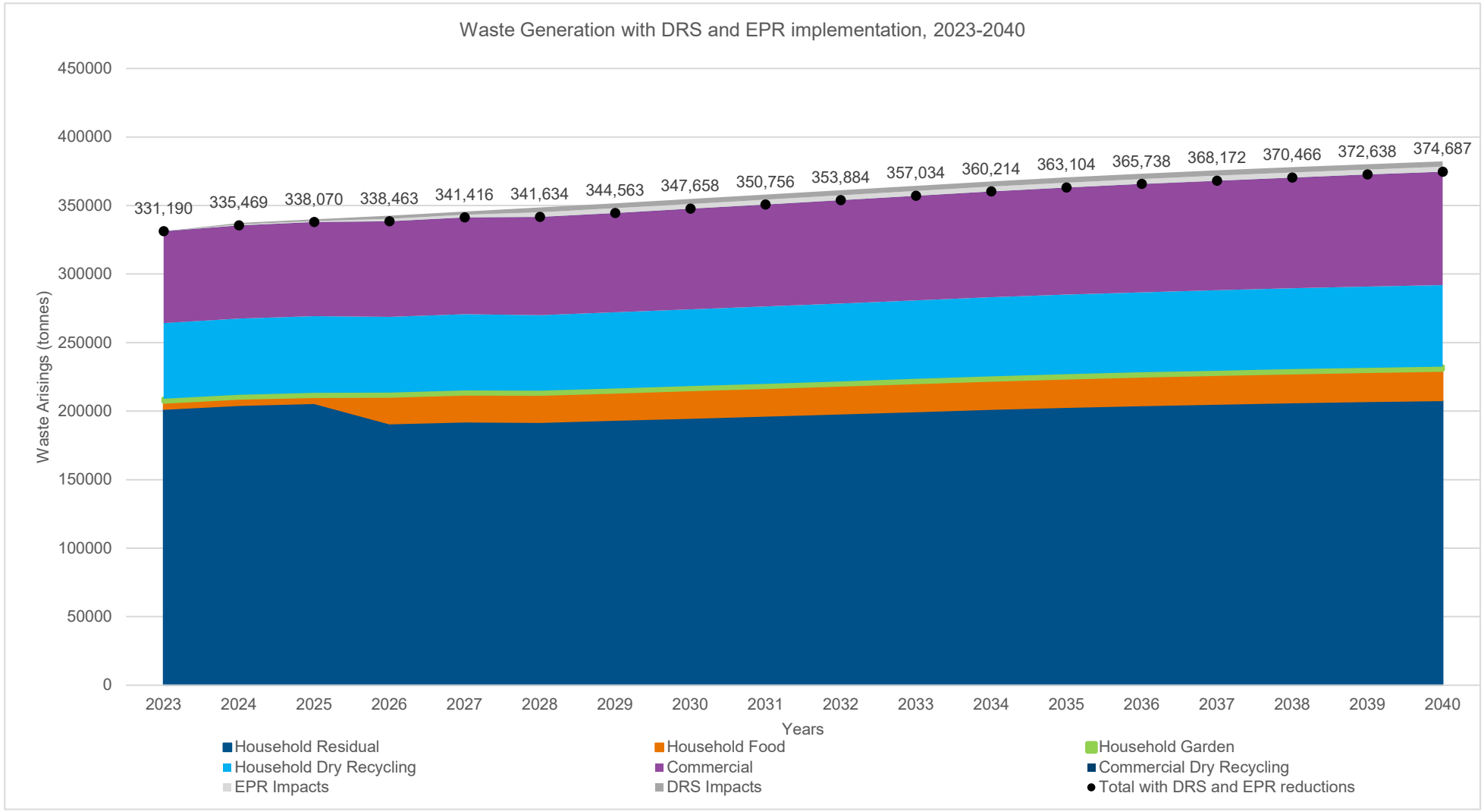


Figure 40: Forecast Waste Generation, with EPR and DRS impacts (including commercial co-collected with household waste), 2023-2040



5. BASELINE AND OPTIONS MODELLING

This section provides a detailed overview of the Baseline and Options recycling and waste collection modelling conducted.in support of the Strategy. The primary aim was to assess the current waste collection services across the WRWA area and to explore future options to align with the Strategy Strategy's objectives.

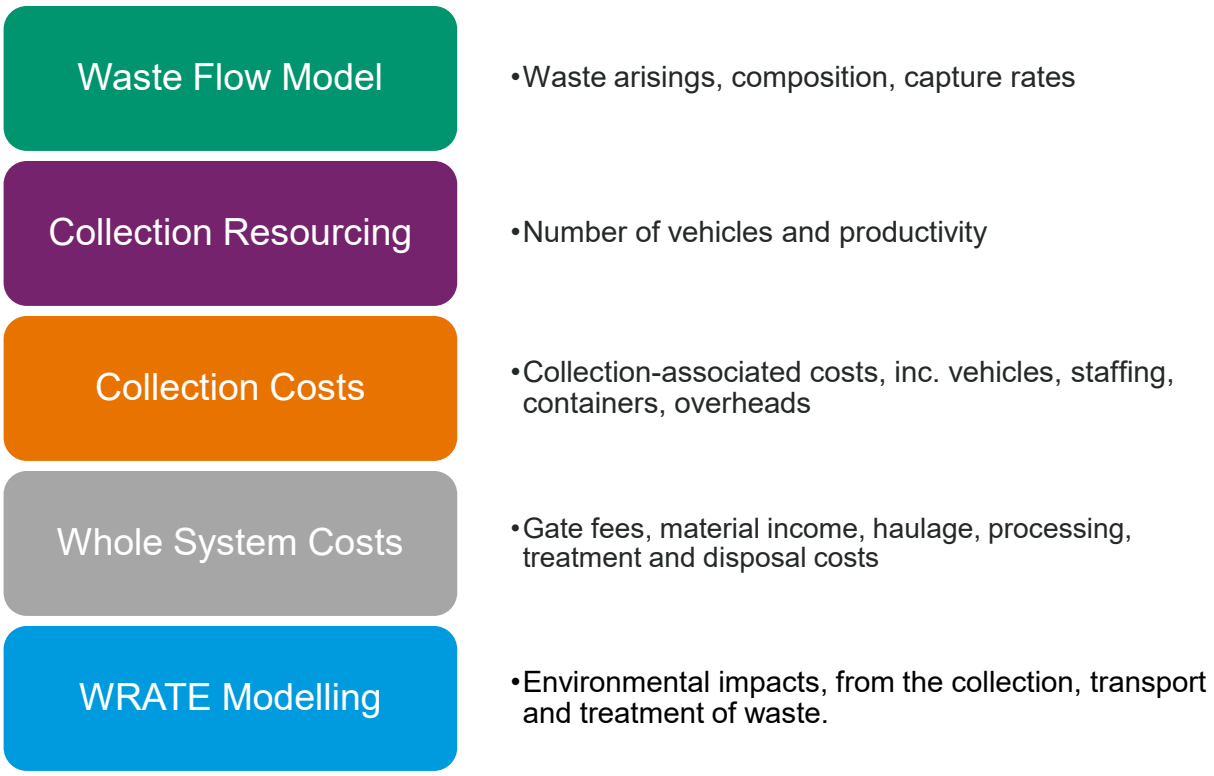
The modelling undertaken for WRWA's waste collection and disposal service methods includes an analysis of the waste arisings, recycling activities, resources, costs and environmental impacts associated with these activities. The Baseline serves to identify WRWA's current status and acts as a reference point for comparison against a series of different modelled collection and disposal options. As detailed in the Workshop Outcomes section the modelled Options have been developed in collaboration with WRWA and the Partner Authorities through a series of workshops with the Officers and Members.

5.1 BASELINE MODELLING

The Baseline modelling represents the current waste collection services across the WRWA area in **FY2022/23**. The modelling focuses on the core household recycling and waste collection services (excluding non-core elements such as bulky waste, clinical waste, fly-tipping or street cleansing collections). To accurately reflect the reality of resourcing, the resources and cost modelling elements include commercial or fly tipped waste where it is co-collected with household waste.

Six separate models are used in the Baseline modelling process. Figure 41 demonstrates the different models used for the Baseline modelling, with an explanation of each element below.

Figure 41 Waste Collection Models



A brief outline of the development and purpose of each stage identifies the overall methodology:

1. **Waste Flow Model (WFM)** – Provides the waste flow calculations for waste collected from households for the Partner Authorities for the Baseline year and each of the agreed Options. This model focuses on only the core collections (household refuse, dry recycling, garden and food), for the purpose of examining changes to resources required and the associated costs.

2. **Collection Resourcing Model (Collection Resources)** – Calculates the number of vehicles and productivity for a collection system for the Partner Authorities for the Baseline year and each of the agreed Options.
3. **Gross Collection Costs Model (Collection Costs)** – This model calculates the collection costs for a kerbside collection system based on the number and type of vehicles, staffing levels, number and type of containers and other assumptions relating to overheads for the Partner Authorities for the Baseline year and each of the agreed Options.
4. **Whole System Costs Model (WSCM)** – Provides the total costs of collection, processing, treatment and disposal of waste for the Baseline year and each of the agreed Options. This includes costs associated with haulage, transfer, and treatment.
5. **Waste and Resource Assessment Tool for the Environment (WRATE)** – originally developed on behalf of the Environment Agency. It has been regularly utilised since its' development to estimate the environmental impacts arising from waste management systems, including embodied emissions from bins, sacks, collection vehicles, and collection, transport and treatment of waste.

5.1.1 Current Data and Collection Systems

5.1.1.1 Current Collections

The input for the modelling was provided by the WRWA councils. The table below provides a summary of the collection schemes modelled for the core waste streams (residual, dry recycling, food and garden waste) for each of the Partner Authorities in the baseline year – 2022/23. Table 29 below represents the majority of household collections in the Partner Authorities, although some Authorities operate twice or thrice weekly collections for specific housing types.

Table 29 Current household waste collection schemes of WRWA councils (FY 2022/23)

	Residual waste		Dry recycling		Food waste		Garden waste	
Authority	**Scheme**	**Frequency**	**Scheme**	**Frequency**	**Scheme**	**Frequency**	**Scheme**	**Frequency**
Hammersmith & Fulham	Sack collections	Weekly	Co-mingled	Weekly	Prototype scheme (~6000 properties)	Weekly	N/A	N/A
Kensington and Chelsea	Sack collections	Twice weekly	Co-mingled	Twice weekly	Prototype scheme (~6000 properties)	Weekly	Chargeable (£75.90/yr)	Fortnightly
Lambeth	Wheeled bin collections	Weekly	Co-mingled	Weekly	Co-collected with Garden Waste	Weekly	Chargeable (£75.80/yr)	Weekly
Wandsworth	Sack collections	Weekly	Co-mingled	Weekly	Prototype scheme (~2000 properties)	Weekly	N/A	N/A

5.1.1.2 Households

Table 30 provides a summary of the number of households across the WRWA area. The modelling process accommodates the waste collection of different housing types such as standard/street-level properties, flats/estates, and properties with narrow access.

Table 30: WRWA Number of Households Modelled FY2022/23

Partner Authorities	Baseline
Wandsworth	153,139
H&F	92,031
Lambeth	150,272
K&C	99,247
Total	**494,689**

5.1.1.3 Household Tonnes

The Partner Authorities have provided the quantities in Table 31 below (in tonnes per year) of the total household residual, dry recyclable and food and garden waste collected for the Baseline modelling year FY2022/23. Ricardo has assumed that the kilograms per household rate (kg/hh) is uniform for each type of household.

Table 31: WRWA Household Tonnes Modelled for FY2022/23

Waste Stream (tonnes/year)	As Provided All Properties	Modelled All Properties
Residual Waste	200,658	200,658
Dry Recycling (excluding contamination)	46,953	46,953
Dry Recycling Contamination	8,248	8,248
Food Waste	880	880
Garden Waste	389	389
Mixed Organics Waste	6,372	6,372
Total (tonnes/year)	**263,501**	**263,501**

5.1.2 Baseline Modelling Assumptions

Where operational data was not available from Partner Authorities, industry averages and/or Ricardo's in-house database were used to calibrate the model to best represent WRWA's current operations. Any modelling assumptions applied were agreed prior to modelling with the Partner Authorities.

5.1.3 Baseline Tonnes

Ricardo's Waste Flow Model (WFM) uses tonnes data provided by the Partner Authorities to calculate the total arisings per property type, the quantity of waste diverted and remaining in residual as well as the capture rates for each material. The model provides a detailed breakdown to demonstrate the current performance across the WRWA area, which can then be used as a foundation for options modelling.

In addition to the tonnes provided by the Partner Authorities, an agreed dry recycling and residual composition was used to generate the WFM outputs. Ricardo was provided with three sources of compositional data: MRF sampling data from FY2022-2023, CORY sampling data from 2022 and data from a compositional audit

conducted by MEL in 2022. For the dry recycling composition, Ricardo has prioritised the MRF sampling data and used the compositional audit data to provide further disaggregation where possible. For the residual waste composition, Ricardo has used the MEL compositional audit.

5.1.3.1 Capture Rates, Tonnes Collected, Household Recycling Rate

WRWA's current capture rates and household recycling rates have been calculated based on household waste only.

Table 32 and Figure 42 present the material capture rates in tonnages and percentages for recyclable and compostable materials only. The capture rate refers to the amount of a material that is currently collected for recycling as a proportion of the total material arisings. E.g. the amount of paper being recycled divided by the total amount of paper waste arisings. The capture rates presented apply to all property types including standard properties, flats and narrow access properties. The capture rates refer to individual materials inside the Dry Mixed Recycling stream, and are dependent on the composition used, therefore these should be taken as a high-level indication of high and poor performing material recycling.

Table 33 presents the WRWA tonnes collected in FY2022/23 and the recycling rate. The household recycling rate is an indicator of how much waste across WRWA is being recycled. It is calculated by taking total household recycling tonnes collected (dry mixed recycling, garden and food waste, excluding contamination) divided by the total waste collected.

Table 32: WRWA Recycling Capture Rates

Material	Arisings (t/year)	Diverted (t/year)	Capture rate (%)	Remaining in residual (%)	Arisings (kg/hh/yr)	Diverted (kg/hh/yr)
Recyclable paper	12,845	7,326	57%	43%	108	62
Recyclable card & cardboard	22,857	17,772	78%	22%	186	143
Liquid cartons	1,640	591	36%	64%	13	5
Plastic bottles	6,067	2,848	47%	53%	49	23
PTTs	6,550	2,307	35%	65%	53	19
Other dense plastic	4,176	-	0%	100%	34	-
Recyclable glass	20,312	13,363	66%	34%	163	105
Ferrous	1,929	1,166	60%	40%	15	9
Non Ferrous	1,133	680	60%	40%	9	5
Textiles	8,683	643	7%	93%	68	5
WEEE	1,513	257	17%	83%	12	2
Garden waste	13,515	2,010	15%	85%	107	15
Food waste	85,068	5,631	7%	93%	663	40
Total	**218,671**	**54,594**			**1,744**	**433**

Figure 42: WRWA Recyclables Capture Rates (%)

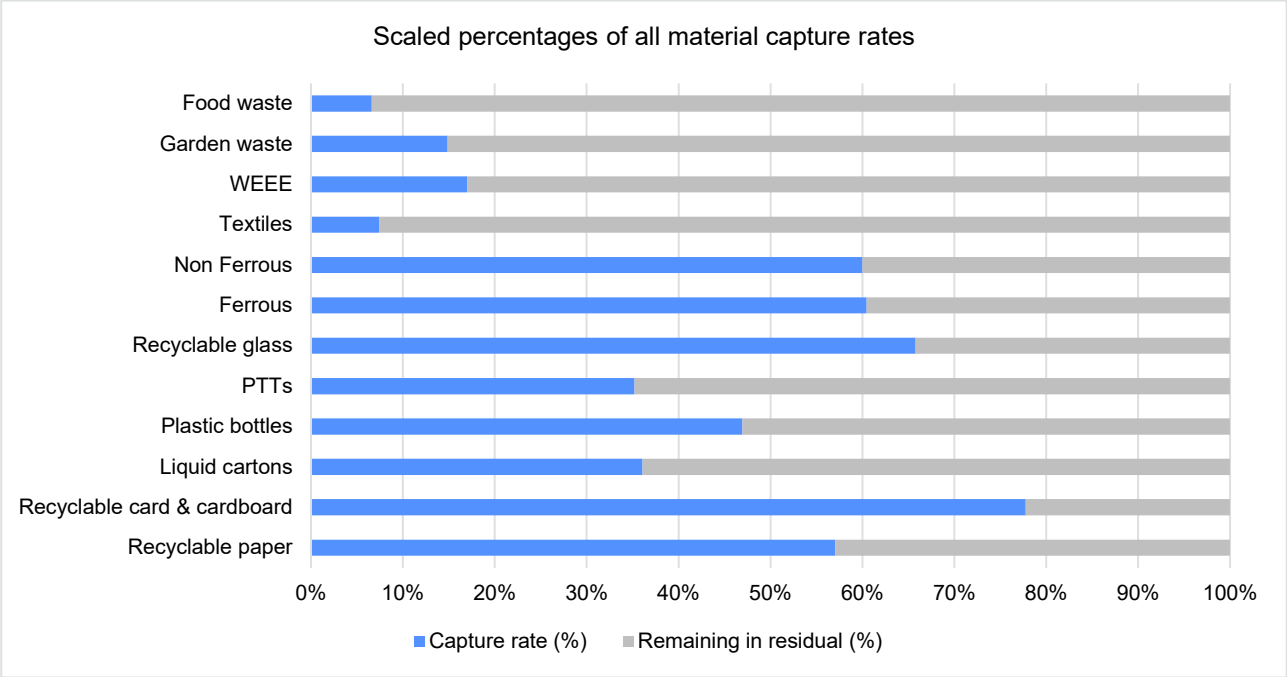


Table 33: WRWA 2022/23 Household Waste Arisings (tonnes) and Recycling Rate (%)

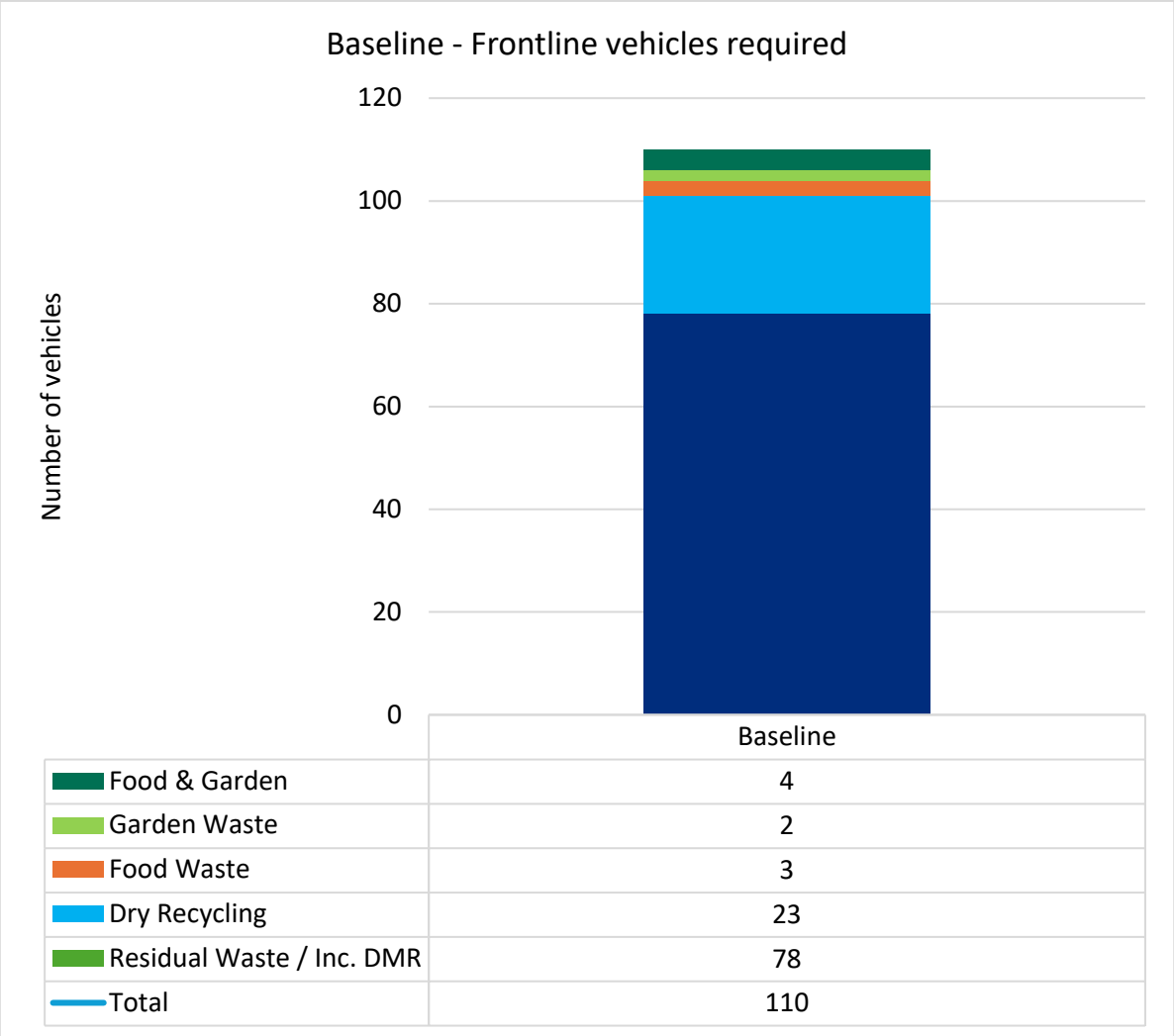
Waste stream	Waste Arisings (tonnes/year)
Comingled DMR	46,953
Contamination	8,248
Food	5,631
Garden	2,010
Residual	200,658
Total	**263,501**
Recycling rate	**20.72%**

5.1.4 Baseline Resourcing

The Baseline Resourcing reflects the number of resources required to deliver the waste collection services in FY2022/23. This part of the modelling includes the number of vehicles and staff required for the service, taking into account, tonnes collected, vehicle specifications speeds and distances, and staff working patterns. While the tonnes modelling focuses on core household collections only, in order to reflect the tonnes picked up by the vehicles, the resourcing results below include the commercial waste that is co-collected with household waste.

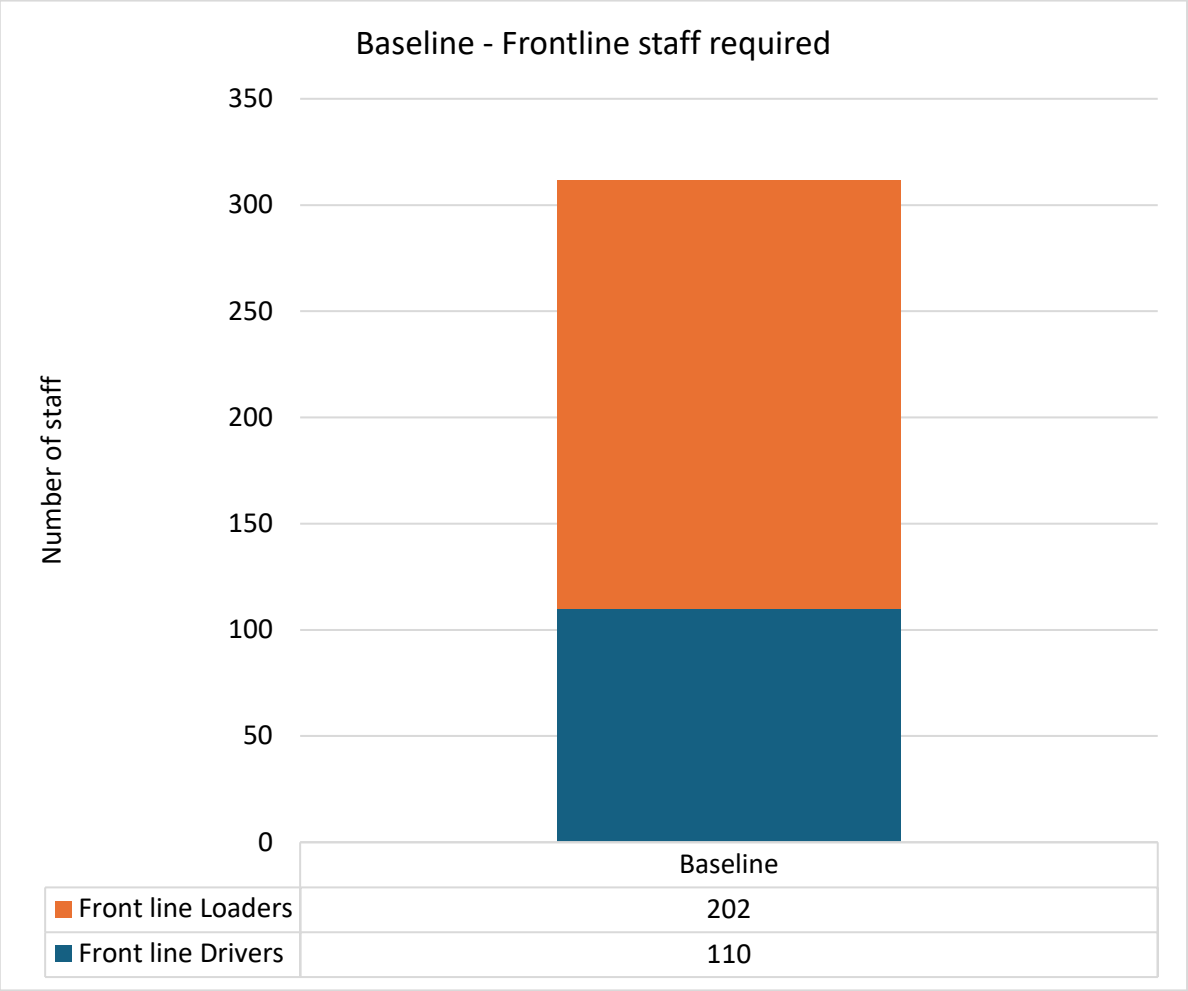
Figure 43 and Figure 44 show the modelled number of vehicles and staff for the Baseline services in the WRWA area. According to the provided data, the Partner Authorities operate their core household waste collection and co-collected commercial waste services by means of 110 vehicles. Based on the modelled figures, it is expected that approximately 110 drivers and 202 loaders are employed for the household and co-collected commercial waste collection services in the WRWA area.

Figure 43: Frontline Vehicles Required for WRWA's Waste Collections



	Baseline
Food & Garden	4
Garden Waste	2
Food Waste	3
Dry Recycling	23
Residual Waste / Inc. DMR	78
Total	110

Figure 44: Frontline Staff Required for WRWA's Waste Collections



5.1.5 Annual Collection Costs

The Baseline collection costs reflect the resources that collect household waste and commercial waste that is co-collected with household waste across the WRWA area. These costs exclude haulage, handling, sorting, processing, treatment, disposal and any sources of income.

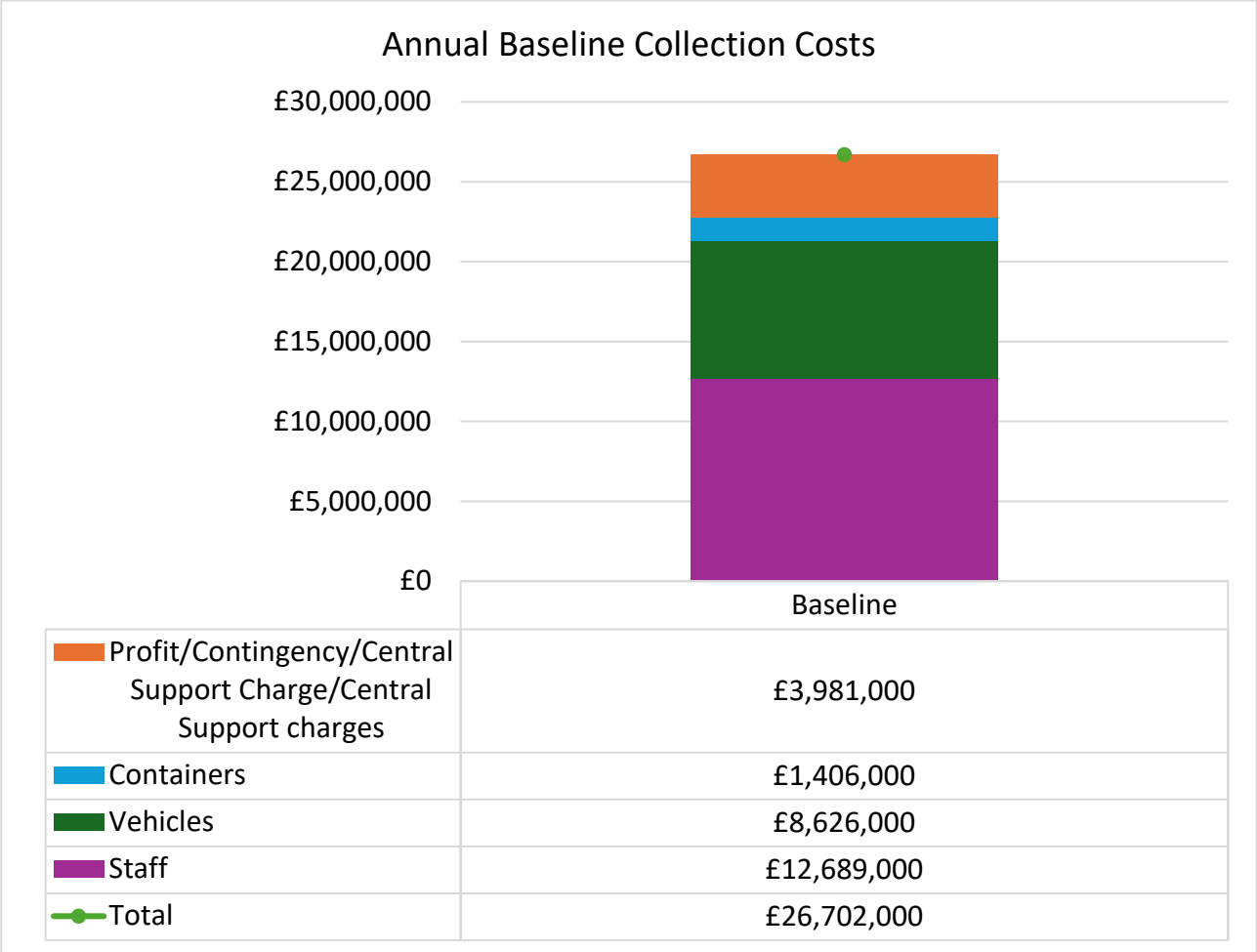
The cost modelling was high level and not intended to be used as a full detailed service review, hence the exercise examined core services and used standard assumptions where information was not available. Thus, the results should not be compared with or used for budgeting purposes, but to provide an indication of the direction and scale of change related to the Options modelled. As the modelled costs are annualised, this means that capital expenditure has been amortised over the relevant lifespans (e.g., vehicles over 7-8 years and containers over 5-10 years). It has also been assumed that all vehicles will be purchased (even in the Baseline); this is so that the Baseline collection costs can provide a suitable comparison to the Options collection costs.

The Annual collection costs for the Partner Authorities are presented in Table 34 and a high-level summary of costs is shown in Figure 45. Overall total annual collection costs are £26.7M. Of this total, staff costs are £12.7M, vehicle costs including spares are £8.6M, contingency and central support charges are £4M and containers cost £1.4M.

Table 34: WRWA Annual Waste Collection Costs

		Baseline - Annualised costs (nearest £1000)
Vehicles	No. vehicles to purchase	110
	Front line vehicle costs Inc. insurance & fuel	£7,482,000
Frontline Staff	No. Front line Drivers	110
	No. Front line Loaders	202
	Front line Drivers	£3,492,000
	Front line Loaders	£4,891,000
Container costs	New Containers	£0
	Container Replacements	£1,406,000
Other costs	Ancillary vehicles	£1,144,000
	Wages (Agency, overtime, other staff)	£4,306,000
	Contract Operations	£1,100,000
	Central Support Charges	£1,498,000
	Profit/contingency	£1,383,000
Gross Operational Expenditure	Gross Operational Expenditure (excl Profit/Contingency/Central Support Charge)	£23,821,000
	Gross Operational Expenditure (incl Profit/Contingency/Central Support Charge)	**£26,702,000**

Figure 45: WRWA's Annual Waste Collection Costs



	Baseline
Profit/Contingency/Central Support Charge/Central Support charges	£3,981,000
Containers	£1,406,000
Vehicles	£8,626,000
Staff	£12,689,000
Total	£26,702,000

5.1.6 Whole System Costs

The Whole System Costs present the collection costs in addition to the handling, treatment and disposal of household waste, and income from recyclable materials. Due to a lack of available cost data, these results do not include the treatment of commercial waste which is co-collected with household waste.

Table 35 shows that the annual whole system costs for WRWA broken down by collection and treatment type. In Table 35, blue shaded cells represent the income received from materials and garden waste subscriptions. The whole system cost for WRWA is £61.4M. The largest proportion of this total comes from the treatment of residual waste and dry recycling contamination which costs £33M per year. This is followed by collection costs of £26.7M. There are smaller costs related to the handling of dry recycling, food and garden waste, which total £2.2M. In addition, income is received from recyclable materials and garden waste subscriptions, totalling £878K.

Table 35: WRWA Annualised Whole System Costs

	Baseline (Nearest £1000)
Collection Costs	£26,702,000
Dry Recyclate Income	-£400,000
Dry Recyclate Handling (MRF)	£1,767,000
Food and Garden Waste Treatment Costs (IVC)	£356,000
Garden Waste Treatment Costs (Windrow)	£52,000
Garden Waste Income	-£478,000
Contamination disposal (Gate fee)	£1,320,000
Residual waste treatment	£32,106,000
Whole System Cost	**£61,425,000**

5.1.7 Environmental Impact

The environmental impact has been calculated using the life cycle assessment software, WRATE. In order to provide an accurate environmental analysis of the tonnes and resources associated with WRWA's waste treatment, the environmental impact analysis includes both household waste and the commercial waste that is co-collected with household waste.

In WRATE, a positive figure indicates an impact to the environment and a negative figure is an offset of impacts. Recycling of materials will offset production of goods from raw materials and thus result in a saving in the environmental impact. Another reason for a saving can be using waste as fuel for energy generation and offsetting the use of natural gas for the same purpose.

The outputs from WRATE in Table 36 show savings in the impact categories; Climate change, Human toxicology, Freshwater ecotoxicity, Acidification, and Abiotic resource depletion. The remaining impact category (Eutrophication) sees an impact. The results in Table 36 show that the treatment of waste offsets the same amount of carbon dioxide which 6,038 cars emits through a year. The emissions that are avoided with regards to Human Toxicology ad Freshwater Ecotoxicology shows that the system offset 134,333 and 128,489 cars annually respectively. Furthermore, the emission of SO2 to the environment is offset by 116,096 kg which correlates with running 11,610 2x2 MW coal fired power plants for a year. Lastly due to recycling the corresponding of 48,633 tonnes of lead acid batteries are avoided annually. These five environmental impact categories lead to off-sets however, the current system emits PO4 to the environment and the emissions has the same impact as running 72,643 football fields yearly.

WRATE does not take the emissions from raw material extraction, production and use of the product into account. The analysis starts from the point where the material or product is discarded and collected by the Partner Authority. A description of each WRATE Impact Category is shown in Table 37

Table 36: WRWA WRATE Analysis

Impact category	Baseline	Unit	Comparator	Description
Climate Change	-27,774,157	kg CO_2-Eq	6,038	Cars/year
Human Toxicology	-73,883,335	kg 1,4-DCB-Eq	134,333	Cars/year
Freshwater ecotoxicology	-6,424,436	kg 1,4-DCB-Eq	128,489	Cars/year
Acidification	-116,096	kg SO_2-Eq	11,610	2 x 2 MW coal fired power plant/year
Eutrophication	8,302	kg PO_4-Eq	72,643	Football fields/year
Resource Depletion	-972,651	kg antimony-Eq	48,633	tonnes of lead acid batteries/year

Table 37: WRATE Impact Category Descriptions

Impact Category	Description of Impact Category unit
Climate change	Climate change: CO_2-eq normalises all of the Greenhouse gasses to their CO_2-eq.
Human Toxicology	Human toxicology: 1,4 DCB-eq is the normalised impact of 1,4-dichlorobenzene. 1,4 DCB is a chemical which through short-term exposure can results in irritation of the skin, throat, and eyes. Over long-term exposure it can result in effects on the liver, skin and central nervous system.
Freshwater ecotoxicology	Freshwater ecotoxicity: 1,4 DCB-eq is the normalised impact of 1,4-dichlorobenzene. Exposure of 1,4 DCB in the freshwater environment can cause loss and/or species extinction.
Acidification	Acidification: SO_2-eq refers to the chemicals which contribute to acid rain.
Eutrophication	Eutrophication: PO_4-eq increases of the amount of Phosphorous in an aquatic environment can cause increased growth of algae and large aquatic plants which can result in a decrease level of dissolved oxygen in the water body.
Resource depletion	Abiotic resource depletion: antimony-eq is the factor used for accounting depletion of resources.

5.2 CONCLUSION AND NEXT STEPS

The Baseline modelling results were provided to WRWA and the Councils and agreed as an accurate Baseline to feed into the next stage of modelling for the project. The Options modelled were calibrated and based on these results.

6. OPTIONS MODELLING

In this section, the total combined modelling results for WRWA are presented for the Options modelled. This includes total tonnage for waste streams from the Waste Flow Model, the outputs of the Collection Resourcing and Costs models, and the Whole System Costs Model results and environmental impact WRATE results.

The current Baseline is used to calibrate the models to the current systems in WRWA. A Baseline + was also modelled to show the projected performance of the current services for the financial year (FY) 2027/28. The Baseline + is directly comparable to the Options modelled, which are also based on the assumptions of service provision for FY 2027/28.

As described in the Workshop Outcomes section the following Options in Table 38 were agreed to be modelled by WRWA and the Technical Officers. Options 1-4 involve retaining the frequency and containers of the current services and will include the rollout of food waste collections Borough-wide and garden waste subscriptions for each Borough. In addition, these Options explore both separate and co-collection of residual and dry recycling and food and garden waste. For flats, Options 3 and 4 still model flats as separate collections for residual waste and dry mixed recycling as it is not possible to co-collect two different streams from large communal bins.

Option 5 represents a high performing collection across WRWA, utilising the separate collection of materials. In this Option the frequency of residual waste collection is modelled as fortnightly with wheeled bins, and dry recycling is modelled as a weekly wheeled bin collection. Where possible, participation and set out rates have also been uplifted to model a high performing service. The participation rate is the proportion of households served presenting a container for collection at least once in a 4-week period and the set out rate is the proportion of households served presenting a container for collection on any given collection day. For Option 5, Flats' residual waste collections have been modelled as weekly due to concerns raised by the Partner Authorities about the practicality of fortnightly collections for residual waste from flats. Please note that in order to represent Lambeth's current collection as high performing, Option 2 has been modelled as a fortnightly residual collection service operates in Lambeth only.

Table 38: WRWA Modelling Options

	Residual Waste	Dry Recycling	Food Waste	Garden Waste	Number of Households
Baseline (2022/23)	WRWA current collection services in 2022/23				494,689
Baseline +	Same as Baseline but with waste arisings and housing projected for future year – **2027/2028**				519,569
Option 1	Separate collection, frequency to stay the same as Baseline +	Separate collection, frequency to stay the same as Baseline +	Borough-wide, separate weekly collection	Separate, fortnightly, charged	519,569
Option 2	Separate collection, frequency to stay the same as Baseline +	Separate collection, frequency to stay the same as Baseline +	Borough-wide, mixed weekly collection, GW charged		519,569
Option 3	Co-collection of residual with DMR – frequency to stay the same as Baseline +		Borough-wide, separate weekly collection	Separate, fortnightly, charged	519,569
Option 4	Co-collection of residual with DMR – frequency to stay the same as Baseline +		Borough-wide, mixed weekly collection, GW charged		519,569
Option 5	Separate collection, fortnightly, 140L bins (where possible), no side waste Flats move to weekly collection	Comingled, weekly, 240L bins (where possible)	Borough-wide, separate weekly collection	Separate, fortnightly, charged	519,569

6.1 MODELLING OPTIONS ASSUMPTIONS

Where possible Ricardo has used data available from the Baseline modelling for the Options. However, where new collection systems are modelled, assumptions have been made and agreed with the Partner Authorities regarding yield changes, containers and vehicles. In addition, as detailed in the Forecasting appendix, the impacts of Extended Producer Responsibility (EPR) and Deposit Return Scheme (DRS), have been applied to the waste arisings for FY 2027/28.

6.1.1 Garden Waste

For Hammersmith & Fulham and Wandsworth an estimated garden waste yield and the number of subscribers has been assumed. These assumptions were based on the current performance and uptake from Kensington and Chelsea and Lambeth's garden waste schemes as well as benchmarking against other London Boroughs.

6.1.2 Food waste

Using the Partner Authorities' food waste trial data, industry benchmarking, and performance estimations from the Partner Authorities, food waste yields have been assumed for Kensington and Chelsea, Hammersmith & Fulham and Wandsworth.

6.2 OPTIONS TONNES

6.2.1 Recyclate Tonnage (excluding contamination)

Table 39 presents the recycling material (in tonnes, excluding contamination) that is recycled in the WRWA area for the Options. The waste arisings are categorised using a colour coded scale from red-green, depending on the level of waste reduction or increase compared to the Baseline. Red indicates the lowest increase in recyclables or lowest reduction in residual waste, whereas green represents the highest increase in recyclables or highest reduction in residual waste.

The Baseline + models WRWA's current service in 2027/2028, taking into the effects of legislation such as DRS and EPR and household increase. Some dry recyclables observe a drop in tonnage per household due to the effect of EPR and DRS pulling out materials currently presented for recycling collections, such as plastic, glass and cans. Whereas materials such as paper and cardboard will see an uplift in tonnes per household due to impact of EPR increasing the amount available in packaging material. Since EPR will encourage the use of paper and cardboard in packaging material from businesses, it is expected that these two materials will see an uplift in tonnes presented for collections from households because residents will be buying packaging material with greater paper and cardboard materials. These calculations are intertwined with housing growth for the Partner Authorities.

For all options there is a reduction in residual waste with Option 5 seeing the largest reduction. This reduction in residual waste is a result of the introduction of food waste collections and a garden waste subscription service across all Partner Authorities. This is also reflected in the increase of garden and food kg/hh/yr uplifts from Baseline + to Option 1. There is a smaller reduction in residual waste in Option 2 compared to Option 5. This is due to the impact of fortnightly residual collections for Lambeth only.

In line with the residual waste reductions, Option 5 shows the largest increase in dry recycling tonnes, due to the restriction of residual waste collections. Similarly for Option 2 this is also shown on a smaller scale because of the residual waste collection restrictions in Lambeth. "

Table 39: WRWA Options Recycling Tonnes (excluding contamination)

Material	Baseline	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Recyclable paper	7,326	8,289	8,289	8,468	8,289	8,289	8,816
Recyclable card & cardboard	17,772	20,267	20,267	20,505	20,267	20,267	21,017
Liquid cartons	591	625	625	645	625	625	681
Plastic bottles	2,848	1,399	1,399	1,440	1,399	1,399	1,494
PTTs	2,307	2,038	2,038	2,099	2,038	2,038	2,214
Recyclable glass	13,363	11,779	11,779	11,864	11,779	11,779	12,194
Ferrous	1,166	983	983	1,012	983	983	1,041
Non Ferrous	680	398	398	405	398	398	417
Textiles	643	684	684	822	684	684	951
WEEE	257	228	228	242	228	228	260
Garden waste	2,010	2,095	3,510	3,510	3,510	3,510	3,510
Food waste	5,631	5,934	19,771	20,270	19,771	19,771	21,079
Total	**54,594**	**54,717**	**69,970**	**71,284**	**69,970**	**69,970**	**73,675**

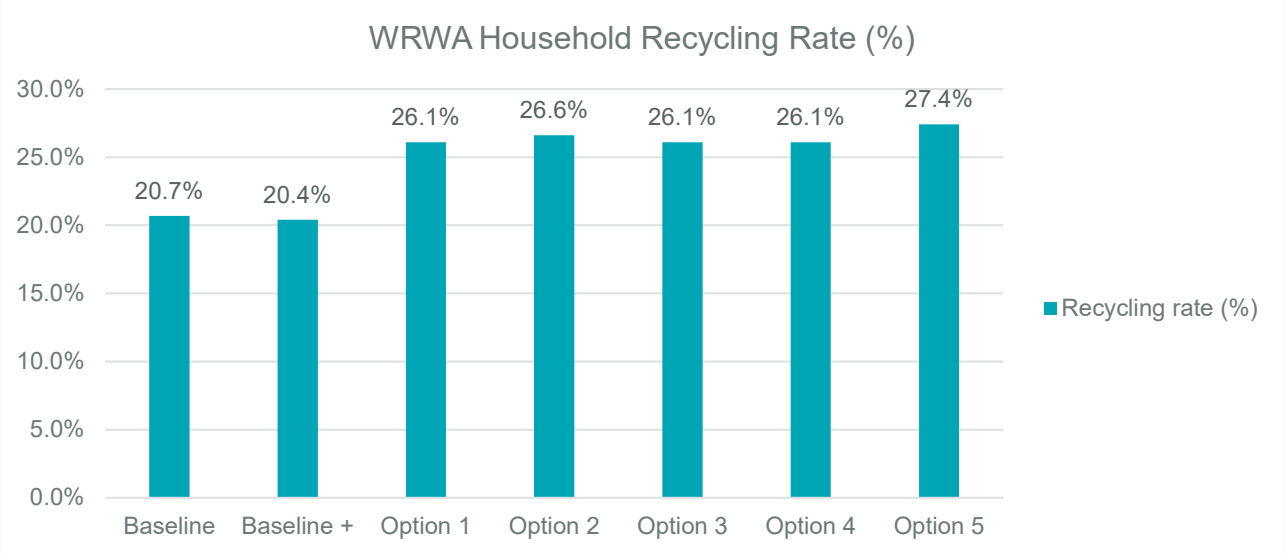
The performance (recycling rate) and waste arisings for the Baseline and Options are presented in Table 40

Table 40: Total Household Waste Arisings

Waste stream	Baseline	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Comingled DMR	46,953	**46,689**	**46,689**	**47,503**	**46,689**	**46,689**	**49,086**
Contamination	8,248	**8,223**	**8,223**	**8,401**	**8,223**	**8,223**	**8,655**
Food	5,631	5,934	19,771	20,270	19,771	19,771	21,079
Garden	2,010	2,095	3,510	3,510	3,510	3,510	3,510
Residual	200,658	205,572	190,320	188,827	190,320	190,320	186,182
Total	**263,501**	**268,512**	**268,512**	**268,512**	**268,512**	**268,512**	**268,512**
Recycling rate	**20.7%**	**20.4%**	**26.1%**	**26.6%**	**26.1%**	**26.1%**	**27.4%**

Figure 46 shows the average household recycling rate across the WRWA Partners for the Baseline and each Option.

Figure 46: WRWA Household Recycling Rate (%)



6.2.2 Residual Waste Yield per Option

Table 41 compares the residual waste yield for the Baseline, Baseline + and each of the Options.

Table 41: Residual Yield (kg/hh/yr)

Waste stream	Baseline	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Residual waste yield	**406**	**396**	**366**	**363**	**366**	**366**	**358**

6.2.3 LACW Recycling Rate

Table 42 shows the different waste streams combined with household recycling rate of Option 5 to equal a total LACW recycling rate of 36.4%.

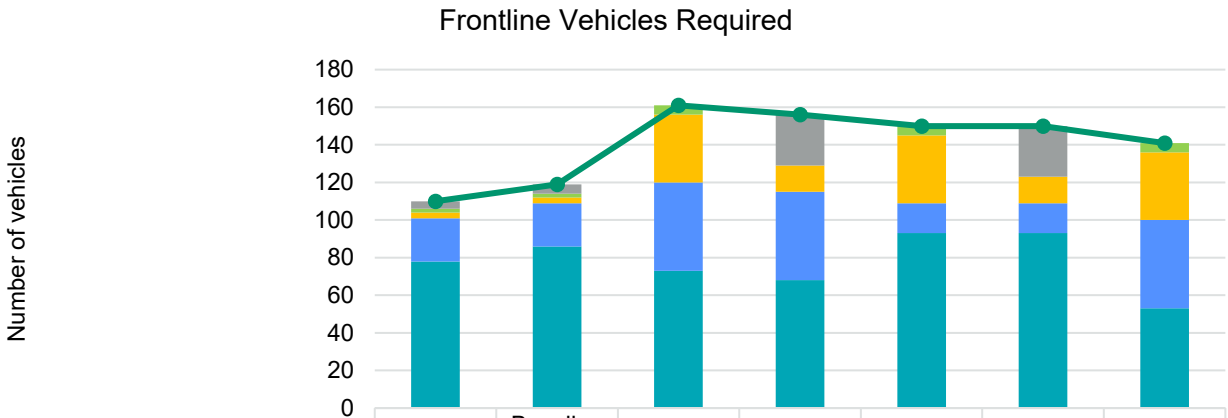
Table 42: LACW Recycling Rate

WRWA all Waste and Recycling 2027/28			
Waste stream	Recycling	All waste	Recycling rate
Household Kerbside Collections (Option 5)	73,675	268,512	27.4 %
HWRC	8,461	16,891	50.1 %
Independent (bring banks, collection points)	7,115	7,115	100 %
Commercial and Industrial	42,899	70,327	61.0 %
Total household generated waste	**89,251**	**292,518**	**30.5 %**
LACW	**132,150**	**362,845**	**36.4 %**

6.3 OPTIONS RESOURCING

Figure 48 provides an overview of the resources required for each of the Partner Authorities and per waste stream collected. The number of vehicles reflects the resources required to collect the household waste and commercial waste that is co-collected. Where Partner Authorities have double shifted vehicles (e.g. used them during the day and for an evening shift), this has been reflected in both the Baseline and throughout the Options.

Figure 47: Options Number of Frontline Vehicles Required by Waste Stream



	Baseline	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Food & Garden	4	5	0	27	0	27	0
Garden Waste	2	2	5	0	5	0	5
Food Waste	3	3	36	14	36	14	36
Dry Recycling	23	23	47	47	16	16	47
Residual Waste / Inc. DMR	78	86	73	68	93	93	53
Total	110	119	161	156	150	150	141

Baseline +

The Baseline + shows the current systems modelled for the chosen year of 2027/28, with an increase of 9 vehicles compared to the Baseline across the Partner Authorities due to the higher housing collection coverage.

Option 1

This Option shows an increase of 42 vehicle numbers due to Borough-wide food waste collection and garden waste subscription. In addition, this Option models the separate collection of dry recycling and residual, this requires a greater number of vehicles because materials can no longer be collected on the same round. This is a change for three of the Partner Authorities which had co-collection of dry Recycling and residual waste as the Baseline service.

Option 2

This is similar to Option 1, with the main difference being the mixed food and garden waste collection, for Kensington and Chelsea, Wandsworth and Hammersmith & Fulham, the number of vehicles is the same as Option 1, because the same number of vehicles are required for the separate and co-collection of food and garden waste. However, for Lambeth, Option 2 models a move from a weekly to a fortnightly residual waste scheme, whereby 5 fewer residual waste vehicles are required, because of the reduction in residual waste tonnes.

Option 3

This is the first Option with a joint residual waste and dry mixed recycling collection, as such there is a reduction in 11 vehicles compared to Option 1. This is due to the overall time efficiency savings of co-collections because residual waste and dry recycling will be collected on the same round (same vehicle) instead of separate rounds

in Options 1 and 2. However, because vehicles are collecting two materials, there is a slower collection round (collection operatives are collecting the same amount of waste from half the amount of households) compared to separate streams, which has been taken into account in the modelling.

Option 4

This Option models both the joint collections from Option 2 and Option 3 and has the same number of vehicles as Option 3. This is because the co-collection of food and garden waste requires the same number of vehicles as the separate collection of food and garden.

Option 5

This Option is based on separately collected streams along with a move to a fortnightly residual waste collection and a weekly dry mixed recycling collection across the four Partner Authorities. There is a reduction of 20 residual waste vehicles compared to the separate collections in Option 1 due to the fewer residual waste tonnes collected. Compared to the other Options this has the lowest number of vehicles (141), while offering a Borough wide food collection service and a garden waste subscription service. This also has the highest set out rates for recyclables to show what a high performing system could achieve.

6.4 OPTIONS COSTS

6.4.1 Annual Collection Costs

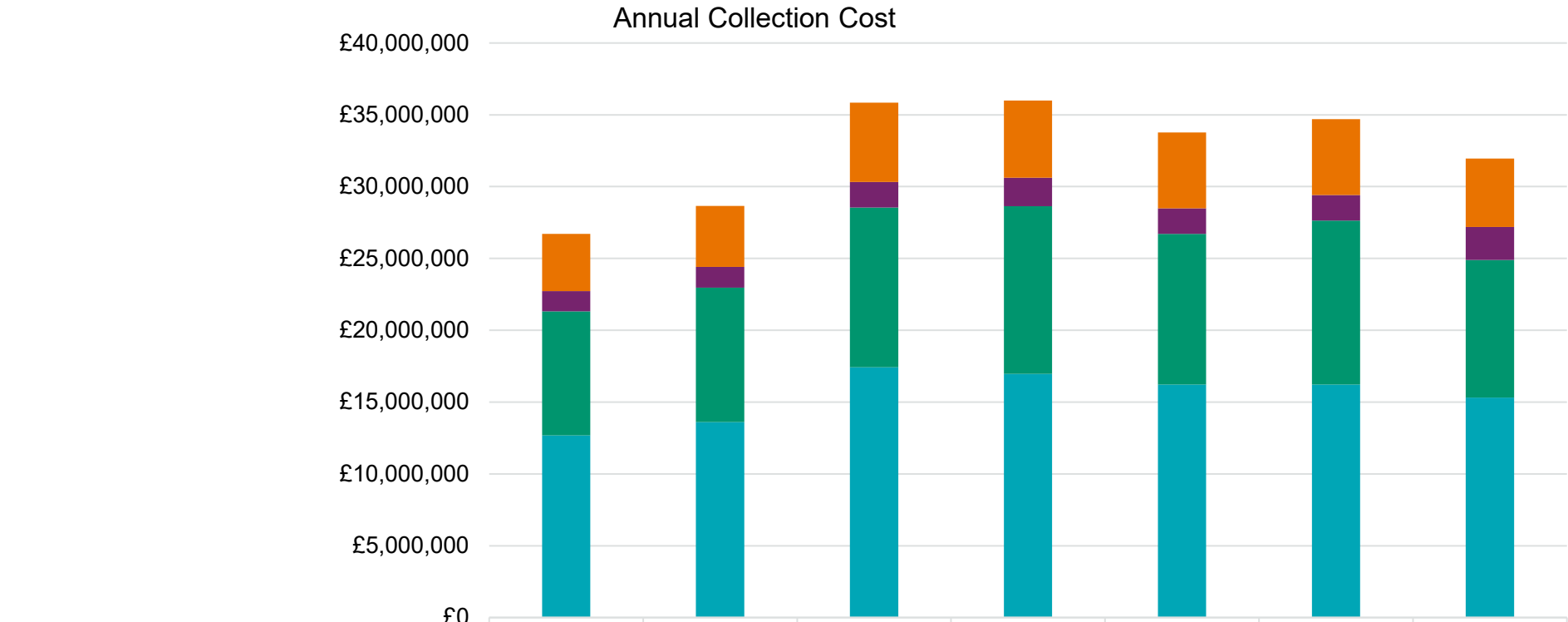
Gross annual collection costs to the nearest £1,000 are presented in Table 43 and .Figure 48 below and any cost savings are highlighted in blue. In order for Options to be comparable to the Baseline and Baseline +, the Baselines assume that all vehicles required are purchased as a new fleet. The capital expenditure on collection vehicles and containers is annualised. The collection costs include the cost of collections associated with household and commercial waste that is co-collected with household waste.

Table 43: Options Annual Collection Costs

		Baseline	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Vehicles	Number of vehicles to purchase	110	119	161	156	150	150	141
	Front line vehicle costs Inc. insurance & fuel	£7,482,000	£8,103,000	£9,770,000	£10,292,000	£9,209,000	£10,108,000	£8,349,000
Frontline Staff	Number Front line Drivers	110	119	161	156	150	150	141
	Number Front line Loaders	202	219	294	284	267	267	246
	Front line Driver costs	£3,492,000	£3,782,000	£5,129,000	£4,976,000	£4,784,000	£4,784,000	£4,497,000
	Front line Loader costs	£4,891,000	£5,330,000	£7,274,000	£7,057,000	£6,633,000	£6,633,000	£6,133,000
Container costs	Container Capex (annualised)	£0	£0	£262,000	£463,000	£262,000	£262,000	£1,509,000
	Container Replacement Costs	£1,406,000	£1,449,000	£1,516,000	£1,505,000	£1,516,000	£1,516,000	£779,000
Other costs	Fleet costs	£1,144,000	£1,251,000	£1,344,000	£1,385,000	£1,265,000	£1,307,000	£1,239,000
	Wages Costs (Agency, overtime, other staff)	£4,306,000	£4,495,000	£5,027,000	£4,934,000	£4,812,000	£4,812,000	£4,678,000
	Contract Operating Costs	£1,100,000	£1,179,000	£1,537,000	£1,497,000	£1,456,000	£1,456,000	£1,340,000
	Central Support Charges	£1,498,000	£1,595,000	£2,073,000	£2,025,000	£1,989,000	£1,989,000	£1,782,000
	Profit/contingency	£1,383,000	£1,472,000	£1,913,000	£1,869,000	£1,837,000	£1,837,000	£1,645,000
Gross Operational Expenditure	Gross Operational Expenditure (excl Profit/Contingency/Central Support Charge)	£23,821,000	£25,589,000	£31,859,000	£32,109,000	£29,937,000	£30,878,000	£28,524,000
	Gross Operational Expenditure (incl Profit/Contingency/Central Support Charge)	**£26,702,000**	**£28,656,000**	**£35,845,000**	**£36,003,000**	**£33,763,000**	**£34,704,000**	**£31,951,000**
Difference from Baseline +		-£1,950,000	£0	£7,192,000	£7,350,000	£5,111,000	£6,053,000	£3,297,000

Figure 49 illustrates the data from the above table, with the individual costs in the subheadings being made into general categories. For example, 'Staff' includes the frontline drivers, loaders, backroom staff etc.

Figure 48: Options Annual Collection Costs



	Baseline	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Profit/Contingency/Central Support Charges	£3,981,000	£4,246,000	£5,523,000	£5,391,000	£5,282,000	£5,282,000	£4,767,000
Containers	£1,406,000	£1,449,000	£1,778,000	£1,968,000	£1,778,000	£1,778,000	£2,288,000
Vehicles	£8,626,000	£9,354,000	£11,114,000	£11,677,000	£10,474,000	£11,415,000	£9,588,000
Staff	£12,689,000	£13,607,000	£17,430,000	£16,967,000	£16,229,000	£16,229,000	£15,308,000
Total	£26,702,000	£28,656,000	£35,845,000	£36,003,000	£33,763,000	£34,704,000	£31,951,000

Baseline +

This sees an increase of £2m in annual costs compared to the Baseline due to the increase in vehicle and staff numbers as a result of the increase in housing modelled for year 2027/28.

Option 1

Compared to the Baseline + this Option shows an annual increase of £7.2m associated with the increase in vehicles, staff and container costs due to the rollout of food waste collection Borough-wide and garden waste collection. In addition, some Partner Authorities are moving from co-collected dry mixed recycling and residual waste to separate collections which requires more vehicles as the two materials can no longer be collected on the same round.

Option 2

This Option is £158k higher than Option 1 due to the use of more expensive 26T Refuse Collection Vehicles (RCVs) for the mixed food and garden collection compared to the use of smaller separate food waste vehicles for food waste collections. This annual cost also reflects the fewer vehicles that are required for Lambeth, due to the move from weekly to fortnightly residual collections. Option 2 has higher annual container capex (Capital Expenditure) costs, compared to Options 1, 3 and 4. This is due to the rollout of wheeled bins for Lambeth's fortnightly residual and dry mixed recycling weekly collection.

Option 3

This Option has the second lowest annual cost of Options 1-5. This is because there are fewer vehicles and staff required as a result of the co-collection of residual and dry mixed recycling. The co-collection uses split body vehicles making it more efficient than separate rounds for dry mixed recycling and residual. However, there is still an uplift of £5.1M from the Baseline + due to the additional vehicles and staff required for the rollout of food waste collection Borough-wide.

Option 4

This Option follows a similar trend to Option 2, because it has the co-collection of food waste and garden waste. Despite requiring the same number of vehicles as Option 3, it is £941k more expensive because of the use of larger 26T RCVs for the mixed food and garden instead of smaller separate food waste vehicles.

Option 5

In Option 5, Container capex annual costs increase from Options 1, 3 and 4 due to the roll out of wheeled bins for residual waste and dry mixed recycling. However, the container replacement annual costs decrease by £737k because fewer replacements are now required as a result of the change from sacks to wheeled bins. This option requires the least number of vehicles and staff compared to Options 1-4 because there are fewer residual waste tonnes to be collected as a result of the move to fortnightly residual waste. Overall, this option has the lowest annual collection cost when compared to Options 1-4.

6.4.2 Annual Whole System Costs

Figure 50 presents the annual whole system costs for the Baseline and Options, including handling, treatment and disposal of household waste, and income from dry recycling and garden waste subscriptions which are presented as negative values. Similar to the Baseline, these results do not include the treatment of commercial waste which is co-collected with household waste.

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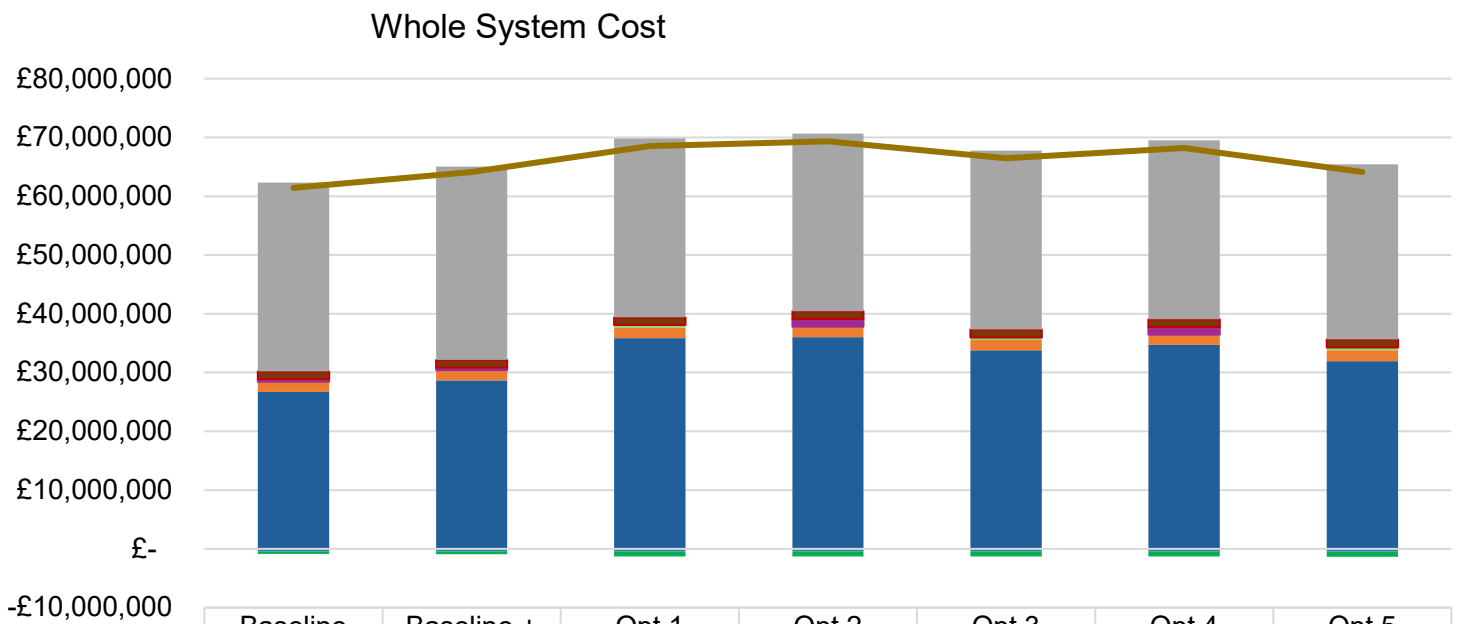
Figure 49: Options Annual Whole System Costs



	Baseline	Baseline +	Opt 1	Opt 2	Opt 3	Opt 4	Opt 5
Residual waste treatment	£32,106,000	£32,892,000	£30,450,000	£30,212,000	£30,450,000	£30,450,000	£29,790,000
Contamination disposal (Gate fee)	£1,320,000	£1,316,000	£1,316,000	£1,345,000	£1,316,000	£1,316,000	£1,385,000
Garden Waste Income	-£478,000	-£497,000	-£880,000	-£880,000	-£880,000	-£880,000	-£880,000
Garden Waste Treatment Costs (Windrow)	£52,000	£52,000	£469,000	£-	£469,000	£-	£469,000
Food Waste Treatment Costs (AD)	£-	£-	£-	£-	£-	£-	£-
Food and Garden Waste Treatment Costs (IVC)	£356,000	£374,000	£-	£1,307,000	£-	£1,280,000	£-
Dry Recyclate Handling (MRF)	£1,767,000	£1,757,000	£1,757,000	£1,789,000	£1,757,000	£1,757,000	£1,848,000
Dry Recylate Income	-£400,000	-£403,000	-£403,000	-£430,000	-£403,000	-£403,000	-£460,000
Collection Costs	£26,702,000	£28,656,000	£35,845,000	£36,003,000	£33,763,000	£34,704,000	£31,951,000
Whole System Cost	£61,425,000	£64,147,000	£68,554,000	£69,346,000	£66,472,000	£68,224,000	£64,103,000

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Baseline +

There is an increase from the Baseline to the Baseline + of £2.7m due to the change in tonnage in 2027/28. Even though there is an increase in annual collection costs, there is a decrease in the Materials Recycling Facility (MRF) and contamination disposal costs and an increase DMR material income. The reduction in tonnages and associated annual treatment costs are caused by the impact of EPR and DRS.

Option 1

Residual waste treatment annual costs decrease from the Baseline + to Option 1 by £2.4m due to the diversion of food waste and garden waste tonnes from residual. There are additional annual costs incurred of £469k for the treatment of garden waste, but this is counteracted by the £880k annual income received from householder garden waste subscriptions. Despite the introduction of the food waste collection, there are no Anaerobic Digestion (AD) treatment costs for this separate service on advice from the Partner Authorities which currently do not pay any treatment fees and / or may receive income for the material. It should be noted that this may change in the future. Although the annual treatment costs associated with this option are £2.4m less expensive than the Baseline +, there are greater collection costs, which means the overall whole system cost is £4.4m higher than the Baseline +.

Option 2

For Kensington and Chelsea, Wandsworth and Hammersmith & Fulham, Option 2 has the same residual, contamination, MRF annual treatment costs and material income costs as Option 1. However, due to the move from weekly to fortnightly residual waste collection and the associated decrease in residual tonnes and increase in dry recycling tonnes, there is a slight reduction of residual waste treatment tonnes from Option 1. There is also an increase in both dry recycling handling of £32k and dry recycling income of £27k. In addition, this Option involves the co-collection of food and garden waste, so these will be treated at an In Vessel Composting (IVC) facility, which has a greater cost than separate Open Windrow Composting (Windrow) and Anaerobic Digestion (AD) facilities. This combined with the highest collection cost means that Option 2 has the highest annual whole system cost out of all the Options.

Option 3

Option 3 has the similar residual and contamination, MRF annual treatment costs and material income as Option 1. Similar to Option 1, due to the separate collection of food and garden, the annual treatment costs are £838k lower than Option 2, because a separate Windrow and AD facility are used. The collection costs are the second lowest for Option 3, and combined with the treatment costs, Option 3 has the second lowest annual whole system cost.

Option 4

Option 4 has the same residual, contamination, MRF annual treatment costs and material income as Options 1 and 3. Similar to Option 2, due to the co-collection of food and garden waste, the treatment costs for these materials are £838k higher because an IVC facility is used. When combined with the collection costs, the annual whole system cost of Option 4 is £1.8m more expensive than Option 3.

Option 5

Due to the increase in recycling tonnes and reduction in residual in Option 5, the residual treatment is £660k lower than Options 1, 3 and 4. In addition the annual DMR handling cost has increased by £91k and the material income from DMR has increased by £57k, reflecting the increase of recycling tonnes due to higher participation rates. These treatment costs, combined with the collection costs for Option 5, means it has the lowest annual whole system cost out of all the Options.

6.5 ENVIRONMENTAL IMPACT

Table 44 to Table 46 and Figure 50 to Figure 55 present the WRATE Options analysis for the treatment of WRWA's waste. Similar to the Baseline the environmental impact analysis includes both household waste and the commercial waste that is co-collected with household waste. The results are colour coded to reflect their impact on a scale from green to red. Green represents the greatest carbon saving and lowest environmental impact, whereas red represents the lowest carbon saving and the greatest environmental impact.

WRATE is based on background data from a static database; therefore, the results are suitable to be used for comparing Options but may not represent actual impacts. A positive figure indicates an impact to the environment and a negative figure is an offset of impacts. Recycling of materials will offset the production of goods from raw materials and thus result in a saving in the environmental impact. Another reason for a saving can be using waste as fuel for energy generation and off-setting the use of natural gas for the same purpose. Table 37 presents the impact categories to consider as part of the life cycle assessment for the different waste collection systems Options.

The differences in the model outputs for the Options is a result of how the waste is being treated. For instance, increasing the capture and treatment of food waste results in a reduction of residual waste tonnes going to incineration as the food waste will be diverted from that flow. This also means that the AD facility or IVC (depending on the scenario) will glean more materials which will result in more output materials from those processes, which will offset the virgin generation of said output products (biogas and compost).

Furthermore, changing the process will also have an impact on the transport which is required for transporting the waste to the treatment facilities which leads to differences between each option.

It should be noted that the results in Table 44 are very similar and determining the best performing scenario is indicative from the populated results. There is for instance less than 2% difference between the minimum and maximum figure from Human Toxicology.

Table 44: Calculated emissions for the impact categories for the Baseline + and Options

Impact category	Climate change	Human Toxicology	Freshwater ecotoxicology	Acidification	Eutrophication	Resource depletion
Unit	*kg CO2-Eq*	*kg 1,4-DCB-Eq*	*kg 1,4-DCB-Eq*	*kg SO2-Eq*	*kg PO4-Eq*	*kg antimony-Eq*
Baseline +	-27,838,117	-74,513,778	-6,492,555	-114,944	8,969	-993,416
Option 1	-27,851,972	-73,696,009	-6,347,215	-110,893	13,661	-991,845
Option 2	-25,485,024	-72,084,590	-6,355,821	-116,192	10,463	-966,038
Option 3	-27,851,972	-73,696,009	-6,347,215	-110,893	13,661	-991,845
Option 4	-25,485,024	-72,084,590	-6,355,821	-116,192	10,463	-966,038
Option 5	-29,519,020	-72,608,052	-6,244,585	-116,719	12,350	-954,595

Table 45: Normalised impacts comparing the impacts to other 'real world' comparators.

Description	kg CO2-Eq per car/year	kg 1,4-DCB-Eq per car/year	kg 1,4-DCB-Eq/car/year	kg SO2-Eq/coal fired power plant/year	kg PO4-Eq/football field	kg antimony-Eq/1 tonne of lead acid batteries
Comparator factor	*4,600*	*550*	*50*	*10*	*0*	*20*
Baseline +	6,052	135,480	129,851	11,494	78,479	49,671
Option 1	6,055	133,993	126,944	11,089	119,534	49,592
Option 2	5,540	131,063	127,116	11,619	91,551	48,302
Option 3	6,055	133,993	126,944	11,089	119,534	49,592
Option 4	5,540	131,063	127,116	11,619	91,551	48,302
Option 5	6,417	132,015	124,892	11,672	108,063	47,730

Table 46: Ranked performance of the Options

Impact cat	Climate change	Human Toxicology	Freshwater ecotoxicology	Acidification	Eutrophication	Resource depletion
Baseline +	4	1	1	4	1	1
Option 1	2	2	4	5	5	2
Option 2	5	5	2	2	2	4
Option 3	2	2	4	5	5	2
Option 4	5	5	2	2	2	4
Option 5	1	4	6	1	4	6

Baseline +

The Baseline + ranks as the fourth scenario with regards to carbon saving, as shown in the climate change graph. The Baseline + is the third most impacting option when considering Acidification. However, it generates the biggest saving in relation to Human Toxicology, Freshwater Ecotoxicology and Resource Depletion and the lowest contribution to Eutrophication. As a result, the Baseline + shows the lowest impact for 4 of the 6 impact categories.

Option 1 & 3

These Options have an increased amount of food and garden waste tonnes diverted from residual waste compared to the Baseline +. Both Options use separate AD and Open Windrow Composting (OWC) facilities for food and garden waste respectively. Options 1 and 3 have been grouped together as they are very similar in terms of their effects on the impact categories. Options 1 and 3 rank joint second with regards to Climate Change and Human Toxicology and Resource depletion across the Options. However, Options 1 and 3 perform the worst for Acidification and Eutrophication and rank as joint 4th considering Freshwater Ecotoxicology.

Option 2 & 4

Similar to Options 1 and 3, these Options have an increased amount of food and garden waste tonnes diverted from residual waste compared to the Baseline +. These Options treat food and garden waste together at an In Vessel Composting (IVC) facility. Options 2 and 4 have been grouped together as they are very similar in terms

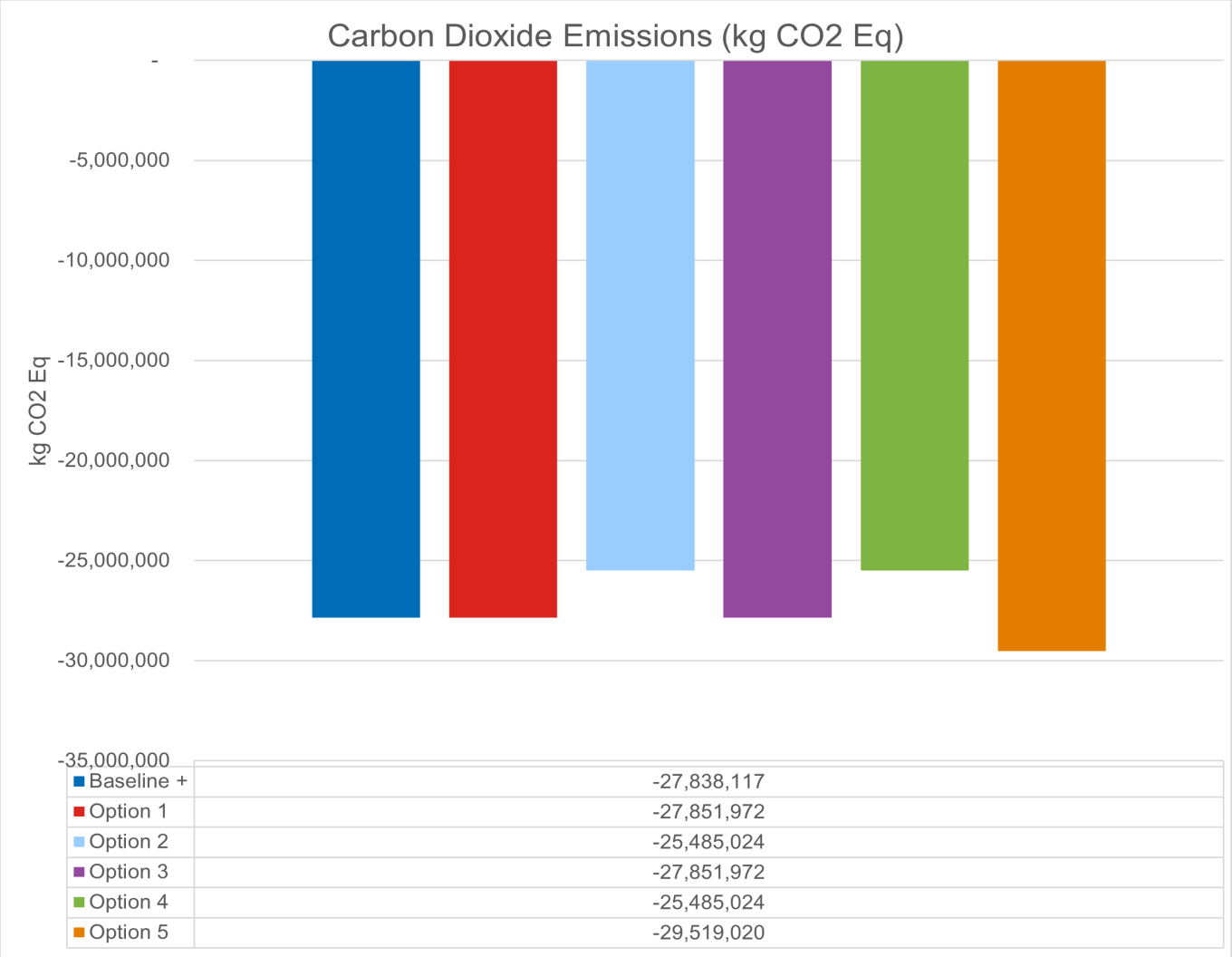
of their effects on the impact categories. The options share the 2nd rank for Freshwater Ecotoxicology, Acidification and Eutrophication respectively. However, Option 2 and 4 rank joint worst considering Climate Change and Human Toxicology and they rank joint 4th with regards to Resource Depletion.

Option 5

Option 5 has the highest recycling rate compared to other Options and this Option involves the separate treatment of food using AD and garden waste using OWC. Option 5 has the greatest Carbon saving compared to any of the Options and the Baseline +. Option 5 has the lowest contribution to Acidification. Option 5 ranks as the worst option with regards to Freshwater Ecotoxicology and Resource Depletion. The Option ranks as the fourth option when considering Human Toxicology and Eutrophication.

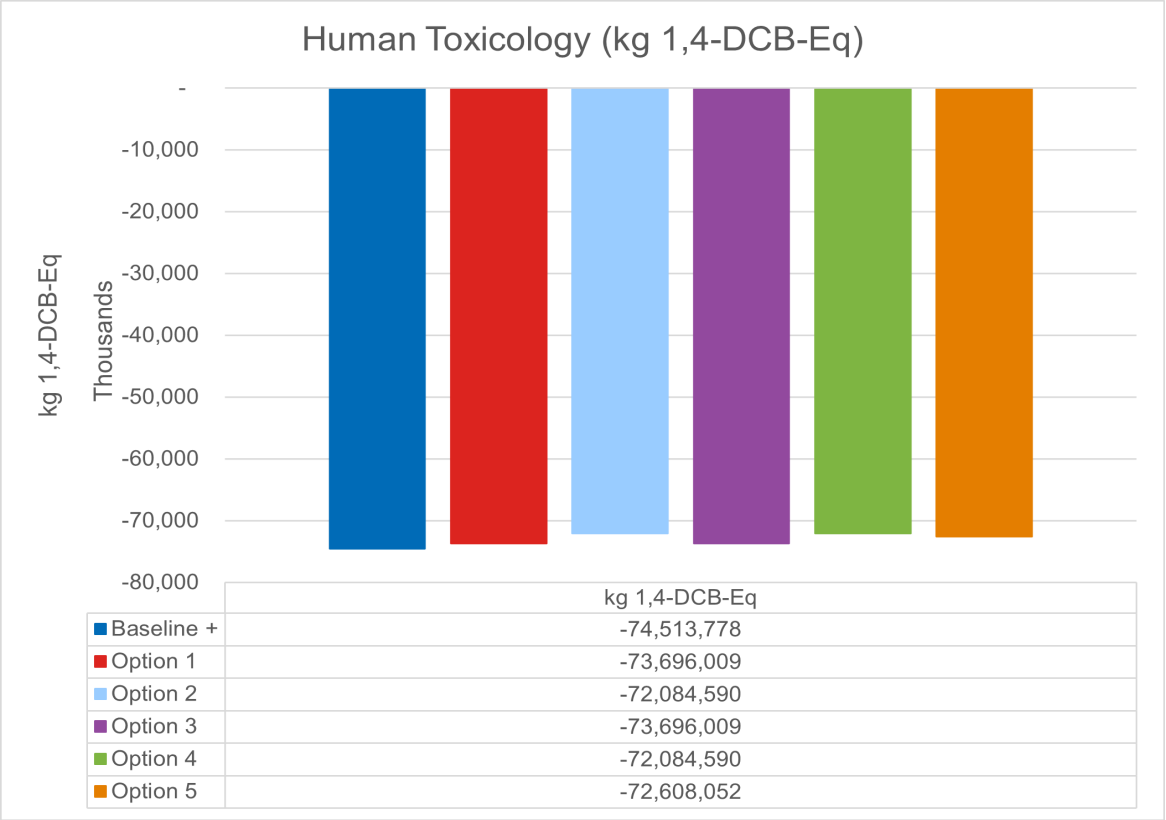
Whilst Option 5 is best performing for Carbon reduction and acidification impact categories, it is not the best performing Option across all impact categories. This is because the environmental impact for each Option reflects the chosen treatment methods for the waste. Whilst increasing the amount of materials being recycled will reduce the impacts from the Energy from Waste facility, it will also increase the impacts associated with recycling treatment facilities as these will receive an increase of recyclable materials to process. Therefore, an increase will be observed in some of the impact categories while a reduction will be seen in others depending on the chosen treatment of the materials.

Figure 50: Options WRATE Analysis: Climate Change



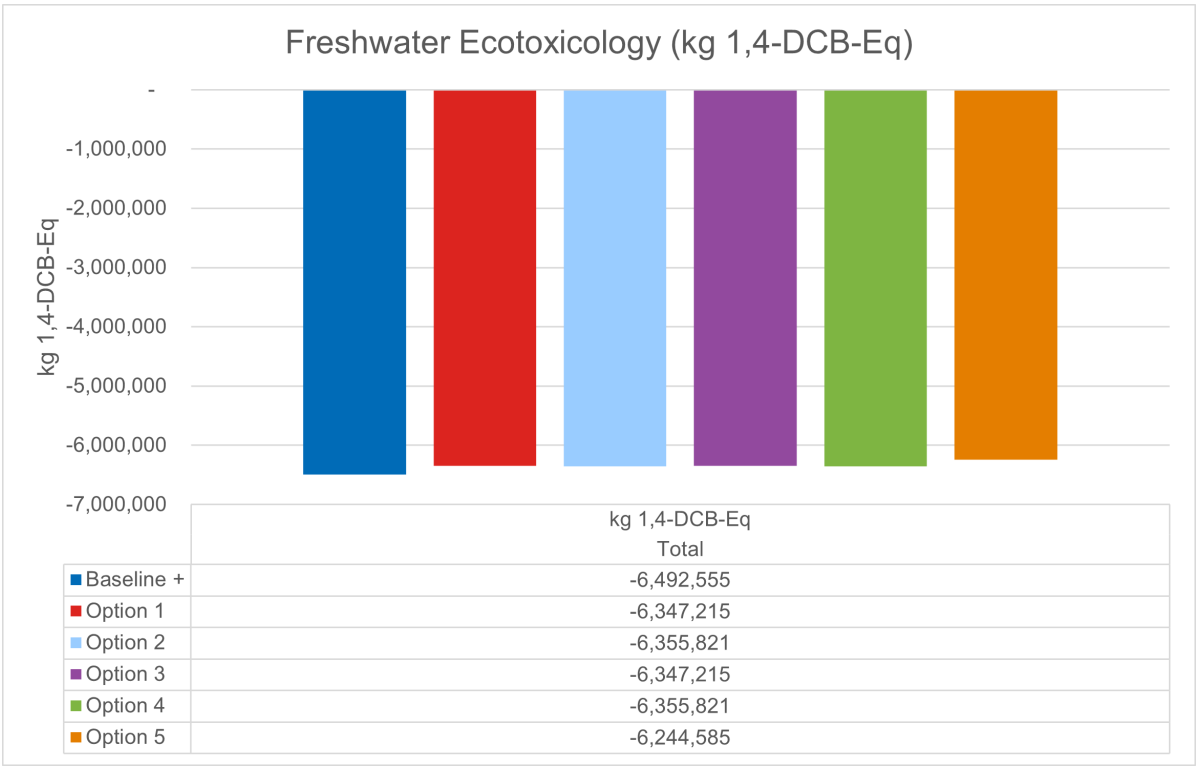
Baseline +	-27,838,117
Option 1	-27,851,972
Option 2	-25,485,024
Option 3	-27,851,972
Option 4	-25,485,024
Option 5	-29,519,020

Figure 51: Options WRATE Analysis: Human Toxicology



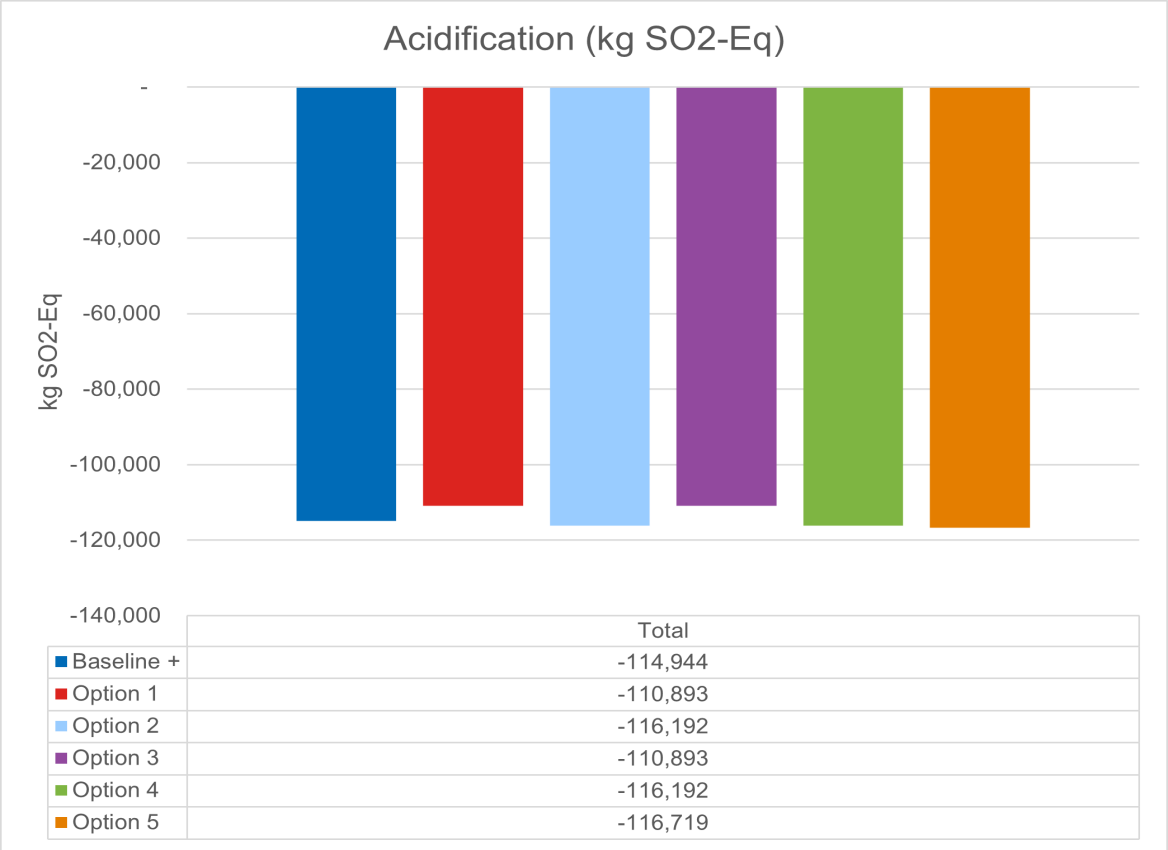
	kg 1,4-DCB-Eq
Baseline +	-74,513,778
Option 1	-73,696,009
Option 2	-72,084,590
Option 3	-73,696,009
Option 4	-72,084,590
Option 5	-72,608,052

Figure 52: Options WRATE Analysis: Freshwater Ecotoxicology



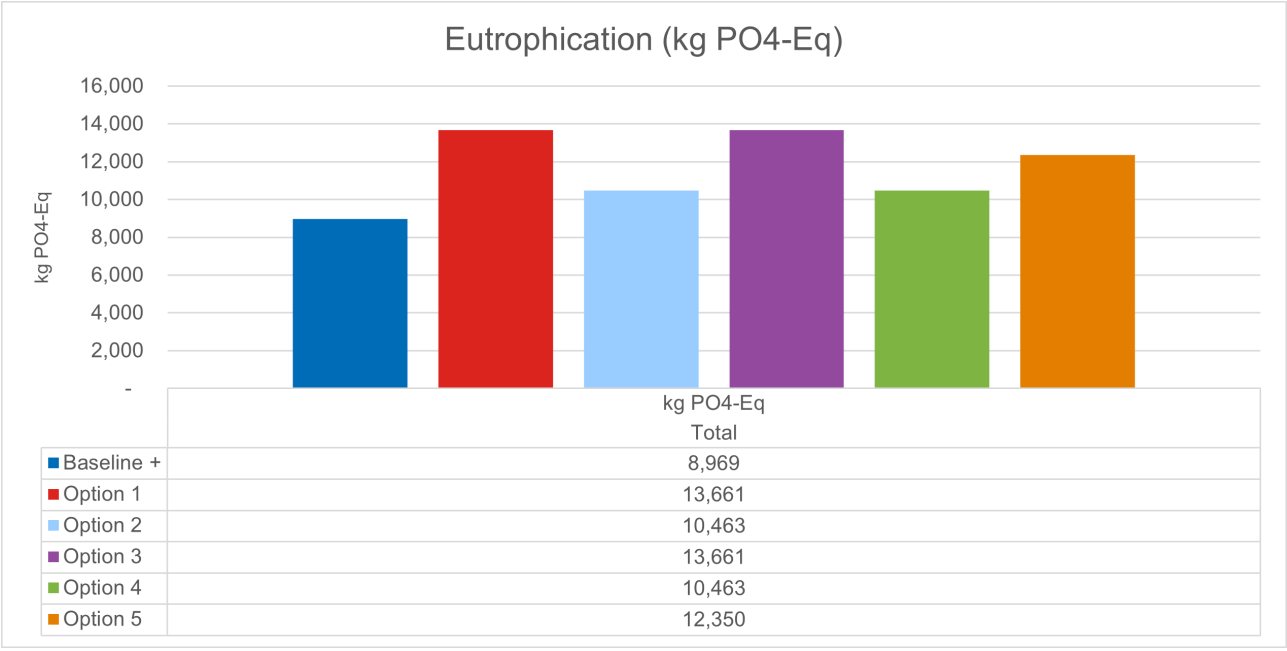
	kg 1,4-DCB-Eq Total
Baseline +	-6,492,555
Option 1	-6,347,215
Option 2	-6,355,821
Option 3	-6,347,215
Option 4	-6,355,821
Option 5	-6,244,585

Figure 53: Options WRATE Analysis: Acidification



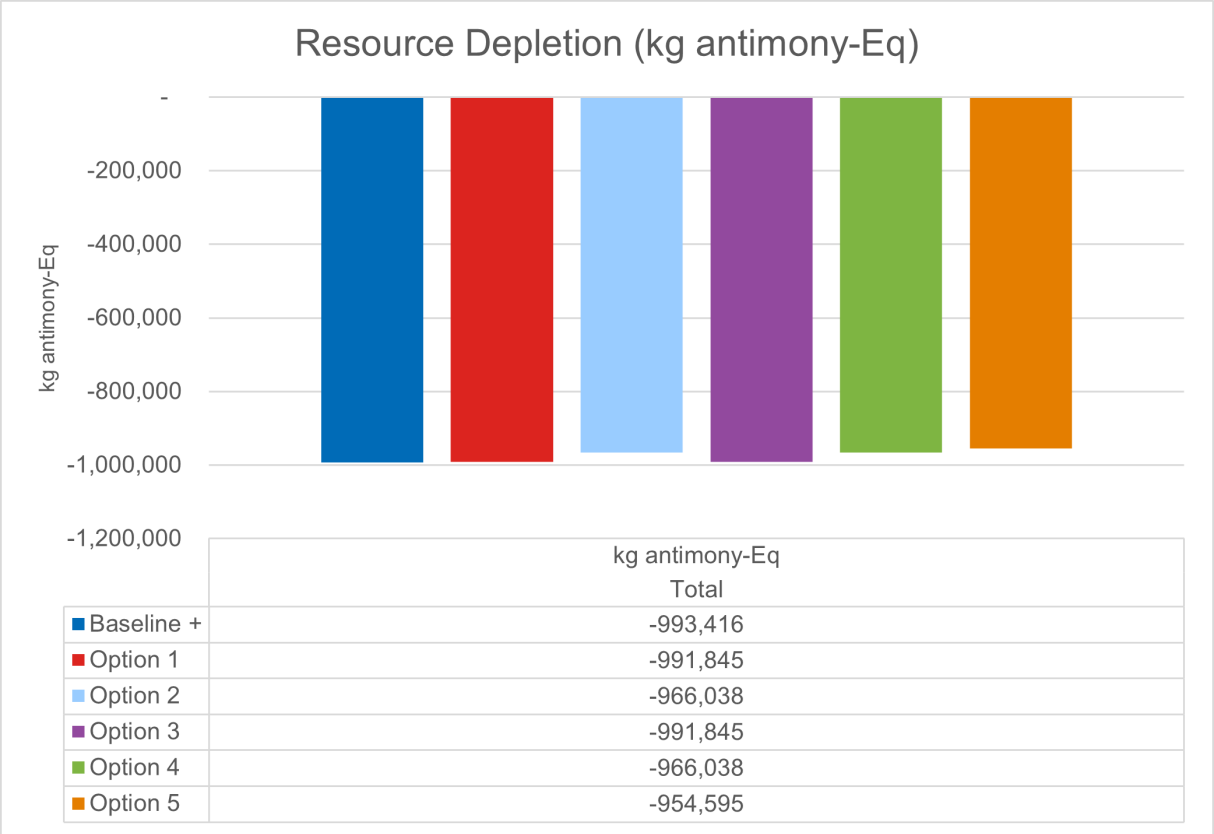
	Total
Baseline +	-114,944
Option 1	-110,893
Option 2	-116,192
Option 3	-110,893
Option 4	-116,192
Option 5	-116,719

Figure 54: Options WRATE Analysis: Eutrophication



	kg PO4-Eq Total
Baseline +	8,969
Option 1	13,661
Option 2	10,463
Option 3	13,661
Option 4	10,463
Option 5	12,350

Figure 55: Options WRATE Analysis: Resource Depletion



	kg antimony-Eq Total
Baseline +	-993,416
Option 1	-991,845
Option 2	-966,038
Option 3	-991,845
Option 4	-966,038
Option 5	-954,595

7. OPTIONS APPRAISAL

The Options appraisal is a ranking exercise to determine a preferred Option from the range of Options modelled. The Baseline + and each of the Options are ranked against weighted evaluation criteria agreed by the Officers in the Evaluation Criteria workshops as set out in Table 47.

Table 47: Evaluation Criteria

Criteria	Assessment	Weighting	Weighting Split
Deliverability Risk (performance)	Qualitative assessment of deliverability of achieving performance of targets	11.9%	11.9%
Ease of use for public	Qualitative assessment of ease of use for the householders	10.9%	10.9%
Public acceptability (reputational factors)	Qualitative assessment of public perception of option	6.9%	6.9%
Local environmental impact (litter, noise, odour)	Qualitative assessment (litter, noise, odour)	5.9%	3.0%
	WRATE quantitative assessment: Human toxicology		0.59%
	WRATE quantitative assessment: Freshwater ecotoxicology		0.59%
	WRATE quantitative assessment: Acidification		0.59%
	WRATE quantitative assessment: Eutrophication		0.59%
	WRATE quantitative assessment: Resource depletion		0.59%
Borough corporate Strategy alignment	Qualitative assessment against key relevant targets/objectives	6.9%	6.9%
Compliance with legislation/policy and associated targets (national and regional)	Qualitative assessment against key relevant targets/objectives	8.9%	8.9%
Waste prevention	Quantitative assessment of recycling rate.	13.9%	6.9%
	Quantitative assessment of EfW diversion.		6.9%
Carbon reduction	WRATE Quantitative assessment: Climate change	12.9%	12.9%
Cost	Quantitative assessment: total cost of option – (collection and treatment costs)	11.9%	11.9%
Flexibility	Qualitative assessment of flexibility to changes (i.e. vehicle types, container types)	9.9%	9.9%

As described in the Workshop Outcomes section the WRWA Borough Officers agreed upon red amber green (RAG) ratings for each of the evaluation criteria and a weighting. These can be seen in Table 48. As part of the appraisal, the Options were independently evaluated by Ricardo and agreed with WRWA.

Table 48:Evaluation Criteria and RAG Ratings

Criteria	Assessment	Red (0)	Amber (2)	Green (3)
Deliverability Risk (performance)	Qualitative assessment of deliverability of achieving performance of targets	Does not achieve targets	Achieve some/ close to targets	Achieves targets
Ease of use for public	Qualitative assessment of ease of use for the householders	Completely new system which is more difficult for the majority of householders	The same as the current system for the majority of householders	Easier to use than the current system for the majority of householders
Public acceptability (reputational factors)	Qualitative assessment of public perception of option	Unacceptable to public	Acceptable to some groups of public (e.g. people in certain housing types)	Acceptable to majority of public
Local environmental impact (litter, noise, odour)	Qualitative assessment (litter, noise, odour)	Higher environmental impact than Baseline	Similar environmental impact than Baseline	Lower environmental impact than Baseline
	WRATE quantitative assessment: Human toxicology	Ranked based on quantitative results.		
	WRATE quantitative assessment: Freshwater ecotoxicology			
	WRATE quantitative assessment: Acidification			
	WRATE quantitative assessment: Eutrophication			
	WRATE quantitative assessment: Resource depletion			
Borough corporate Strategy alignment	Qualitative assessment against key relevant targets/objectives	Not compliant with corporate strategy	Partially compliant with corporate strategy	Fully compliant with corporate strategy
Compliance with legislation/policy and associated targets (national and regional)	Qualitative assessment against key relevant targets/objectives	Not compliant with current nor incoming legislation	Compliant with current legislation. Partially compliant with incoming legislation, requiring exemptions	Compliant with current and incoming legislation
Waste prevention	Quantitative assessment of recycling rate.	Ranked based on quantitative results.		
	Quantitative assessment of EfW diversion.			
Carbon reduction	WRATE Quantitative assessment: Climate change	Ranked based on quantitative results.		
Cost	Quantitative assessment: total cost of option – (collection and treatment costs)	Ranked based on quantitative results.		
Flexibility	Qualitative assessment of flexibility to changes (i.e. vehicle types, container types)	No flexibility	Some flexibility	Complete flexibility to changes

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7.1.1 Qualitative and Quantitative scoring of Options

Table 49 presents the qualitative evaluation criteria scoring. For deliverability risk, all Options were ranked the same as they are likely to meet some performance targets. Similarly, for ease of use and public acceptability, the Baseline + and Options 1-4 were ranked the same as the Baseline. However, Option 5 performed worst against this criterion, because it involves a change of frequency and containers for the WRWA residents.

For flexibility, the Baseline +, Options 3 and 4 were ranked lower than Options 1 and 2. This is because separate collection of materials have greater flexibility in the operation of vehicle fleet compared to co-collection of materials which require split bodied vehicles. Option 5 was ranked the highest due to separate collection of materials, coupled with the introduction of bins, which aligns with the Simpler Recycling legislation.

Table 49: Options Qualitative Evaluation Criteria Scoring

Criteria	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Deliverability Risk (performance)	2	2	2	2	2	2
Ease of use for public	2	2	2	2	2	0
Public acceptability (reputational factors)	2	2	2	2	2	0
Local environmental impact (litter, noise, odour)	2	2	2	2	2	3
Borough corporate Strategy alignment	0	2	2	2	2	2
Compliance with legislation/policy and associated targets (national and regional)	0	2	2	2	2	3
Flexibility	0	2	2	0	0	3

For local environmental impact, referring to the litter, noise and odour, the Baseline + and Options 1-4 ranked the same as the Baseline, because the frequency of collections and container types will be maintained. For Option 5, this was ranked as performing better compared to the Baseline + because of the move away from sacks. The remaining 5 of the 6 sub criteria for this category were calculated quantitatively based on the WRATE modelling results, the results of this can be seen in Table 50.

Table 50: WRATE Quantitative Evaluation Criteria Scoring

Criteria	WRATE assessment	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Local environmental impact (litter, noise, odour)	Human toxicology	74,513,778	- 73,696,009	- 72,084,590	- 73,696,009	- 72,084,590	- 72,608,052
	Freshwater ecotoxicology	6,492,555	- 6,347,215	- 6,355,821	- 6,347,215	- 6,355,821	- 6,244,585
	Acidification	114,944	- 110,893	- 116,192	- 110,893	- 116,192	- 116,719
	Eutrophication	8,969	13,661	10,463	13,661	10,463	12,350
	Resource depletion	993,416	- 991,845	- 966,038	- 991,845	- 966,038	- 954,595

All Options scored equally against Borough corporate strategy alignment, with the Baseline + performing lower, because it does not set out to meet the Mayor of London's recycling targets. Similarly, when measuring the

compliance with legislative targets, the Baseline + performed the worst because it is the only Option which does not involve an area wide food waste collection. Options 1-4 performed equally, because they have an increased recycling rate compared to the Baseline +. Option 5 performed the best, because it has the highest recycling rate and seeks to achieve the legislative targets.

Waste prevention, carbon reduction and cost were quantitively scored based on the outcomes of the modelling. These results are presented in Table 51. Option 5 ranks the highest for both waste prevention and carbon reduction because of the high diversion of recycling tonnes from residual as a result of a fortnightly residual collection. Whereas Baseline + performs the worst against waste prevention because it has the lowest recycling rate and EfW diversion compared to the Options. Option 2 performs slightly better compared to Options 1, 3 and 4 for waste prevention as Lambeth has a higher recycling rate and EfW diversion, because it has been modelled on a fortnightly residual collection.

The carbon reduction scoring is based on the WRATE modelling outcomes for climate change. This ranks Option 5 as the highest. Options 2 and 4 rank the worst due to the joint treatment of food and garden waste at the IVC facility instead of separate AD and Windrow facilities used in Options 1 and 3.

For collection costs, the Baseline + ranks the best, this is followed by Option 5, which requires the fewest resources of Options 1-5. For Whole System Costs Option 5 ranks the best as it receives the greatest material income for recyclables and has the lowest residual waste treatment costs. Options 1 and 2 rank the worst as these require more resources compared to Options 3 and 4.

Table 51: Options Quantitative Scoring against Waste Prevention, Carbon Reduction and Cost

Criteria	Quantitative assessment	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Waste prevention	Recycling rate	20.4%	26.1%	26.6%	26.1%	26.1%	27.4%
	EfW diversion	205,572	190,320	188,827	190,320	190,320	186,004
Carbon reduction	WRATE climate change	27,838,117	-27,851,972	-25,485,024	-27,851,972	-25,485,024	-29,519,020
Cost	Total cost (collection and treatment)	64,147,000	68,554,000	69,346,000	66,472,000	68,224,000	64,103,000

Once the initial qualitative and quantitative scoring was completed, the evaluation criteria weightings were applied. The total weighted scores are presented in Table 52. The results show that Options 1, 2 and 5 rank the highest when the modelling results are combined with the evaluation criteria and their associated weightings. The difference between Options 1 and Option 2 is 0.9 percentage points, reflecting that these scenarios are very similar in their scoring. Furthermore, Option 5 has a 1.7 percentage points lower score compared with Option 2, showing that Options 1, 2 and 5 overall rank quite similarly. These Options are followed by Options 3 and 4 ranking as 4th and 5th respectively.

It should be noted that the result from Option 2 is skewed as Lambeth's residual frequency is the same as Option 5. This means that the costs and emissions do not follow the same trends as the three other Partner Authorities.

Table 52: Options Appraisal Weighted Scores

	Baseline +	Option 1	Option 2	Option 3	Option 4	Option 5
Total score	**60.2%**	**78.3%**	**77.4%**	**72.1%**	**70.8%**	**75.7%**

8. CONCLUSION

This report details and summarises the work conducted in support of the draft Joint Resources and Waste Strategy for the London Borough of Hammersmith & Fulham, the London Borough of Lambeth, the Royal Borough of Kensington and Chelsea, the London Borough of Wandsworth and Western Riverside Waste

Authority (WRWA). Ricardo has applied a robust and structured methodology for the Strategy, in collaboration with the Officers and Elected Members.

During this process, both qualitative and quantitative aspects of the current local and national waste landscape were considered to explore future waste collection and treatment options for the WRWA Area. The outputs from the options modelling will inform target setting for the strategy period. A critical element of the project involved the Officers and Members of the WRWA area working closely with the WRWA project team and Ricardo. This collaboration provided valuable input into the direction of the Strategy and the data needed to inform waste collections modelling. Regular meetings for the Strategy ensured partners' involvement and engagement, fostering a collective vision for the future.

9. GLOSSARY

Term	Acronym	Description
Anaerobic digestion	AD	The process by which organic matter is broken down, in the absence of oxygen. The biogas created by the process can be used as a fuel to generate renewable energy i.e. electricity and heat, and as a bio-fertiliser for farmland. Anaerobic digestion is recognised by the Government as one of the best methods for food waste recycling.
Baseline		A starting point of analysis, from which all future Options can be compared to. A Baseline plus or + is a Baseline projected to a future year.
Benchmarking		Comparison of recycling and residual waste yield performance against other local authorities.
Carbon emissions		Carbon dioxide (CO_2) is the principal greenhouse gas related to climate change. It is common for the measurement of different greenhouse gas emissions to be standardised into 'carbon equivalent' emissions, allowing for easier comparisons of the many types of activity that produce these emissions.
Capture rate		A measure of how much of available material for recycling is being collected in the recycling container.
Co-mingled		A recycling scheme whereby recyclable materials are presented together in one wheeled bin or sack for collection.
Commercial waste	CW	Commercial (or business) waste is any waste that comes from a commercial activity including waste that comes from retail, construction, demolition, industry, agriculture, etc.
Composition		An analysis of the different materials present within waste through a process of physically sorting, weighing and categorising items.
Constituent Councils (or Partner Authorities)	CCs	The Councils that make up Western Riverside Waste Authority, namely London Borough of Hammersmith & Fulham, Royal Borough of Kensington and Chelsea, London Borough of Lambeth and London Borough of Wandsworth.
Deposit return scheme	DRS	A recycling scheme in which consumers pay a small deposit upon purchase of drinks containers, which is refunded upon receipt of the empty container at designated return points.
Dry mixed recycling	DMR	Consists of recycling materials that include paper, cardboard, metal cans and plastic, which can then be put into one waste stream and be processed efficiently & effectively.
Energy from Waste	EfW	Energy from waste facilities generate renewable energy in the form of electricity or heat through incineration of residual waste.

Term	Acronym	Description
Extended producer responsibility	EPR	A policy in which producers are responsible for the products they create throughout its lifecycle. The scheme aims to create a more circular economy and increase recycling by making individual businesses responsible for the full net cost of managing packaging waste, with higher modulated fees applied to items which are harder to recycle.
Forecasting		Analysis undertaken to estimate future waste arisings overtime taking into account household growth and legislative changes.
Greater London Authority	GLA	The Greater London Authority is the administrative body for Greater London. It comprises a directly elected Mayor and directly elected London Assembly.
Greenhouse Gas	GHG	Greenhouse gases (such as carbon dioxide and methane) absorb solar radiation and trap heat in the atmosphere, creating a 'greenhouse effect' which results in global warming. Solid waste contributes directly to GHG emissions mainly through the generation of methane from the anaerobic decay of waste in landfills, and also through the incineration of waste.
Household Waste	HHW	All waste collected by Waste Collection Authorities under section 45(1) of the Environmental Protection Act 1990, plus all waste arisings from Civic Amenity sites (HWRCs) and waste collected by third parties for which collection or disposal credits are paid under Section 52 of the Environmental Protection Act 1990. Household waste includes waste from collection rounds of domestic properties (including separate rounds for the collection of recyclables), schools, public buildings, street cleansing and litter collection, beach cleansing, bulky household waste collections, hazardous household waste collections, household clinical waste collections, garden waste collections, Civic Amenity/Household Waste and Recycling Centre wastes, drop-off/'bring' systems, clearance of fly-tipped wastes, weekend skip services and any other household waste collected by the waste authorities. Household waste accounts for approximately four fifths of London's municipal waste.
Household Waste and Recycling Centre	HWRC	A facility where the public can dispose of household waste and recycling, including garden waste, electrical, textiles and bulky waste. While some sites accept commercial waste, the Smugglers Way HWRC is for resident use only.
Local Authority Collected Waste	LACW	All waste collected by the local authority, including household waste and household-like waste from businesses and non-municipal fractions such as construction and demolition waste.
Materials Recycling Facility	MRF	A MRF is a processing plant for recyclables. It uses a combination of mechanical and technical equipment to separate co-mingled recyclables into single stream materials.

Term	Acronym	Description
Multi-stream recycling		Multi-Stream recycling is the separation of recyclable materials into more than two containers prior to waste collection.
Municipal waste	MSW	Household waste and waste similar in nature produced by businesses and composition to household waste which is managed by a waste collection or waste disposal authority. Sometimes also referred to as Municipal Solid Waste.
Options		Modelled scenarios with changes from the Baseline that produce outputs for waste tonnes, resourcing, costs and environmental impacts.
Options appraisal		Assessment of different Options against evaluation criteria to find a preferred Option.
Recycling		The Waste Framework Directive defines this as 'any recovery operation by which waste materials are reprocessed into products, materials or substances whether for the original or other purposes. It includes the reprocessing of organic material but does not include energy recovery and the reprocessing into materials that are to be used as fuels or for backfilling operations'.
Residual waste		Waste that is left once recyclable waste or reusable items have been separated.
Resources and Waste Strategy for England		This strategy sets out how material resources will be preserved in England by minimising waste, promoting resource efficiency and moving towards a circular economy. The strategy includes targets for eliminating certain types of waste and reducing others within set timeframes.
Reuse		The Waste Framework Directive defines this as 'any operation by which products or components that are not waste are used again for the same purpose for which they were conceived'.
Waste		Any substance or object which the holder discards, intends to discard or is required to discard
Two-Stream Recycling		Two-Stream recycling is the separation of recyclable materials into two containers prior to waste collection.
Waste Collection Authority	WCA	A local authority responsible for collecting waste from households and certain commercial premises where required (e.g. the Partner Authorities).
Waste Disposal Authority	WDA	A local authority responsible for the treatment and disposal of waste collected by Waste Collection Authorities (e.g. WRWA).
Waste prevention		The Waste Framework Directive defines this as 'measures taken before a substance, material or product has become waste, that reduce: (a) the quantity of waste, including through the re-use of products or the extension of the life span of products; (b) the adverse impacts of the generated waste on the environment and human health;

Term	Acronym	Description
		(c) the content of harmful substances in materials and products.'
WRAP	WRAP	WRAP is a climate action NGO which works with local authorities, businesses and individuals to tackle the causes of the climate crisis and give the planet a sustainable future.
WRATE - Waste and Resources Assessment Tool for the Environment	WRATE	Waste and Resources Assessment Tool for the Environment is used to assess the environmental impacts of waste management activities during their whole life.

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WESTERN RIVERSIDE WASTE AUTHORITY JOINT RESOURCES AND WASTE STRATEGY 2025-2040

SEA Statement of Determination

Report for: Western Riverside Waste Authority

Ref. 3061.

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11/07/2024

CONTENTS

1 INTRODUCTION

1.1 THIS DOCUMENT

This document forms the Strategic Environmental Assessment (SEA) Screening Statement of Determination for the Joint Resources and Waste Strategy for Western Riverside Waste Authority (WRWA).

WRWA is the statutory body, or local authority, responsible for the management of the waste delivered to it by:

- London Borough of Hammersmith & Fulham
- London Borough of Lambeth
- Royal Borough of Kensington and Chelsea
- London Borough of Wandsworth.

1.2 PURPOSE OF THE JOINT RESOURCES AND WASTE STRATEGY

The Joint Strategy will set an over-arching vision, ambition and priorities of how the waste in each local authority will be collected, treated and processed over the next strategy period which will run from 2025 to 2040. The Strategy will set targets for waste reduction, reuse and recycling with regard to national and regional policies and targets. It will have regard to and be guided by an overarching legal and strategic framework as set out in the Environmental Protection Act 1990, the Environment Act 2021 and the Government's 25 Year Environmental Plan.

The strategy development process involves extensive analysis and modelling of the current baseline position for collection services for all WRWA members, developing future options for collection, treatment and disposal and assessing the Whole System Cost of the options across WRWA. Options are being developed in collaboration with WRWA and the constituent Councils through a series of workshops for officers, directors, and elected Members.

The Joint Strategy will define a plan for waste management services from 2025 to 2040 and thereafter will be updated on a ten-year basis.

1.3 THE JOINT STRATEGY AND THE SEA SCREENING PROCESS

The objective of SEA is to provide a high level of protection of the environment and to contribute to the integration of environmental considerations into the preparation and adoption of plans with a view to promoting sustainable development.

The requirement for SEA was brought into legislation by the SEA Regulations[1]. These regulations transposed the requirements of EU Directive 2001/42/EC (the SEA Directive) into English legislation. Following Brexit, minor amendments, to correct deficiencies and terminology, were made to the SEA Regulations through the Environmental Assessments and Miscellaneous Planning (Amendment) (EU Exit) Regulations 2018.

Screening is the process of deciding whether a plan or programme requires SEA. It was considered whether a Strategic Environmental Assessment (SEA) would need to be conducted on the Joint Strategy. The Screening Statement was prepared in accordance with the requirements of the SEA Regulations. The Practical Guide to SEA was also taken into account.

A SEA screening consultation was prepared to enable the Consultation Bodies as specified in section 4 of the SEA Regulations to provide comment on the appropriateness of the screening process and its

[1] The Environmental Assessment of Plans and Programmes Regulations 2004 (Statutory Instrument 2004 No. 1633) apply to any plan or programme which relates solely or in part to England.

conclusion for the Joint Strategy.

Those bodies are Natural England, Historic England and the Environment Agency. The consultation period on the SEA Screening Statement was for a period of 5 weeks and took place from 25th March 2024 to 29th April 2024.

The consultation period closed on the 29th April 2024 and a Statement of Determination (this document) has been produced indicating that the SEA screening process has been conducted in accordance with the SEA Regulations and available guidance and a determination has been made concluding that there are **no significant environmental effects from the Joint Strategy** and determining that **a full SEA is not required.** In accordance with the SEA Regulations the conclusions on the determination will also be made available to the public.

1.4 CONTEXT OF THE STRATEGY

Under Section 32 of the Waste Emissions Trading Act 2003, WRWA and its constituent councils have a duty to prepare and adopt a joint strategy in order to manage household waste and other waste similar in nature to waste from households (i.e. commercial waste) in their area.

The UK Government has set targets[2] to recycle 65% of municipal waste by 2035 and have no more than 10% of municipal waste being disposed to landfill by 2035. A net zero target has also been set in order to decarbonise all sectors of the UK economy by 2050 which includes the waste management sector.

The Joint Strategy must align with the UK's Resources and Waste (R&W) Strategy, which consists of three elements:

- Consistency in Collections (CC) – an ambition for all English waste collection authorities to collect the same material streams, including food waste, in a consistent manner and to drive up recycling. This ambition is now clarified as “Simpler Recycling”.
- Extended Producer Responsibility (EPR) – a methodology for moving the full cost of dealing with packaging waste from households away from local taxpayers and Councils to the packaging producers, applying the ‘polluter pays’ principle.
- Deposit Return Scheme (DRS) – the introduction of a scheme to reward consumers for returning empty drinks containers to ‘reverse vending machines’ to encourage recycling and reduce littering.

Some elements of the R&W Strategy were incorporated in the Environment Act 2021, granted Royal Assent in November 2021. However, the majority of the proposals in the R&W Strategy consultation will be implemented through secondary legislation.

Other key relevant legal framework and strategic guidance that the Joint Strategy must follow includes:

- Environmental Protection Act 1990
- The Environment Bill
- 25 Year Environmental Plan
- Circular Economy Package
- Net Zero Strategy
- Local Government Act 1999
- Mayor of London’s Municipal Waste Management Strategy
- London Environment Strategy

[2] Waste Management Plan for England (publishing.service.gov.uk)

1.4.1 The Structure of the Joint Strategy

The Joint Strategy is currently subject to change in terms of structure and duration; however, the following themes are set to be explored:

- Overview – “why we need a waste strategy”
- Current services and performance – “where we are now”
- Future – “what waste streams and volumes we expect to manage”
- Our vision and priorities – “where we want to be”
- Roadmap – “how we get there”
- Measuring success – “how we measure performance”

1.4.2 The Strategy Area

WRWA is the statutory body, or local authority, responsible for the management of the waste delivered to it by:

- London Borough of Hammersmith & Fulham
- London Borough of Lambeth
- Royal Borough of Kensington and Chelsea
- London Borough of Wandsworth

Figure 1.1 shows the location of these boroughs within London.

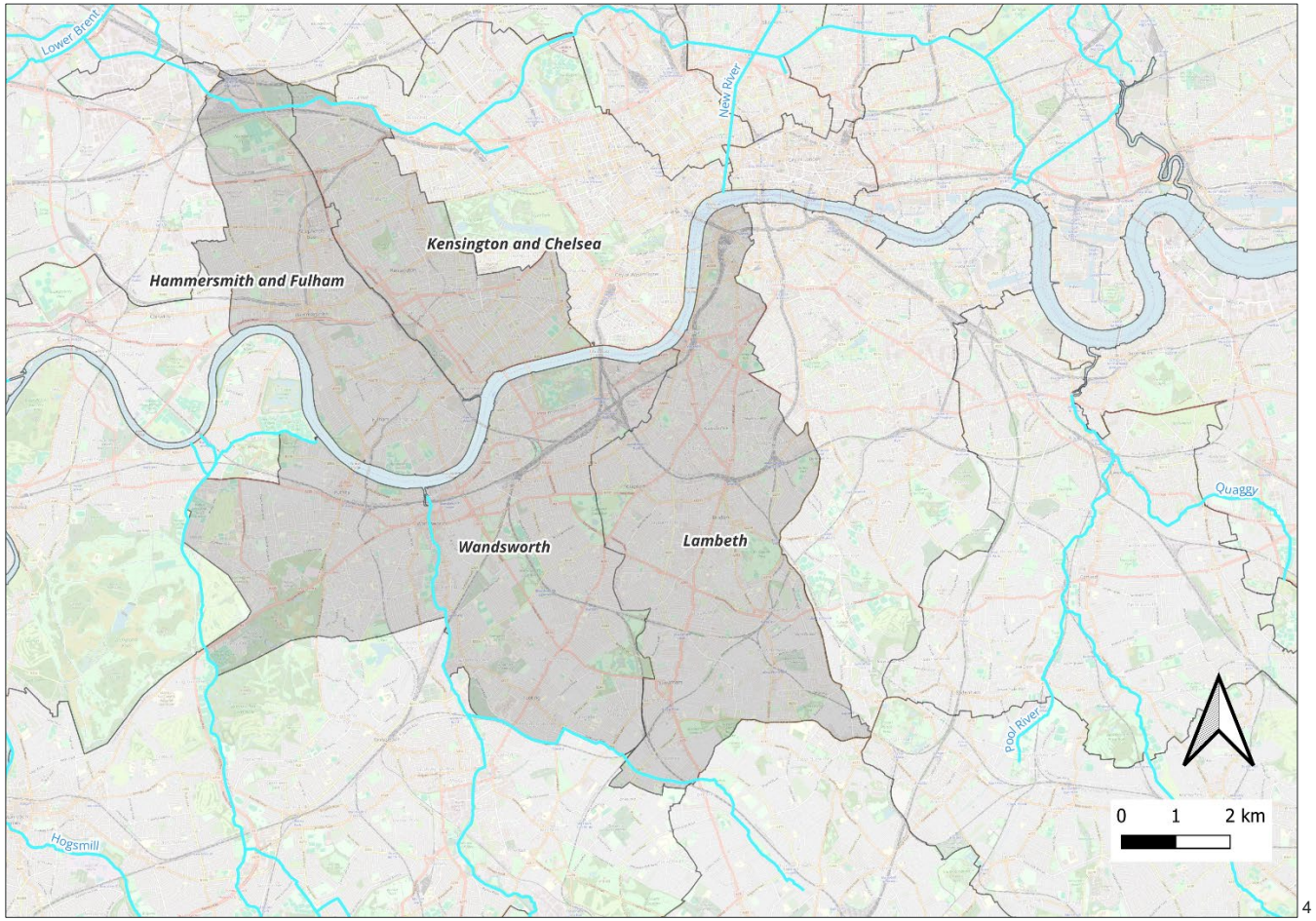
1.4.3 Responsibilities of the Partner Authorities

WRWA on behalf of the four constituent councils, is responsible as the ‘waste disposal authority’ for arranging the disposal of waste generated by the collection activities of the constituent councils of household waste and recycling, as well as from waste and recycling collections from local businesses that choose to use each constituent council’s commercial waste services. The constituent councils also manage street cleansing, fly-tipping removal, and management of litter from local parks and open spaces, that all generate waste which WRWA is responsible for managing.

WRWA is the ‘joint waste disposal authority’ for the area and is responsible for providing treatment and disposal services for the waste and recycling collected by the constituent councils. WRWA also operate one Household Waste and Recycling Centre at Smugglers Way where residents can deposit a wide range of materials for reuse, recycling and disposal.

The four constituent councils have all declared climate emergencies in 2019 and committed to achieving Net Zero in council operations by 2030. Additionally, London has declared a climate emergency as declared by the Mayor of London in 2018 with a target to recycle 50% of Local Authority Collected Waste (LACW) by 2025. The Joint Strategy will refer to these targets alongside the policies and targets set for waste management and climate change as set by the constituent councils.

Figure 1.1: Map of the WRWA area[3]



[3] Contains OS data @ Crown copyright 2024

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1.4.4 Baseline Collection Methods and Frequencies

Table 1.1 summarises the current baseline collection methods and frequencies across the Strategy area. Currently, Hammersmith and Fulham, Kensington and Chelsea and Wandsworth collect food waste and garden waste separately, with the treatment facilities for these are anaerobic digestion (AD) and Open Windrow Composting respectively. Lambeth currently co-collects food and garden waste, so this is sent for treatment at an in-vessel composting (IVC) facility.

1.4.5 Refuse Collection Options

The Joint Strategy will model five collection options in addition to a modelled baseline projected to a future year (*known as a Baseline Plus). For the Joint Strategy, the Baseline plus will be modelled to financial year 2027/2028 and will incorporate population increase, and the impacts of legislation including Extended Producer Responsibility, the Deposit Return Scheme and Simpler Recycling, specifically the requirement for councils to separately collect food waste boroughwide.

A set of five collection options will be modelled for each borough for the financial year 2027/2028 as shown in **Table 1.2**. Options 1-4 will utilise the current collection frequencies and containers used by each borough and will focus on co-collection of materials and associated vehicle changes. Option 5 will demonstrate a high performing collection, where participation levels will be increased, and containers and collection frequencies will be changed to maximise recycling performance.

- Option 1: Separate collection of Residual, comingled Dry Mixed Recycling (DMR), Food and Garden waste.
- Option 2: Separate collection of Residual and comingled DMR and co-collection of Food and Garden waste.
- Option 3: Co-collection of Residual and comingled DMR, and separate collection of Food and Garden waste
- Option 4: Co-collection of Residual and comingled DMR, and co-collection of Food and Garden waste
- Option 5: Separate collection of Residual, comingled DMR, Food and Garden waste. Residual will move to a fortnightly collection, with wheeled bins. DMR will move to a weekly collection with wheeled bins.

Options 1, 3 and 5 will involve the separate collections of food and garden waste.

For Options 2 and 4, food and garden waste are co-collected.

. No new infrastructure is required as a result of this Strategy development and implementation.

1.4.6 Treatment Options

Depending on the baseline collection scheme of each borough, the treatment options may change as a result of the collection method of food and garden waste for each option. For all options, the treatment facilities for Residual and DMR will be the Energy from Waste facility (EfW) and the Materials Recycling Facility (MRF) currently used by all boroughs.

Where options specify the separate collection of food and garden waste, the treatment facilities will be Anaerobic Digestion (AD) and Open Windrow Composting respectively.

This means that, for options 1,3 and 5, the treatment facilities will be the same as the Baselines (for Hammersmith and Fulham, Kensington and Chelsea and Wandsworth). Whereas for options 2 and 4, co-collected food and garden waste requires treatment at an IVC.

For options 1 and 3, Lambeth will treat separate food and garden waste in the same way as the other three boroughs.

This strategy does not explore options for any new infrastructure or treatment processes. In terms of treatment, it is only concerned with options involving a change in destination of relatively small volumes of food and garden waste between different existing facilities depending on whether they are collected separately or mixed.

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Table 1.1: Summary of the Current Baseline Collection Methods and Frequencies across the Strategy Area

			Residual			Dry Mixed Recyclables (DMR)			Food waste			Garden waste		
			Frequency	Vehicle	Container	Frequency	Vehicle	Container	Frequency	Vehicle	Container	Frequency	Vehicle	Container
Baseline	Hammersmith & Fulham	Standard properties	Weekly	26T Twin Pack - Co-collection with DMR	Wheeled bins/Sacks	Weekly	26T Twin Pack - Co-collection with Residual	Wheeled bins/Sacks	Weekly (trial)	7.5T Refuse Collection Vehicle (RCV)	Caddy			
		Flats	Weekly	26T RCV Open Back	Sacks	Weekly	26T RCV Open Back	Wheeled bins/Sacks						
	Kensington & Chelsea	Standard properties	Twice Weekly	26T Twin Pack - Co-collection with DMR	Sacks	Twice Weekly	26T Twin Pack - Co-collection with Residual	Sacks	Weekly (trial)	12T RCV	Caddy	Fortnightly	18T RCV	Sacks
		Flats	Twice Weekly	26T RCV/18T RCV	Communal bins	Twice Weekly	18T RCV	Communal bins	Weekly (trial)	12T RCV	Wheeled bin			
		Narrow access properties	Twice Weekly	12T RCV	Sacks	Twice Weekly	12T RCV	Sacks	Weekly (trial)	12T RCV	Caddy	Fortnightly	18T RCV	Sacks
	Wandsworth	Standard properties & Narrow access	Weekly	26T Twin Pack - Co-collection with DMR	Sacks	Weekly	26T Twin Pack - Co-collection with Residual	Sacks						
		Flats	Weekly	26T RCV	Communal wheeled bins	Weekly	26T RCV	Communal wheeled bins						
	Lambeth	Standard properties	Weekly	26T RCV	Wheeled bins	Weekly	26T RCV	Wheeled bins/sacks	Weekly - co-collected with garden	26T RCV	Food waste - caddy Garden waste - reusable sack	Weekly - co-collected with food	26T RCV	Food waste - caddy Garden waste - reusable sack
		Flats	Weekly	26T RCV	Communal wheeled bins	Weekly	26T RCV	Communal wheeled bins	Weekly (trial)	26T RCV	Caddy			

Table 1.2: Strategy Options with corresponding Treatment facility type; also showing Baseline Treatment facility type

	Residual Waste	Dry Recycling	Food Waste	Garden Waste	Additional information	Residual Waste	Dry Recycling	Food Waste	Garden Waste
Baseline (2022/23)	See specific baselines for boroughs above in Table 1.1					Energy from Waste (EfW)	MRF	**Lambeth:** IVC **K&C, H&F and Wandsworth:** AD	**Lambeth:** IVC **K&C,:** Open Windrow
Baseline +	Same as Baseline but with waste arisings and housing projected for future year – **2027/2028**							Same as baseline	
Option 1	Separate collection, frequency to stay the same as baseline +	Separate collection, frequency to stay the same as baseline +	Borough-wide, separate weekly collection	Separate, fortnightly, charged				**All boroughs:** AD	**All boroughs**: Open Windrow
Option 2	Separate collection, frequency to stay the same as baseline +	Separate collection, frequency to stay the same as baseline +	Borough-wide, mixed weekly collection, GW charged					**All boroughs:** IVC	**All boroughs:** IVC
Option 3	Co-collection of residual with DMR – frequency to stay the same as baseline +		Borough-wide, separate weekly collection	Separate, fortnightly, charged				**All boroughs:** AD	**All boroughs:** Open Windrow
Option 4	Co-collection of residual with DMR – frequency to stay the same as baseline +		Borough-wide, mixed weekly collection, GW charged					**All boroughs:** IVC	**All boroughs:** IVC
Option 5: 'high performing' collection system including increased set-out rate, recognition rate, and participation rate	Separate collection, fortnightly, 140L bins (where possible), no side waste. Flats on weekly collection.	Comingled, weekly, 240L bins (where possible). Flats on weekly collection.	Borough-wide, separate weekly collection	Separate, fortnightly, charged				**All boroughs:** AD	**All boroughs:** Open Windrow

2 THE SEA SCREENING PROCESS

2.1 THE REQUIREMENT FOR SEA

As stated in the SEA Regulations, the requirement for a SEA applies to waste management plans, programmes and strategies. A SEA is only required if the Strategy is likely to have 'significant environmental effects' as detailed in Regulation 9(3):

"Where the responsible authority determines that the plan, programme or modification is unlikely to have significant environmental effects (and, accordingly, does not require an environmental assessment), it shall prepare a statement of its reasons for the determination."

The screening process forms the first stage of SEA and determines whether a SEA is required for a plan or programme. The Practical Guide to SEA[5] provides a framework for determination of the requirement for SEA (the screening process) in a staged flow-diagram (see Figure 2.1).

In accordance with **Figure 2.1**, the Practical Guide to SEA sets out eight criteria that should be considered when screening a plan, programme or strategy to determine whether it will require a SEA. These are set out in **Table 2.1.**

[5] A Practical Guide to the Strategic Environmental Assessment Directive: Practical Guidance on Applying European Directive 2001/42/EC', Office of the Deputy Prime Minister, 2005.

Figure 2.1 Application of SEA

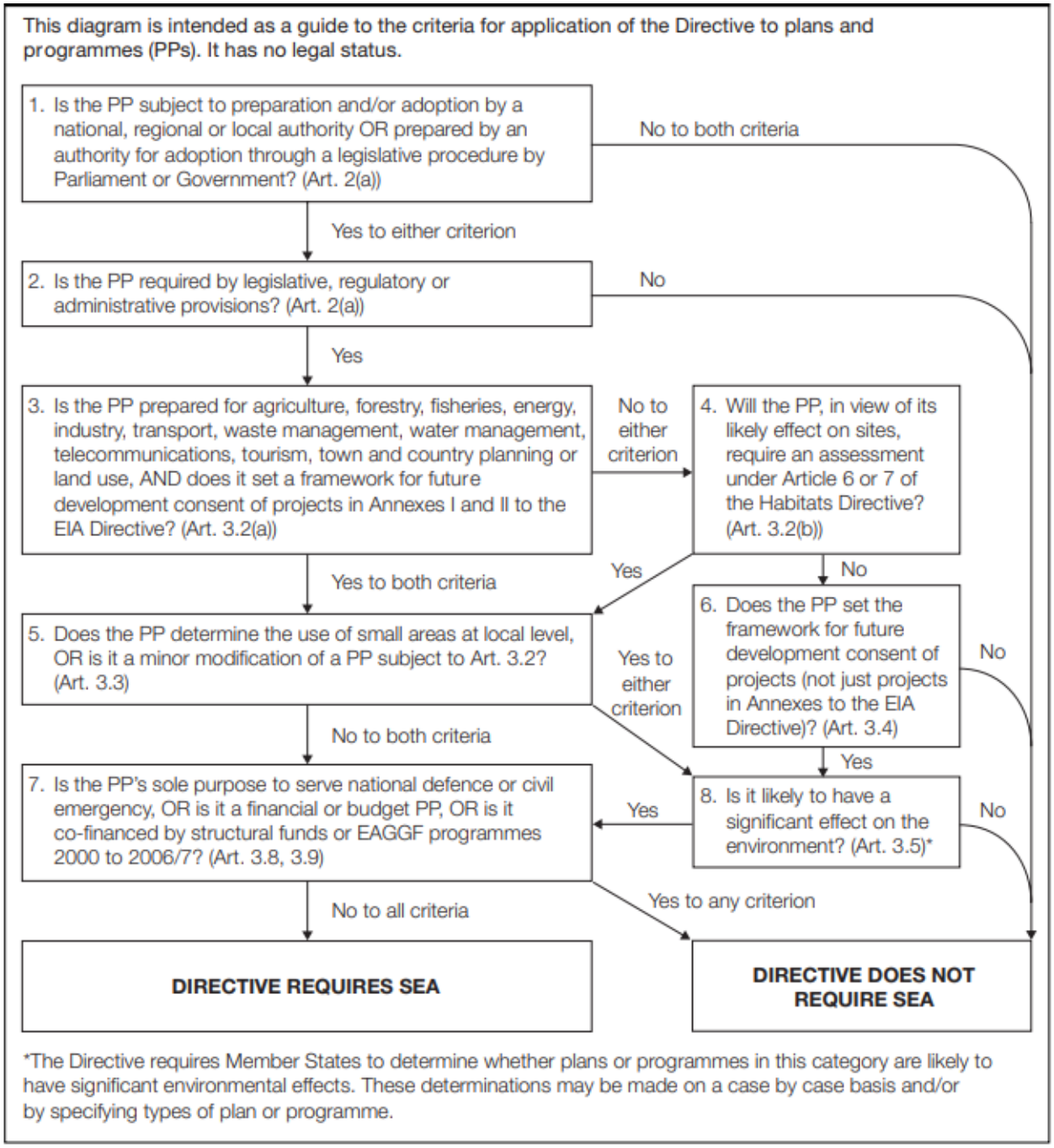

Table 2.1 Consideration of the Likely Significant Effects

	Screening Question	Screening Assessment
1	Is the strategy subject to preparation and/or adoption by a national, regional or local authority OR prepared by an authority through legislative procedure by Parliament or Government?	**Yes** The Joint Strategy sets out how WRWA and the four partner authorities/constituent councils, namely the London Borough of Hammersmith and Fulham, Royal Borough of Kensington and Chelsea, London Borough of Lambeth and the London Borough of Wandsworth will work together to preserve resources by minimising waste, promoting resource efficiency and moving towards a circular economy.
2	Is the strategy required by legislative, regulatory or administrative provisions?	**Yes** WRWA has a statutory responsibility for the collection and treatment of waste from the four constituent councils, including refuse, recycling, street cleansing and other waste materials.
3	Is the strategy prepared for agricultural, forestry, fisheries, energy, industry, transport or waste management, telecommunications, tourism, town and country planning or land-use, AND does it set a framework for future development consent of projects in Annexes I and II to the EIA Directive?	**No** Whilst the Joint Strategy is prepared for waste management it does NOT set a framework for future development consent of projects in Annexes I and II to the EIA Directive. WRWA will be implementing a separate Procurement Strategy which is more likely to address this scope.
4	Will the strategy, in view of its likely effects on sites, require an assessment under Article 6 or 7 of the Habitats Directive	**No** The implementation of this Joint Strategy will not have any likely significant effects on sites. This Joint Strategy sets the direction of travel for the development of waste collection and treatment services for the streams for which WRWA are responsible, with ancillary work on promoting waste reduction and reuse also included. The Joint Strategy emphasises the need for more reuse but does not set out any specific locations or activities. WRWA and the four constituent councils in their separate capacities as local planning authorities will assess area-wide land-use policy for waste management through a review of the Joint Waste Development Plan.
5	Does the strategy determine the use of small areas at local level, OR is it a minor modification of a plan subject to Article 3.2?	**No** The Joint Strategy covers the administrative areas of WRWA area, comprising of the above four constituent councils.
6	Does the strategy set the framework for future development consent of projects (not just projects in Annexes to the EIA Directive)?	**No** The Joint Strategy does not set the framework for future development consent of projects. The Strategy does not set out any specific needs or locations. The four constituent councils in their separate capacities as local planning authorities

	Screening Question	Screening Assessment
		will assess area-wide land-use policy for waste management through a review of the Joint Strategy.
7	Is the strategy sole purpose to serve the national defence or civil emergency, OR is it a financial or budget plan, OR is it co-financed by structural finds or EAGGF programmes 2000-2006/7?	**No** The purpose of the Joint Strategy is not to serve national defence or a civil emergency and it is not a financial or budget plan.
8	Is it likely to have a significant effect on the environment?	**No** The Joint Strategy sets out strategic aims and ambitions for resources and waste management of the partner authorities of the WRWA. All four constituent councils have declared climate emergencies in 2019 and are committed to achieving Net Zero in their operations by 2030.

2.2 DETERMINATION OF SIGNIFICANCE

In accordance with the SEA Regulations the likely significant effects of the Joint Strategy have been considered in relation to the SEA Screening criteria and are presented in **Table 2.2**.

Table 2.2 Consideration of significant environmental effects of the Joint Strategy

SEA Screening Criteria	Summary of Predicted Environmental Effects	Significant Environmental Effect?
1. The characteristics of plans and programmes, having regard, in particular, to-		
(a) the degree to which the plan or programme sets a framework for projects and other activities, either with regard to the location, nature, size and operating conditions or by allocating resources;	The Joint Strategy will not provide a policy framework or allocate resources. Instead, it provides the evidence base for local needs as well as the context and priorities of national and regional waste and resources policy for the local area. The Joint Strategy prescribes no significant alterations to the location, nature, size or operating conditions of potential facilities related to waste management. The Joint Strategy provides a framework for the Partner Authorities to seek to explore and investigate options in collaboration with wider organisations as well as promoting initiatives to the community. In terms of specific changes to the waste and recycling services that are already in place across the area, the Joint Strategy seeks to implement anticipated new national requirements for separate food waste collections and exploring different ways of collecting other recyclable materials which are already being collected. These are not considered to entail a significant environmental effect.	No
b) the degree to which the plan or programme	The Joint Strategy is a strategic framework document in the local context that sets out the high-level aspirations for	No

SEA Screening Criteria	Summary of Predicted Environmental Effects	Significant Environmental Effect?
influences other plans and programmes including those in a hierarchy;	waste and resource management. The Joint Strategy is influenced by a number of plans and programmes, nationally and regionally, within which there are a number of policy drivers that will influence how the Partner Authorities manage resources and waste in the future. The Joint Strategy itself has limited direct influence over other plans and programmes and therefore, it is not considered to entail a significant environmental effect.	
(c) the relevance of the plan or programme for the integration of environmental considerations in particular with a view to promoting sustainable development;	The Joint Strategy is relevant for the integration of environmental considerations to minimise waste arising and maximise waste reduction, reusing and recycling. The London Plan and the constituent councils' Local Plans set the policies for sustainable development. The objectives in the Joint Strategy will not change Local Plan policy.	No
(d) environmental problems relevant to the plan or programme;	The Joint Strategy will set targets for waste reduction, reuse and recycling all in accordance with national and regional policies and targets. Objectives set out in the Strategy are not anticipated to introduce or exacerbate environmental problems.	No
(e) the relevance of the plan or programme for the implementation of Community legislation on the environment (for example, plans and programmes linked to waste management or water protection).	The Joint Strategy supports targets for recycling and landfill diversion. The Strategy also contains aims, objectives, and priorities to facilitate treatment of waste in line with the waste hierarchy. The Strategy will supplement Local Plan policies and is not relevant to the implementation of Community legislation on the environment.	No
2. Characteristics of the effects and of the area likely to be affected, having regard, in particular, to (i.e. will the environmental effects be significant when consideration is given to:)		
(a) the probability, duration, frequency and reversibility of the effects;	It is not envisaged that the implementation of the Joint Strategy is likely to have any significant negative environmental effects. The Strategy will set out waste collection and treatment options around existing infrastructure and local priorities and aspirations. Whilst it does not set out any specific needs or locations a number of the objectives and priorities proposed aim to deliver improved performance in line with wider regional and national targets.	No
(b) the cumulative nature of the effects;	The Joint Strategy is designed to improve environmental protection/performance, and therefore there are no negative cumulative environmental effects envisaged for the strategy. The Strategy is consistent with the waste hierarchy and therefore will promote that waste is treated increasingly in a more sustainable and environmentally friendly manner, meaning pollution and other negative	No

SEA Screening Criteria	Summary of Predicted Environmental Effects	Significant Environmental Effect?
	environmental impacts are reduced over the life of the Strategy.	
(c) the transboundary nature of the effects;	The Joint Strategy will not provide a policy framework or allocate resources. Instead, it provides the evidence base for local needs as well as the context and priorities of national and regional waste and resources policy for the local area. The Strategy does not set out any specific needs or locations. The Strategy intends that changes in waste collection and treatment should move waste up the Waste Hierarchy where possible, and therefore any potential effects of service changes will entail an environmental performance improvement within the boundaries of the WRWA area.	No
(d) the risks to human health or the environment (for example, due to accidents);	There are no expected additional risks to human health and/or the environment arising from the implementation of the strategy. Key priorities in the evaluation of Joint Strategy options include carbon reduction and minimising environmental impact.	No
(e) the magnitude and spatial extent of the effects (geographical area and size of the population likely to be affected);	The spatial extent of the Joint Strategy is contained within the constituent councils' Local Plan areas. The Strategy does not seek to expand current waste management operations in the area. It seeks to reduce waste growth, increase reuse, repair and recycling. The Strategy seeks to improve waste management which is considered to have positive effects in the WRWA area.	No
(f) the value and vulnerability of the area likely to be affected due to- (i) special natural characteristics or cultural heritage; (ii) exceeded environmental quality standards or limit values; or (iii) intensive land-use;	The Joint Strategy is not site specific and has been considered alongside sustainability issues as described in criteria 1(d). Furthermore, the implementation of the Strategy will not remove protection for any such areas and therefore there are no significant effects associated with the Joint Strategy.	No
(g) the effects on areas or landscapes which have a recognised national, Community or international protection status.	The Joint Strategy will not remove any protection for areas with a recognised community or international protection status. The strategy will encourage improved environmental performance. It is anticipated that the Strategy will not impact protected areas.	No

SCREENING REPORT AND CONSULTATION PROCESS

2.3 SCREENING REPORT AND CONSULTATION PROCESS

A SEA Screening Statement, as specified in section 4 of the SEA Regulations, was prepared to enable the Consultation Bodies to provide comment on the screening process and its conclusion for the Joint Strategy.

WRWA consider that the Joint Strategy does not require a full SEA.

The bodies consulted for this Strategy were Natural England, Historic England and the Environment Agency. The consultation period on the SEA Screening Statement ran for five weeks, as is standard practice, from 25th March 2024 to 29th April 2024.

No responses were received from two statutory consultees; the Environment Agency and Historic England. Natural England responded stating that they had no comments to make.

The final element of the SEA process in this instance, is a Statement of Determination (this report) indicating that the SEA screening process has been conducted in accordance with the SEA Regulations and available guidance, and a determination has been made on the likely 'significant environmental effects' of the Joint Strategy.

3 CONCLUSION

The scope of the WRWA Joint Strategy has been considered against the criteria from the Practical Guide to SEA[6] and the SEA Regulations.

It is considered that the Joint Strategy will not set a framework for future development consent of projects. Also, the aims, objectives and priorities that will be set out in the Joint Strategy are focussed on exploring ways to work together and in partnership with the local community and other organisations to deliver sustainable systems for managing resources and waste in accordance with wider established targets and evolving legislation. Waste collection and treatment options are being explored to deliver these aspirations using existing treatment facilities and sites already in use within WRWA's operational boundary. For these reasons and following the results of the consultation with the statutory consultees, it is determined that no significant environmental effects will result from the Joint Strategy. Therefore, it is considered that there is **no requirement for a full Strategic Environmental Assessment.**

[6] A Practical Guide to the Strategic Environmental Assessment Directive: Practical Guidance on Applying European Directive 2001/42/EC', Office of the Deputy Prime Minister, 2005.

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DRAFT
Equality Impact Assessment

Joint Resources and Waste Strategy

DRAFT VERSION FOR CONSULTATION

NOTES ON THIS DRAFT:

- **This document remains in Draft form until it is formally adopted following the conclusions of a full public consultation exercise.**
- **The content is therefore subject to additions and amendments until that process has concluded.**

Contents

Further contact information

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www.wrwa.gov.uk/strategy

INTRODUCTION

This document provides an initial assessment of equalities impacts in relation to the Joint Resources and Waste Strategy for the London Borough of Hammersmith & Fulham, the London Borough of Lambeth, the Royal Borough of Kensington and Chelsea, the London Borough of Wandsworth and Western Riverside Waste Authority – collectively referred to as the Western Riverside Partners.

The Western Riverside Partners work together to reuse, collect, sort, recycle, treat and dispose of waste in the area. Together the Partners want to reduce their environmental footprint by:

- Producing less waste.
- Moving to a Circular Economy by keeping materials and things in use for as long as possible through repairing, sharing and reuse.
- Making it easier for our residents and businesses to recycle more.

Our Vision:

"The Western Riverside partners will work together with our residents and businesses to prioritise waste prevention, reduce our carbon emissions and environmental impacts, and provide customer focused waste and recycling services that maximise value from the materials we manage."

To achieve the vision the Western Riverside Partners have developed a Strategy aimed at reviewing the current policy situation and defining a collective ambition for waste management services spanning from 2025 to 2040. To date it has involved extensive analysis of the current baseline position for collection services across the area, developing future options for collection, treatment, and disposal, and assessing the whole system cost of these options. The collaboration with the Partner Authorities through a series of workshops for officers, directors, and elected members has facilitated the integration of multiple perspectives and expert inputs, ensuring that the Strategy is robust and inclusive.

EQUALITY IMPACT ASSESSMENT

The Equality Impact Assessment (EqIA) is a critical component of policy-making in the UK, ensuring that decisions consider their potential impact on individuals with protected characteristics as defined by the Equality Act 2010 which include:

- Age
- Disability
- Gender Reassignment
- Marriage and Civil Partnership
- Pregnancy and Maternity
- Race
- Religion or Belief
- Sex
- Sexual Orientation

The duty of 'due regard' requires decision-makers to actively consider equality implications before and during policy development and to remain mindful of these considerations when making decisions. This proactive approach helps to eliminate discrimination, promote equality of opportunity, and foster good relations between different groups.

This EqIA examines the Strategy, evaluating its potential impacts on various protected groups and ensuring that the strategy promotes inclusive and equitable outcomes for all stakeholders.

The Western Riverside Partners wish to hear and proactively consider any comments in relation to how any aspect of the issues presented may impact on any sections of the community as listed above. Any feedback in relation to equalities and any point raised within this document will inform a full Equality Impact Assessment and Analysis of the Strategy.

It should be noted that although the Strategy sets out that within the proposed Action Plans there will be a need to deliver service improvement and changes these will be designed according to local needs and will be subject to individual EqIA conducted by the relevant Partner Authority.

SUMMARY OF EVIDENCE

To ensure 'due regard' is given to the Public Sector Equality Duty (PSED), the following evidence has been considered to date:

- Draft Joint Resources and Waste Strategy
- Stakeholder Consultation Plan
- The Social Value Model and related government guidance
- The Equality Act 2010
- Feedback from stakeholder engagement sessions with Technical Officers and Elected Members
- Data on local demographics and waste management needs

This evidence-based approach helps identify how the Strategy might affect different groups and develop strategies to mitigate any negative impacts.

WHO IS AFFECTED BY THE JOINT RESOURCES AND WASTE STRATEGY?

The Strategy will affect all residents within the Partner Authorities' area, any businesses that use the waste and recycling services of the Partner
Authorities and any staff involved in the delivery of services.

CONSULTATION

A fully compliant consultation will be undertaken in Autumn 2024. Equalities impacts and monitoring are included in the consultation. Following the consultation, feedback received will be included within a consultation report.

The WRWA Partners have considered equalities for the development of the Strategy and delivery of the consultation in a number of ways including:

- Provision of paper copies of the Strategy and consultation for those without access to the internet. Paper copies will be available from local libraries or on request from Western Riverside Waste Authority (contact details provided)
- A general drop-in session will be provided for Q&A on the Strategy and to provide support with the consultation survey.
- Focus groups which will be designed to be representative of the diverse communities in the area and will take into consideration protected characteristics will be run on the Strategy to gather views and answer questions
- Individuals requiring a different form of support in order to participate in the consultation will be encouraged to email / telephone or write to Western Riverside Waste Authority

IMPACT ON PROTECTED CHARACTERISTICS

This section evaluates the implications of the Strategy on protected characteristics, ensuring inclusivity and accessibility across diverse demographic groups.

Table 1: Initial assessment of the implications of the Draft Joint Strategy on protected characteristics

Protected Characteristic	Negative Impact	Positive Impact	No Impact	Unsure of Impact	Comments
Age			**X**		The strategy acknowledges the importance of waste management services being accessible to all age groups. Initiatives include enhancing accessibility to recycling facilities and tailored educational programs for schools and youth groups. Potential challenges for older adults due to mobility issues are addressed through targeted communication strategies, and accessible services such as assisted collections.
Disability			**X**		The strategy aims to make waste management services accessible to individuals with disabilities. Measures include providing large print and easy-to-read materials and ensuring physical facilities are accessible. Consultation with disability advocacy groups helps develop tailored solutions, such as assisted waste collection services.
Gender reassignment			**X**		Although not directly addressed, the strategy remains neutral and inclusive. Communication and engagement activities use inclusive language, avoiding discrimination based on gender identity. Stakeholder feedback is encouraged to address any specific issues related to this group.
Marriage and civil partnership			**X**		While no specific provisions exist, the strategy ensures equal access to waste management services regardless of marital status. No adverse impacts are anticipated for this characteristic.

Protected Characteristic	Negative Impact	Positive Impact	No Impact	Unsure of Impact	Comments
Pregnancy and maternity			**X**		Support services for pregnant women and new mothers are recognised. Flexible waste collection schedules and additional support for households with newborns such as 'real nappies' are included. Information and resources will be accessible to support effective household waste management.
Race			**X**		The strategy aims to include all racial and ethnic groups within the WRWA area. Language barriers are addressed through document translation. Outreach programs engage ethnic minority communities to address their specific needs and concerns.
Religion or belief			**X**		Sensitivity to diverse religious practices is maintained. Waste management schedules avoid disadvantaging any religious group. Special provisions are made for religious festivals generating increased waste.
Sex			**X**		No differential impacts based on sex are anticipated. Equal opportunities for all genders in consultation processes and accessing waste management services are ensured. Gender-sensitive communication strategies will be employed.
Sexual Orientation			**X**		All sexual orientations are included without discrimination. Feedback from LGBTQ+ communities is encouraged to identify specific needs or issues.

STRATEGIES FOR MITIGATION AND INCLUSION

Inclusive Communication
To ensure that all stakeholders are adequately informed and can participate in the strategy, the WRWA Partners will implement a range of communication methods. This includes producing materials in accessible formats (large print, easy-read, audio) and translating key documents into multiple languages (where required). Additionally, the use of social media and local community networks will help reach a broader audience.

Targeted Engagement
Recognising that different groups may have unique needs, the WRWA Partners will conduct targeted engagement activities. This includes focus groups/drop-in sessions with specific communities, such as older adults, people with disabilities, and ethnic minorities. These sessions will help gather detailed feedback and ensure that the strategy addresses the needs of all community members.

Flexible Service Provision
The strategy proposes flexible waste management services to accommodate the diverse needs of the community. This includes options such as assisted waste collection for individuals with mobility issues, additional support for new mothers, and consideration of religious practices in scheduling waste collection. As mentioned previously individual actions arising from the Strategy will undergo their own specific EqIA.

Monitoring and Review
The impact of the Strategy on protected characteristics will be continuously monitored. Regular reviews and updates will be conducted to ensure that the strategy remains inclusive and effective. Stakeholder feedback will be a critical component of this process, and adjustments will be made as necessary to address any emerging issues.

CONCLUSIONS

The draft EQIA for the Strategy demonstrates a commitment to inclusivity and equality. By proactively considering the impacts on various protected groups and implementing targeted strategies to mitigate any negative effects, the Strategy aims to promote equitable access to waste management services for all community members. Continuous monitoring and stakeholder engagement will ensure that the strategy evolves to meet the changing needs of the community, fostering a more inclusive and sustainable waste management system.

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