Towards a low waste north London

North London Joint Waste Strategy 2025 - 2040

BARNET LONDON BOROUGH

Camden

ENFIELD Council

Hackney

Haringey LONDON

ISLINGTON For a more equal future

NORTH LONDON WASTE AUTHORITY

Waltham Forest

North London Joint Waste Strategy 2025 – 2040

Contents

DRAFT VERSION FOR CONSULTATION

This document remains in draft form and is published for the purpose of a public consultation exercise.

The content will be subject to additions and amendments until that process has concluded and the final Strategy adopted by the North London Waste Authority and the constituent borough councils.

Introduction

The waste world is changing. Responding to the climate emergency is more urgent now than ever before, and the way we all manage and dispose of our waste will be a significant factor in addressing this. Reducing waste at source, and reusing, recycling, repairing materials, as well as keeping resources in circulation as long as we can, are all vital to us playing our part in responding to this challenge. As a whole, the waste sector accounts for one fifth of global methane emissions and four percent of greenhouse gas emissions in the UK. [1,2] Reducing our impact is vital in ensuring our environment is left in a better condition for future generations. Increasingly, waste management strategies at local and regional level, which advocate whole system change with the support of national government and wider industry, are seen as essential tools to address this.

This Strategy will guide our work for the next fifteen years. Through the aims and activities set out in this document, we will help north London move towards a low waste, sustainable future. By 2040 we want everyone in north London to be producing less waste, with products designed to stay in use for longer and packaged responsibly. Residents will understand the journey of waste and its environmental impacts and will be equipped with the knowledge, skills and services they need to reuse and repair items which might otherwise be thrown away. Businesses will adopt a circular economy approach, keeping resources in use for as long as possible before they become waste. Consumers will make more sustainable choices, with fewer items becoming waste. Where items are not able to be refilled or reused they will be easier to recycle with convenient and accessible services which all our residents and many more businesses will make use of. When waste finally cannot be reused or recycled, we will use it to produce energy and heat to help power north London. With new, state-of-the-art facilities, we will dispose of waste and generate energy in the greenest possible way, limiting emissions and other negative environmental impacts. Our north London community will be engaged with our work, including the next generation who will have access to education and training opportunities at our new facilities. All residents will have access to high quality waste services which deliver positive environmental outcomes as well as wider community benefits.

Our approach to achieve this low waste future is set out in the chapters that follow, these will set the direction for our policy and operations until 2040. Our priority during this period will be to secure the best environmental outcomes. We will achieve this by innovating and leading by example to provide positive initiatives which drive best practice, whether that is funding for community projects, offering pioneering recycling services for difficult materials, or providing green jobs and education opportunities for north London residents. We will work collaboratively with partners and our communities as part of the wider waste system, and we will use our influence to encourage positive changes from businesses. Crucially, we will also need meaningful action from government and so will campaign for policy and legislative change where required.

To have the most positive environmental impact, our first priority is to follow the principles of the waste hierarchy by reducing waste. Where waste is produced we will create opportunities to reuse, repair and recycle more than ever before. Where waste cannot be reused, repaired or recycled we will ensure it is managed in the cleanest, most environmentally friendly way possible with no waste to landfill. Our service offer to residents and businesses is also a key focus, and we will ensure that services deliver benefits for our community while meeting local needs for waste management.

[1] How to cut emissions from waste by as much as 84% | World Economic Forum (weforum.org)
[2] Atmospheric emissions: greenhouse gases by industry and gas - Office for National Statistics

Over recent years government has proposed significant changes to the waste sector, but relatively little has been delivered since new policies were announced in the Resources and Waste Strategy in 2018. Through that strategy and the Environment Act, government have outlined changes which will affect the operation and funding of the waste system including the introduction of a Deposit Return Scheme (DRS), expansion of the polluter pays principle through the Extended Producer Responsibility (EPR) scheme, and changes to increase consistency and the materials collected through local authority waste services (Simpler Recycling). The legislative changes proposed will not only impact how waste is managed, but are complex and span across a number of government departments. In many cases, the details of how these changes will be implemented and the impacts they will have remain unclear. While we had hoped for clarity on these positions to enable us to plan with confidence for the long-term, this Joint Waste Strategy has instead been developed against an uncertain background. We have therefore intended to maintain flexibility and a pragmatic approach which will allow us to continue to deliver effective waste services as we adapt to the evolving landscape.

It's important that we work to understand how legislative change will impact the waste we manage, and that the government works with local authorities to ensure the changes can be implemented successfully at a local level. However, to have the best environmental outcomes, there must be widespread, systemic change which can only be led by government at a national level. We hope to see significant progress on waste reduction and other environmental goals during this Strategy. Government has the powers to influence industry and the public to help us deliver on these ambitions. In part two of this Strategy, we will outline our expectations and key actions government should take to support the waste sector and drive progress towards a low waste, circular economy.

There are also now a range of national and regional targets to which local authorities are expected to contribute. We will report on these metrics and aim to achieve our ambitious targets, however success will depend on there being a system-wide approach across the UK. Manufacturers, businesses, central government and residents all need to help instigate societal changes to increase recycling, reuse and repair, and ultimately to reduce the amount of waste we are all producing in the first place.

What is the north London Joint Waste Strategy?

The North London Joint Waste Strategy is the Joint Waste Strategy for the London boroughs of Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest and the North London Waste Authority. The Strategy is written on behalf of all eight of these authorities, who will be referred to throughout as 'we', 'NLWA and the constituent boroughs' or 'the eight authorities'. The Strategy period is from 2025 to 2040.

The Strategy sets out the authorities' aspirations for all levels of waste management, including collection, transfer, treatment and disposal, in accordance with the waste hierarchy. It sets out how NLWA and the constituent boroughs will help to minimise waste, increase recycling, reuse and repair, protect the environment, and move towards a circular economy. It will form the basis of how NLWA and the constituent boroughs manage waste in the future, and work together to deliver essential waste management and disposal services in the best interests of north London's residents.

The Strategy does not address local environmental quality issues such as litter, street cleansing and fly-tipping as these are managed by individual boroughs. Waste from these sources will be treated and disposed of according to the policies and aims set out in this Strategy, but measures to reduce the incidents of public nuisance are addressed by local plans in each borough.

The Strategy also sets outs the policy and legislative situation - the current and future context for resources and waste management. What we hope to achieve in terms of resources and waste management and current performance, through the services provided to north London residents and communities, is discussed below in the form of the vision, priorities, aims and objectives. The Strategy also focuses on the longer-term targets and aspirations of NLWA and the constituent boroughs and the general principles by which we will work together to achieve them.

Consequently, the Strategy will be a key reference point for NLWA and the constituent boroughs when considering proposals for waste management during the given period.

Why do we need a new strategy?

The most recent North London Joint Waste Strategy covered the period 2004 to 2020 and was largely concerned with finding a solution for waste disposal infrastructure in north London, which has since been agreed upon.

It is a requirement under section 32 of the Waste and Emissions Act 2003 for waste authorities for a two-tier[3] area to have a joint strategy for the management of waste, the Act requires that the strategy includes management arrangements for all municipal waste and that the constituent boroughs consult on the strategy appropriately. The strategy must also have regard for guidance given by the government.

In addition, waste authorities in Greater London must, when formulating policy, act in general conformity with the Mayor of London's municipal waste management strategy (currently the London Environment Strategy).

There are also significant legislative changes coming in the near future. It is important that the Authority and the constituent boroughs have an up-to-date strategy which will consider and set out how all eight partners will respond to these changes.

Who we are

NLWA is the statutory joint waste disposal authority for north London. NLWA is responsible for the recycling, composting and disposal of waste collected by its seven constituent boroughs and covers around 2,000,000 people in some 850,000 households.

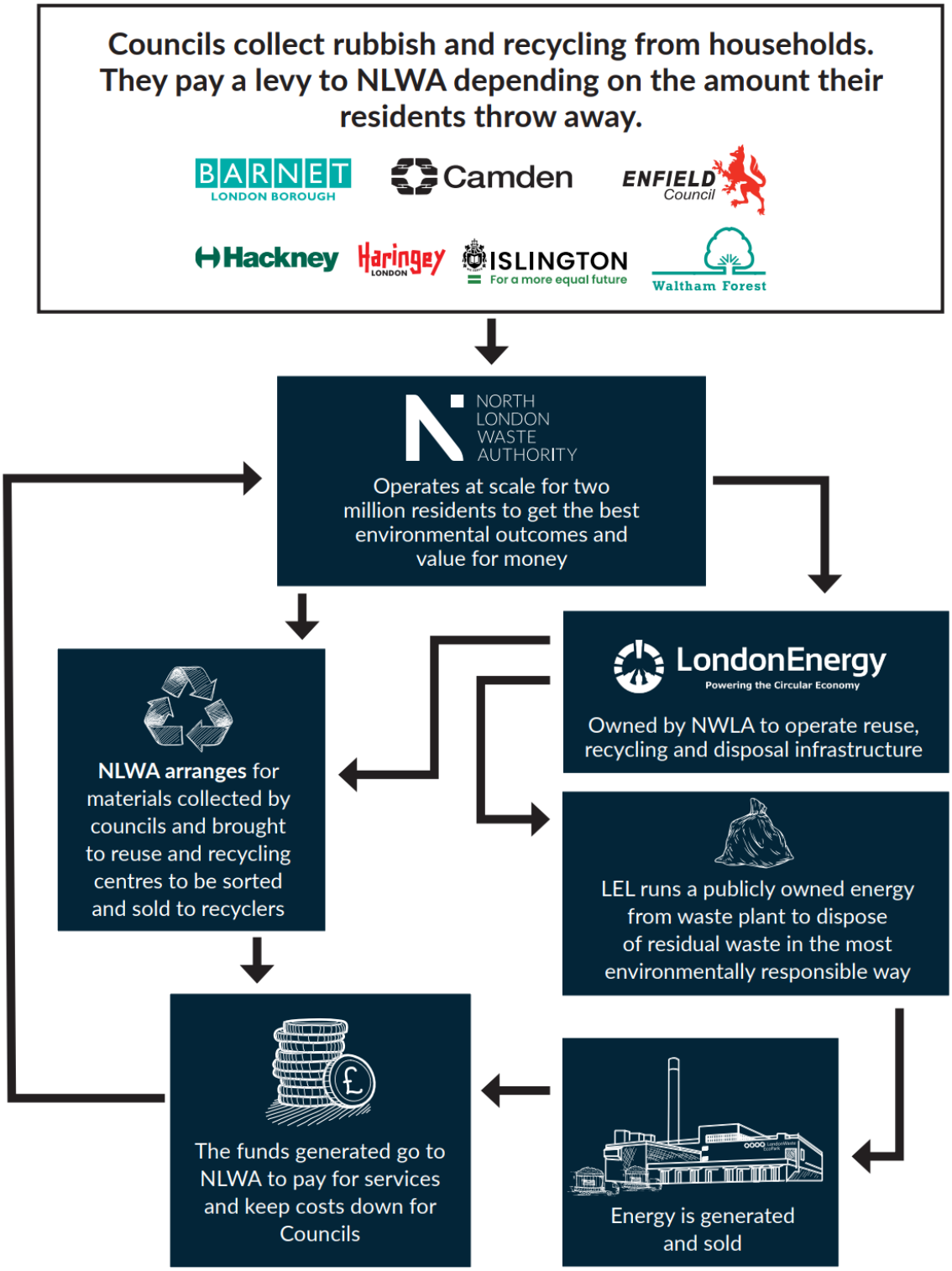
In 1986 the government abolished the Greater London Council, and new arrangements were put in place across London including four joint waste disposal authorities such as NLWA. Under these arrangements, the north London boroughs are Waste Collection Authorities with legal duties to collect household waste and to collect commercial waste if requested. NLWA, as the Waste Disposal Authority, has legal duties to treat, manage and dispose of the waste collected by the seven boroughs. The seven constituent boroughs and NLWA work in partnership to tackle the waste challenge in their area, recognising that joint working to plan the collection, treatment and disposal of waste supports efficient service delivery for residents and communities.

Each north London borough is governed by democratically elected councillors using a cabinet system, with an elected council leader and a cabinet member with responsibility for environmental issues including waste. NLWA comprises 14 councillors (Members), two from each of the constituent boroughs. These councillors make decisions on NLWA's policies and services, led by a Chair and vice-Chairs. The organisation is mainly funded by a levy it places on its constituent boroughs for waste services and by specific charges for the management of some types of waste. Amongst some of its responsibilities, NLWA has a statutory obligation to provide a suitable number of Reuse and

[3] Where separate authorities have legal duties for the collection and disposal of waste such as in north London.

Recycling Centres (RRCs) for residents, and to have a strategy in place outlining how services will be operated and resources will be managed and conserved in the future.

NLWA, through its wholly owned company LondonEnergy Ltd, manages waste infrastructure across north London including transfer stations for sorting and processing waste, eight public reuse and recycling centres and the energy from waste facility at the Edmonton EcoPark. NLWA is currently building a new energy recovery facility at the Edmonton site (see below for more detail).



Document structure

The structure of this document is as follows:

- Chapter one – introduces our vision for the Strategy, along with our priorities, aims and objectives.

Chapters two to five describe the current and future context for waste management in north London:

- Chapter two – describes the north London area and how we expect local changes to impact on waste produced.
- Chapter three – describes the waste that we currently manage in north London and how this could change over the period of the Strategy.
- Chapter four – describes how the changing legislative and policy context will impact the waste management process.
- Chapter five – describes the engagement which has taken place with our community and the priorities our residents have for this Strategy.

Chapters six to ten set out the approach we will take to deliver the vision, aims and objectives of the Strategy.

- Chapter six – sets out how we will support the reduction in household waste including promoting repair and reuse.
- Chapter seven – sets out how we will undertake to improve recycling
- Chapter eight – sets out how we will reduce the environmental impact of waste disposal.
- Chapter nine – sets out how we will deliver collaborative, community-focused services.
- Chapter ten – describes the impact we expect to have and how the strategy will be implemented and monitored.

Part one: context and challenges

Chapters one to five set out our aims for the Strategy, as well as describing the context in which our waste services operate. This includes analysis of the north London area, the waste we manage, the changing policy landscape, and feedback received from our residents.

Chapter one: vision and aims

1.1 The need for change

Significant change is required when it comes to producing lower levels of waste in the future. The government needs to move beyond the recent history of delays and uncertainty, and deliver ambitious and system-wide policy action to help drive the nation towards a more circular economy. Only this would bring about the reduction in waste which we hope to see. Government should also consider the right way to assess what works in this area, and how to define and measure success. For instance, while recycling rates can be a useful metric, as a statutory target this does not record or incentivise a reduction in overall waste produced. Local authorities also need powers to act, and the support of central government to achieve our environmental ambitions.

Companies who provide the goods and packaging also have a key responsibility. Businesses need to prevent or reduce waste through product and packaging design and the way they use materials and services. Those who produce waste must take responsibility for the costs and environmental impact. This includes manufacturers of products and packaging, as well as retailers who contribute to the overall consumption patterns. If delivered successfully, extended producer responsibility schemes introduced by government can be one method to ensure that relevant businesses contribute a fair share of costs and have the incentive to change unsustainable business practices. Businesses can also separate their recyclable and biodegradable wastes, including the wastes produced by their customers on their premises, and regard them as a resource which could be reused or remain in use in a more circular model. They need to ensure that the products they produce are easy to reuse and repair, and it's clear from labelling what can and can't be recycled.

These changes would enable residents to produce less waste in the first place and recycle more, encouraging everyone to consider what we buy, use, and throw away and adopt sustainable consumption habits. Products should be kept for longer or passed on when no longer needed, enabling a more circular economy. We also need a recycling society, where everyone has a good understanding of what can be recycled and what cannot.

1.2 The waste hierarchy

A guiding principle of managing waste and resources is the 'waste hierarchy' which informs the approach taken in this Strategy. This hierarchy is shown below with definitions for each level. The most beneficial method is 'prevention' of waste and the least beneficial 'disposal'. All waste handlers should take reasonable measures to follow the waste hierarchy priority order, giving priority to methods that prevent waste or prepare materials for reuse, recycling or recovery. Disposal is the lowest priority option, but where necessary, should involve recovery of energy. Prevention of waste in the first place is key to reducing waste arisings overall and is the top rung of the waste hierarchy.

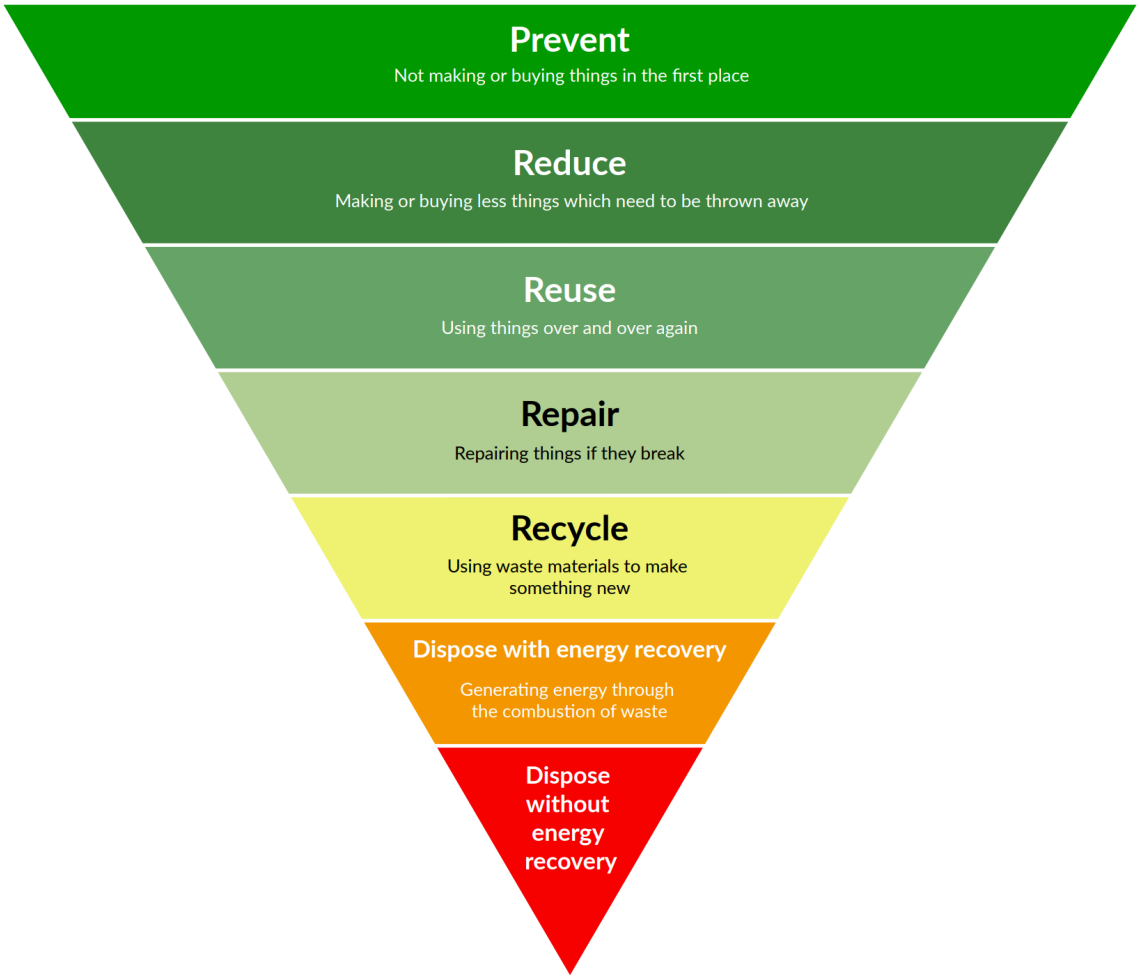
Prevention and reduction will therefore be significant priorities in this Strategy as we aim to move waste up the hierarchy and keep materials in use for longer. NLWA and the constituent boroughs cannot achieve this alone. Government has the powers to legislate and drive changes in behaviour to encourage sustainable consumption, so they must lead efforts to prevent and reduce waste. Businesses also have a key role, and must adapt how products are designed, packaged, used and disposed of so more items can be reused or repaired, and resources stay in use for longer. This would mean fewer items ever becoming waste in the first place, driving key environmental benefits.

Following the hierarchy, our next priority is recycling. Again, success will also rely on leadership from government who can legislate, invest in services and campaign to increase national participation

rates and drive behaviour change. Industry should ensure recyclable materials are used wherever possible, and that waste produced by businesses is also recycled. NLWA and the constituent boroughs will seek to recycle as much of north London's waste as possible, by offering extensive services and engaging with residents to encourage participation.

While recovery and disposal are further down the hierarchy, we must still be properly equipped to manage waste which cannot be prevented, reused or recycled. The waste hierarchy highlights the importance of recovering energy where possible, so that even when waste cannot be recycled it will be used as a resource. This Strategy sets out how we will manage this disposal process while minimising the negative environmental impacts and realising social benefits.

Figure 1. The Waste Hierarchy



1.3 The strategy vision

In December 2022, NLWA and the constituent boroughs jointly developed a vision for a cleaner, greener and more sustainable future for north London, outlining how our new Strategy will promote waste reduction and prevention in line with moving waste up the waste hierarchy as far as possible. This includes adopting and promoting the circular economy approach to ensure that waste and resources are managed so that we contribute to mitigating the effects of climate change.

All of the constituent boroughs have declared a climate emergency. This is reflected in the Strategy, which commits to contributing to a cleaner, greener and sustainable future for north London.

The Strategy has a strong emphasis on promoting and supporting the reuse of materials, and working with our partners, we will make north London a place where all materials are valued as reusable resources and that nothing goes to waste.

Where it is not possible to avoid generating waste, we will work to reduce it through reuse and repair, and to boost recycling. Together, we will provide all households with an easy-to-use recycling collection service to increase the types of recyclable materials collected. Our reuse and recycling centres will offer residents further opportunities to recycle a wide range of materials, including specialist services for many difficult to recycle materials. We will continue to explore other initiatives which will maximise public participation in recycling.

We will deliver services in a cost-effective way through our publicly owned company LondonEnergy Limited. Our model of public ownership will ensure that income from energy generation is returned to invest in new projects and for the wider benefit of the north London boroughs and their residents. Our waste management services will comply with environmental protection legislative standards.

We will work in partnership with residents, as everyone in north London has a part to play so that we can achieve our vision. Moving forward, we will continue to work with residents from across the boroughs through education and communication schemes.

NLWA and the seven boroughs cannot achieve this in isolation. Reducing waste is a team effort including the government, manufacturers, retailers and consumers. Government must lead the way through the introduction of legislation and campaigns in collaboration with these other groups. We have responded to all the government's relevant waste consultations to date and will continue to make strong representation concerning waste matters. Although we will strive to do everything we can, we require support from central government to realise the full extent of our ambitions. Consequently, we will initiate a list of asks for government to support us in delivering this strategy.

In summary, the vision for the Strategy is:

> **To manage north Londoners' waste according to the waste hierarchy, prioritising waste reduction then maximising reuse, repair, recycling (and the most climate-friendly means of disposal possible) where reduction is not feasible. This includes providing environmentally-friendly, best-value, resident-focussed services and policies that meet the challenges of the Climate Emergency.**

1.4 Aims and objectives

Joint aims, objectives and a set of priorities were all derived from the vision outlined above. Together, these form the overarching policy framework which will guide our work over the course of this Strategy.

The policy aims which we will look to achieve through this Strategy are:

A1. To promote waste prevention and reduction.

A2. To promote sustainable resources and waste management policies in north London and create a more circular economy.

A3. To minimise the overall environmental impacts of resource and waste management, especially the effects on climate change.

A4. To engage residents, community groups and local businesses in the development and implementation of resources and waste management.

A5. To provide resident-focused, cost-effective, best value services.

These are underpinned by a series of further objectives which will support the overall aims. The objectives are:

O1. To explore innovative waste management policies which contribute to meeting the challenges of the climate emergency. This will help to achieve environmental goals including improving air quality and achieving net-zero targets.

O2. To work across our boroughs and with the north London community to minimise the amount of residual wastes arising.

O3. To work across our boroughs and with the north London community to increase uptake of reuse and repair.

O4. To work across our boroughs and with the north London community to maximise recycling.

O5. To divert resources and waste from landfill and support more sustainable initiatives for disposing of waste.

O6. To deliver the infrastructure needed to manage north London's waste, and work with the local community to maximise the benefits of our facilities.

O7. To increase accessibility of our services and information for all members of the community.

O8. To maximise all opportunities for social value benefits from waste and resource management, including employment, skills and wellbeing.

Our approach to delivering these aims and objectives is set out in chapters six to ten. The actions and activities we will undertake are grouped into four thematic priorities which summarise the aims and objectives above.

Priority 1: supporting the reduction in waste, by promoting prevention, repair and reuse.

Priority 2: improving and maximising recycling

Priority 3: reducing the environmental impact of disposal, where there is no option to prevent or reuse waste.

Priority 4: delivering collaborative, community-focused services which provide value for money and maximise social value.

Chapter two: our north London area

2.1 Overview

The north London region covered by this Strategy comprises the seven north London Boroughs of Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest – the NLWA's constituent boroughs.

Figure 2. The north London area

The seven NLWA boroughs are largely characterised by:

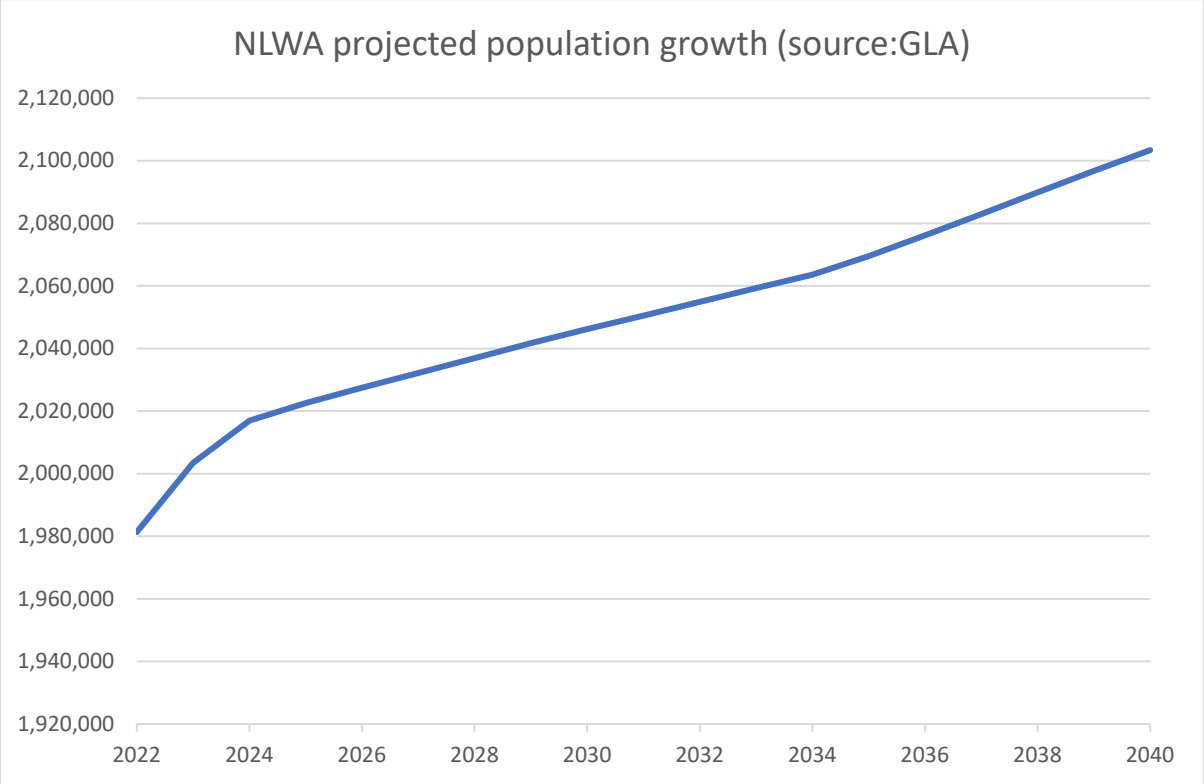
- Some of the country's most densely populated areas
- A highly diverse and mixed population
- A more transient population than the UK average
- Areas with high levels of deprivation, alongside more affluent areas
- A large proportion of homes in flats and shared housing
- Fewer properties with gardens than in more rural areas

These elements contribute to some challenges delivering waste and recycling services in such highly populated, urban areas.

2.2 Population and demographics

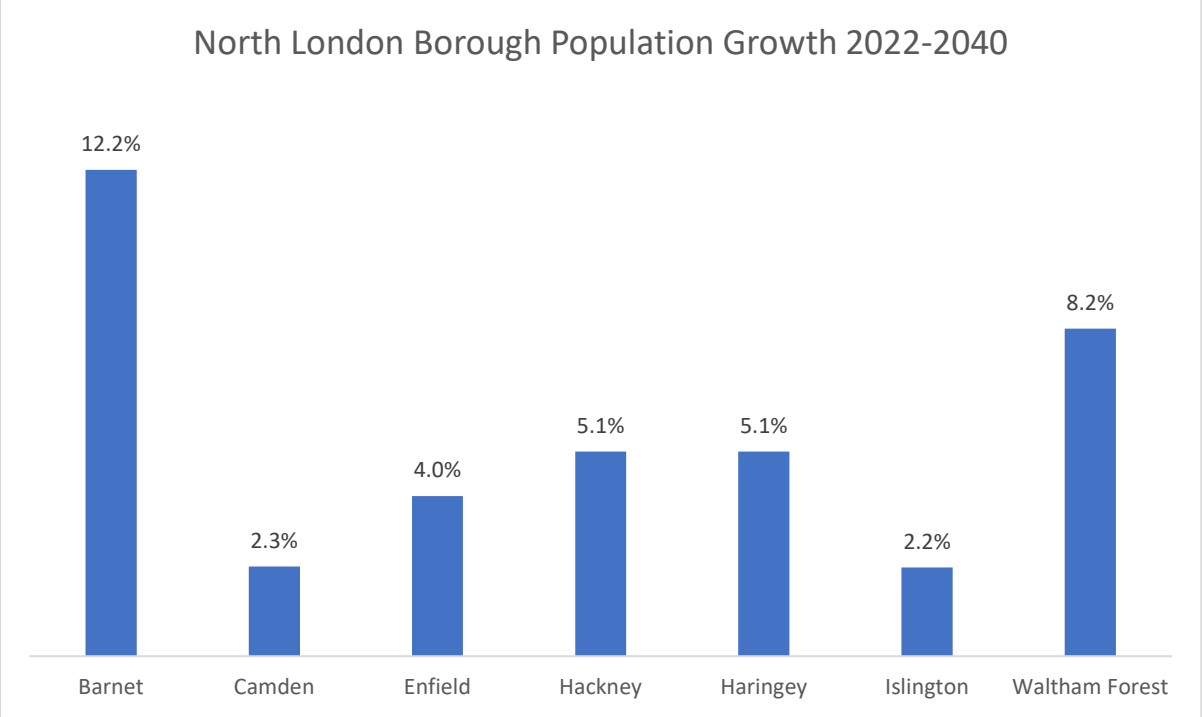
Around 2,000,000 people currently live in the north London area, in around 850,000 households. The north London population is expected to grow by six percent between 2022 and 2040, with some variation by borough.[4] This growth rate is above the projected average for England of around five percent. These projections are shown in figure 3 and 4. Modelling undertaken for this Strategy shows population growth is the most significant factor in driving potential growth of waste tonnage in the future.

Figure 3 – Population growth in north London to 2040 (source: GLA projections)



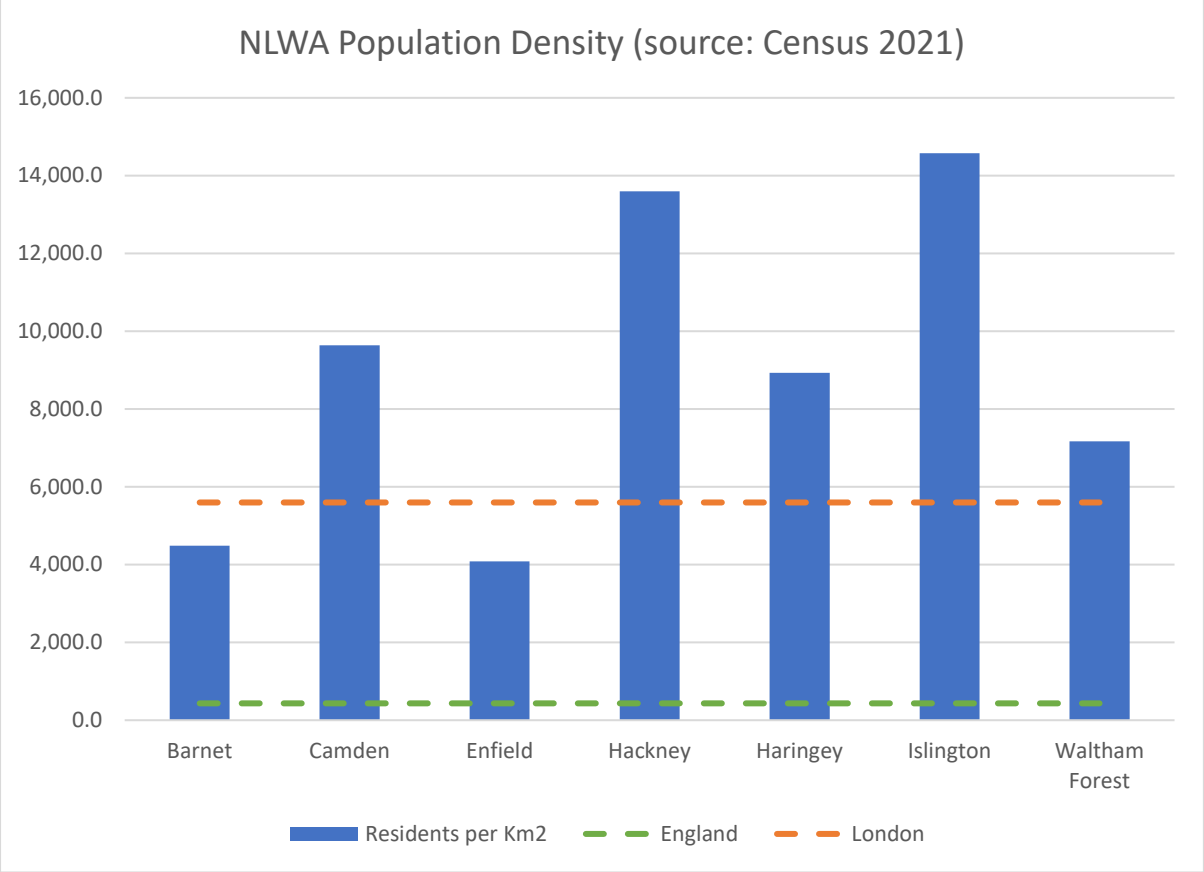
[4] Population and household projections – London Datastore

Figure 4 - Population growth by borough (Source: GLA Projections)



The area is also one of the most densely populated in the UK. As shown in figure 5, each of the north London boroughs has significantly higher population density compared to the rest of England. Five of the seven boroughs are also more densely populated than London overall. Dense urban areas generally tend to achieve lower recycling rates, due in large part to housing stock and lack of garden waste. Limited space for infrastructure can also be a challenge.

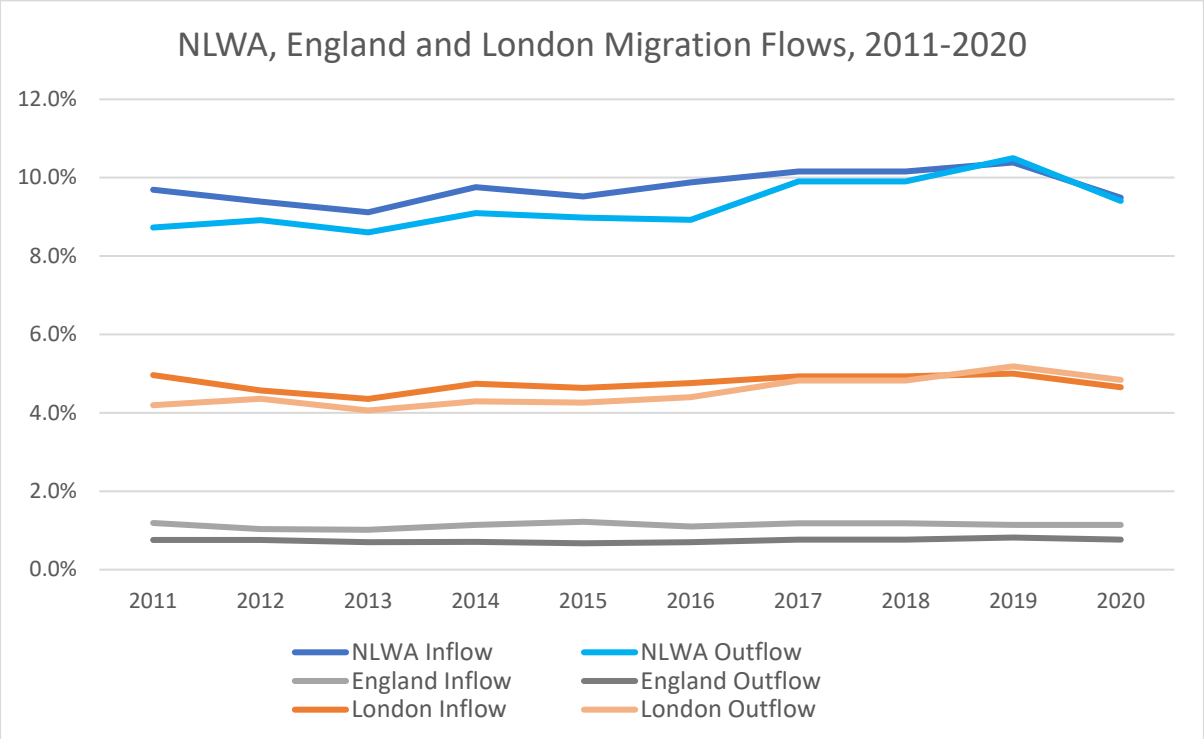
Figure 5 – Population density in north London (source: ONS Census 2021)



The area is characterised by a diverse, mobile, urban population. Compared to the rest of the country and the rest of London, a significantly higher proportion of residents move in and out of north London each year. This includes both international migration and moves within the UK, there are also currently 16 universities within the north London area, creating another transient population. These trends are shown in figure 6 below and have been consistent over the long-term. The data below extends to 2020 – following this, population movement patterns were heavily disrupted by the Covid-19 pandemic, however we can assume the long-term history of a highly mobile population in north London will continue over the course of this Strategy.

The high turnover in local population creates unique challenges for waste management in the area. For instance, new residents need to get used to new policies and requirements, while those moving out in a short time may potentially be less engaged with their local community or the services on offer. Figure 6 illustrates that among any area in the country, North London is particularly affected by these challenges.

Figure 6. Inward and outward migration flows (international and within-UK) as a proportion of overall population (source: ONS)

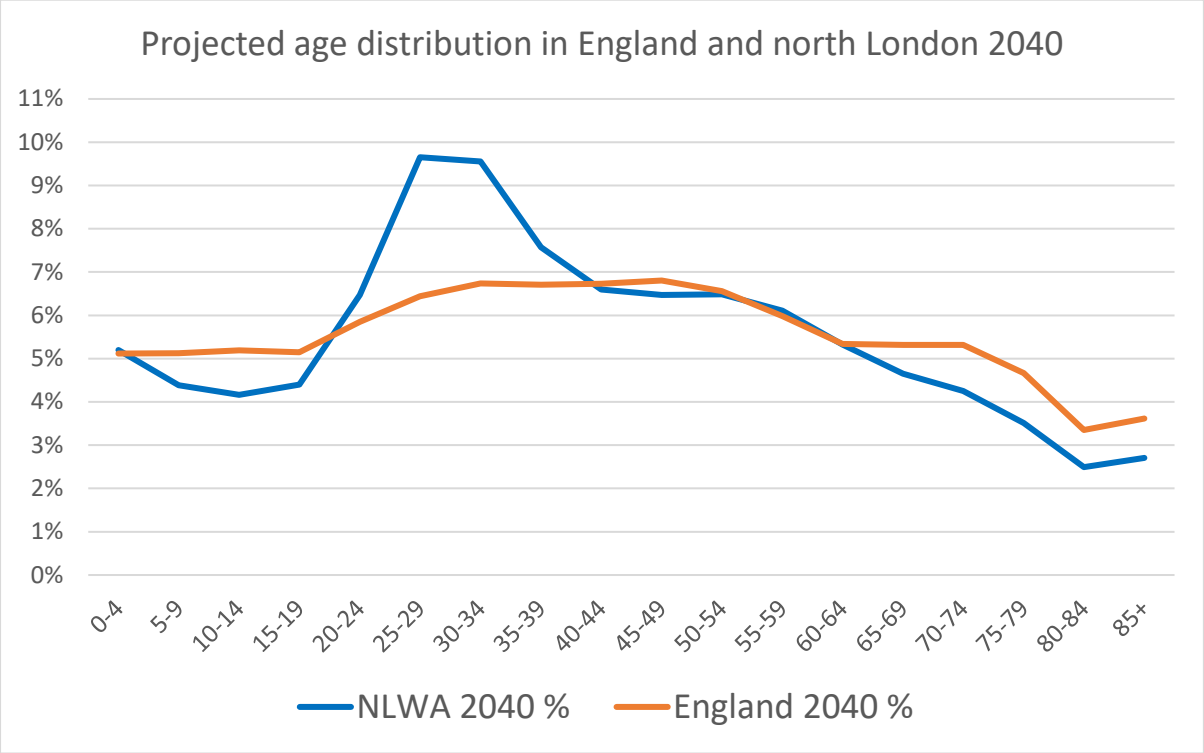


The population of the area is relatively young, with 20 to 40 being the largest age group in north London. This is fairly typical of London as a whole, which has the lowest median age of any region in England at 35. The population of north London is expected to increase overall, with the highest population in the 21-30 and 31-40 age brackets by 2041 for all the boroughs. There is also expected to be an increase in the age brackets of 61-70,71-80 and 81-90. Figure 7 shows this future age distribution compared to England, illustrating the high number of younger, working-age adults and relatively lower proportions of under 18 and over 65 year olds.

ONS statistics on consumer spending show that household expenditure is highest among working age adults. [5] This group will make up an increasing proportion of north London's population during this Strategy, while an expected decrease in numbers of children in the area reflects a trend towards fewer and smaller families, who typically produce less waste on a per-person basis. This indicates that, unless there are significant cultural and behavioural changes, we are likely to see heavier overall consumption patterns in the area as the makeup of the population changes. An increasing population, tending to consume more per-person, could potentially drive growth in overall waste tonnage, including both household and commercial waste. Through this Strategy, we will prepare to manage any potential higher demand, while encouraging sustainable consumption to reduce waste on a per-person basis. This means our services will be equipped for the future, adaptable to the population's needs and aimed towards limiting the environmental impact of north London's waste.

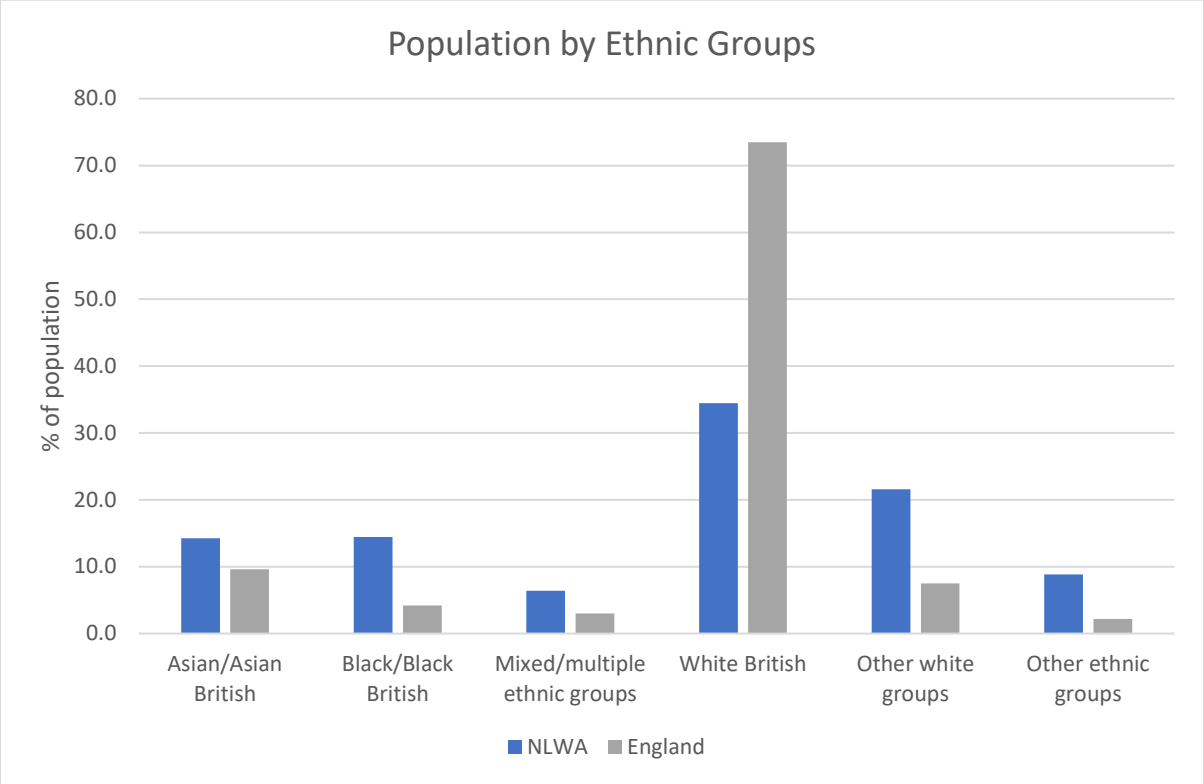
[5] Family spending in the UK - Office for National Statistics (ons.gov.uk)

Figure 7 – Current and future age profile of NLWA population (source: GLA)



The north London population also has a high degree of ethnic diversity and this is expected to increase as less populous ethnic groups grow. Figure 8 shows the current proportions of major ethnic groups in north London compared to London as a whole and England. As shown, significantly fewer north London residents identify as 'White British' than in the rest of England. For this Strategy to be successful, we must have a good understanding of these trends within our population and ensure that our work reaches and reflects the diverse communities within north London. For example, the diverse population means that north London is home to many different religions and cultures. Waste generation can vary significantly around religious and cultural holidays, and it is important we remain aware of this seasonal variation and manage it effectively. We will always look to understand our local context so that we can engage successfully with the population and help to overcome any potential challenges in communications or delivery of services.

Figure 8 – Proportion of ethnic groups (source: ONS Census 2021)



2.3 Deprivation

Indices of Deprivation (IoD) were produced by the Ministry of Housing, Communities and Local Government (MHCLG) as a means of comparing different areas of England by a variety of deprivation measurements. Data is ranked such that the lower the score, the greater the deprivation. The most deprived local authority ranks 1 and the least deprived 317.

Overall, the IoD highlights the relatively high levels of deprivation within north London - the overall ranking for north London is 70 out of 317. Barnet and Camden are the least deprived boroughs with rankings of 184 and 132 respectively, although both do contain significantly deprived areas. The most deprived borough is Hackney with an IoD ranking of 7. There is also a significant amount of local variation within each area. The boroughs in north London have a high degree of local variation and pockets of deprivation at a local level, even alongside more affluent areas.

The indices are made up of seven deprivation elements, relating to income, employment, health and disability, education, barriers to housing and services, living environment and crime. Of these, the rankings for north London are lowest for 'barriers to housing and services' and 'living environment', followed by 'income' and 'crime'. This indicates that it is within these domains which north London experiences the most acute deprivation.

Figure 9 – Index of Multiple Deprivation for north London boroughs (source: MHCLG)

	Income	Employment	Education	Health	Crime	Living environment	Barriers to housing & services	Local Authority Rank
Barnet	137	201	302	297	111	71	20	184
Camden	87	151	274	207	70	22	132	132
Enfield	30	92	141	221	84	53	5	59
Hackney	5	57	214	67	15	14	3	7

Haringey	31	83	184	154	9	17	9	37
Islington	17	63	244	82	13	13	27	28
Waltham Forest	43	111	155	161	46	19	6	45
North London average	50	108	216	170	50	30	29	70

Higher levels of deprivation in local authorities can be associated with lower recycling rates.[6] Some of the most commonly cited reasons for this include lack of storage space in areas with high-density or crowded housing, a more mobile population creating challenges for communication and engagement with services, and households affected by poverty having higher-priority concerns. More deprived areas also tend have less green space and fewer gardens, reducing the amount of organic waste that can be collected and contribute to recycling rates. These are fundamental, structural issues which create additional challenges for waste authorities in more deprived areas.

In planning our policies and services NLWA and the constituent boroughs will remain mindful of these issues and the challenges they can present. Through this Strategy, NLWA and our constituent boroughs will be working actively to engage all of our residents and deliver services that prevent waste and help to deliver a more circular economy in north London. Alongside this, we also hope to see improvements in economic wellbeing for our residents in the more deprived areas of north London, though this will depend on national policymaking and wider economic factors which are beyond our own control.

2.4 Housing

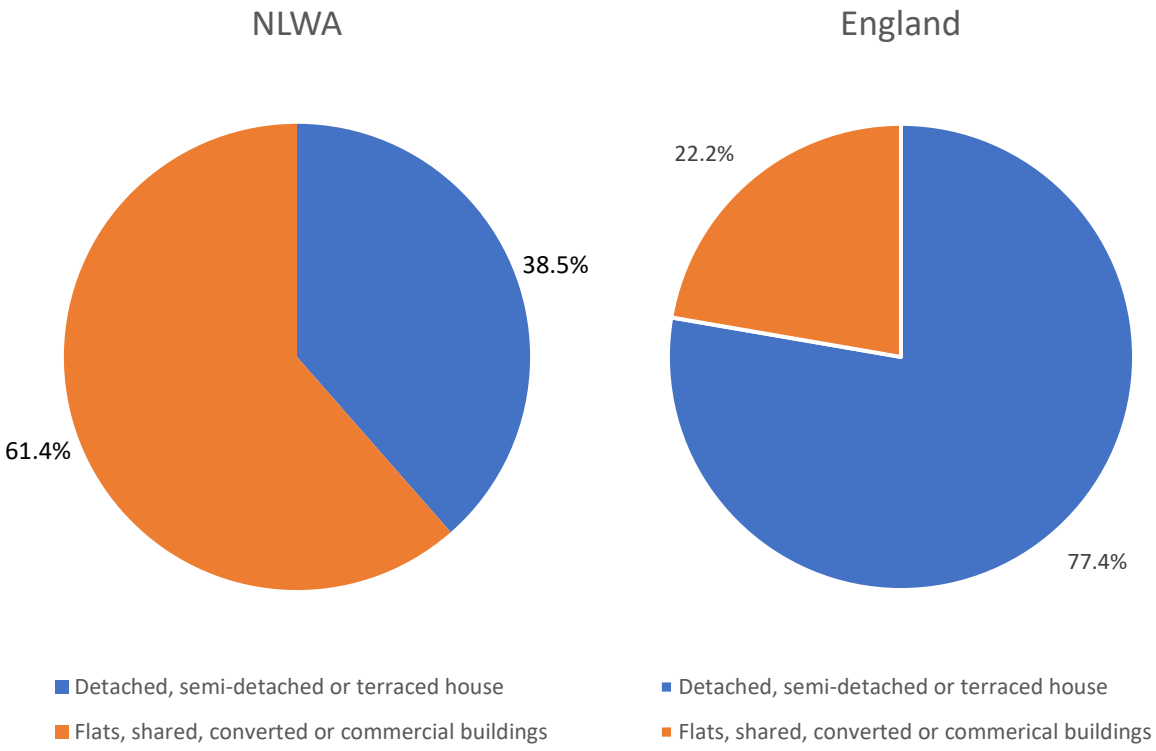
There are also changes taking place to housing demographics in the area, as regeneration schemes and new residential developments encourage more residents to move to north London. Across north London as a whole the predominant land use is residential housing, the majority of which are either flats or shared or converted accommodation.

Figure 10 shows the makeup of north London's housing stock in comparison to England and London. This demonstrates the low number of detached, semi-detached, and terraced houses compared to the picture nationally. In contrast the area has a large proportion of purpose-built flats (42.9%) and converted or shared houses (15.3%). The number of residents living in commercial buildings, including above shops is 1.6% - double the proportion reported nationally.

Flats tend to produce less waste per-household, while there is typically a higher recycling yield from houses with kerbside collections. Lack of internal storage space is a consistent issue which can impact recycling activities, which can mean, dense urban environments struggle to increase the amount of material their residents can recycle. The high proportion of shared housing shown above also includes significant numbers of houses in multiple occupation (HMOs) i.e. homes where multiple separate households share common facilities. These properties present additional challenges in terms of resident and landlord engagement and service provision.

[6] Analysis of recycling performance and waste arisings in the UK 2012/13; WRAP (2015)

Figure 10. Housing Types in north London and England (source: ONS Census 2021)



North London also has fewer properties with gardens than in the rest of England while gardens across London are also 26% smaller than the national average.[7] This contributes to relatively low quantities of garden waste. In more rural authorities, garden waste can contribute significantly to recycling rates but this does not apply in north London.

All north London boroughs are set to see a substantial increase in house-building following the adoption of the London Plan 2021. The London Plan has identified Opportunity Areas and Housing Action Zones in parts of north London including parts of the Lee Valley. The vast majority of new housing in north London is expected to be in flats, which may support our goal to reduce waste on a per-capita basis, but means we must remain aware of the challenges around collecting high quality and high volumes of recycling from these properties.

2.5 Conclusion

Looking back to the previous Joint Waste Strategy there have been many counteracting trends and developments in north London. Some of these have been helpful for waste management, while others have made delivery more complex. The makeup of the area heavily determines what can be achieved with regards to waste reduction and recycling and this will continue to apply for the period of this Strategy. We must work within the local context set out in this chapter, always ensuring we maintain a good understanding of local issues and deliver our environmental ambitions in collaboration with our community.

The area and its population will continue to change over the upcoming period, sometimes presenting new and unpredictable challenges. To ensure that the Strategy matches future changes in demography, NLWA and the constituent boroughs have agreed to continue to share demographic information where it is required for the Strategy's delivery and implementation. In development of

[7] Access to gardens and public green space in Great Britain - Office for National Statistics (ons.gov.uk)

this Strategy, we have produced forecasts and analysed the local area in detail. However, we simply cannot predict all of the complex social, economic and demographic trends that could affect delivery. As a result, our aim is to maintain a flexible approach and remain adaptable to all future developments in north London.

Chapter three: waste in north London

3.1 Waste streams

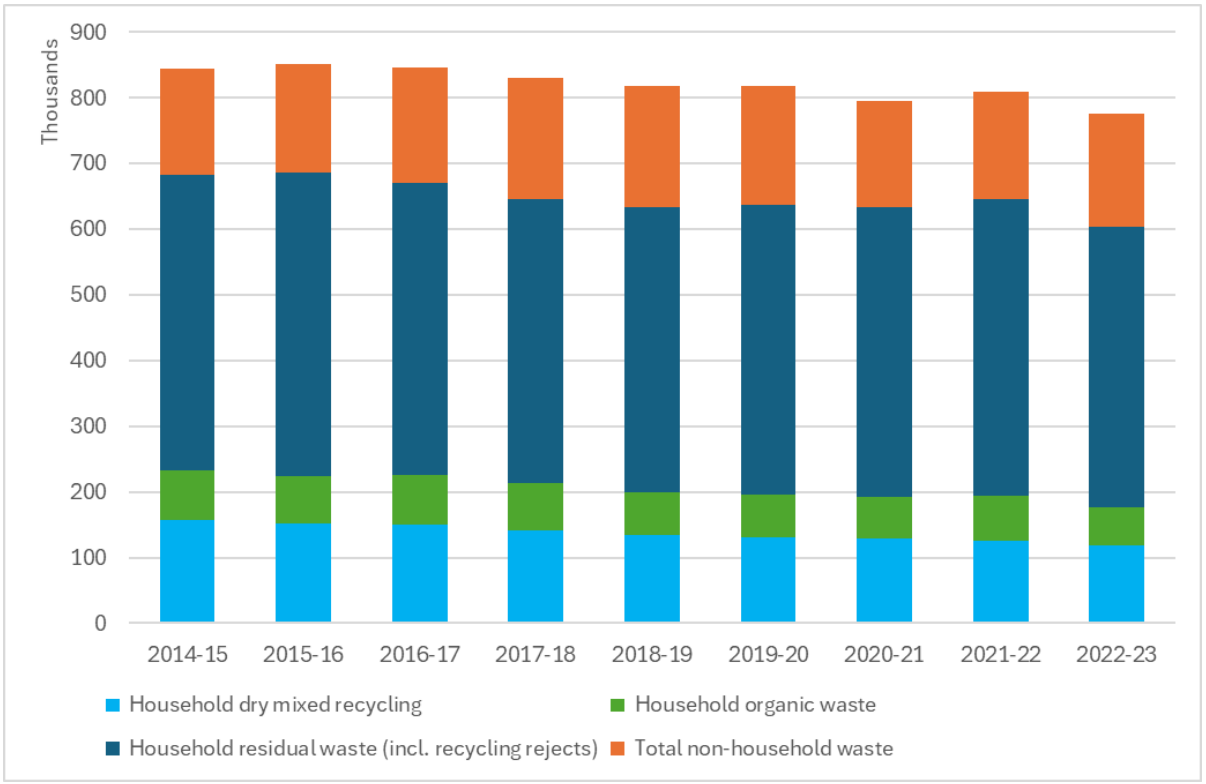
NLWA and the seven boroughs manage both household and non-household waste. All waste collected and managed by both parties which is the sum of household and non-household waste is referred to as Local Authority Collected Waste (LACW). Non-household waste includes waste collected under any commercial arrangements the boroughs have with local businesses to collect their waste, as well as fly-tipped waste collected by the boroughs.

In 2022-23, total LACW for NLWA and the boroughs was over 770,000 tonnes. Of this total, just over 600,000 tonnes was household waste. Figure 11 shows the long-term trend for LACW tonnages in north London after processing and treatment. This means the household residual waste statistics include a small percentage of waste that was initially collected for recycling but was not possible to recycle. These recycling rejects include items contaminated with non-recyclable residues such as food waste or non-recyclable material that has been incorrectly put in the recycling bin. Similarly, household recycling will include a proportion of waste initially collected as residual waste but actually recovered for recycling.

After processing and treatment, 118,195 tonnes of household DMR were sent for recycling or reuse in 2022-23. 58,433 tonnes of household food and garden waste (organic waste) were sent for recycling and composting. In 2022-2023, the percentage of household waste sent for recycling, reuse or composting in north London was 29.2%.

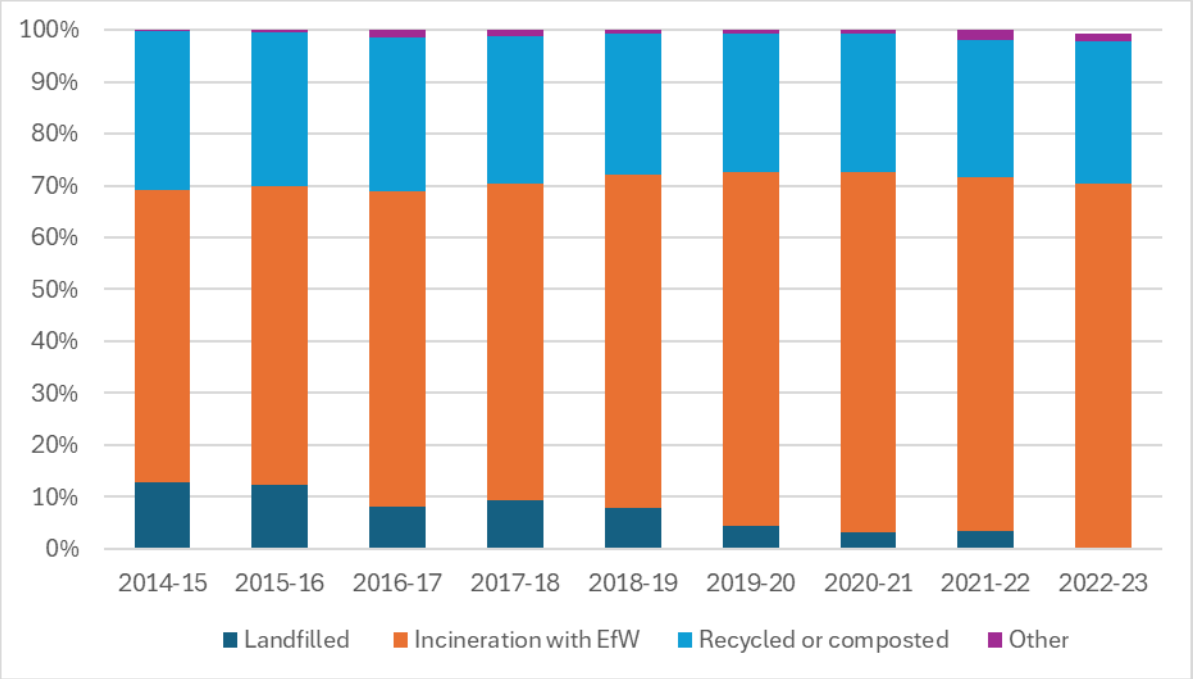
Figure 11 shows total waste processed in north London over the period 2014 to 2023, fluctuating around 800,000 tonnes since 2018-19.

Figure 11. Total Local Authority Collected Waste (LACW) processed 2014-2023



In 2022-23, 176,629 tonnes of waste were sent for recycling or composting. We have used the vast majority of the residual waste to generate energy and heat for north London. Over the years, we have successfully reduced the amount of waste sent to landfill and in 2022-23 this amounted to only 2,069 tonnes or 0.27% of total LACW. Figure 12 below shows this trend over the period 2014 to 2023.

Figure 12. NLWA waste management treatment (source: Defra)

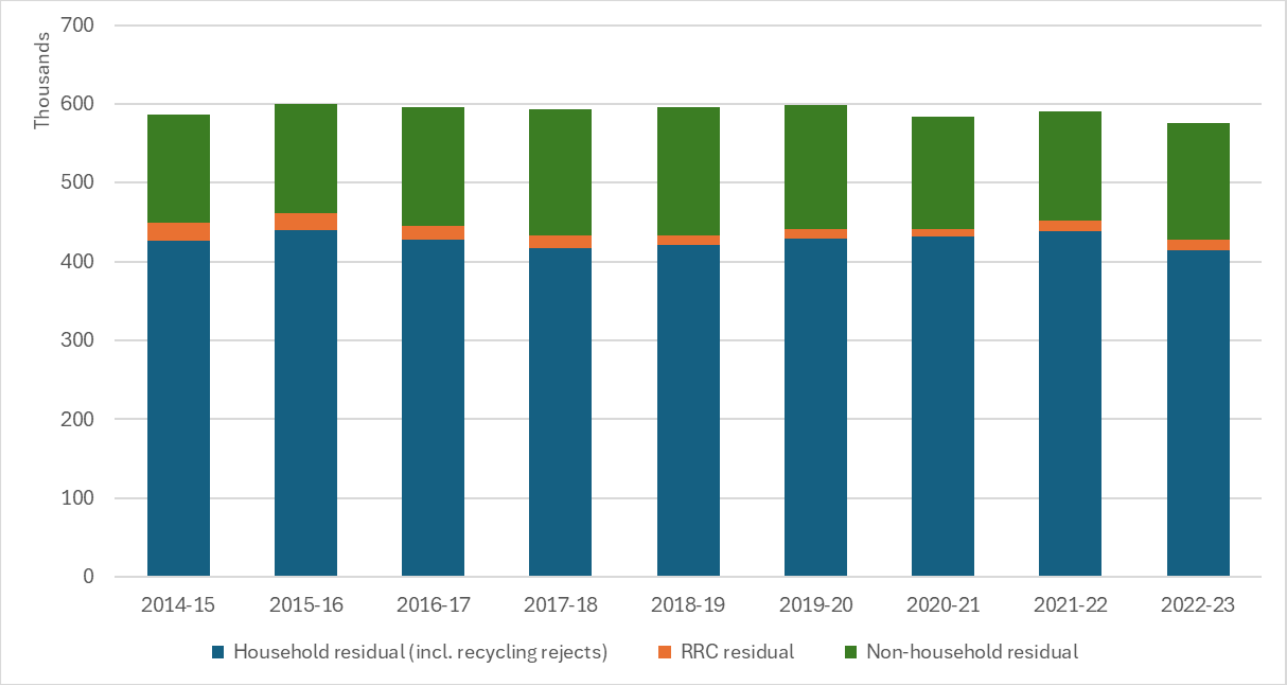


3.1.1 Residual waste

100 percent of north London residents receive a residual waste collection service. The frequency of this service varies by borough according to local requirements. Many north London residents use a communal service, for example those living in flats or shared housing. This limits the impact that changes to kerbside services, such as reducing frequency or limiting capacity, can have on overall residual waste tonnage in the area.

In 2022-23, 576,109 tonnes of residual waste were processed in north London. Figure 13 below shows the total amount of residual waste generated in north London from 2014-15 to 2022-23 including household, non-household and waste collected at RRCs. Total residual tonnage was affected by impacts on businesses and households during the Covid-19 pandemic which began in 2020. Since then, there has been some fluctuation in tonnages, with the increased cost of living potentially causing a slight downturn in household waste.

Figure 13. Residual waste tonnages 2014-2023



It is important to consider total waste tonnage in relation to population size. North London is already one the most densely populated areas in the country, and the population is expected to grow over the period of this Strategy at a faster rate than the rest of the UK. Figures 14 and 15 below show the trends for household waste tonnage on a per-capita basis. We will continue to focus on these population-based metrics as we look to prioritise waste reduction, as it is waste reduction which will bring about the greatest environmental benefits.

Figure 14 shows that household residual waste per capita for NLWA and the boroughs has stagnated but shown a reduction in 2022-23 on 2014-15 numbers. The slight upturn from 2021-22 is inflated by the 2021 Census which resulted in a drop in total population reported for north London. The lower population figure for 2022-23 contributes to a higher household residual waste per capita for that year compared to previous years (excluding 2021-22) despite a reduction in household residual waste tonnages. Overall, north London household residual waste per capita remains lower than that for England.

Figure 14 Household residual waste per capita, north London and England, 2014-2023

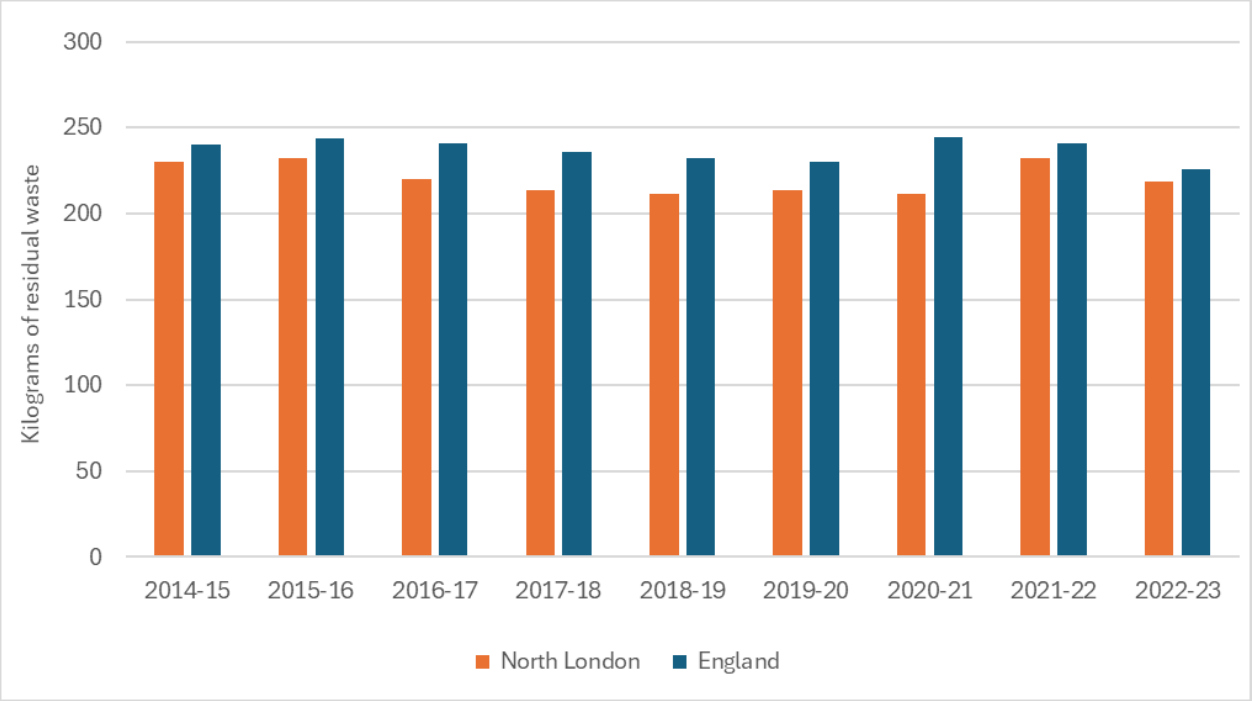


Figure 15 Total household waste per capita, north London and England, 2014-2023

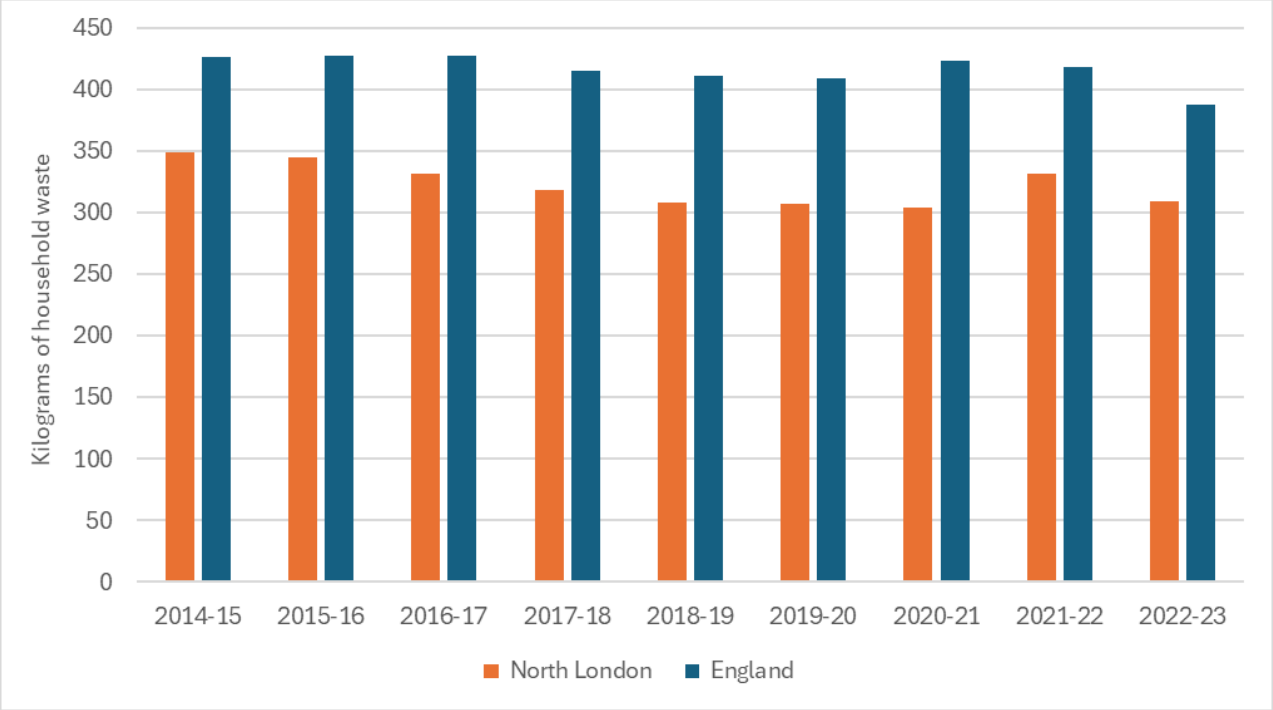


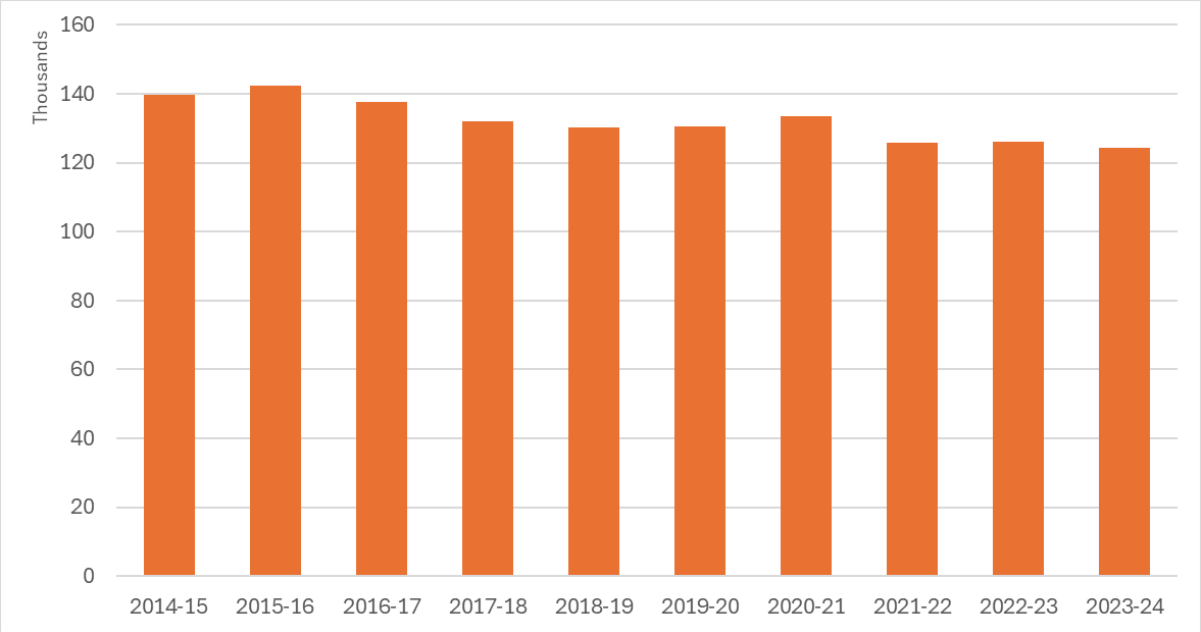
Figure 15 presents total household waste per capita for England and north London since 2014. Total household waste per capita in north London decreased by 45.4kg or 13% between 2014-15 and 2020-21. At a national level, there was only a reduction of 0.69% in the same period. In 2020-21, the north London number was 119.1kg lower than that reported for England. The north London numbers for 2021-22 and 2022-23 are skewed by the 2021 Census, as explained above.

3.1.2 Dry mixed recycling (DMR)

Dry mixed recycling (DMR) includes a variety of recyclable materials that are mixed for collection. Across the north London boroughs, it includes paper, cardboard, plastic, metal and glass. The constituent boroughs collect this through a co-mingled service. Figure 16 shows a reduction in processed household DMR tonnage for north London since 2014. DMR materials are susceptible to economic conditions and are impacted by changing consumer purchasing habits, potentially impacted by cost of living. More recently, producers are favouring lighter material in response to consumer demand and in preparation for the upcoming changes to packaging legislation.

We will aim for this Strategy to help increase recycling in north London, but this will be within the context of an overall aim towards reducing waste.

Figure 16 Total dry recycling tonnage received by NLWA 2014-2023



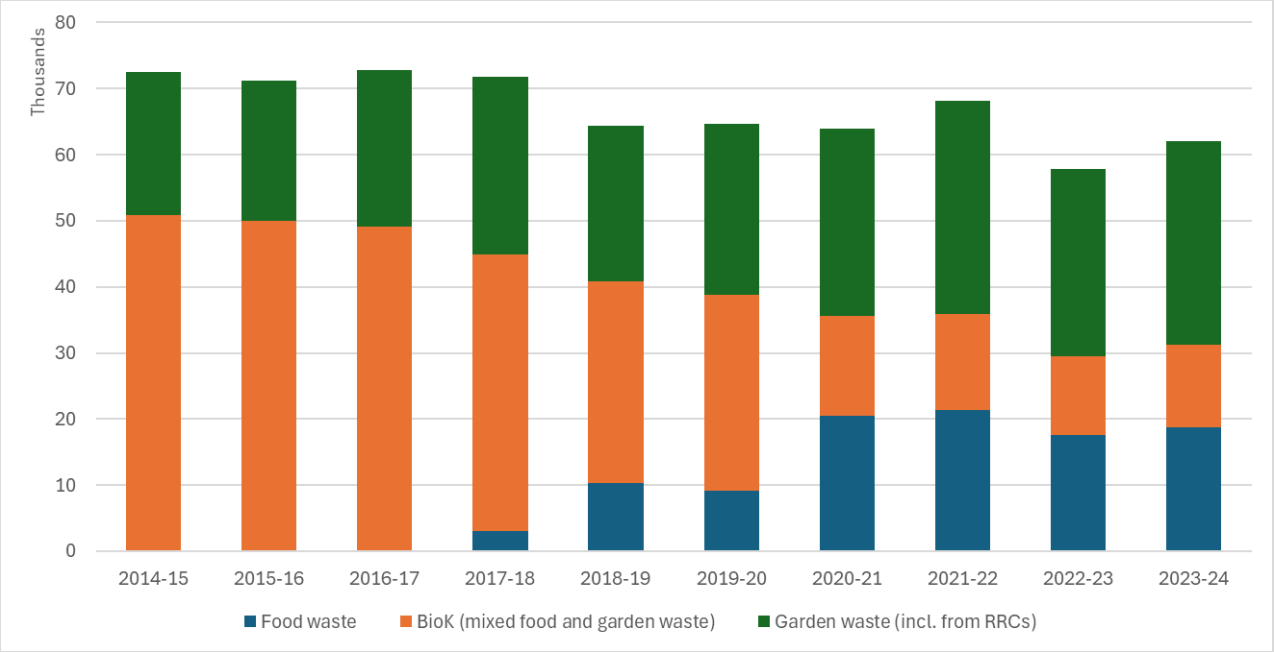
3.1.3 Organic waste

Organic waste, as shown in figure 17, comprises three categories in north London: food waste, garden waste and garden and food waste combined (known as 'BioK').

Garden waste is collected by the constituent boroughs who can opt to charge for this service. Residents are also encouraged to use other methods to dispose of garden waste. Firstly, via home composting garden waste (cuttings, trimmings, plants, branches and other garden waste which can be composted). Alternatively, residents can also take their garden waste to any of north London's RRCs. Some north London boroughs collect food waste and garden waste together. The new Simpler Recycling arrangements allow the constituent boroughs to continue to collect this waste combined. However, figure 17 shows that BioK tonnages in north London have reduced since 2014 with more separate food waste being captured for recycling.

Compared to the national average, north London collects and recycles less organic waste. This can largely be explained by the limited number of properties with gardens in the north London area. This is also a limiting factor on north London's overall recycling rate, as the quantity of garden waste present in other areas is simply not available in north London.

Figure 17 North London organic tonnage 2014-2023



3.1.3a Food waste

Many of the constituent boroughs offer food waste services to suitable properties and during this Strategy period, all boroughs will roll out a food waste collection service to all properties in line with national policy changes.

Figure 17 shows the total tonnage of LACW organic waste (split into food, garden, and combined food and garden 'BioK') collected for north London since 2014. We can expect food waste tonnage to increase in the coming years as more collections are rolled out across the area.

3.1.4 Waste electrical and electronic equipment (WEEE)

Residents delivered 2,502 tonnes of WEEE to our network of RRCs in 2022-23, an increase of 195 tonnes to 2021-22. NLWA also provide a kerbside service for the collection of larger WEEE items. Five of the seven constituent boroughs currently make use of this service. In 2022-2023, this service collected almost 78 tonnes of WEEE, an increase of 26 tonnes on the previous year. A further 26 tonnes was collected via local bring banks, and some of the north London boroughs also provide a collection service for small WEEE items.

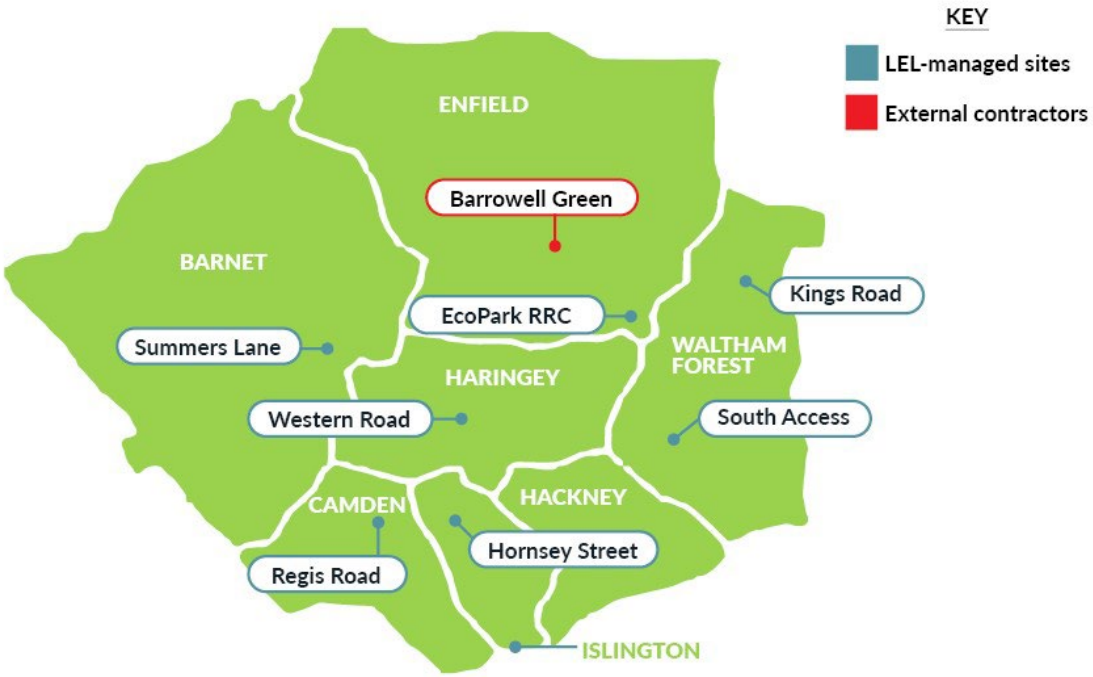
3.1.5 Household collections

As Waste Collection Authorities, the seven north London Boroughs have a statutory duty to provide collection services and street cleaning. Each borough determines the frequency of their household collections depending on their local requirements. If these services change, boroughs undertake significant consultation and communication with their residents. We also undertake trials to understand practical implications and take lessons from new developments and best practice across the sector. The north London boroughs either employ waste management contractors or their own staff to deliver their collection services. Waste collection service contracts are integrated with other collection service contracts where this can be demonstrated to offer best value. As the Waste Disposal Authority, NLWA is required to make arrangements for the final disposal of all household and commercial waste collected by the north London Boroughs.

3.1.6 Reuse and recycling centres

There are currently eight reuse and recycling centres (RRCs) across the north London area. NLWA are responsible for running seven of these (via LondonEnergy Ltd.) including the newly opened facility at the Edmonton EcoPark, while the Barrowell Green site is operated by Enfield Council. These sites are available for residents to use free of charge to deposit a wide range of materials for reuse, recycling or disposal. All north London residents may utilise the sites regardless of which of the boroughs they reside in. Three of the RRCs are also available for businesses to pay to use through a direct arrangement with the operator of the sites, and the new site at the EcoPark will accept both residential and commercial waste.

Figure 18. Map of north London Reuse and Recycling Centres



The RRCs take a wide range of items which can be sent for reuse, recycling or disposal including 29 separate waste streams which are accepted at the new Edmonton centre. Items which are reusable are sold at the ReUse Shop at King's Road RRC.

Approximately five percent of our total waste arisings in 2023-24 was processed through the RRCs. NLWA-managed sites dealt with 39,402 tonnes and 72% of all materials were recycled, reused or composted.

3.1.7 Chargeable services

3.1.7a Bulky waste

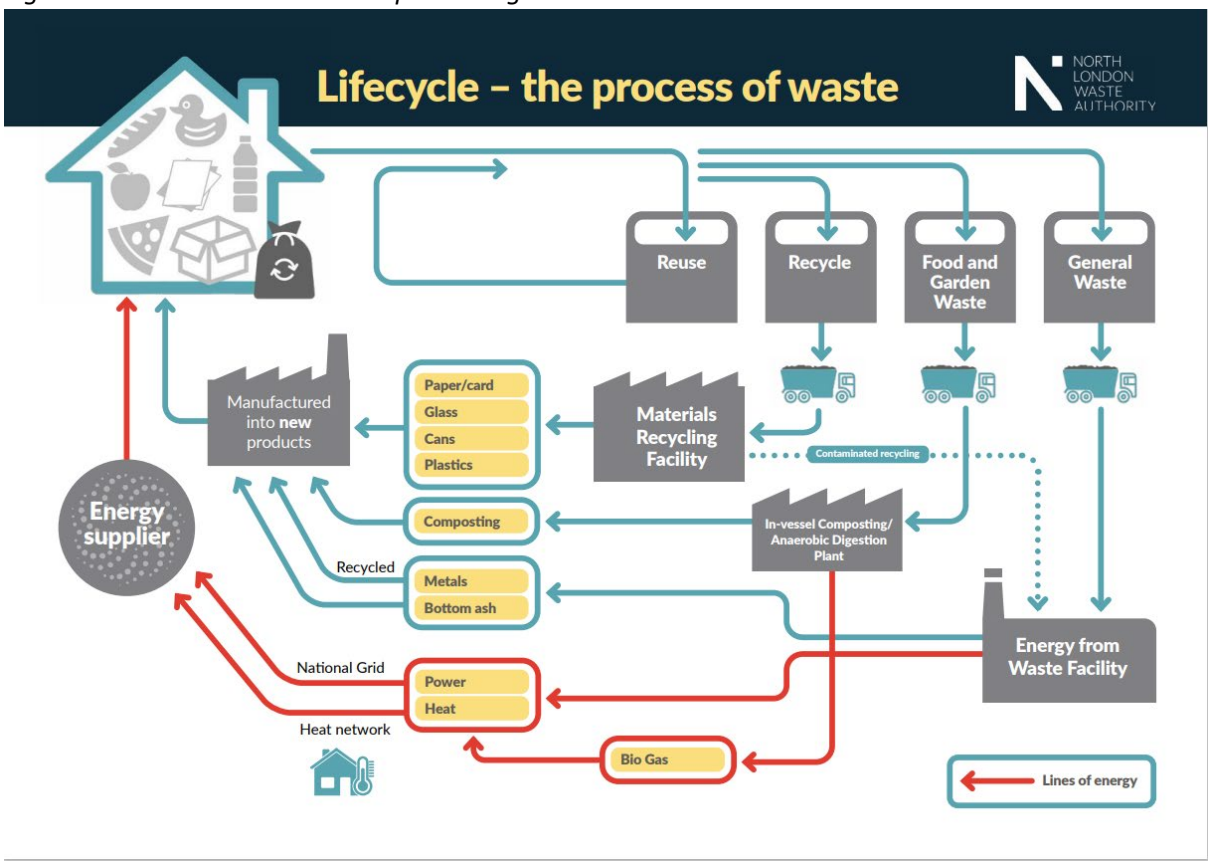
Residents can arrange for the collection of larger items - this is known as a bulky waste collection. Each constituent borough has its own service in place for its residents. Boroughs can opt for this service to be chargeable, often with a minimum collection fee. The types of items that can be collected include domestic furniture, appliances (televisions, fridges, freezers, washing machines) or other large items.

3.1.7b Commercial waste

Commercial waste is treated differently to household waste, as any property/business that is commercially rated must pay for the removal of their waste by a licensed waste carrier. The constituent boroughs will collect this waste for a fee. We would encourage more local businesses to take up this service for the environmental benefits it could bring, as discussed in section 7.9.

3.2 Current operations

Figure 19. Waste collections and processing overview



3.2.1 Collections and processing

Waste and recycling are collected from the homes and businesses of north London by the constituent boroughs or are received at one of the Reuse and Recycling Centres. From there, NLWA manage and process the material, using contractors within the process where appropriate. NLWA ensure that north London has the appropriate infrastructure in place to manage the waste collected by the seven boroughs, to recycle as much of it as possible, and to dispose of the rest in the most suitable way. This section gives an overview of the current system, but our approach and our network of facilities is continually open to review and will evolve to ensure we continue meeting the needs of the north London community.

Waste is taken either to the Edmonton resource recovery facility or a local waste transfer station to be sorted and transferred for recycling, composting, reuse or energy recovery. The use of waste transfer stations brings economic and environmental advantages, ensuring that we can manage waste in the local area as efficiently as possible. Recycling is sent to a materials recycling facility and residual waste is processed at the Edmonton energy from waste facility. We are currently redeveloping the Edmonton EcoPark and building the greenest energy recovery facility in the country to replace the old site, as well as modern recycling facilities.

3.2.2 LondonEnergy Limited

LondonEnergy Limited is a company wholly owned by NLWA, which manages and operates the Edmonton Energy from Waste Facility, seven Reuse and Recycling Centres (including the new RRC at the EcoPark) and three waste transfer stations. NLWA and LEL work closely together to deliver cost effective and environmentally sustainable services. This relationship ensures that NLWA, the constituent boroughs, and north London residents, have the benefits of publicly owned assets with a focus on providing services for the community.

NLWA has a contract with LEL for the disposal of wastes collected by the north London Boroughs. LEL is publicly owned with NLWA as the only shareholder. This means the business operates entirely for the benefit of north London, and not for the profit of external shareholders. The contract has no minimum tonnages that must be delivered for disposal, which frees the north London constituent boroughs to reduce, reuse, recycle and compost as much rubbish as they wish with no financial penalty. The contract, and our relationship with LEL, also allows us flexibility to maximise any opportunities for environmental benefits such as moving towards lower carbon vehicles and operations.

As the sole shareholder of LEL and owner of the Energy from Waste facility, NLWA ensures that the funds generated by energy from the Edmonton EcoPark are reinvested into public services for residents.

3.3 Waste composition

To prepare this Strategy, NLWA and the constituent boroughs have analysed north London's household waste composition. For the analysis of kerbside waste, between three and five samples of waste were selected for analysis. These were based on differing socio-demographic categories. Each sample was formed from the waste presented by a target of 50 selected households. In total, waste samples were taken representing a target of 2,600 households. A total of 17,724kg of residual waste was collected for analysis.

A key finding was that food is the single largest component of our residual waste, making up 32% of the total. Of this food waste, 74% is classified as avoidable, meaning that it was, at some point prior to disposal, edible. 33% of all the discarded food is found to still be in its packaging. This means a significant amount of food which could have been eaten, is instead currently going to waste disposal. This is at a cost to all eight authorities and our residents, and leads to greenhouse gas emissions which could be avoided by preventing that food waste, or recycling it where it is unavoidable.

Paper made up 10% of the residual waste; 23% of this was alternatively recyclable at the kerbside. Plastic items made up 13% of the residual waste; 31.5% of this was alternatively recyclable at the kerbside. In total, 39% of the residual waste at kerbside could have been recycled using existing services.

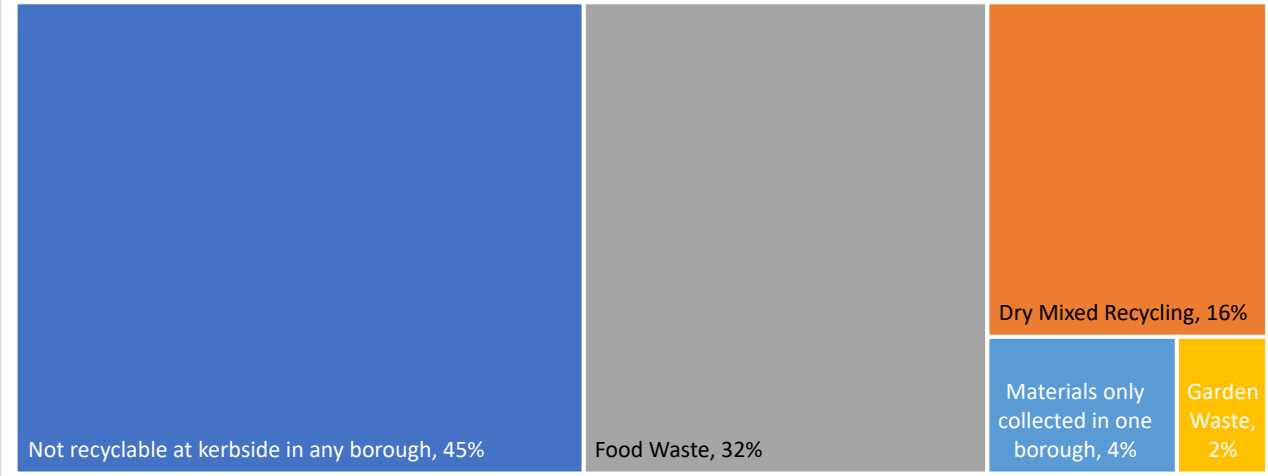
These findings highlight the need for continued waste prevention and engagement with residents to drive behaviour change. Soon, all households in north London will have food waste collections alongside the current dry mixed recycling services. Success in reducing our residual waste will depend on public participation in these services so NLWA and the boroughs will work with the community to promote recycling and to encourage sustainable behaviour, including reductions in food waste.

An average of 1.3kg/hh/wk of total residual waste was due to packaging materials; 18.8% of the total. The upcoming extended producer responsibility scheme, if successful, should incentivise

businesses to reduce this waste and help to ensure more of it is captured for recycling so we hope to see more progress and successful implementation of that scheme over the coming period. On the other hand, relatively little of our residual waste (1.3%) is covered by the upcoming deposit return scheme for drinks containers. This policy is more likely to divert material which is already in our dry mixed recycling. More on the effects of these and other related policies is discussed in chapter three.

Full details of the waste composition analysis will be published in due course and the findings will inform the implementation of this Strategy. Over the course of the Strategy we will also produce new composition analysis at regular intervals, so that all eight authorities can make fully informed policy and service decisions and we can properly assess our progress towards the targets of this Strategy.

Figure 20. Composition of NLWA kerbside residual waste and its recyclability



3.4 Understanding the future of waste in north London

In line with future changes to the north London boroughs, NLWA and the constituent boroughs need to understand what the waste they collect and manage might look like in the future. Modelling has been undertaken to inform this strategy, and to help forecast the changes we could see to north London's waste in future. We are dealing with a very uncertain world with a lot of factors outside of our control, so while we don't know which (if any) of these future scenarios we will be working within, we must understand and prepare for the range of possible outcomes. We continue to work through economic uncertainty, while an example like the Covid-19 pandemic demonstrated how sudden events can change normal patterns and have lasting effects at a local, regional, national and international level.

The waste projections analysis considers population growth, local and national policy drivers, economic changes and other relevant factors to look at what could influence the levels of waste that will be generated in north London in the future. These scenarios considered the effects of government policy changes in the Environment Act and the Resources and Waste Strategy (e.g. Simpler Recycling, Deposit Return Scheme and Extended Producer Responsibility). The analysis allows us to understand how these legislative changes could impact on waste in north London, as discussed in Chapter 3. These results provide our best estimate of the impact of known policy changes, but we cannot fully predict the complex effects these changes will have so we will continue to monitor changes to our streams over the coming years. We must also allow for the likely development of additional policies in future, which have not been captured or accounted for in our current models.

Five projections were developed to show the possible range of arisings and recycling rates that we may need to manage in future. This includes high, medium and low waste growth scenarios, as well as additional projections to demonstrate hypothetical 'best practice' and the trajectory of the Mayor's regional targets for recycling. These projections are comparable to those chosen by other authorities that have produced joint waste strategies, and give a broad picture of the likely scenarios which could come into play in the future, ensuring all possible outcomes are covered and given full consideration in this strategy. None of the scenarios represent a predicted or desired outcome, but collectively illustrate a plausible range which NLWA and the boroughs will plan for in future. The modelling presented here will provide insights to underpin policy and service planning for the period of the Strategy. The five projections are as summarised as follows:

- Projection **A** represents the **High Waste Growth** scenario. This maintains current arisings per household recycling performance and shows the effects of population growth, changes to housing stock and waste increasing in line with national economic growth.
- Projection **B** shows effects of **Consumer Change**. Projected waste growth is moderated by changed buying habits, the potential effects of austerity and higher cost of living, as well as some impact of policy changes such as Simpler Recycling. This is a moderate tonnage growth scenario.
- Projection **C** is a low tonnage scenario depending on **Resource Efficiency**. In this projection, resource productivity is doubled to keep materials in use for longer, combined with changed buying habits and the full potential impact of government waste reforms.
- Projection **D** models **Maximum Recycling**. Conditions for waste arisings are the same as projection **C** and combined with the effects of the theoretically best possible recycling e.g. through increased participation, and minimum contamination.
- Projection **E** demonstrates the Mayor of London's **Regional Targets** for recycling rates. While this does not represent a practical roadmap to achieving the targets, the projection is included in the model to shows the trajectory that would be required and the potential impacts on waste arisings.

The complete set of factors applied within each projection are detailed in the table below and discussed further in appendix one.

Projection	Detail
A: High Waste Growth	**GLA population projections:** As the key driver for growth (kg/ person) **Changes in housing stock:** All new properties are assumed to be flats. Future yields adjusted to reflect lower levels of recycling and higher residual waste per person from flats **Economic growth:** All waste streams grow in line with GDP
B: Consumer Change	As Projection A plus allowance for: **Economic growth:** GDP impacts for trade waste only **Austerity / Cost of Living impacts:** Waste reduction impacts as evidenced by the last recession, lasting approximately 5 years **Changing buying habits:** Increased WEEE arisings & recycling, reduced paper consumption **EPR measures and Consistent Collections**: Food waste collections, effect of packaging EPR on residual and dry recycling streams
C: Resource Efficiency	**GLA population projections:** As the key driver for growth (kg/ person) **Changes in housing stock:** All new properties are assumed to be flats. Future yields adjusted to reflect lower levels of recycling and higher residual waste per person from flats **No changes due to economic growth:** No increase due to GDP **Doubling resource productivity:** Waste reduction measure as materials are used for longer, focus on reuse

	Austerity / Cost of Living impacts: Waste reduction impacts as evidenced by the last recession, lasting approximately 5 years **Changing buying habits:** Increased WEEE arisings & recycling, reduced paper consumption **Full impacts from DRS & EPR measure:** Effect of packaging EPR and DRS on residual and dry recycling streams
D: Max Recycling	**GLA population projections:** As the key driver for growth (kg/ person) **Changes in housing stock:** All new properties are assumed to be flats. Future yields adjusted to reflect lower levels of recycling and higher residual waste per person from flats **No changes due to economic growth:** No increase due to GDP **Doubling resource productivity:** Waste reduction measure as materials are used for longer, focus on reuse **Austerity / Cost of Living impacts:** Waste reduction impacts as evidenced by the last recession, lasting approximately 5 years **Changing buying habits:** Increased WEEE arisings & recycling, reduced paper consumption **Full impacts from DRS & EPR measure:** Effect of packaging EPR and DRS on residual and dry recycling streams **Increased recycling performance to best practice urban levels:** Increased recycling performance from reduction of rejected loads, increased participation and increased recycling of trade, street litter and RRCs
E: Regional Targets	**GLA population projections:** As the key driver for growth (kg/ person) **Changes in housing stock:** All new properties are assumed to be flats. Future yields adjusted to reflect lower levels of recycling and higher residual waste per person from flats **No changes due to economic growth:** No increase due to GDP **Doubling resource productivity:** Waste reduction measure as materials are used for longer, focus on reuse **Austerity / Cost of Living impacts:** Waste reduction impacts as evidenced by the last recession, lasting approximately 5 years **Changing buying habits:** Increased WEEE arisings & recycling, reduced paper consumption **Full impacts from DRS & EPR measure:** Effect of packaging EPR and DRS on residual and dry recycling streams **Mayor of London / GLA Targets delivered:** LACW recycling rate of 50%, Household recycling rate of 45% by 2025, 65% MSW recycling rate target for London by 2030

Figure 21 shows the total waste arisings forecast by the model in each projection. This provides some insight into the total amount of waste that might be generated by the growing population of north London in future. The High Growth scenario (A), has the highest forecast tonnage due to the assumptions around economic growth and lack of any waste minimisation effects. In the Consumer Change scenario (B), the growth in total waste is moderated by the waste minimisation effect of austerity and varying assumptions on the effect of economic growth compared to scenario A. The Resource Efficicency scenario (C) gives a flat growth profile due to a lack of any GDP-driven growth paired with austerity and changed buying habits, as well as full impacts of government policy and waste minimisation introduced with a doubling of resource productivity. Projections D and E vary from C only with regards to recycling, so the overall waste arisings shown on the graph are identical.

Figure 21 Projected Waste Arisings to 2050 (Scenarios A-E)

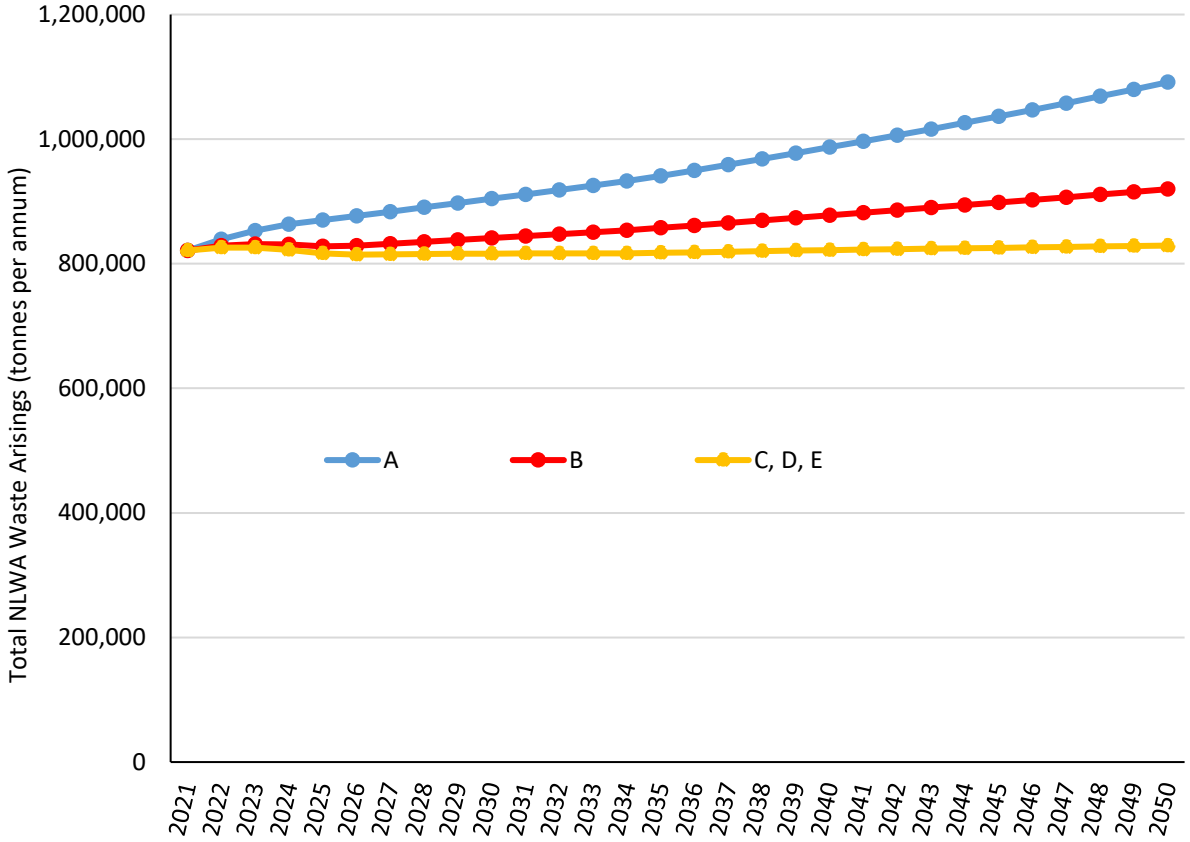
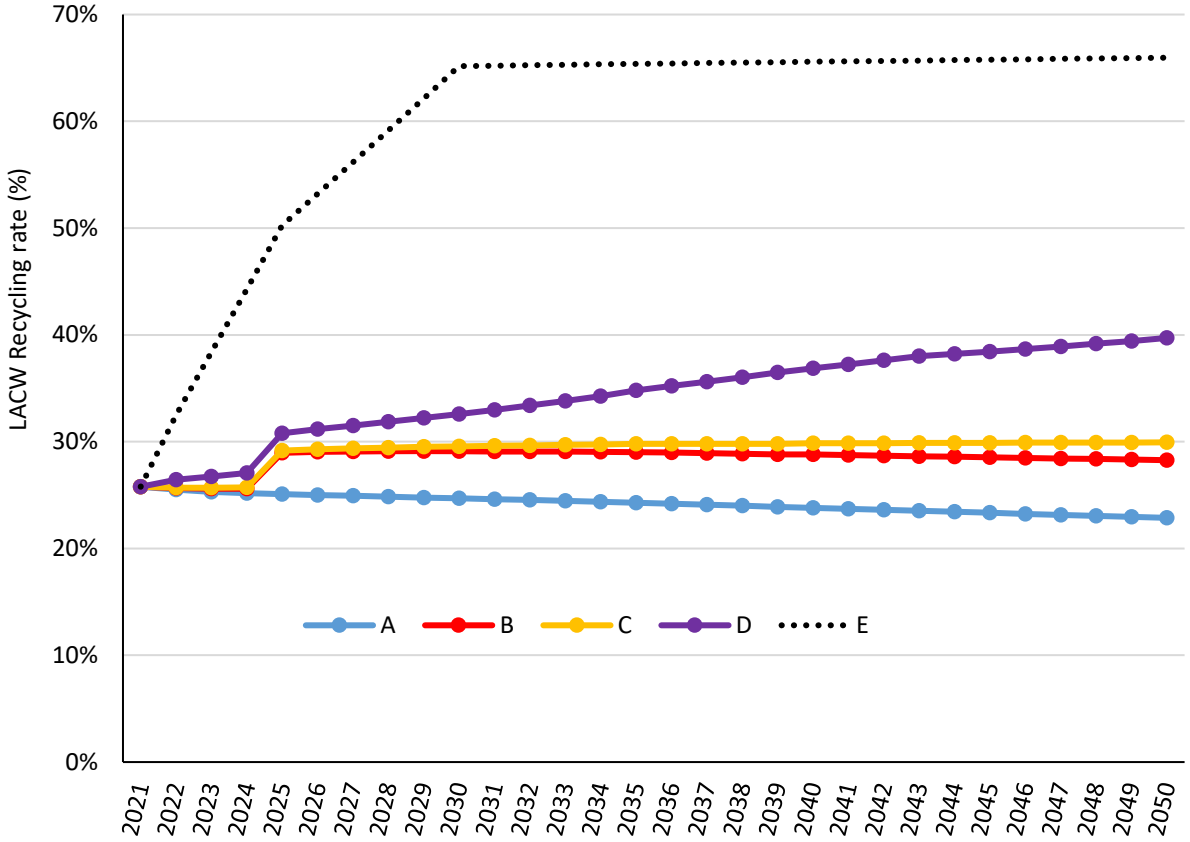


Figure 22 shows the effect of each scenario on recycling rate. The slight drop in the High Growth scenario (A) occurs as the GDP-driven growth assumption also increases tonnage of non-recycled waste. The Consumer Change scenario (B) introduces the positive effects of policy changes, for example new food waste collections in some boroughs, which helps to increase the projected recycling rate. In the Resource Efficiency scenario (C), the full suite of DRS & EPR measures paired with doubling resource productivity and lack of GDP-related growth helps improve the recycling rate. It should be noted that some of the policies included within the model have now been delayed, so in practice the beneficial impacts will not apply until later years. The Maximum Recycling scenario (D) shows the increases of Scenario C, alongside additional effects of decreasing rejected loads, increasing public participation and recycling more trade and RRC waste. Due to the nature of north London's housing stock, particularly the high proportion of flats and the low number of gardens, opportunities to transform the recycling rate are fairly limited. Using best possible assumptions on participation and contamination, this model forecasts a recycling rate of around 40%. The Regional Targets projection (E), simply applies the Mayor of London's targets to all waste streams in order to illustrate the proposed trajectory of the recyling rate if those targets were achieved.

Figure 22 Projected recycling rates to 2050 (Scenarios A-E)

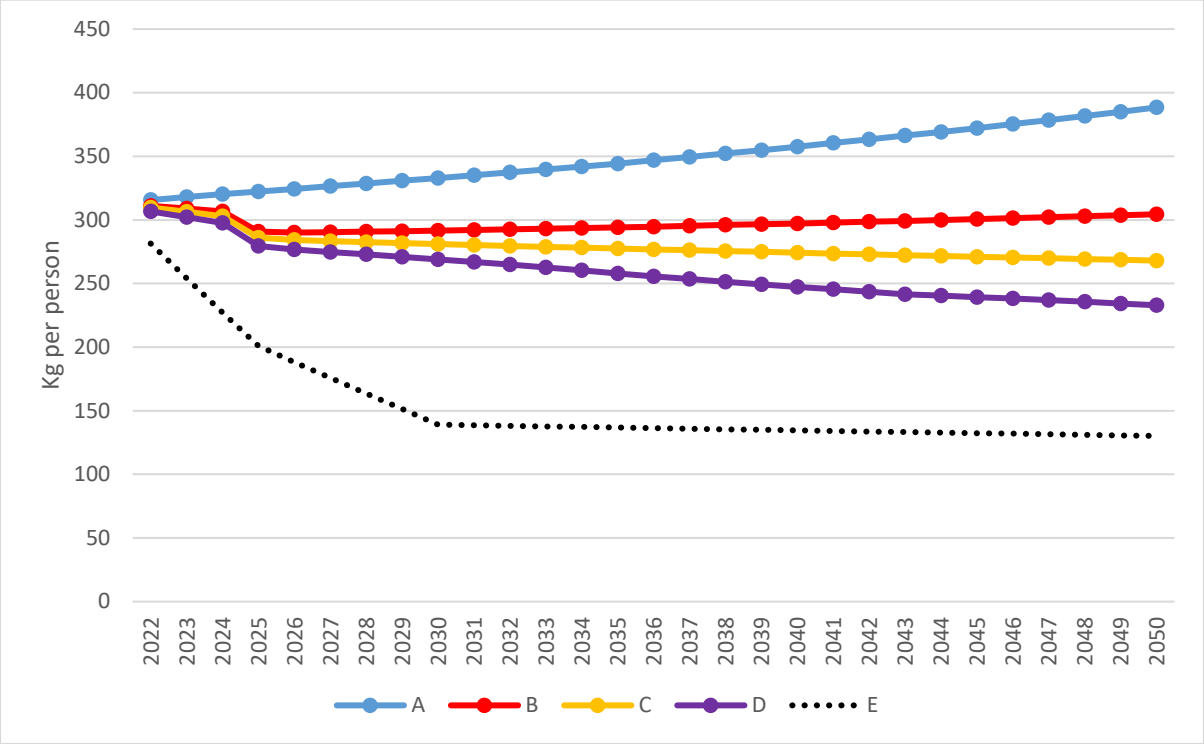


The modelling has shown that population growth is the largest driving factor behind increasing waste tonnage. Over the course of the Strategy, north London's population is projected to grow faster than the national and London average, so it is prudent to assume that this ongoing increase in population may increase the total waste generated. It will be crucial to monitor this on a per-capita basis, so we can understand how waste prevention activities can be effective, even while overall tonnages could increase in line with the growing population. The government also has a national target to achieve 287kg of residual waste per person[8] by 2042.

Taking into account the forecasted arisings and recycling rates, figure 23 shows the residual waste per person in each scenario. Only the high waste growth scenario (A) shows increased waste per capita. In the other scenarios, the positive effects of policy change, changed consumer habits and resource efficiency would help to reduce waste arisings on a per capita basis. This is most pronounced in projection D, where the projected increases to recycling would divert material from residual waste. Again, projection E models the Mayor's recycling target and is included to demonstrate the impact this would have on waste per capita if achieved.

[8] Government definition of residual waste includes all non-household waste, except 'major mineral waste' Estimates of Residual Waste (excluding Major Mineral Wastes) and Municipal Residual Waste in England - GOV.UK (www.gov.uk)

Figure 23 projected residual waste per capita (scenarios A-E)



We will use the analysis we have produced for development of this Strategy to plan and prepare ourselves so that we are able to respond to a changing and unpredictable environment. While none of these projections can perfectly predict the future, we will ensure that our services are resilient enough to cope with a range of different scenarios and unforeseen circumstances. The different scenarios show significant variation in projected tonnage therefore it is important that we prepare for a range of different tonnage scenarios, as we will remain obligated to manage the total quantity of waste produced in north London and collected by our constituent boroughs.

3.5 Modelling alternative collection options

Extensive modelling has also been undertaken to understand what waste collections in the area may look like in the future, and how different options are likely to perform regarding recycling rates, costs and carbon emissions as well as a range of qualitative features. This will inform how improvements can continue to be made to recycling and collection services over the period of the strategy.

The full analysis can be seen in the Options Appraisal at appendix two. The alternative options which have been modelled as part of the Options Appraisal are outlined in the table below. A baseline based on 2021-22 has been modelled for each borough to provide a summary of the current collection service operated in each area, and to provide a basis to compare each of the alternative collection options against.

	Baseline 2030	**Option 2**	**Option 3**
	Baseline in 2030 *+ separate food waste collections, DRS/EPR, simpler recycling*	***Twin stream, year: 2021/22*** *+ separate food waste collections, DRS/EPR, simpler recycling*	***Multi stream, year: 2021/22*** *+ separate food waste collections, DRS/EPR, simpler recycling*
Dry recycling	As per current service, based in 2030.	Alternate weekly twin stream collection (1: paper	Weekly multi stream collection (1: paper / card, 2: cans, plastic

		/ card, 2: mixed plastic / metal / glass) via 2 wheeled bins.	bottles and pots, tubs and trays, 3: glass) via 3 boxes.
Garden waste	As per current service, based in 2030.	As per current service.	As per current service.
Food waste	Separate food waste collection for all properties, where not already provided, including flats.		
Residual waste	As per current service, based in 2030.	As per current service.	As per current service.

The criteria with which each of the options are assessed was agreed during a workshop with council officers on 12th May 2023. The agreed criteria are as follows:

- Recycling Performance – as modelled, using agreed assumptions
- Cost – developed through collection costs derived from modelling tools, in addition to cost information from the councils and notional recycling, treatment and disposal costs based on industry data
- Carbon – as modelled through the Mayor of London's Emissions Performance Standard tool
- Operational Flexibility – considers how future proofed the service is in relation to vehicle and container requirements
- Public Acceptability – an assessment of how each option will be / is accepted by the householder, this considers the level of change required by residents and the number of containers required
- Alignment with National Policy Direction – considers how well each option aligns against proposals within the national Resources and Waste Strategy and Simpler Recycling
- Social Value – access to a full recycling service, job creation and any other wellbeing or community benefits
- Deliverability – considers the operational changes and resourcing required to deliver the options

Overall, it was found that each different collection option has its own merits and assessment of a preferred option should consider the relative importance each of the criteria to the boroughs when planning collection services. While some options might be expected to provide slight increases to recycling performance, this must be weighed against the other criteria such as higher costs, carbon impacts, or other practical considerations. For full discussion of the results please see the report at appendix two.

This modelling was undertaken in consultation with the constituent boroughs but the results presented reflect the results as a single picture for the north London area overall. In practice, all of the boroughs have individual circumstances, so the results cannot necessarily be overlaid onto individual boroughs who will take decisions on collection services in accordance with their local requirements. The analysis will help inform those decisions and enable NLWA and the boroughs to put in place evidence-based policy and services over the Strategy period.

3.6 Conclusion

The data discussed in this chapter gives a picture of the current levels of waste produced in north London, and our approach to managing the various material streams. The historical trends highlight some of the difficulty achieving a significant reduction in waste tonnages, as trends are fairly stubborn over the long-term. Reduction will require significant change from government, businesses

and individuals, as we must aim for sustainable consumption levels and a more circular economy which keeps resources in use for longer before becoming waste.

Our projections show that while population growth and associated housing development (particularly in flats) may result in increased overall waste, the increasing tonnage can also be limited by economic conditions, consumer behaviour and national policy. While we will play our part in minimising waste and increasing recycling, we will also call for action from government, industry and individuals to change nationwide behaviours. Achieving a reduction in waste will depend heavily on central government action, as well as consumer habits changing. We will continue to campaign for the policy and legislative change which will support the transition to a low waste future. Change is also required from industry, as businesses have a key role to play in developing a more circular economy. Growth in waste may also be somewhat moderated by increases in prevention, reduction and recycling activities across the waste streams managed by NLWA and the boroughs. We will therefore continue to prioritise waste prevention activities and services, and will support efforts across society to move towards a future where waste is reduced and recycling, reuse, composting and repair are increased to the highest possible levels.

Our forecasts also highlight the sheer uncertainty in the waste sector at this moment in time and emphasise the need to prepare for many different and complex challenges. Major policy reforms will be implemented in the coming years, we have tried to understand their impacts but will need to adapt as these become the new reality. We can also expect changes in behaviour as businesses and individuals respond, adding to the complex picture for waste generation and management in the coming years. In this context, we must equip ourselves to continue taking action at a local level and be prepared to manage north London's waste effectively in all possible scenarios including those modelled above, but this Strategy must also provide flexibility to respond to new and unexpected outcomes.

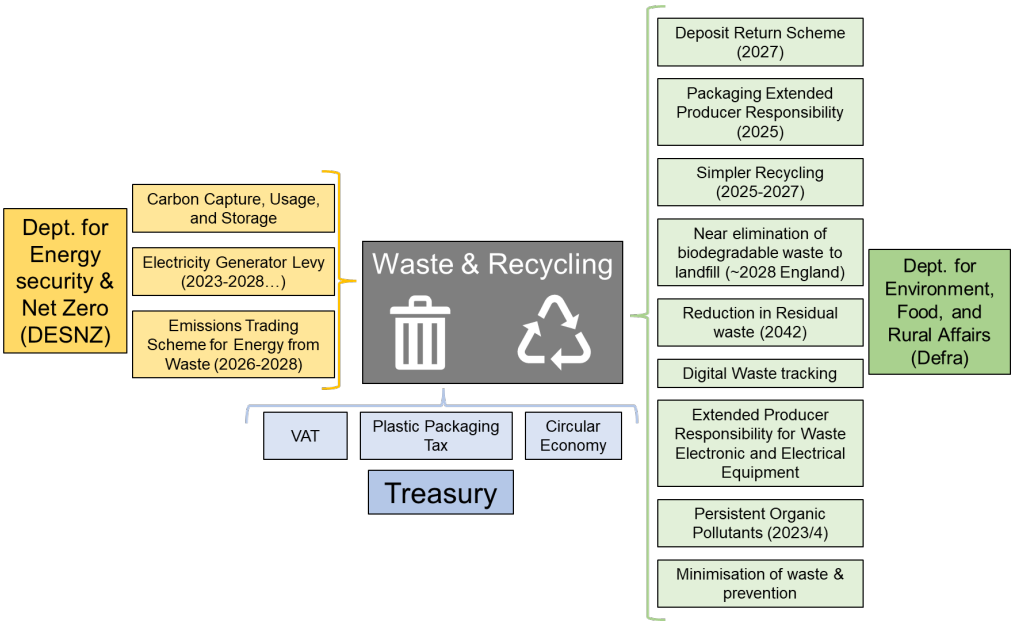
Chapter four: policy and legislative context

We must develop and deliver our own long-term strategy for waste management within the legislative context set out by government and substantial changes have been in development for several years. Progress towards a low waste society, in north London and elsewhere, depends on having a strong legislative framework to guide behaviour. We also need consistent and aligned policymaking across government, real support for local waste management operations, and timely delivery of key commitments. Looking to the future, the new government must deliver on ambitions for a low waste, circular economy and provide local authorities with the clarity and support we need to deliver changes alongside providing our vital local services.

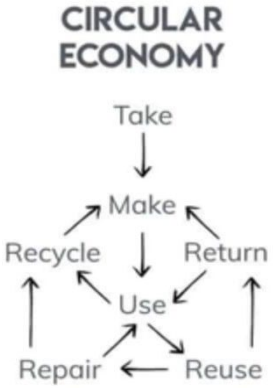
The previous government's Resources and Waste Strategy, published in 2018, set out ambitious aims to become a world leader in resource management and move society towards a circular economy. Since then, few of the commitments have been delivered. Key policies were delayed and watered down, so that rather than transforming the sector and meeting ambitious environmental goals, the proposals look likely to have only a modest impact.

The extensive number of policies governing waste management, and the complex relationships between different government departments, is illustrated below and some of these policies are discussed in greater detail in the appendix of this document. The diagram shows just a snapshot of the complex environment we work within. Relevant policies can originate from different departments of government and often have differing motivations and competing outcomes. Each are also subject to their own set of changes, delays and assumptions which are hard to predict and make planning local services particularly challenging. We must respond effectively to frequent changes in any number of these policy areas while also accounting for regional policies set by the Mayor of London and working with boroughs' policies at a local level. Despite this challenging context and the lack of leadership from recent governments, we are now moving ahead with this new Joint Waste Strategy as we must make plans that enable us to move towards a cleaner, greener and sustainable future for north London. All of the policy and legislation discussed in this chapter and the appendix has been considered during the development of this Strategy, and our plans and policies are in accordance with relevant guidance from government and the Mayor of London.

Figure 24. Some of the government policies and departments influencing waste management



4.1 Policy principles



4.1.1 Circular economy

A guiding principle of national policymaking, and this Strategy, is the aim to move towards a more 'circular economy'. This relates closely to the Waste Hierarchy described in section 1.2 and our efforts to prevent, reuse and recycle waste over disposal.

In a circular economy, we would transition away from a take-make-dispose economy to a more circular system which keeps resources in use for as long as possible. This is achieved through maintaining the maximum value when in use, and then recovering and repurposing material at the end of its life. So rather than making, using and then throwing stuff away in a linear system, a circular economy means finding new ways of making use of materials and keeping value in the system. This is the outcome we would like to see in north London and nationally.

4.1.2 Climate emergency

Climate change is the greatest environmental challenge facing the world and is driven by rising levels of greenhouse gases in the atmosphere (which include gases such as carbon dioxide and methane). This results in global heating, rising sea levels and changing patterns of rainfall. These changes can increase the risk of flooding, heatwaves, droughts, and wildfires. To try and overcome this, the government has committed the UK to achieving 'net zero' by 2050. This means that there will be an equal balance between the amount of greenhouse gas emissions produced and the amount removed from the atmosphere, through planting trees or using technology such as carbon capture.

The waste management sector is estimated to have contributed around 4% of greenhouse gas emissions in the UK in 2021[9]. But the emissions of waste disposal are only part of the picture. The carbon released when waste is disposed of is embedded in products or materials when they are designed and produced. The extraction of resources, the manufacturing process, transportation and consumption also all have an environmental impact. The ongoing process of making new products and throwing them away drives greenhouse gas emissions. To reduce these impacts, we want the items people produce and use to be designed sustainably and have as long a life as possible in a circular economy. This would cut down our consumption of virgin materials and avoid the carbon emissions associated with waste disposal. This is why reducing waste helps tackle the climate emergency and is the first priority of this Strategy.

The actions and commitments set out in this Strategy will aim to reduce our impact on the environment and help respond to the climate emergency. This will include reducing the waste we send to landfill to zero, therefore avoiding one of the most harmful sources of emissions (landfill is a significant source of methane emissions). We will also use our new facilities to harness energy and heat from our waste, reducing the area's need to rely on fossil fuels. Our facilities will use the best available technology to minimise our impact on the environment, and we are committed to improving our facilities and exploring new technologies like carbon capture and storage so they can be implemented as soon as practically possible to help reduce our environmental footprint even further.

[9] Department for Business, Energy & Industrial Strategy. Final UK greenhouse gas emissions national statistics: 1990 to 2021

4.2 What impact will key legislative changes have in north London?

In preparation of this Strategy, we have analysed the effects we expect to see from some of the key legislative changes which have been proposed. It is difficult to predict with any certainty what the impacts of new legislation will be, especially given the uncertain policy environment over recent years. While we await further clarity and progress from government, we must work to understand the potential impacts and ensure we are prepared to continue delivering high quality and cost-effective services in a changing environment.

The introduction of the UK Extended Producer Responsibility (EPR) for packaging system has two core aims: to incentivise better design of packaging (e.g. improving recyclability of packaging products, light-weighting of material or producing refillable packaging), and to shift the cost burden of managing packaging waste away from the taxpayer and onto the producers of the packaging. Once EPR has come into effect from 2025, it is expected that more packaging waste will be able to be recycled, and as a result diverted from the residual waste stream.

A Deposit Return Scheme (DRS) aims to improve overall recycling and resource recovery by placing a redeemable deposit on 'in scope' materials. Again, this should in theory encourage more recycling, reduce litter and reduce the number of drinks containers (subject to being covered by the scheme) in the residual waste stream. There are questions around how the scheme will impact local authorities. Crucially, as these materials will be diverted from local authority collection systems, local performance towards target recycling rates will be affected and revenue from the sale of the materials will be lost. Modelling undertaken for this Strategy has produced an estimate for the tonnage changes associated with EPR and DRS, as shown in figure 26 below.

Simpler Recycling will introduce new requirements for local authority collection services. In terms of impact on north London, the collection of food waste from all households should ideally result in a decrease in organic waste in the residual waste stream, and an increase in the amount captured for recycling. For dry recycling, all households in north London already receive collections for the core set of materials, with only soft plastics being collected in addition, which will add little weight or recycling potential. As a result, Simpler Recycling will change very little for dry recycling collections in north London. However, despite the minimal impact on dry recycling collections as a service, a consistent approach across England may result in greater participation from residents, and therefore has the potential to increase the capture rate of recyclable materials.

As part of the analysis work undertaken to inform the development of this strategy, a series of models were produced to understand the potential outcomes of various collection methods (shown in full in the Options Appraisal at appendix 2). These models incorporate forecasts of the government's key waste reforms (DRS, EPR and Simpler Recycling) with results shown in figure 26. This analysis indicates that recycling tonnage could slightly increase by 1.5%, while residual waste tonnage would be expected to reduce by 2.6%. Although it would be impossible to fully predict the effects of the policy changes, this can be a helpful estimate to understand how our services and waste tonnage could change in future.

Tonnage impact of DRS, EPR and Simpler Recycling on north London's waste:

Waste Reforms Impact	Recycling Tonnage	Residual Tonnage
North London percentage change	+1.5%	-2.6%

The inclusion of Energy from Waste (EfW) into the UK Emissions Trading Scheme (ETS) from 2028 could have a potentially severe impact on north London's waste operations. As shown earlier in the Strategy, EfW is north London's method for managing residual waste in line with the waste hierarchy and our statutory requirements. As a result, based on 2022 ETS prices, NLWA would face additional costs of £23m p.a., which represents over a third of NLWA's total expenditure. Costs could be expected to rise further in future years. Whilst we welcome and encourage greater measures to decrease carbon emissions, it is vital that the government recognises the need to avoid potentially devastating effects on local authority budgets and instead target manufacturers who are responsible for fossil-based products entering the waste stream.

4.3 Regional and local policies

In addition to national legislation, this Strategy will be implemented in the context of local and London-wide policies. The proposals in this Strategy have been developed with consideration of these policies, in order to check that it can be practically implemented and that it complements the wider aims of NLWA, the constituent boroughs and the Mayor of London.

London Plan

All waste policy within London is driven by the London Plan, which was most recently updated in 2021, and runs to 2041. As outlined within the London Plan, this document 'serves as a blueprint for the future development and sustainable, inclusive growth of the city'.

There are three policies within the plan which specifically focus on waste, these include reducing waste and supporting the circular economy (Policy SI 7), ensuring waste capacity and net waste self-sufficiency (Policy SI 8) and safeguarding waste sites (Policy SI 9).

London Environment Strategy

The London Environment Strategy was published by The Mayor of London in 2018, which sets out a range of actions to improve the environment within London. Regarding waste, it includes an aspiration for London to be a 'zero waste city' by 2050 and sets out London-wide targets. The London Environment Strategy gains its force from the powers and responsibilities contained in the GLA Act. As waste authorities, NLWA and the constituent boroughs have a duty to ensure that services and actions we undertake are in general conformity with the Mayor's Strategy. Some of the targets relating to waste include:

- 50% of local authority waste to be reused, recycled or composted by 2025
- 65% of municipal waste and 50% of household waste to be reused, recycled or composted by 2030.

As well as the strategic targets, the Mayor's Strategy also includes specific requirements on elements such as service delivery and carbon performance. NLWA and the constituent boroughs will continue to work in partnership with the Mayor of London to deliver effective waste services and ensure our Strategy remains aligned with the approach for London. We will contribute to the Mayor's London-wide targets by striving to recycle as wide a range of materials as possible and working collaboratively to drive up public participation and trial new initiatives, while also recognising the local challenges which have been presented in the previous chapters.

The Mayor's strategy covers a range of different environmental areas beyond waste, including air quality, green infrastructure and climate change. Our Joint Waste Strategy supports a number of the Mayor's key aims across all of these areas, for example:

- By prioritising prevention, repair and reuse, this Strategy supports the Mayor's aims to make London a zero waste city and to transition to a circular economy.
- Our new facilities at the Edmonton EcoPark provide capacity to ensure London can manage all of the waste it produces.
- Our energy recovery facility makes the most of materials that can no longer be reused or recycled, by using them to generate low carbon energy, helping ensure London has the energy supply it needs while preventing further generation capacity needing to be built.
- The heat we produce using north London's waste will supply thousands of homes connected to a district heat network, reducing reliance on gas boilers and helping London to decarbonise.
- The new energy recovery facility will also use world-class, proven technology to capture and control pollutants and limit impacts of waste on London's air quality.
- We aim to entirely avoid the use of landfill, helping to further reduce the climate impact of our waste management activity.

Reduction and Recycling Plans

In order to help achieve the Mayor's London-wide targets, and as required under proposal 7.2.1b of the London Environment Strategy, all London authorities have developed reduction and recycling plans (RRPs) which include local targets. The plans outline how waste collection authorities' targets will contribute to London-wide reduction and recycling targets and demonstrate 'general conformity' with the LES. All RRPs are structured around four key areas: waste reduction, maximising recycling, reducing environmental impact and maximising local waste sites. In order to set targets and monitor progress within each of the four key areas, each local authority outlines key actions, expected impacts, key milestones and performance against milestones. Our constituent boroughs' RRPs have been a critical input to the development of this Strategy, helping to determine the scope and goals of the activity set out here. We will continue to collaborate with each of the constituent boroughs to support their aims and objectives as set out in RRPs.

Local climate and environmental strategies

In response to the climate emergency, minimising our environmental impact is a key focus of this Strategy. Each borough also has their own local plans and policies in place to address the climate crisis, and this Strategy has been developed to align with these. The approach to waste management which is set out here will therefore support the boroughs to achieve their environmental goals and form an important part of north London's response and adaptation to climate change. Some of the key activities which complement the existing local plans, include:

- Working with the local community to support waste prevention activities, encouraging residents and businesses towards sustainable behaviour and lower consumption of resources.
- Promoting a circular economy by providing opportunities for items to be reused or repaired instead of disposed of. This keeps resources in good use for longer, retaining carbon within the product for longer and reducing the carbon emissions from the disposal of unwanted goods at the end of their life.
- Ensuring we have sufficient infrastructure in north London to manage the waste it produces in the most environmentally-friendly way possible. This means using state-of-the-art technology to limit emissions and maintain air quality, processing waste and recycling locally where possible and minimising use of landfill.

- Using waste as a resource to generate energy and heat for north London. Use of the district heating network supplied by our facilities will help to eliminate the need for individual gas boilers to heat local buildings.
- Decarbonising our assets and operations where possible, including developing plans to install carbon capture and storage when the technology becomes available.
- Providing education, training and employment opportunities which develop green skills in waste management, construction and infrastructure, helping the local workforce to transition to a green economy.

Through these actions, and working in partnership with our boroughs, we will help to deliver environmental benefits for north London in line with local policy and ambition.

North London Waste Plan

The North London Waste Plan (NLWP) sets out the planning framework for waste management in north London until 2036. It identifies existing waste sites and capacity, priority areas for new waste management facilities and sets out policies for determining waste planning applications. The NLWP was prepared jointly by the seven north London boroughs and adopted by each as the planning authorities for the area. NLWA is not responsible for preparing or submitting the NLWP but have been consulted on its development.

The NLWP takes account of the facilities and infrastructure described in this Strategy. Over the course of the Strategy, NLWA and the constituent boroughs may review our spatial requirements for waste management services and this process will comply with the NLWP.

4.4 Conclusion

The discussion above and in the appendix shows the complex backdrop of national and regional policymaking which will affect waste management in north London. All relevant policy and legislation has been accounted for in the development of this Strategy and we are confident that the plans set out in this document are in accordance with guidance from the Secretary of State, as well as regional and local policies.

Our performance and ability to achieve the environmental ambitions we have for north London are heavily influenced by the policy context we are working within, and many elements remain outside of our own control. Where national and regional targets have been set, reaching these will depend on action and support from government. The lack of clarity and commitment on key policies in recent years has hampered the development of our Strategy and unless resolved, risks limiting what can be achieved.

In response to this complexity, we have aimed to develop a Strategy which will remain adaptable to the evolving policy landscape and enable us to navigate through the ongoing uncertainty. While we have ambitious aims for waste management in north London, we also recognise the reality that government policy will shape much of what can be achieved. With this in mind, we will aim not only to react, but also to shape the context around us by developing and campaigning for our own policy positions to support the environmental ambitions in north London.

Chapter five: what do our residents say?

Successfully implementing the Strategy will only be possible if the north London community is fully informed and able to play an active role.

NLWA and the constituent boroughs are keen to ensure the vision and priorities proposed for the new Strategy reflect the needs of north London's communities, are aligned to emerging national and regional plans and policies, and are well placed to address the climate emergency. We therefore offered our residents the opportunity to input into the Strategy development process.

In the development of this Strategy, two thorough and full public engagement processes have been planned to understand the needs of the local communities. First, a public 'listening exercise' was carried out in summer 2023, giving residents a chance to tell us their views on waste and the environment, and to inform the Strategy's aims and objectives.

Our intention is to have sought the views of a full range of stakeholders, including residents, elected members, borough officers, business owners, partners and local community organisations. We also recognise that we will not have reached all our residents and that London's population is fluid. Our engagement, therefore, will be ongoing over the lifetime of the Strategy.

5.1 Towards a low waste north London - first public engagement exercise

The early development process for the Strategy included a 'listening exercise', in summer 2023. While not a formal consultation, the key objective was to encourage as many residents as possible, as well as stakeholders already connected with NLWA and constituent boroughs, to engage and provide feedback on the Strategy's emerging vision and priorities. This set the scene for the development of the Strategy.

The exercise was conducted through a 12-week campaign between 6 July 2023 and 27 September 2023. During this period, feedback was gathered via an online (and paper) survey, seven pop up events spread across the seven boroughs and four focus groups (two online and two in person). We also held detailed follow-up conversations with local environmental organisations and interest groups as we developed the proposals within the Strategy.

In the listening exercise we asked for views on:

- The importance of the proposed key priorities for our Strategy
- What local authorities, manufacturers, businesses, central government and residents could do to help achieve these priorities

The listening exercise engaged over 2,000 north London residents, with the majority having contributed via the online survey (1,693). 362 of our respondents provided feedback in person at our pop-up events across north London, with 37 members of the public attending focus groups.

In their feedback, residents told us about their priorities for the Strategy, and the actions that could be taken to help achieve our vision. Waste is a broad issue, and residents clearly understood that meeting our environmental goals for north London will require action from across the system. Residents told us about the changes they want to see from government, manufacturers/retailers, NLWA and the constituent boroughs, and individuals. All these groups have responsibilities and the ability to influence the waste we produce in north London, and will need to take action if we are all to reach our environmental goals. We have used this input from residents to inform the development of this Strategy and the approach set out in the following chapters.

Resident priorities for the Strategy

Reducing carbon emissions and making environmentally friendly choices were key priorities for residents, even if they came at a cost. Residents also supported recycling more items and reducing the amount of waste produced. More repair and re-use facilities were popular options, and many respondents wanted to see more funding for circular economy initiatives.

Residents believed that legislation should be introduced from government, including banning products that cannot be easily recycled or ensuring that more products are recyclable as well as making manufacturers responsible for the costs of disposal. A deposit return scheme (DRS) for drinks containers was a popular option.

Residents believed manufacturers and retailers could do more to design products to minimise packaging, ensure items lasted and could be repaired. Amongst the most favoured options were actions relating to packaging, including minimising the amount of packaging produced or producing only packaging that is recyclable. A large number of respondents also felt that food should be produced without packaging and that this should be available for a reasonable price. Many respondents felt that the burden was being placed on residents and that businesses were not doing their fair share.

Respondents highlighted they would be willing to change their buying habits to purchase items with less packaging. A high number would also avoid single-use food and drinks containers. Reusing and recycling items was a popular option with more than four fifths of respondents saying they would be prepared to do this. Most respondents also wanted to use food more wisely, including preserving leftovers or by composting food waste.

Respondents wanted NLWA and the constituent boroughs to provide accessible and easy-to-use facilities for recycling, including bins in public areas and recycling centres which do not require the use of a car. Respondents wanted to be able to recycle more materials, including all types of plastic and small electricals (WEEE). They also wanted NLWA and the boroughs to try and influence manufacturers and retailers to ensure that products and packaging can be recycled. Incineration was unpopular amongst a small number of respondents, and many questioned why contaminated waste cannot be cleaned and recycled. Several residents wished to see the recycling bins changed but there was inconsistency amongst responses over how these should be changed. Some wanted more bins for different types of recycling while others wanted to be able to put all items in a single bin.

Significantly, a key take-away is that residents recognise that NLWA and the constituent boroughs cannot achieve the aims and objectives of the Strategy alone, and that achieving the strategy vision has to be part of a wider effort involving all of the partners listed above.

All of these views have been considered during development of this draft Strategy and our approach to waste management has been informed by the input from our community. This has led to the priority of this Strategy being to reduce waste, which provides the greatest opportunity for environmental benefits. We have also reflected residents' priorities in our aims to maximise recycling and to minimise the environmental impact of our waste disposal. We also aim to provide residents with the services they need to reduce waste and recycle effectively.

The final listening exercise report is included in Appendix 3.

5.2 Public consultation

This draft Strategy is published as part of a public consultation running until 19 January 2025. Feedback received during this process will be considered and the Strategy updated where required.

Part two: our approach

Chapters six to ten of the Strategy set out how we will respond to the challenges described in part one and the actions we are taking to deliver our aims and objectives.

Chapter six: supporting the reduction in waste by promoting prevention, repair and reuse

6.1 Overview

In line with the waste hierarchy, the first priority for this Strategy is to prevent and reduce waste as this will most significantly reduce our impact on the environment. Through our activities on waste prevention, repair and reuse we aim to promote a circular economy, keeping materials in use and out of the waste stream for as long as possible. By 2040 we would like to see north London become a place where the whole community engages in sustainable behaviour and minimises the waste they produce. There would be fewer single-use and disposable products on the market. More local people would have the skills and tools required to repair items, or have easy access to services that could help prevent them going to waste.

In the 2023 listening exercise, residents told us that reducing the amount of waste produced was a key priority and supporting repair and reuse was a popular option. Many respondents wanted to see action on waste reduction from government and businesses. Residents said that they would support changes aimed to reduce packaging, encourage greater repairability, tackle single use plastics and put greater responsibility on the manufacturers of products. Successfully reducing waste will require more sustainable consumption patterns across society, shifting to a circular economy where fewer items are thrown away and many more are kept in use through reuse, repair or sharing opportunities.

This must be enabled by effective legislation and leadership from government, which would encourage the right behaviour from manufacturers and other businesses who profit from ever-growing consumption. It is government that has the power to incentivise green business practices, move us to a circular economy and enable individuals to produce less waste.

NLWA and the constituent boroughs have progressed significantly since the last Joint Waste Strategy on waste prevention commitments. Resident support has been delivered through campaigns, outreach, financial incentives, direct funding support to local projects, and reuse infrastructure. Through this Strategy we will continue that progression and move towards a low waste north London. We will collaborate with national and regional bodies, draw on collaborative working and collective expert experience of NLWA and the boroughs, along with supporting external local initiatives. This will enable us to test interventions, demonstrate effectiveness and ultimately scale up successful trials.

We aim to enable sustainable behaviours such as reuse, repair and sharing. We want to increase residents' motivation and understanding of the journey of waste and encourage sustainable consumption. By increasing opportunities for residents to repair and reuse items, we can help prevent items from ever becoming waste and move towards a more circular economy. With this goal, we aim to align communications and engagement activities delivered across NLWA and the boroughs and work in partnership with all organisations to tackle common priorities and amplify waste prevention impacts. Crucially, we also aim to provide policy responses and engage with national and regional strategy development on waste prevention, to represent the collective ambitions of NLWA and the boroughs. This means campaigning for central government action to increase support for the circular economy and for reductions in the manufacture and consumption of single-use and unrecyclable items.

Our approach will focus on the following activities:

- enabling communities to deliver change on the ground
- providing prevention, reuse and repair opportunities
- engaging and informing residents
- encouraging behaviour change
- developing and delivering an ambitious education programme
- working in partnership with local organisations and others in the sector

Further detail on these is found in sections 6.3 – 6.9. As we cannot succeed without leadership and support from government, section 6.2 sets out the policy change and national action we hope to see to enable waste reduction.

6.2 Our asks of government

We want to support a move to a circular economy and make it easier for residents to participate in it through the information, support, and activities we provide. However, to make this a reality there is an important role for government to play.

We will ask central government to take action which designs out wasteful practices by manufacturers and makes it easier for residents to do the right thing through the consumption and disposal choices they need to make. This includes legislating to reduce waste, for example by banning planned obsolescence and ensuring repairability. We will campaign for design standards which could ensure that more products are easily repaired or reused and fewer products are treated as disposable. We will also call for investment in the infrastructure required to support the repair and reuse sector. Government support for research and development could drive new technology, product design and skills development which would help move us towards a more circular economy while also creating opportunities for green jobs and growth.

We will also call on the government to target businesses in an effective and ambitious way, so that the cost of disposing of waste is fully covered by producers. As well as ensuring that the financial burden of managing waste sits with those who produce it, this will incentivise manufacturers and industry to produce less waste in the first place. This is imperative to reducing waste at source and will be a key step towards achieving our joint goals on waste reduction. Reducing waste would also lead to financial savings on waste services so successful intervention from government would not just benefit our environment, but also reduce pressure on local authority finances.

6.3 Enable communities to deliver change on the ground

We are committed to support organisations tackling waste issues and working with residents at the community level. We intend to continue this approach, enabling local projects to lead by example and deliver their own waste prevention initiatives. This will in turn bring wider benefits to the community and contribute to the local circular economy, as we work with local groups to share learning, develop skills and provide support to expand projects. We will monitor and evaluate our investments with stakeholders in the not-for-profit sector to ensure that support continues to be provided in the most effective way. As we develop our funding model we will engage further with grassroots community groups to ensure our approach is inclusive and we are reaching the diverse population of north London.

Case study: The North London Community Fund

The North London Community Fund launched in 2017 and has invested over £600,000 in 59 local projects. The fund provides community-based, non-profit making organisations with support to develop new approaches to reduce waste or extend the reach and impact of existing waste prevention activity in the north London area. Support is given to those organisations to promote their work and monitor their approaches with a view to understanding the potential for scaling up or rolling out successful initiatives to other areas or over longer periods of time. We plan to continue working closely with the fund recipients, supporting networking for those who want to learn from and replicate the approaches being delivered.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A1, A2, A3, A4 and objectives O1, O2, O3 and O8.

6.4 Provide prevention, reuse and repair opportunities

We aim to make north London a low waste society by enabling the move to a circular economy. This means minimising the population's demand on resources and maximising the reuse and recovery of resources as much as possible, rather than treating them as waste. NLWA and the constituent boroughs are working to promote high levels of reuse and repair and will seek to maximise opportunities for the community to undertake waste prevention activities. For example, we will enable reuse services which provide a place for residents to buy ethically by purchasing pre-loved items, and prevent them from becoming waste. We will monitor uptake of these services and develop targets and performance metrics where appropriate (see section 6.9).

Where practicable, we will expand these activities and investigate options for development of new local infrastructure, exploring how NLWA and the constituent boroughs can use our influence, buildings, funding, and powers to help third sector and other organisations in the development of the circular economy. Many of the constituent boroughs are already taking steps to encourage reuse in their areas. NLWA will work in partnership with the boroughs to support these initiatives and will develop the reuse offer at RRC sites across north London, ensuring we make effective use of our space, facilities and materials to drive greater reuse and divert waste from disposal.

We want to help support and bring repair back to the high street and facilitate a circular economy in north London with an active waste prevention, repair, and reuse community. We will encourage residents through our communications to utilise local repair businesses and signpost to repair, reuse and zero waste initiatives. Businesses should also seek to avoid waste and reuse resources as much as possible, this can have economic as well as environmental benefits. We will work to promote repair skills development and sharing and hiring opportunities to help avoid unnecessary purchasing of items that are used infrequently or as a one-off. Our aim is for these initiatives to reach all sections of the community so our work is as inclusive as possible.

Considering all the material streams managed through this Strategy, the ambition is to create hubs for circularity by diverting materials that can be reused or transformed into new products locally. We will ensure that contracts made with off-takers of materials are designed to accommodate local circularity opportunities alongside commercial needs. This includes waste electrical and electronic equipment (WEEE), as we are engaging community groups working on WEEE waste prevention and will aim to collect as much electrical waste as possible for repair and reuse. We will also make compost available for use by the local community. As per the environmental assessment of this Strategy, utilising our organic material for local horticulture or domestic use will have positive carbon impacts compared to other uses, as well as bringing positive benefits to the community.

Case study: Reuse opportunities at our Reuse and Recycling Centres

Since 2015 The ReUse shop at King's Road Reuse and Recycling Centre has been saving usable items from going to waste by selling them to local residents at very affordable prices. The shop is stocked entirely with second hand items which people have either brought to one of our eight reuse and recycling centres (RRCs) for disposal or specifically donated to the shop by waste conscious residents. North London residents can also access DIY materials and paint for reuse at several of our RRCs. These services support the circular economy by keeping items in use for as long as possible before they reach the end of their life.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A1, A2, A4, A5 and objectives O1, O2 and O3.

6.5 Engage and inform residents

Through communication campaigns, we reach large numbers of north London residents and can signpost residents to opportunities for reuse and repair, in support of developing a circular economy. We will continue to work collaboratively with partners to deliver joint campaigns and to achieve economies of scale in terms of reach and investment. This area of work will also be important in continuing to empower north Londoners with information about the changing landscape of waste generation, management, and policy that dictates our work and gives them a voice in shaping how we tackle it. Through our campaigns and communications activity, we aim to bring about strong and sustained participation in waste minimisation, reuse and recycling systems. We will focus our resources on waste streams with the highest environmental impact. Food waste will be a significant priority for future campaigns due to the quantity found in north London's residual waste.

Providing learning opportunities for north Londoners about the journey of waste and the part we all play in it is an essential role we will fulfil. We will provide informal education through our website and campaigns for wider community. We will always aim to produce materials and resources which are culturally appropriate and suitable for the diverse north London community, including working to overcome cultural and language barriers where necessary. We will also provide places for residents to see waste management in action so that they can understand the approaches taken and ask questions of those delivering them. We will work with partners to establish educational visits at our reuse and recycling centres, energy from waste facility and the materials recovery facility.

These activities are in line with the vision and policy framework set out in chapter one and will support the aims A1, A2, A4 and objectives O2, O3, O4 and O7.

6.6 Work with schools

A large focus of our outreach is working with schools and colleges to embed waste education and minimisation activities and inspire good habits relating to waste. Over the course of this Strategy, we will be expanding our work with schools and higher education establishments in north London to promote waste prevention to the next generation, making use of new space and facilities for teaching at the EcoPark.

Our new schools programme will increase environmental awareness and develop a 'waste less, recycle more' culture within north London schools. The in-depth outreach programme has been co-developed with teachers, for teachers. The overarching goal is to establish a culture of waste prevention within the primary schools that participate in the programme, by putting the knowledge for change in the hands of north Londoners. Boroughs will be working closely with NLWA and participating schools to ensure that they have the right waste and recycling infrastructure to enable successful waste reduction. Waste prevention education will be designed according to the needs of each school, with inclusivity and diversity considered from the project's inception.

Officers will develop an ambitious educational programme to be delivered at EcoPark House, the new education and community centre owned by NLWA, where visitors can learn more about recycling resources, heat, power, and reducing the impact of their waste. We plan to pursue for the Council for Learning Outside the Classroom (CLOtC) accreditation and aim to become an industry-leading educational facility in north London.

We intend for these programmes to become long-term, recurring activities, in line with our commitment to preserve the planet's resources for future generations.

These activities are in line with the vision and policy framework set out in chapter one and will support the aims A1, A2, A4 and objective O8.

6.7 Encouraging behaviour change

To effectively prevent waste, we will focus on specific audiences, using behaviour change methodologies to tailor messages and overcome barriers to change. Our approach will involve clear and concise communication strategies aimed at raising awareness and maximising understanding and engagement. We want to ensure that our work reaches and reflects the diverse communities within north London, and we will actively seek to engage our local population to make sure that these campaigns are inclusive and equitable.

We will work on materials-focused initiatives and collaborate with other London waste disposal authorities to share resources and align approaches. A key focus will be on incorporating a London-wide approach, particularly in priority areas such as food and textiles.

We will explore the integration of practical incentives to complement our work. We will continuously review the most effective mechanisms for incentivisation, including vouchers and discounts on products such as reusable nappies and period products. We will also conduct research to ensure that when interventions are created, they are evidence-based. To ensure the effectiveness of our work, we will work with our diverse communities across north London to help encourage take-up of the schemes and will implement robust measurement and evaluation mechanisms. This will include tracking metrics to assess the impact of our campaigns and initiatives, allowing us to adapt and refine our strategies as needed.

Case study: the reusable nappy fund

The Reusable Nappy Fund Scheme operates across NLWA and all the north London boroughs and provides vouchers of £70 per baby to parents/carers to use against reusable nappies or a nappy laundry service. In 2023-2024, 1131 people signed up to the scheme. There is an assumption that while a person has redeemed a voucher, their baby will continue to use reusable nappies for at least two years; therefore, the benefits of disposable nappy waste are experienced for more than one year. Between 2023 and 2024, it is estimated that 813 tonnes of nappy waste would be avoided if all vouchers were redeemed.

These activities are in line with the vision and policy framework set out in chapter one and will support the aims A1, A4 and objectives O2, O3 and O7.

6.8 Working in partnership

The scale of waste is vast and dealing with the many complex issues created by consumption requires collaboration to find the best solutions. Countless organisations and individuals campaign for structural reforms and work to enable behavioural change. As well as working with local businesses, we will strengthen existing partnerships and build new ones with public sector authorities, environmental groups, campaigners, and grassroots organisations. This will include enhancing our approach to equality, diversity and inclusion by actively seeking to engage with organisations from the many diverse communities in north London. The not-for-profit sector has a crucial role to play in waste reuse, often providing specialist knowledge of particular waste streams and making connections that enable social benefits as well as environmental benefits to arise. Using our networks across north London we will help connect partners and facilitate waste reduction and the move towards a circular economy.

We will work with organisations to amplify existing work and deliver projects together to have a bigger impact. We will also contribute to pan-London and national campaigns and add value through additional outreach and engagement into our communities. We will aim to partner with organisations of all scales to deliver and raise awareness of waste prevention initiatives in our communities. We will be open to working with anyone who shares our ambition of a circular economy and can make a difference on the ground, and we will actively seek new partnerships to help us design, develop and deliver innovative projects.

These activities are in line with the vision and policy framework set out in chapter one and will support the aims A1, A2 and objectives O2, O7 and O8.

6.9 Monitoring our progress

Waste reduction

The primary goal of this Strategy is waste reduction. The most effective way to limit the environmental impacts of waste management is to produce less waste in the first place. We will help north London to reduce waste through our programme of prevention, repair and reuse activities set out above. Progress on waste reduction will also depend on government leading the way through legislation, businesses changing their production to generate less waste, and individuals adopting more sustainable consumption habits

Our analysis shows that food waste makes up a significant proportion of north London's residual waste (32%) with almost a quarter (24%) of the residual waste being avoidable[10] food waste. Reducing this will be a key priority and have a significant impact on the total amount of residual waste generated. Over the course of this Strategy, we will aim to reduce the avoidable food waste found in household residual waste by 50%.

A further 15% of residual waste is made up of other material which could have been collected for recycling using existing household services. We also aim to reduce the amount of these materials in our residual waste stream by 50%. These ambitious reductions will be achieved through policy change and action from industry to reduce waste at source, alongside our prevention activities, behaviour change campaigns and increasing rates of recycling.

Prioritising these two key material streams will help drive an overall reduction in household waste and reduce our environmental impact. Overall progress on waste reduction will be monitored using two headline metrics: total waste per person, and residual waste per person. Our reporting will focus on household waste given that this is NLWA and the boroughs' primary responsibility to manage and where we can target most of our interventions. Targets for these overall performance indicators will be considered in future as the effects of our prevention activity, and the government's upcoming waste reforms, become better understood.

Indicator	Metric	Targets
Avoidable food waste	% of residual	50% reduction
Recyclable material in residual waste	% of residual	50% reduction
Total household waste per capita	Kg / person	
Residual household waste per capita	Kg / person	

Reuse

Where possible we aim to reuse as much material as possible, helping to enable a circular economy and bring greater environmental benefits than recycling or disposal.

[10] Avoidable food waste is food and drink thrown away that was, at some point prior to disposal, edible. In contrast to inedible items such as banana peel, egg shells etc which can be classified as 'unavoidable'.

A wide range of reuse activity occurs in north London, for example through our RRC network, items resold in the charity sector, and shared or repaired by residents. As set out above, we will work to enable and facilitate that activity through partnerships with others working towards the circular economy and the practical support we provide for local initiatives. Measures which fully encompass all of this activity in the community are not currently available so we will aim to improve our data on reuse to build a better picture of the activity in north London. We also call on government to support with development of new metrics which would enable reuse to be properly accounted for in national statistics and prioritised over recycling, in line with the waste hierarchy.

To monitor our progress on this Strategy, more limited but useful indicators are available. In 2023/24 over 1,000 tonnes of material brought to our reuse and recycling centres (RRCs) was directed to reuse, approximately 2.5% of the total material collected. This was predominantly through our ReUse Shop, partnerships with off-takers or use of materials by the community. Our ambition will be to double the quantity of material reused as a percentage of waste received at RRCs.

As we progress with this Strategy, we will review these metrics with a view to setting more specific targets or strengthening our data where possible.

Indicator	Metric	Targets
Reused material	% of RRC waste reused	Double % of material reused

Chapter seven: improving and maximising recycling

7.1 Overview

If waste cannot be prevented in the first place, or items are unable to be reused or repaired, the next best option is to recycle. By 2040, we want any waste which cannot be prevented to be managed in the most effective and environmentally-friendly way. Recycling has the benefits of diverting material away from the residual waste and avoiding the use of virgin material in manufacture of new products. To achieve these benefits, the government must provide leadership, using legislation and policy reforms to drive change across industry and providing the resources we need to ensure that we can always implement reforms effectively at a local level. Success should be measured using meaningful targets that capture the true environmental impacts of waste and drive us towards overall waste reduction.

Manufacturers and other businesses also have a key responsibility to make sure that their products are easily recyclable. North London's businesses can engage with our service to ensure that they are reducing their environmental impacts by recycling as much as possible and managing their waste locally.

We also require residents to play their part by engaging with their local services and recycling their waste wherever possible, including recycling food and preventing this from entering the residual waste. NLWA and the boroughs will work to enable and facilitate this, engaging with residents to drive participation and collecting and processing a wide range of materials, including through new and innovative schemes. NLWA and the constituent boroughs aim to recycle as much of north London's waste as possible and contribute to the targets set out in the Mayor's London Environmental Strategy. Our plans to achieve this are set out in the following sections.

In the 2023 listening exercise, there was broad consensus that north London residents are keen to recycle more. This chapter sets out our approach to enable this, focusing on the following activities:

- Maximising material collected for recycling, including hard-to-recycle materials and food waste
- Providing the infrastructure we need to effectively manage north London's recycling
- Processing recycling effectively, including as much as possible within the UK
- Engaging and informing residents
- Working with businesses

Further detail on each of these is found in sections 7.3 – 7.10. Section 7.2 sets out the action and support we need from government to improve recycling in north London.

7.2 Our asks of government

Our goals for recycling must be supported by action from government. We ask that local authorities are given the powers and resources needed to work with the public and businesses to ensure they recycle and dispose of waste appropriately. And that the wider sector is supported and action taken to grow the processing capacity we need to handle all recycling within the UK.

Ambitious measures should be introduced which ensure the cost of recycling is placed firmly on those who produce it, and which encourage the use of recycled rather than virgin materials within

products and packaging. In the short term, this includes implementing the packaging Extended Producer Responsibility (EPR) scheme as soon as possible, with fair and transparent payments to local authorities which reflect the true cost of dealing with packaging waste. In the longer term, we will seek the expansion of the EPR scheme to include other waste streams.

We will call for further action to support recycling participation among the public. The proposed deposit return scheme is a good starting point but does not go far enough. We will recommend the introduction of a genuinely comprehensive scheme which includes glass, HDPE and cartons. The government should ensure that messaging to the public is clear and consistent. National campaigns should support behaviour change to increase the uptake of recycling services, as well as prioritising reduction and reuse. We will also seek legislation to ensure that producers are required to adequately label packaging as recyclable, which would also support these measures.

With the introduction of compulsory food waste collection, the government must support a step change in food recycling participation. As an urban and densely populated area, we will call for action to support the specific challenges north London faces in this respect, including barriers relating to infrastructure and behaviour change.

We also want government to improve the metrics and reporting methods which are used to measure performance and track waste management nationally. We will campaign for a move away from proportional targets such as recycling rate to focus on waste reduction, as this better reflects the quantity of waste arising and its impact across the country. Using these metrics, we could more effectively measure and incentivise a reduction of overall waste, which would bring about the most significant environmental benefits. We will also seek improvements to data collection, monitoring and reporting methods including development or replacement of outdated information systems.

7.3 Recycling collections

North London residents receive either a kerbside or communal recycling service. Generally, the boroughs all collect recycling material together in one container or sack, this is often referred to as a ‘comingled collection’ or ‘mixed dry recycling’. While some local authorities provide their residents with a mixture of bags and boxes to separate out key recyclable materials (referred to as a ‘multi-stream’ collection). The options appraisal undertaken for this Strategy (see appendix 2) explores the potential impacts of the boroughs using commingled, twin-stream or multi-stream collection methods. All of the north London boroughs currently provide comingled collections, due to the high density of housing and limited storage space for multiple containers. As described in chapter two, these local characteristics mean there are challenges for recycling collections in north London. We must recognise these and work to engage residents, always ensuring that our services meet the unique needs of our area and community.

Residents told us in our listening exercise that they value having accessible and easy-to-use recycling services and want to be able to recycle a wide range of materials. So, we will maintain clear, effective and efficient collection methods to enhance levels of recycling and ensure that as full a range of recyclables as possible are collected from residents. In north London, the boroughs each already collect the core materials which government will mandate through the Simpler Recycling reforms, putting our services ahead of many authorities around the country. This range of materials will be expanded to include food for all households and plastic films. We will also explore the viability of adding extra materials to recycling collections at kerbside subject to infrastructure and market constraints.

Through these changes and the further plans set out within this Strategy we aspire to achieve a 50% household waste recycling rate by 2030, in line with the Mayor's Environment Strategy and our previous Joint Waste Strategy. While modelling undertaken for this Strategy indicates that this will be challenging to achieve (see appendix 1 and 2), we will maintain the stretching target in order to continue driving improvements to local recycling services. Progress will need to be supported by ambitious government policy as service changes alone cannot drive such major transformation. It remains uncertain exactly what will be achieved in the context of the upcoming waste reforms, we will therefore continually monitor and review key targets to ensure they remain relevant as the policy landscape evolves. We will always maintain our aspiration to recycle as much waste as possible where it cannot be entirely prevented.

We will regularly review services so that they meet the needs of residents and help to achieve our environmental goals, and specific actions will be set out in Reduction and Recycling Plans over the course of this Strategy. Our ability to deliver on our ambitions and continue improving recycling in north London must also be supported by government policy and adequate funding provision.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A2, A5 and objectives O1, O2, O4 and O7.

7.4 Specialist recycling

We are committed to leading the way for recycling innovation and continue to expand the range of materials we collect. North London has one of the most extensive ranges of recycling services available, enabling residents to manage their waste more sustainably and helping to support the circular economy.

Through this Strategy, we will respond to our residents' priority to recycle more materials by innovating and exploring new initiatives we can offer to increase our recycling services. These specialist recycling opportunities will enable us to manage materials more efficiently, support the circular economy and help us tackle the climate emergency. NLWA's size and partnerships within the industry enable us to test market solutions for some of the most difficult to recycle materials. This supports our objectives to maximise recycling and minimise residual waste, and aligns with our residents' feedback that they would like to recycle more materials.

These activities are in line with the vision and policy framework set out in Chapter one and will support aims A2, A5 and objectives O1, O2 and O4.

7.5 Recycling processing

NLWA manages a contract to process the recycling collected by the seven constituent boroughs. After recycling is collected, it is sent to a material recycling facility. There it is cleaned and separated further, before being sent further afield to be processed into something new. From 2023-24 NLWA are now managing all seven boroughs' recycling after Enfield Council's mixed dry recycling became part of the existing contract.

During the period covered by this Strategy, NLWA will secure a new contract for recycling services. Due to NLWA's position as the country's second largest waste disposal authority, this is likely to be the single largest local authority recycling contract to be let in this period. This procurement will give us the opportunity to work with contractors to improve services and performance, for example by extending the range of materials we can offer, working to drive down contamination and minimise rejected materials. NLWA will ensure that we take this opportunity to use our position and influence, driving positive change in the sector as well as securing the best available services for north London.

We will ensure that our new contract allows us to meet our residents' priorities to have accessible and easy-to-use services which enable them to recycle a wide range of materials, while also securing social benefits such as the London Living Wage for our contractors' employees. The eight authorities will also consider joint procurement options where these can provide better value for money on services and help remove barriers to recycling.

We will work with our contractors to improve the range of materials accepted as part of the general dry mixed recycling service offered by our constituent boroughs to north London residents. Where appropriate, we will also explore the potential to include additional materials and will assess our infrastructure to ensure we can recycle new products coming onto the market. We will also explore options for pre-sorting of residual waste to enable north London to meet the recycling ambitions within this strategy. Although currently, the technology required for pre-sorting at the scale required for NLWA operations is not available, we will continue to monitor developments and consider options if and when they become feasible (this is discussed further in section 8.10).

These activities are in line with the vision and policy framework set out in chapter one and will support aims A2, A3 and objectives O1 and O4.

7.6 Local infrastructure

We will continue to ensure that north London has the infrastructure it needs to manage the waste produced in the area. Residents told us their priorities are to reduce our emissions and environmental impacts. We will support that goal by managing waste locally, where we can ensure it is treated with the highest environmental standards. Avoiding export of waste is part of London's policy to achieve self-sufficiency in waste management by 2026 as stipulated by the Mayor of London. This has the benefit of reducing transport emissions and maintains the responsibility and oversight for our waste within north London, where we can ensure it is treated with the highest environmental standards. Local facilities also provide opportunities for local employment and training and the social value this brings.

Current infrastructure and operations are set out in chapter three. This includes a range of sites including the EcoPark at Edmonton and waste transfer stations around the north London area. These transfer stations enable local sorting and processing, minimising road miles and enabling operational flexibility.

We are redeveloping the Edmonton EcoPark as part of a major investment in infrastructure for the circular economy. The development has delivered state-of-the-art reuse and recycling facilities for our residents and boroughs. This includes a brand-new public reuse and recycling centre allowing our residents and businesses to bring their waste directly to the EcoPark for the first time. Our new recycling facilities have capacity to manage 135,000 tonnes of recyclable materials every year – including wood, plastics and metal.

We will keep our facilities under review as local requirements evolve in future, particularly in response to changes in policy or patterns of waste production. For example, as we progress towards a circular economy, this may require additional local capacity for handling or storing material for recycling or reuse. NLWA and the boroughs will proactively review our network, making sure it meets the latest requirements and helps us to deliver positive environmental outcomes.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A2, A3, A5 and objective O8.

7.7 Processing destinations

We recognise the importance of dealing with our waste and materials as close as possible to the point where they are collected (the Proximity Principle). NLWA have been working with our contractors to reduce the amount of recycling processed overseas, with an aspiration of 100% UK destinations by 2030. Achieving this requires a successful market for materials within the UK and so will depend on government and wider industry. Where our recycling cannot be managed in the UK, it is sent to destinations with high environmental standards. The table below details the end destinations for dry mixed recycling from north London collections:

Figure 25. Recycling destinations

Material	Baseline March 2020			2021-22			2022-23			Q1-Q3 2023-24		
	UK	Europe	Far East	UK	Europe	Far East	UK	Europe	Far East	UK	Europe	Far East
Cardboard			100%	20%	11%	69%	7%	86%	7%	8%	64%	28%
Mixed paper	43%	19%	38%	44%	56%		31%	69%		44%	56%	
Glass	68%	32%		79%	21%		74%	26%		100%		
Aluminium cans	100%			100%			100%			100%		
Steel cans	100%			100%			100%			100%		
Plastic bottles	100%			100%			100%			100%		
Other plastics	100%			100%			100%			100%		

Our commitment to UK destinations promotes environmental aims, as this ensures recycling traceability and reduces the associated transport emissions of our waste. Our position challenges contractors to provide UK processing capacity which in turn brings benefits to other waste authorities. We will continue to use our influence in this way to drive best practice across the sector and secure better environmental outcomes for waste management in the UK. This will include working to develop solutions where there is limited processing capacity in the UK, encouraging government and others in the sector to provide and invest in new facilities.

These activities are in line with the vision and policy framework set out in chapter one and will support aim A3 and objectives O1 and O5.

7.8 Food waste collections

Food waste makes up around a third of north London's residual waste. Most respondents to our listening exercise wanted to use food more wisely, including preserving leftovers or by composting food waste and we will support and enable them to do so. Reducing this will be a vital step in our goal of overall waste reduction and needs significant focus from government, businesses and residents as well as from NLWA and the boroughs. Our programme of engagement and prevention activities outlined in chapter 6 above will aim to reduce food waste and where food is thrown away, we will aim to collect as much as possible for recycling.

Weekly food waste collections will be provided by the constituent boroughs to all properties in north London, in line with the latest government proposals for Simpler Recycling. This should result in an increased quantity of food being collected for composting and a reduction of food in the residual waste. NLWA will ensure we have the capacity and infrastructure to manage the new streams of food waste associated with these changes. We have invested significant capital funding in preparing for this change, developing our new facilities so that new food waste collections can be processed effectively.

As set out in chapter one, north London has some significant challenges for recycling collections due to the dense population and significant proportion of residents living in flats or other properties without a typical kerbside collection service. To help address this, NLWA and the boroughs have worked together to launch innovative trials to provide food waste collections for flats above shops. We have spoken to residents on doorsteps, created communications materials and produced a monitoring approach to measure the service uptake and behaviour change. Learnings from the trials will inform service delivery over the course of this Strategy and help ensure our new services reach all properties, even those with significant challenges for food recycling.

We will also undertake a programme of communications and resident engagement to ensure that the new recycling service acts as a driver for behaviour change and is taken up by the community. Where food waste services already exist across north London, participation from residents is fairly low. As we look to change this and embed food waste recycling services, we need national and London-wide campaigns to help normalise new and more sustainable behaviours, and support for our local initiatives which will tailor messaging for the population and requirements of north London. We will work with partners across the sector to deliver successful campaigns.

As the waste stream making up the largest volume of our residual waste, engagement on food waste, and delivery of the new services will be a high priority for NLWA and the boroughs. To successfully reduce the food in our residual waste, we will need everyone to work together and adopt these changes and help make the new collection services successful.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A1, A4, A5 and objectives O2, O4 and O7.

7.9 Engage and inform

Our aim is to maximise public participation in recycling. We will do this by working with residents to ensure there is clear information on what can and cannot be recycled and use our outreach with community groups to help raise awareness of recycling initiatives. We will continue to work through a significant programme of communications campaigns and waste education to encourage all of our residents to recycle effectively, including recent arrivals to the area who may not have previously received environmental information or engaged with our services. This can help increase materials capture and tackle contamination, improving overall recycling performance.

Where appropriate, we will use London wide messaging and branding in our local activities, working with ReLondon and other partners to support the Mayor's aim to deliver a consistent message across London and increase recycling. As London's largest waste authority, we will take a leading role in partnerships and ensure that campaigns are suitable for the population of north London. Our communications programme will aim to reach and reflect our varied population with an inclusive approach that is culturally appropriate for the many diverse communities in the area.

We will also provide internal education for staff, contractors, NLWA and borough members, and other stakeholders to enable them to understand recycling methods and better equip them to be consistent with this messaging. Our engagement work will be focused on the waste streams with the highest environmental impact, examples include food waste, textiles, and waste electrical equipment.

These activities are in line with the vision and policy framework set out in chapter one and will support aim A4 and objectives O4 and O7.

7.10 Businesses and commercial waste

Local businesses have a key role to play in achieving a circular economy in north London. NLWA and the constituent boroughs' primary responsibilities are to collect and manage household waste, but this is estimated to be only around half of north London's total waste. Across the UK in 2020, commercial and industrial waste amounted to over 40 million tonnes, compared to 27 million tonnes of household waste.[11] This means that if we are to collectively address the climate emergency and reduce our impacts on the environment, action is needed to minimise commercial waste and manage it more responsibly. Many respondents to our listening exercise felt that businesses could do more. Just like residents, businesses should seek to minimise waste, reusing resources wherever possible. Where it cannot be avoided, as much commercial waste as possible should be recycled and the remainder must be disposed of with minimum impact on the environment.

NLWA and the constituent boroughs have the infrastructure and expertise to support businesses to reduce and manage their waste. Using our services and facilities will ensure that waste produced in north London is managed locally, reducing the environmental impact of transporting waste. We can also ensure that a full range of materials are recycled, and where waste needs to be disposed of, using our new EcoPark facilities will ensure this is handled with the best available technology to limit impacts on the environment. This will also allow us to divert any business waste which might otherwise be going to landfill, and ensure we efficiently recover energy and heat which can be used for north London's homes and businesses.

Where the constituent boroughs offer commercial collections, NLWA will support them to develop and deliver these services including through communications activity and joint working. Government could support these local services and secure better environmental outcomes by restricting commercial waste operators, to limit emissions from multiple vehicles serving the same local areas and encouraging take-up of services with the highest environmental standards.

Throughout this Strategy period, we will look to build more partnerships with local businesses especially where we can support and encourage more circular business models. As we progress towards a circular economy, greater reuse of materials, sharing of resources and green skills development can all help bring economic as well as environmental benefits to local businesses. Where commercial waste must be disposed of, businesses in north London should make use of our facilities to ensure their waste is managed locally and responsibly. The environmental benefits of this approach are clear, so we encourage businesses in the area to engage with us to understand how our services can support them to reduce waste and contribute to our environmental ambitions for north London.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A1, A2, A4 and objectives O2, O4 and O8.

[11] UK statistics on waste - GOV.UK (www.gov.uk)

7.11 Monitoring our progress

While waste reduction must be the priority if we are to respond effectively to the climate crisis, recycling also has an important role to play in this strategy. In terms of measuring performance, it is important to note that reporting on the proportion of waste we recycle simply does not account for the total quantity of waste being produced and disposed of, which is the key environmental issue to tackle. We will therefore prioritise monitoring progress through the waste per capita and reduction metrics set out in chapter 6 and hope to see others across government and the waste sector focus on similar metrics in future.

However, we will also continue to work towards improving our recycling rate and contributing to the Mayor of London's targets for 50% of London's household waste to be reused, recycled or composted by 2030. Our previous Joint Waste Strategy also set a target of 50% household recycling. Across London, waste authorities have not yet met this ambitious target so that will remain the long-term aspiration we are working towards through this Strategy.

We must also recognise the national trend of stagnating recycling rates as overall waste production and residual waste has increased. This is likely to continue as legislative changes take recyclable materials out of local authority managed waste and encourage producers to move to lighter materials. In this context, improvements in the recycling rate will depend not only on the steps we can take locally, but also on the effects of government interventions and changes from others in the system such as manufacturers and consumers.

As set out in section 7.5 above, we also have an ambition to process all of our recycling within the UK and will report progress on this target throughout the strategy period.

To meet our goals and support our wider local ambitions, we will need to see progress from government on the policy asks set out in this document to help drive up recycling rates, and we will review our metrics and targets in light of developing policy changes.

Indicator	Metric	Targets
Recycling rate	% of household waste by weight which is recycled, reused or composted.	50%
Processing destinations	% within UK	100%

Chapter eight: Reducing the environmental impact of disposal, where there is no option to prevent or reuse waste

8.1 Overview

Environmental impacts, including climate change, greenhouse gas emissions and air quality, are key priorities in north London. We want any waste which cannot be prevented, reused or recycled to be managed in the most effective and environmentally friendly way. While some waste must be disposed of, it is our ambition to do this using the cleanest, most advanced methods which minimise effects on the environment. We will set out in this chapter our approach to waste disposal, including how we will use north London's residual waste as a valuable resource for heat and energy. Our actions on this will take account of the air quality policies within the London Environment Strategy.

We have a continuing commitment to tackling the Climate Emergency and achieving carbon goals by 2040, including moving away from fossil fuels where possible. This chapter demonstrates our ambitious plans for reduction of greenhouse gas emissions, including through carbon capture and storage and the development of our new facilities. This redevelopment is the most significant public sector investment in waste facilities London has seen for a generation and we're proud to be setting a benchmark for other waste authorities. It is our chance to build the greenest waste hub of its kind in the country.

In the 2023 listening exercise, there was broad consensus that north London residents are keen to reduce carbon emissions, make environmentally friendly choices and recycle more. This chapter sets out our approach to enable this, focusing on the following activities:

- Managing waste disposal in state of the art new facilities which minimise impacts on air quality and the environment
- Mitigating climate impacts by using waste to produce energy and heat
- Reducing greenhouse gas emissions including through decarbonisation of vehicles and potential use of Carbon Capture and Storage technology
- Avoiding landfill
- Actively monitoring developments in technology and infrastructure which can be applied in north London

Further detail on each of these is found in sections 8.3 to 8.9. Section 8.2 sets out the action and support we need from government to help us to continue reducing our environmental impact and address the climate emergency.

8.2 Our asks of government

It is imperative that we all reduce our carbon emissions in response to the climate emergency, and the waste disposal industry is no exception. To effectively reduce the carbon impact of waste disposal, government should legislate to reduce plastic and other fossil-based content in the waste stream. As described in the environmental report of this Strategy, it is this material which has the highest carbon impact when used to generate energy. Government has the powers needed to drive change in this area. Instead, the government has consulted on the UK Emissions Trading Scheme (ETS) being expanded to include energy from waste facilities. This would hugely increase the cost of

managing north London's waste and add significant financial uncertainty to NLWA and the constituent boroughs' long-term plans. If these plans go ahead, the government must ensure the financial impact on local authorities is factored into wider local government funding arrangements.

The only way to ensure the ETS achieves the intended goals and reduces emissions is by linking it to product designers and manufacturers to ensure they bear the cost of unnecessary, unrecyclable items - not only packaging. Businesses must be held responsible for emissions associated with plastic or fossil fuel derived products which they place on the market and be pushed to question design and materials, which in turn might have an impact on waste volume and composition. Unless the government approaches ETS with whole systems thinking and targets producers, these carbon costs will act more like a tax which will be passed onto already-stretched local authorities and ultimately taxpayers.

NLWA and the constituent boroughs are keenly aware of our role in combatting the climate crisis and are building the Energy Recovery Facility ready for adaptation to Carbon Capture and Storage. This will strengthen our efforts to tackle the climate emergency and support the UK's overall effort to achieve Net Zero. As a dispersed emitter, there are significant challenges accompanying these ambitions, and government should provide additional support to facilitate carbon capture and storage for our sector.

Success should be measured using meaningful targets that capture the true environmental impacts of waste. This means moving away from proportional targets such as recycling rate and focusing on waste reduction, to better reflect the quantity of waste arising and its impact across the country. The government should also consider evolving to a carbon-based metric for measuring waste, which would further improve councils' understanding of the environmental impact of waste in their areas. Using these metrics, we could more effectively measure and incentivise a reduction of overall waste and its most harmful impacts, which would bring about the most significant environmental benefits.

8.3 Improving our disposal infrastructure

Residents have told us their priority is to reduce carbon emissions, and all eight authorities are committed to tackling the climate emergency. This Strategy supports that by focusing first on waste prevention, and promoting repair and reuse as set out in chapter six. We also aim to maximise recycling, but when waste must eventually be disposed of, it is vital that we do this in the most environmentally sensitive way possible.

For waste that isn't recycled, there is not currently a route for disposal which involves lower greenhouse gas emissions than a modern, efficient, energy recovery facility associated with a district heat network. We are redeveloping the Edmonton EcoPark and building the greenest energy recovery facility (ERF) in the country so we can manage all of north London's waste using the latest and best technology to control pollutants and limit our environmental impacts. In line with the waste hierarchy, the new facilities will enable us to recover energy from any waste which must be disposed of and prevent rubbish going to landfill where it would cause the most environmental damage. Managing all of our waste within north London also means that road miles are reduced, minimising an otherwise significant source of emissions.

The new facilities will use best practice in emissions controls and displace carbon-intensive processes and virgin fossil fuels, lowering the net carbon impact of waste disposal in north London. By diverting waste from landfill, which is the worst option for the environment, the ERF will reduce the carbon impact of north London's non-recyclable waste. The facility will be in line with the Mayor of London's environmental strategies, ensuring we make an effective contribution to meeting the

Mayor's of London's Emissions Performance Standard and complying with the Mayor's Carbon Intensity Floor (CIF). When the facility eventually supplies 60MWth of heat to district heating, it will comply with the proposed revised CIF of 300g CO2/kWh. For future developments, we will ensure that new infrastructure meets the requirements of Biodiversity Net Gain, in line with the latest legislation. We're proud that our plans also align with the recommendations for managing waste set out in the Climate Change Committee's 6th Carbon Budget.

Overall, the new facilities will be beneficial in terms of greenhouse gas emissions compared to alternative residual waste disposal options, such as landfill or transporting waste elsewhere. This is an integral part of our progress to tackle the climate emergency, supporting our priority to reduce the environmental impact of waste disposal and our residents' desire to limit carbon emissions.

Case study: low carbon buildings at the Edmonton EcoPark

Throughout the building stage at the EcoPark, we are following a Carbon Management Strategy to ensure we reduce embodied carbon as much as possible in delivery of the new facilities. Our contractors have a 10% reduction in embodied carbon target which has seen multiple innovations occur onsite including the award winning ultra-low carbon concrete trial and use of electric-powered tower lights and a hybrid mobile tower crane instead of traditional operation using diesel generators and engines during construction. These initiatives have delivered carbon savings, reduced air and noise pollution and saved the need to purchase diesel. Ground-source heat pumps and over two thousand solar panels will be installed at the site, providing enough renewable energy for EcoPark House to be entirely off-grid. By maximising our opportunities to generate and use renewable energy at our facilities, we will lower the emissions from our infrastructure and operations.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A3, A5 and objectives O1, O5, O6, and O8.

8.4 Providing energy and heat for north London

Disposing of waste with energy recovery uses north London's waste as a resource for society by generating energy in the form of heat and power. Using waste to produce energy is in accordance with the waste hierarchy and ensures a lower environmental impact than landfill or other methods of disposal without energy recovery. NLWA and the boroughs will work together to expand and maximise the benefits of this energy supply for the local area.

The district heating network enabled by the EcoPark will be one of the largest in London, supplying hot water and heating for up to 60,000 local homes and businesses. For those homes and businesses connected to the heat network, that means no gas boilers and reduced reliance on fossil fuels. The area served by the heat network is illustrated in figure 26 below.

We will also supply electricity powered by the waste we manage at the new facilities, reducing local demand on the electricity grid. This is a key element of climate change mitigation in north London, helping to address our residents' priority for reduced emissions, and the reason why the heat and energy generated at the EcoPark feature in the Mayor's plans for the future energy mix in London.

Supplying heat and energy locally makes the most efficient use of the energy recovery facility and ensures that we maximise the benefits of the new facilities for north London. We will continue to explore new ways to make use of the heat and energy generated at the EcoPark for the benefit of

the constituent boroughs and our residents, especially where this can support our collective goals to decarbonise and address the climate emergency.

Figure 26. the heat network powered by the Edmonton EcoPark

These activities are in line with the vision and policy framework set out in chapter one and will support aim A3 and objectives O1, O5 and O6.

8.5 Air quality and other environmental impacts

Climate change, pollution and the impact of waste on the environment are major challenges which NLWA and the constituent boroughs are committed to tackling. Air quality describes the condition of our air, it can be negatively impacted by pollutants including sulphur dioxide and nitrogen oxide. The new energy recovery facility will use world-class, proven technology to capture and control pollutants. Studies of modern energy recovery facilities show their pollution control systems are highly effective at removal of ultrafine particles. As recommended by the Strategic Environmental Assessment of this Strategy, the new facilities will follow international best practice in controlling and monitoring pollutants.

The existing Energy from Waste facility already operates under a strict Environmental Permit issued by the Environment Agency. Our existing plant operates well within the rigorous limits, operating at 40% below limits for nitrogen oxide (NOx) emissions set by the Industrial Emissions Directive (IED). Our new ERF will perform even better, at 60% below IED limits. It will be one of the cleanest and safest facilities in the country, using advanced and proven technology to capture and clean emissions.

Our ERF will be the first energy recovery facility of its kind in the UK to benefit from Selective Catalytic Reduction, which is a world-class technology for controlling emissions of nitrogen dioxide. This process converts nitrogen oxide into water and nitrogen (a harmless gas that makes up 78% of the Earth's atmosphere). Following the example of advanced Scandinavian ERFs, it will also be the first energy recovery facility in the UK to have a combined dry/wet scrubber. This provides an extra stage to the cleaning process, to give a 'final polish' to the gas before it's released from the stack. A liquid is sprayed to neutralise gases and make doubly sure that particulates are captured.

Even at the peak levels, particulate matter from the ERF will make up only 0.52% of local air quality concentrations. This is 400 times lower than the level set by the UK air quality objective. The ERF will operate at almost 1000 times lower than safe limits for particulate concentration recommended by the World Health Organisation.

The ERF is subject to 24/7 monitoring, continuous monthly emission reporting, quarterly reporting and sampling of air and water emissions, bi-annual gas emissions reports and comprehensive annual reports. LondonEnergy uses robust and accepted methods to calculate its energy usage and associated Greenhouse Gas (GHG) emissions. Ongoing monitoring is available to view on LondonEnergy Ltd's website.

8.5a Water

Steam powers the turbines at the EFW to produce electricity. The water released to the sewers is monitored by tight parameters. Samples are taken quarterly and sent to an accredited lab for testing while surface water emissions are also checked quarterly.

8.5b Ash

Ash remains after the waste has been treated. Recycling potential is maximised by sending this to a dedicated facility. The ash is monitored closely, and samples are taken twice a month and sent to an accredited lab for checking. The lab reports show whether the ash can be reused in the construction industry.

The majority of the incinerator 'bottom' ash produced at the end of the process is recycled into aggregate substitutes by a sub-contractor, thereby reducing the extraction of aggregates elsewhere. In addition, scrap metals are recovered from the ash following the combustion process and are recycled.

These activities are in line with the vision and policy framework set out in chapter one and will support aim A3 and objectives O1 and O6.

8.6 Carbon capture and storage

To improve the facility's environmental benefit further, NLWA is currently investigating the use of carbon capture and storage. Carbon capture and storage are technologies that process and capture CO_2 to prevent its release into the atmosphere from an activity such as the burning of waste to generate heat and power. The introduction of carbon capture and storage in due course would further reduce the carbon impact of the facility to a level where it could be carbon negative.

This is a major technical undertaking involving engineering, planning, financing, collaboration, and project management. Subject to further planning, we currently aim to install carbon capture at the EcoPark on the site of the current energy-from-waste facility after it has been decommissioned and dismantled.

NLWA has also joined the Carbon Capture and Storage Association which is the lead UK and European trade association aiming to accelerate commercial deployment. NLWA is a partner too in the Bacton Thames Net Zero (BTNZ) Cooperation Agreement, which is exploring the feasibility of transporting to, and storing carbon dioxide from Southeast England and the Thames Estuary in, the Hewett depleted gas field in the North Sea.

Our commitment to this project reflects our residents' desire to reduce emissions and supports the goals of NLWA and the constituent boroughs to decarbonise and tackle the climate emergency.

These activities are in line with the vision and policy framework set out in chapter one and will support aim A3 and objectives O1, O5 and O6.

8.7 Vehicles

Alternative models and fuels for refuse collection vehicles are coming into the market which will help to reduce the impact that the waste management sector has on the environment. These fuels are cleaner and have a lower environmental impact in comparison to diesel. Our focus on waste prevention and reuse should also have the effect of lowering vehicle emissions as less waste will need to be transported by road and collection vehicles will take longer to fill so can undertake more efficient rounds.

Many of the north London constituent boroughs are already working to electrify their fleets, as one of many steps towards achieving net zero carbon. Many of the smaller street cleansing vehicles and vans in Camden are now fully electric; Islington now buys exclusively electric with the aim of full electrification by 2030; Hackney's vehicles run on hydrotreated vegetable oil, delivering a 92% carbon saving from tailpipe emissions; and in 2022 Enfield Council received delivery of their first fully electric refuse trucks to reduce the Council's carbon footprint.

Over the course of this strategy NLWA and the constituent boroughs will continue this progress and look to electric or alternative fuels for our fleets as a means of reducing our overall carbon impact. In line with the environmental assessment of this Strategy, we will consider efficient collection frequencies, operational logistics and the changing climate when reviewing services. This approach supports our residents' priority to decarbonise and our goals to minimise environmental impacts.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A2, A3 and objective O1.

8.8 Avoiding landfill

Recovering energy from waste at the ERF prevents residual waste from going to landfill. Disposing of waste in landfill does not allow either the material or energy content to be recovered, so it is widely recognised to be the most problematic and undesirable method of disposal.

We are proud of our achievements in reducing waste sent to landfill, and will continue to go further than the national and regional targets oblige us to. To this end we will reduce disposal to landfill to zero by 2040, meaning no waste from our boroughs will be sent directly to landfill. This will be powered by the development and launch of our new state-of-the-art facilities at the Edmonton EcoPark, which enable us to generate energy and heat from all of the residual waste produced in north London and move permanently away from the most harmful means of disposing waste.

Achieving this will reduce the release of methane gas which results from residual waste disposal at landfill. Methane, on a weight basis, has 25 times the global warming potential of carbon dioxide. Our approach will thereby reduce the environmental impact of NLWA's waste management operations and help to combat climate change, supporting national and regional policy goals as well as our commitments to tackling the climate emergency and our residents' priority to reduce emissions.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A2, A3 and objective O1.

8.9 Future treatment technologies

NLWA and constituent boroughs are constantly mindful of changing infrastructure and technology in the waste world, and are consistently scanning the horizon for improvements which will change the way our waste is managed.

When looking for an infrastructure solution at the NLHPP site, NLWA carried out an examination of available waste treatment technologies as alternatives to landfill, including the available thermal waste treatment technologies, pre-sorting of residual black bag waste, and the range of non-thermal treatment technologies. The purpose of this exercise was to confirm whether other forms of treatment may have emerged that are capable of processing residual waste at scale in a proven, safe, reliable, and environmentally responsible manner. This assessment particularly considered recent large scale technology performance and failure.

The review concluded that the only technology proven at the scale of operation required for north London is an energy recovery facility employing advanced moving grate technology. This technology has a long-established track record in managing waste at the scale required in north London, in a safe, environmentally responsible, and reliable manner. We have also undertaken analysis on a range of pre-treatment facilities or technologies which could potentially be options to be included at the EcoPark facility in the future. This included looking at the extraction of metals from the residual waste stream and facilities which have been designed to extract rigid plastics, though at the current time there is not much data available to give comprehensive information on recovery rates due to challenging market conditions. The use of anaerobic digestion for the pre-treatment of the organic fraction of residual waste to recover energy was also considered, although evidence suggests current technology performs poorly and needs to improve to make this a viable solution.

NLWA will continue to monitor developments and advancements in this area. We will explore additional infrastructure for the pre-treatment of waste, including regularly investigating any improvements in artificial intelligence and robotics that will improve the process. We will maintain a watching brief on emerging sorting technologies to try and decarbonise the waste stream if it proves viable.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A2, A3 and objectives O1 and O6.

8.10 Monitoring our progress

Greenhouse gas emissions

Our constituent boroughs have declared a climate emergency, and have each committed to be carbon neutral between 2030 and 2050. This strategy supports those ambitions and sets out a number of actions to reduce the greenhouse gas emissions associated with waste management in north London.

We commit to producing new analysis examining the carbon impact of the waste we manage. Together with up-to-date composition analysis, this will demonstrate the true environmental impacts of the waste being produced in north London. Using this analysis, NLWA and the boroughs will prioritise our activities for the greatest environmental benefits, for example by targeting prevention activity at the materials which cause the most harm when disposed of. As recommended in our Strategic Environmental Assessment, carbon analysis will form part of our regular reporting in future, providing holistic insights on the impacts of consumption and waste production in the area and ensuring our services contribute effectively towards net zero carbon targets and the response to the climate emergency.

We will also seek to influence government and others in the sector to adopt similar reporting and support the development of carbon-based metrics. This would help to ensure that national data and targets capture the true environmental impacts of the waste we manage. Government has an important role to play in securing high-quality data, standardising reporting across the sector, and setting targets which secure environmental benefits and focus on tackling the climate emergency.

Indicator	Metric	Targets
Carbon impact of waste streams	To be developed	
Operational emissions		

Waste processing

During this Strategy period, we will aim to reach zero landfill for the waste collected by local authorities in north London. This puts us significantly ahead of the national target of 10% by 2035 and means that we will entirely avoid the most environmentally damaging means of waste disposal. When the waste produced in north London must be disposed of, it will always be used as a resource for energy and heat. This will mean we avoid the harms of landfill, help to reduce reliance on fossil fuels and support our boroughs with their responses to the climate crisis.

Indicator	Metric	Targets
Use of landfill	% of waste sent to landfill	0%

Chapter nine: delivering collaborative, community-focused services which provide value for money and maximise social value

9.1 Overview

It is a key priority for all eight authorities to provide waste services which meet the needs of our local community. We will continue to deliver these services in accordance with statutory requirements and the highest environmental standards. As well as managing their waste effectively, our services will offer valuable social benefits for residents in north London, and we will always work to ensure we deliver value for money.

This chapter sets out how we will manage and deliver these services, including our network of Reuse and Recycling Centres and other assets. It also describes how we will work with the local community to maximise the social benefits of our work. Our commitment to social value will be embedded in all of our activities, and we will look to deliver this through our work with schools, the voluntary sector and other community partnerships. High-quality, green jobs will be available for local people at our facilities, and young people in the community will have the opportunity for apprenticeships, training and skills development to help equip them for a sustainable future. Partnerships with local businesses, schools and the voluntary sector will help bring further benefits to north London.

Our services will continue to be run for the benefit of the north London community. All of our residents will have access to the waste services they need. We will deliver these services in collaboration with partners, the voluntary sector and the community and we will manage our assets and investments according to the highest standards to ensure we deliver value for money for residents.

We will be collaborating with key partners across London and the wider sector and will aim to have an increasing influence on the national policy debate. Our unique characteristics and expertise mean we can provide trusted advice and thought leadership on waste and related issues. Our strategic engagement with government and other partners will help secure the best outcomes for north London.

Our approach will focus on the following activities:

- Ensuring we provide suitable and cost-effective reuse and recycling services which meet the needs of north London's residents
- Working collaboratively with partners and other stakeholders
- Delivering social value and benefits for the local community
- Providing local people with opportunities to train and develop green skills
- Committing to sustainable procurement practices
- Managing our assets effectively to ensure value for money

Further detail on each of these is found in sections 9.3 – 9.7. Section 9.2 sets out our request that government takes a collaborative approach with local authorities when designing and implementing policy. This will help us ensure that any changes meet the needs of north London and can be delivered effectively in the area, including through fair and transparent funding settlements.

9.2 Our asks of government

To ensure that we can provide effective waste management which meet our environmental ambitions and deliver benefits for our community, central government must provide adequate funding for our services. Local government waste and environmental services are currently working against an extremely challenging financial situation. The Local Government Association estimates that local authorities' core funding per person fell by 26% in real terms during the 2010s and forecasts suggest a £6.2 billion pound funding gap in the years 2024-2026.[12] Maintaining high quality waste services and achieving our environmental ambitions in this context will rely on fair funding in future local government finance settlements. NLWA and the constituent boroughs could also be supported to improve recycling infrastructure by offering additional Recycling Improvement Funds.

We also ask that government works closely and consistently with local authorities when proposing changes in the waste arena, so that these are realistic and reflect that local authorities need to input to arrangements impacted by local circumstances. It is vital to recognise that local authorities may need to adapt proposals as local circumstances change. In collaboration with partners such as the Mayor, ReLondon and London Councils, we will campaign for policy that works for north London and the wider region.

9.3 Reuse and recycling services

NLWA and the constituent boroughs will continually review the services we provide, including our network of reuse and recycling centres (RRCs), so that we meet the needs of our community and provide good value for residents. We will assess local requirements and ensure our services remain cost-effective and fit for purpose. Where necessary, we will implement any changes considering our environmental ambitions and the goals set out in this Strategy. For example as set out in chapter six, we will aim to use the RRC network to encourage greater reuse and repair to avoid unnecessary disposal.

Residents told us in our listening exercise that they value having accessible and easy-to-use facilities for recycling, including sites which do not require use of a car. In response to this, our priority will be to ensure that all residents have access to the services they need to reduce their waste, recycle more and dispose of items responsibly where necessary. This will include working to improve infrastructure for pedestrians and cyclists, design and spatial evaluations and assessments of opening hours and locations of our RRCs. We have already opened a new flagship RRC at the Edmonton EcoPark and improved pedestrian and cyclist access at the Hornsey Street and South Access Road sites. We will continue to develop and adapt our services over the course of this Strategy. We will also ensure that staff are trained and equipped to help all visitors access our services including those who are disabled, pregnant, have health conditions or otherwise may require extra support.

We will also continue to lead by example by trialling new and innovative recycling schemes, providing north London residents with a wide range of specialist services to support a circular economy and divert waste from disposal (see section 7.4).

These activities are in line with the vision and policy framework set out in chapter one and will support aims A2, A4, A5 and objectives O1, O3, O4, O5 and O7

[12] Waste reforms briefing | Local Government Association

9.4 Collaboration and influence

All eight authorities are committed to collaborative working, delivering services alongside our partners and community to help improve performance on waste reduction, reuse and recycling. The eight authorities will work jointly where we can to deliver the best possible services across north London, and ensure we provide value for money. Continuation of this joint working, and development of new partnerships, will be important in successfully delivering the aims and objectives of the strategy.

To support implementation, NLWA will develop a Public Affairs Strategy in consultation with the constituent boroughs with the aim of building working relationships with relevant regional and national decision makers. Our location and remit gives us the unique ability to call out the specific waste challenges faced by London - an ultra-urban environment - and provide invaluable insight into the experience of local authorities. As an impartial statutory body, NLWA will seek to become a trusted voice for politicians, offering expert advice and realistic solutions to waste prevention and achieving a circular economy.

We recognise the strength and efficiencies offered by influencing with others, and as part of the new Public Affairs Strategy we will also work with partners across the waste and voluntary sectors to influence central and regional government policy, in pursuit of our vision of sustainable waste and resource management. This will include working with key partners across London such as the Mayor, London Councils, ReLondon and other waste authorities, to secure the best outcomes in managing London's waste and resources.

We aim to establish more informal partnership working with national, regional and local organisations that have common goals to reduce waste, increase reuse and repair, and improve recycling. We will work in partnership with the commercial and charitable sectors such as the waste industry, supermarkets, housing trusts and furniture reuse forums, to promote waste reduction, reuse and recycling.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A2, A4 and A5.

9.5 Social value

Increasingly, public sector organisations are taking account of the wider social impacts of their policies. Organisations which make a conscious effort to ensure that these effects are positive can be seen as adding social value by contributing to the long-term wellbeing and resilience of their residents, communities and society. Social value is defined through the Public Services Act (2013) and requires all public sector organisations and their suppliers to look beyond the financial cost of a contract to consider how the services they commission and procure can improve the economic, social and environmental wellbeing of an area.

NLWA and the constituent boroughs take social value into account through our policy and spending decisions to deliver benefits for the communities we serve. Each of the boroughs has commitments to deliver social value, including through their contracts and supply chain. These commitments are set out in individual procurement or social value policies for each borough.

Over the course of this Strategy, we will continue these programmes and look to maximise social value from all of our activity and services. This will include providing apprenticeship and training opportunities, educational activities, community grants and volunteering time. We will also encourage our partners and contractors to use local resources and offer local employment wherever

possible, so we will champion opportunities for local employment and businesses through our activities. We will regularly assess social value outcomes and identify areas of improvement.

In addition to the above, NLWA and the seven boroughs commit to pay their staff the London living wage. The London Living Wage is an hourly rate of pay which is higher than what is required by law. It is calculated independently to reflect the high cost of living in the capital, giving a worker in London and their family enough to afford the essentials and to save. Our strong position on this helps ensure that our partners and contractors, LondonEnergy and Biffa, also pay their employees the London Living Wage. We will continue to use our influence to secure these wider benefits, both for north London and the waste sector in general.

Case study: the North London Heat and Power Project social value programme

We have ensured that the North London Heat and Power Project (NLHPP) has brought social and economic benefits to the local community and we will continue to take this approach with future projects. The NLWA project team work closely with our partners to ensure that the contractual commitments are met and that the programme is delivered in a way that recognises emerging needs of the boroughs. A Social Value Governance Board, which comprises of council officers from the seven NLWA boroughs, Acciona, and NLWA, ensures that the opportunities enabled by the NLHPP are reaching the local communities, including jobs and apprenticeships, training placements, and opportunities for local businesses. A Community Liaison Group with representatives from wards surrounding the Edmonton EcoPark enables us to hear from local community groups and share information on opportunities that are available to local people. EcoPark House also provides a new visitor centre and community space for local residents, as well as a waterfront home to Edmonton Sea Cadets.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A4, A5 and objectives O6 and O8.

9.6 Green skills

The Office of National Statistics have defined green jobs as ‘employment in an activity that contributes to protecting or restoring the environment, including those that mitigate or adapt to climate change.’ Our work to minimise waste, and to dispose of it in as environmentally-friendly way as possible is an important part of the local response to climate change. As described above, we aim to limit the impacts of our waste and to use it as a resource for energy and heat, which reduces the area’s reliance on fossil fuel and diverts waste from the most harmful disposal methods.

Our work with schools and the local community helps to build awareness of green jobs available in north London and in the waste sector more widely, while our programme of apprenticeships and training helps to equip north London residents with the skills required to work in this area. Our focus on social value therefore has the joint benefits of creating good quality green job opportunities in the north London area while also ensuring that members of the local community develop skills which can apply to a range of other roles with an environmental focus, for example within waste management, construction or other related sectors. This will help strengthen the local workforce and support the local economy, while also ensuring that local people develop the capability to access green jobs in the future.

These activities are in line with the vision and policy framework set out in chapter one and will support aim A4 and objectives O6 and O8.

9.7 Sustainable procurement

To lead by example in adopting reuse practices and waste prevention, and to meet our climate goals, the north London boroughs have developed and adopted procurement policies which value sustainability and environmental benefits. These make commitments, for example, to use our contracts and commissioning processes to reduce emissions, avoid single-use plastics and maximise social value. Using our purchasing power in this way helps drive environmental benefits and progress towards a circular economy. By committing to maximise local economic, environmental and social benefits, we will also align with the Mayor of London's Responsible Procurement Policy and support delivery of the accompanying Good Work Standard.

In line with this approach, NLWA will also adopt a sustainable procurement policy to complement the boroughs' existing activity. This will help ensure all the authorities are following best practice and using our influence through procurement and commissioning to encourage waste reduction and support the circular economy. By actively engaging with suppliers, we will drive improvement and deliver social value for the local community as described in section 8.4 above. We will also engage with partners across London and the waste sector, where this can help support the move to a low waste, circular economy.

These activities are in line with the vision and policy framework set out in chapter one and will support aims A1, A2, A4 and objective O2.

9.8 Asset management

NLWA and the constituent boroughs own and manage a diverse portfolio of infrastructure assets and facilities to meet the waste management needs of north London. As set out in chapter eight above, we are investing in the creation of major new high-quality infrastructure assets including the North London Heat and Power Project, comprising of an energy recovery facility, a resource recovery facility, and EcoPark House, enabling efficient recycling and management of waste. This means that we have reached a new position of greater responsibility after investing substantially in major new high-quality assets worth approximately £1.5 billion.

To maximise the life of our assets and safeguard their functions and value, we will develop and implement best-in-class asset management practices. NLWA will produce an Asset Management Strategy to define the required frameworks, approaches, and appropriate governance arrangements to establish long-term responsible stewardship. The Asset Management Strategy will support delivery of this Joint Waste Strategy and align with the aims and priorities set out in this document. This will include steps to assess, review and address legacy assets, facilities and land that do not or will no longer fulfil the functions for which they were procured or are misaligned with this Joint Waste Strategy.

Our intention is to follow the international asset management standard (ISO 55001) – learning the lessons from asset ownership over time and continually improving our approach to achieve our joint objectives for north London. Effective asset management practice over the long term will underpin the successful use, operation, and maintenance of our facilities, enabling us to safeguard their functions, maximise their life and minimise their ongoing costs while also maximising opportunities and investments for the benefit of our community.

These activities are in line with the vision and policy framework set out in chapter one and will support aim A5 and objectives O6 and O8.

9.9 Monitoring our progress

We will monitor the activities outlined above through performance indicators to be developed within each individual workstream. These will be detailed in delivery plans and monitoring reports published on a regular basis throughout the Strategy period.

Chapter ten: impact and monitoring

This Strategy has set out how we will support north London to reduce waste, improve our recycling, and limit the environmental impact of waste disposal while we continue to ensure our services are delivered for the benefit of north London's residents. The actions we take to manage waste over the next fifteen years will play a key role in north London's response to the climate emergency. We are ambitious about what we can achieve, but clear that we can't reach our goals alone. While NLWA and the constituent boroughs collect and manage north London's waste, this is only a small part of a wider system that also includes government, businesses and residents. Action is needed from all of these groups if we are going to jointly meet the challenges that waste services will face in the next fifteen years and achieve our environmental goals.

10.1 Monitoring our performance

We have ambitious environmental goals for north London and will measure and report our progress delivering this Strategy using the metrics described in the chapters above as key performance indicators. Where targets have been set, we aim to meet these by the end of the Strategy period (2040) and will report on progress through annual reports presented to the Authority and published on the NLWA website. A summary of these reporting metrics is shown in the table below:

Indicator	Metric	Targets
Avoidable food waste	% of residual	50% reduction
Recyclable material in residual waste	% of residual	50% reduction
Total household waste per capita	Kg / person	
Residual household waste per capita	Kg / person	
Reused material	% of RRC waste reused	Double % of material reused
Recycling rate	% of household waste by weight which is recycled, reused or composted.	50%
Processing destinations	% within UK	100%
Carbon impact of waste streams	To be developed	
Operational emissions		
Use of landfill	% of waste sent to landfill	0%

To help develop this Strategy, we have analysed the current composition of north London's waste (see section 3.3). This analysis informs our targets for the Strategy period and highlights some of the changes we need to see in order to achieve our environmental ambitions for north London. To

enable improved reporting in future and to enhance our understanding of the waste being produced in north London, we commit to undertake similar analysis on a regular basis. We will produce updated waste composition analysis as necessary to understand the impact of policy and service changes and the progress of this Strategy. This will also allow us to develop and analyse further measures such as individual material capture rates, which can provide greater insights than the current focus on recycling as a percentage of total waste.

As we continue to monitor and engage with the government's development of new policies and fully understand their potential implications, we will review the metrics above to ensure they remain appropriate. We will place the targets for this Strategy in the context of the new policy environment when this becomes clearer.

10.2 Impact assessments

While preparing this Strategy, we have assessed the impacts that our proposed approach and activities could have on the environment, and on people with protected characteristics. Through our Options Appraisal, we have also analysed financial impacts.

10.2.1 Environment

The Strategy's impact on the environment has been assessed through a Strategic Environmental Assessment (SEA). All central and local government plans, policies and strategies that have potential to have a significant effect on the environment are required to be assessed regarding how they contribute to sustainable development. This is carried out via the completion of an SEA. The requirements for an SEA are defined in the 'Environmental Assessment of Plans and Programmes (SEA) Regulations 2004'.

The SEA involves a review of key central and local government plans and strategies that have the potential to influence the management of waste, as a basis for considering the suitability of the Strategy. The assessment also considers the local environmental, social, and economic context of north London with relevance to waste management services and their impacts to establish an environmental 'baseline'. From this assessment, the key sustainability issues identified for the Strategy include:

- Mitigating climate change by reducing the carbon impact of resources and waste management
- Adapting to climate change, e.g. potential weather related and flooding issues
- Effective waste management and climate change benefits
- Changing waste streams after Covid-19 and as part of lifestyle changes and government policy
- Landfill diversion, reuse, repair and prevention, energy recovery from waste, recycling and composting
- Reducing fly-tipping and litter
- Reducing local air pollution and improving water quality
- Supporting the circular economy
- Providing services for a growing, aging and transient population and for those with long term health problems and disabilities
- Addressing environmental impacts including harm to human health and natural environment
- Managing the impact of food waste and garden waste

The Strategy has been reviewed in relation to these issues, with the key parts of the draft assessed against a wide range of SEA Objectives which are measured using SEA Criteria to ensure an appropriate strategy is developed. During the development of the Strategy, feedback from the SEA

process has informed the drafting of specific content and proposals. The actions and mitigations proposed in the Environmental Report have been incorporated into the Strategy to ensure we achieve a sustainable and environmentally beneficial approach for waste management in north London

The SEA has been subject to consultation as per the regulatory requirements and the draft Environmental Report presented at appendix 4 represents the public consultation stage of the SEA process.

10.2.2 Equalities

An initial Equalities Impact Assessment (EqIA) has been undertaken to investigate the implications of the draft north London Joint Waste Strategy on specific groups of people. The purpose of an EqIA is to ensure that policies and strategies do not discriminate against target groups with protected characteristics, and where possible contribute to improving the lives of local communities. Completing an EqIA is a systematic process that is designed to consider the needs of each target group and assess the impact that a policy or strategy may have on them.

For assessment purposes, the following protected characteristics have been considered:

- Race
- Physical & mental disability
- Gender reassignment
- Sex
- Sexual Orientation
- Religion or Belief
- Age
- Marriage & civil partnership
- People who are pregnant or subject to maternity legislation

The following are not protected characteristics by law, but will be considered in this equalities assessment:

- Socio-economic

It is recognised that many of these protected characteristics may overlap and have similar needs and/or be subject to similar prejudices. The target groups are based on the Equality Act (2010), the aligning Public Sector Equality Duty (2011) and those adopted in regional guidance written by Transport for London (TfL), Greater London Authority and other functional bodies. The identified groups are also reflected in the available EqIA guidance of the London boroughs within the strategy area. They are considered suitable to reflect the diverse population within the seven London boroughs.

Consultation with the public and relevant stakeholders is required for the EqIA. Consultation supports and strengthens value judgement and builds consensus, whilst helping to avoid assumptions and potential prejudice through providing evidence and information. The findings of the initial assessment are presented at appendix 5 in draft form for consultation and respondents to the consultation are invited to comment on any equality issues relevant to the draft Strategy.

10.2.3 Financial

The Options Appraisal analysis presented in appendix 2 contains an analysis of ‘whole system costs’ for the relevant options of waste collections and disposal assessed. This analysis illustrates the total

annualised collection costs including vehicles, containers, staffing, running, standing and overheads costs, as well as any revenues received by the councils (e.g. income associated with charged garden waste collections) and the notional treatment and disposal costs of managing the collected waste. This analysis serves as the financial assessment for the draft Strategy. It should be noted that these figures are not provided as budget setting costs and a further business case would be required to explore the implications on the Waste Levy of any service changes. Any additional costs related to the activity outlined in this Strategy will be assessed in detail on a case-by-case basis, as we plan the implementation of any new programmes and projects. These financial assessments will be subject to the usual scrutiny and budget-setting requirements of NLWA and the seven boroughs.

10.3 Governance and review

This Strategy provides the strategic framework for waste management operations in north London from 2025 to 2040. To ensure we deliver on the intentions set out in this document, we will also publish regular delivery plans to track the actions and commitments we will undertake in the shorter term. Each authority will be responsible for publication of their own plans, and for the constituent boroughs, this function may be served by the existing Reduction and Recycling Plans. NLWA will aim to produce a delivery plan to accompany this Strategy approximately every two to three years, providing detail on the programmes of work which will be carried out in each period to support the longer-term aims of the Strategy. We will also undertake periodic reviews of the Strategy, report on progress and make updates if required.

Joint working between NLWA and the constituent boroughs will be crucial to the success of this Strategy, as will our collaboration with the Mayor of London. Our governance arrangements and regular engagement between officers will ensure we work in close partnership to successfully deliver waste services for north London. We will also engage with our residents on an ongoing basis to seek feedback from the community and codesign new initiatives.

Reporting on the Strategy will be to the North London Waste Authority, which is made up of fourteen councillors, two from each of the seven north London boroughs. It is these fourteen councillors that make decisions relating to the disposal of north London's waste and hold NLWA accountable for meeting its responsibilities. Our progress towards achieving the aims of the Strategy will be presented to the Authority, and the public, on an annual basis.

Appendix

Appendix: an overview of relevant policy and legislation

Statutory duties and powers

NLWA is established as a statutory joint waste disposal authority under Schedule 1 to the Waste Regulation and Disposal (authorities) Order 1985, while each of the constituent boroughs are defined as waste collection authorities under the Environmental Protection Act 1990. The Environmental Protection Act also sets out each authority's functions. The boroughs, as collection authorities, have a statutory duty to provide refuse collection, street cleansing and a wide variety of other waste collection services, including recycling collections. NLWA's duties are as follows:

- To make arrangements for the disposal of waste collected by the constituent boroughs.
- To make arrangements for places to be provided at which residents may deposit their household waste and for the disposal of waste so deposited;
- To make arrangements for the storage and disposal of abandoned vehicles in accordance with section 3 (8) of the Refuse Disposal (Amenity) Act 1978 (Removal of abandoned vehicles)

NLWA's work goes beyond these disposal duties, with a focus on preventing and reducing waste arising in the first place and recycling as much as possible. This is enabled by the same Act, which provides NLWA with certain powers to manage and dispose of waste, including:

- To make arrangements to recycle, use, sell or otherwise dispose of deposited waste or anything produced from such waste including for the purpose of producing heat or electricity or both.
- To take steps to minimise the generation of controlled waste of any description, generated in its area.

As well as the Environmental Protection Act 1990, we are governed by multiple other pieces of legislation. This includes the Waste & Emissions Trading Act 2003 which requires us to prepare a joint municipal waste management strategy, and the Local Government Act 1972 which gives powers to carry out activities considered appropriate to our statutory functions, including acquiring and disposing of land.

The North London Heat and Power Generating Station Order

In 2017, following two rounds of public consultation and an examination by the Planning Inspectorate, the Secretary of State for Business, Energy and Industrial Strategy granted consent for NLWA to build a replacement energy recovery facility and associated development at the Edmonton EcoPark.

The examination began in February 2016 and was concluded in August 2016. The examination included:

- visits to the proposed site by the Examining Authority;
- issue-specific hearings, during which the Examining Authority asked NLWA and other interested parties questions about the application;

- open hearings, during which anyone who registered a relevant representation was invited to attend and make a verbal representation to the Examining Authority; and
- extensive written communication between NLWA and the Examining Authority, which enabled the Examining Authority to request further information and documentation in support of the application.

The Development Consent Order authorised the development of the North London Heat and Power Project and provides the legislative framework for us to construct, operate and maintain the new energy from waste facility. This has allowed us to deliver the most significant public sector investment in waste facilities London has seen for a generation, building the greenest energy recovery facility in the country using modern technology to improve our environmental impacts, and providing flagship reuse and recycling services for residents at the new EcoPark.

Government strategies and policy changes

Resources and Waste Strategy, 2018

"Our Waste, Our Resources: A Strategy for England" (2018), is focused on improving recycling quality and increasing recycling rates from households and businesses. It includes substantial reforms to municipal waste collection and management services, for example, requiring the separate collection of food waste from households. It also puts a greater responsibility on producers of goods and packaging to play their part in dealing with the products at the end of their life. New measures proposed include Extended Producer Responsibility for packaging materials (EPR)[13] and the introduction of a deposit return scheme (DRS) for single use drinks containers, and an initiative to improve recycling rates by ensuring a consistent set of dry recyclable materials is collected from all households and businesses (Simpler Recycling).

Each of the measures mentioned above will impact on the services delivered in north London and how they are funded going forward, these effects are explored in more detail in section 4.2 above. While we had hoped that the policies in the Resources and Waste Strategy would be transformative for the sector, so far they have delivered little due to a combination of delays and reduced ambition. It is essential the government provides certainty on the detail of these changes and moves forward with delivery and legislation. Without the necessary action from government, we cannot effectively plan the local services which will be required in order to meet all of our environmental ambitions.

Within the Resources and Waste Strategy, the previous government acknowledged the need to set clear expectations and give local authorities the confidence to invest in waste infrastructure and promote recycling. In recognition of the financial pressures on local authorities, there is also a pledge for additional resource to meet new costs associated with these policies. It is vital that these commitments are delivered to provide the certainty and support we need to plan and deliver our own strategy.

Targets included at the time in the Resources and Waste Strategy were:

- 50% of household waste reused, recycled or composted by 2025.
- 65% of municipal waste (which includes waste from businesses that is similar to household waste, comprising materials like food, paper, plastic etc.) reused, recycled or composted by 2035.

[13] The National Strategy also raises the potential for further producer responsibility measures including for textile wastes (e.g. to help tackle 'fast fashion' impacts), bulky waste (e.g. mattresses, carpets) and other waste streams.

- That no more than 10% of municipal waste in England should be sent to landfill by 2035.
- That avoidable waste of all kinds is eliminated by 2050.

These targets are ambitious and local authorities would need a clear roadmap with clarity on how they can be delivered in order to realistically contribute. The sector has been expecting significant change and progress from new policies, which now appear unlikely to have a transformative impact on waste reduction or recycling. Authorities in London and other densely populated urban areas generally have lower recycling rates because of high numbers of flats and houses in multiple occupation (HMOs). Authorities with low numbers of flats and high levels of garden waste can more easily achieve and exceed the targets. In addition, national policies will result in less recyclable waste being presented to local authorities to manage, with it instead being returned to producers through take-back schemes such as a Deposit Return Scheme. This could impact the recycling performance that local authorities are able to report.

Targets are best placed when their aim is to reduce overall waste, rather than focusing on increasing the recycling rate, which does nothing to reduce the amount of total waste being produced. With this in mind, we would encourage the government's to move away from weight-based targets and refocus on measuring waste higher up the hierarchy. This will be a focus for our own activity under this Strategy.

Environment Act, 2021

The Environment Act is a key piece of government legislation which addresses environmental issues such as air and water quality, wildlife and climate. The Act will also be the primary legislation for a number of the key waste management measures in the government's Resources and Waste Strategy.

Through the Environment Act, government committed to a national waste reduction target, aiming for no more than 287kg of residual waste per person by 2042, a 50% reduction from the 2019 levels. This target includes all residual waste produced in England except for major mineral waste, so is not directly comparable to the household waste which NLWA and the constituent boroughs primarily handle. Nevertheless, we support the focus on waste reduction as a driver for national policy and local services, and this Strategy has been developed with waste reduction as the first priority.

Extended producer responsibility (EPR) for packaging

EPR for packaging is a policy which requires producers to be responsible for the packaging they place on the market at the end of its life. It is intended to promote packaging design with greater recyclability. The packaging EPR system was announced in the Resources & Waste Strategy for England with the intention for legislation to be in force in 2023. That date was postponed to 2024 and now, at the time of writing this strategy, the scheme is intended to be implemented from 2025.

The EPR system will require packaging producers to pay for the full net costs of collecting, handling, recycling and disposing of packaging waste, shifting the burden of costs away from the taxpayer and local authorities. However, at the time of writing, payment estimates have not yet been provided and major uncertainties remain over the details of the scheme.

To ensure the EPR legislation fully supports better waste management, the funding should be sent back to local authorities to reimburse the actual costs of waste disposal. The legislation should also have safeguards that support local authorities to use the funding for waste management ahead of other priorities. The EPR approach should also be applied to other waste streams which are difficult to recycle or have significant environmental impact such as textiles or mattresses.

Deposit Return Scheme (DRS) for drinks containers

A DRS is a policy tool which involves consumers paying a deposit for an item (added to the retail price at point of purchase) which is then redeemed when the packaging is returned to a designated point. Through the Resources and Waste Strategy, the government announced that a DRS for England, Scotland, Wales and Northern Ireland will be introduced from 2023. This has now been repeatedly delayed and at the time of writing is officially slated for 2027. The lack of firm commitment and progress from Government has so far prevented industry and local authorities from preparing for the implementation of the scheme as await further clarity.

The aim of the DRS is to boost recycling, reduce littering and improve the quality of material collected for recycling. These long-term benefits are clear, as can be seen from the schemes which are successfully operating in countries such as Norway, Switzerland, and Germany, so we urge that implementation is not delayed any further in England.

The DRS system implemented for England will apply to all single-use plastic and metal drinks containers (excepting HDPE containers, which are primarily used for milk bottles). Despite originally proposing to include glass bottles in the scheme, the government later announced that these will be excluded in England. This significant change in policy added to uncertainty over the scheme and created difficulties for implementation across the UK.

The containers which remain in-scope will in most cases be diverted from local authority waste streams, resulting in less material collected from households for recycling and a subsequent reduction in revenue. The scheme may also leave local authorities with poorer quality material for recycling, further reducing income as well as driving up costs for contamination. It is important these points are recognised in relation to future recycling targets and funding settlements.

Simpler Recycling

Within the Resources and Waste Strategy for England 2018, there were proposals to increase the consistency of how local authority kerbside collections are managed, it is envisaged that this will help drive England to achieve a 65% municipal recycling rate by 2035. These reforms, now known as ‘Simpler Recycling’ (previously ‘Consistent Collections’), will mandate minimum and more standardised recycling services across England. This includes a set list of dry mixed recycling materials which must be included in recycling collections, though collections can continue to be commingled. Local authorities must all offer collections of:

Glass:

- glass packaging including bottles and jars

Metal:

- steel and aluminium tins and cans
- steel and aluminium aerosols
- aluminium foil
- aluminium food trays
- steel and aluminium jars and bottle lids
- aluminium tubes

Plastic:

- plastic bottles made of polyethylene terephthalate (PET, including amorphous, recycled PET), polypropylene (PP) and high-density polyethylene (HDPE)

- pots, tubs and trays made of PET (including amorphous, recycled and crystalline PET), PP (including expanded PP) and polyethylene (PE)
- PE and PP plastic tubes larger than 50mm x 50mm
- cartons for food, drink and other liquids, including aseptic and chilled cartons

All paper and card *except*:

- paper and card that contains glitter or foil
- paper that is laminated
- stickers and sticky paper
- padded lined envelopes
- paperback and hardback books
- wallpaper

From March 2027, authorities will also be required to collect plastic film as part of the dry recycling service. All of the above materials are already collected by the north London boroughs and recycled so these changes will have limited impact on NLWA operations. Only plastic film will be a new service which the boroughs will put in place by 2027.

A significant change being made under Simpler Recycling is that all local authorities will need to provide food waste collections for all properties by 2026. Most north London boroughs currently offer food waste collections, but in some cases a new service will be introduced or the existing service extended to all properties. This includes flats and flats above shops, some of which are not currently provided with a food waste collection. We will work with our boroughs to implement these changes and increase the quantity of food waste which is collected. Removing food from the residual waste is an important aspiration, our latest waste composition analysis shows food makes up around a third of our residual waste. These changes must also be fully supported by Government, meeting the commitment in the Resources and Waste Strategy to fund the costs of implementation and on-going service delivery.

Emissions Trading Scheme (ETS)

The UK ETS was initiated in January 2021, replacing the EU scheme. In July 2023, the Department for Energy Security and Net Zero (DESNZ) announced it was taking forward proposals to include Energy from Waste (EfW) and incineration plants in the UK Emissions Trading Scheme (ETS) from 2028. This will result in additional costs for operators of incinerators and EfW facilities and will raise the costs of waste disposal for local authorities who have statutory obligations to dispose of waste and little control over the carbon content.

It's important for the climate that we all reduce our carbon emissions, and the waste disposal industry is no exception. But as waste authorities we are limited in what we can achieve – ultimately the most effective way to reduce the carbon emissions generated by waste disposal is to create less waste in the first place. Government policy needs to target product designers and manufacturers to ensure the focus is on preventing waste at its source and building a circular economy.

25-Year Environment Plan, 2018

In its 25 Year Environment Plan (Jan 2018), the government set out its ambition to improve the environment within a generation. This included adopting policies within Government Strategies to use resources from nature more sustainably and efficiently, and managing pressures on the environment by minimising waste. This plan led to the development of the Maximising Resources, Minimising Waste (Waste Prevention programme for England).

Waste Prevention Programme for England

In July 2023, the government released an update to the Waste Prevention Programme for England, "Maximising Resources, Minimising Waste". Waste prevention activity reduces the amount of waste which is generated; the government's view on how this can be achieved is set out within three areas (designing out waste, systems and services, data and information) across seven key waste sectors. Some key policies which are outlined within the plan include revising the waste hierarchy guidance by 2024, removing fees to have bulky domestic furniture collected from households by 2025, and developing best practice guidance on reuse for local authorities with consideration of how this can be reported. Waste prevention should be a key priority for future policy and we would welcome further progress on these plans, as well as a stronger focus from government on moving waste up the waste hierarchy towards reduction and reuse rather than recycling and disposal.

Clean Growth Strategy

The Clean Growth Strategy was published in 2017 and aimed to increase national income while reducing greenhouse gas emissions in order to meet the UK's 2050 net zero goal. The Strategy highlights that the UK waste sector has contributed to significant falls in carbon, with the large reduction in waste being sent to landfill resulting in lower greenhouse gas emissions. 13.2% of the UK's energy was generated from 'renewable sources and waste' in 2021[14].

[14] https://www.ons.gov.uk/economy/environmentalaccounts/datasets/ukenvironmentalaccountsenergyconsumptionfromrenewableandwastesources