North London Joint Waste Strategy

Annual Monitoring Report

2017-18

November 2018

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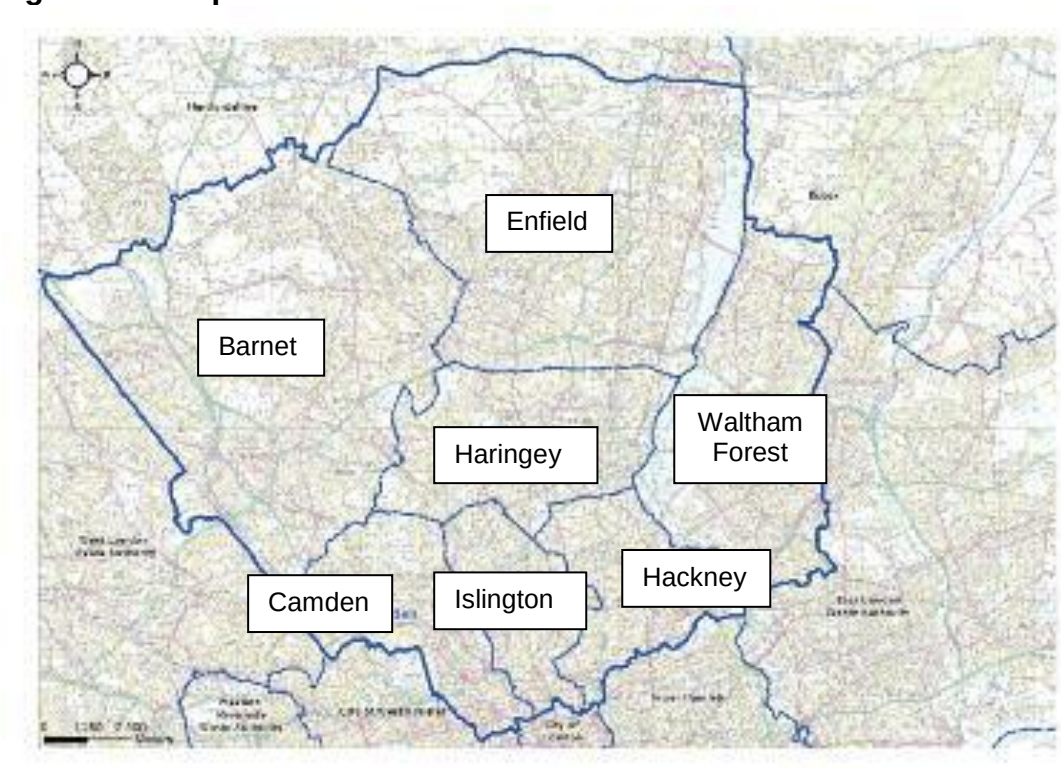
Front cover: Picture taken at a Waste Prevention event to encourage use of reusable bottles as part of the plastics campaign

1 Introduction

The north London area covers almost 30,000 hectares and municipal waste arising in this area is collected by seven Waste Collection Authorities these are:

- London Borough of Barnet
- London Borough of Camden
- London Borough of Enfield
- London Borough of Hackney
- London Borough of Haringey
- London Borough of Islington
- London Borough of Waltham Forest

Figure 1.1: Map of the North London area



In 2009 the eight north London waste authorities (the seven waste collection authorities and the waste disposal authority – collectively described here as the Partners) adopted the North London Joint Waste Strategy (NLJWS), a combined waste strategy for the area between the years 2004 to 2020 that was consistent with both the National and the Mayor of London's waste strategies in place at the time. The NLJWS sets a framework for the management of municipal waste, i.e. the waste collected by the north London boroughs (including both household and non-household waste) in north London and seeks:

- A recycling-led solution with the aim of achieving a combined household re-use, recycling and composting rate of 50% by 2020 (for the sake of simplicity, this is usually referred to as a 'recycling rate' of 50% elsewhere in Authority information).

- A reduction of biodegradable municipal waste going to landfill, so that by 2020 the proportion of such material that goes to landfill is reduced to 35% of 1995 levels (in line with the Landfill Directive targets)[1].

This annual monitoring report details the performance of the eight Partners towards achieving the objectives and targets set in the NLJWS during 2017-18. Details of previous year's progress are available in the previous reports, which are available on the NLWA website at: Annual Monitoring Reports. Update link to http://www.nlwa.gov.uk/governance-and-accountability/annual-strategy-monitoring-reports/

This annual monitoring report should be read in association with the previously published North London Joint Waste Strategy (February 2009) as it is not intended to duplicate text already published within that document. The NLJWS is available to view or download from the Authority's website at: North London Joint Waste Strategy.

The majority of the data reported here is from WasteDataFlow, the web based system for reporting waste management information by UK Local Authorities to government. Data from WasteDataFlow is publically available at: WasteDataFlow.

Document layout

The green shaded boxes below contain the 'implementation actions' published in the NLJWS that the eight Partners have agreed to report annually. The numbering follows those as set out in the NLJWS.

Each implementation action is followed by some analysis and commentary.

Implementation actions which are not reported upon in this document generally do not lend themselves to annual monitoring and review, e.g. implementation 1.B. which states that the North London Partner Authorities have agreed to a series of Aims and Objectives.

Terminology

The Authority	–	the North London Waste Authority
The Boroughs	–	the seven north London borough councils of the Authority (as above)
The Partners or the Partner Authorities	–	the Authority and the Boroughs together

[1] The London Plan, consolidated with alterations since 2011, the Mayor's spatial strategy for the capital, (March 2016) now aims for London to "work towards zero biodegradable or recyclable waste to landfill by 2026" – Policy A (c). The London Plan is available on the GLA website http://www.london.gov.uk/what-we-do/planning/london-plan

2 North London demographics

The data presented in this section is supplied by the Office of National Statistics (ONS) mid-year estimates and is reproduced in WasteDataFlow. These numbers remain important in managing the waste arising in north London and planning services for the future.

As set out below, the total population of the north London area is now estimated to be 2,024,344. This is a significant increase from the estimated 1,500,000 in 1991. These people live in an estimated 811,810 dwellings with on average 2.5 people living in each dwelling.

The continued increases in population and the number of households in London suggest that the amount of waste generated is likely to grow over the remaining period of this Strategy.

2.A To ensure that the Strategy matches future changes in demography, the Partner Authorities have agreed to continue to share demographic information where it is required for strategy development and implementation.

Table 2.1: Population of the north London area

	Population	**Dwelling stock**	**Population density (per hectare)**
Barnet	386,083	148,220	45
Camden	246,181	108,000	113
Enfield	331,395	123,970	40
Hackney	273,526	112,590	144
Haringey	278,451	108,210	94
Islington	232,865	107,580	157
Waltham Forest	275,843	103,240	71
North London	**2,024,344**	**811,810**	**69**

During 2017/18 the number of people living in all the north London boroughs and the north London area as a whole continued to rise. Population density varies widely across the Authority area by between 45 and 157 people per hectare.

The areas with high population density are home to many people that have either small gardens or no garden at all, meaning that the amounts of garden waste that could potentially be collected from these areas will be lower than in more rural areas outside of London. In turn, this means that achievement of a recycling target, which is a combination of both 'dry waste' re-use and recycling, and of composting performance must be sought in north London by maximising dry recycling.

North London has substantial areas of transient population and a relatively young population. High transience creates a considerable challenge in terms of ensuring that interaction between the Partner Authorities and householders through education or enforcement is consistent and effective.

Dwelling stock is the recorded number of self contained units of accommodation. If a number of people live separately in a house this would be counted as a single dwelling. The dwelling stock figure is used in calculations that refer to the number of households elsewhere in this report.

The NLJWS predicted a growth in the dwelling stock of the North London area from approximately 708,000 in 2003/04 to approximately 811,000 in 2020/21 (it currently stands at 811,810). The NLJWS also predicted that the population of the north London area would reach 1,825,200 by 2016, which has been exceeded.

The population of the north London area is currently growing at a rate of some 1.73% per annum and the dwelling stock is increasing by just over 1% per annum.

When the NLJWS was published it was envisaged that an increasing population would produce an increase in the amount of waste arising which in turn would require a combination of an increase in the waste treatment capacity provided and intensification in the use of the existing facilities. Unexpectedly the amount of waste produced between 2006/07 and 2012/13 fell despite the increase in population and dwelling stock. It is not certain why the amounts of waste produced declined despite the increase in the number of people living in the area, but this would appear to be related to the economic downturn during this period. 2013/14 saw a return to increasing waste volumes being produced for the first time since 2006/07 but this has not been sustained and the waste produced in the North London area has decreased again in 2017/18. Further details are provided in Section 21 below.

3 Waste prevention

The NLJWS contains a series of nine implementation actions to address the reduction and reuse of waste. The first of these actions is listed below with the remainder detailed in Table 5 of the North London Waste Prevention Plan 2016-18 available on the Authority's website at http://www.nlwa.gov.uk/docs/2016/north-london-waste-authority-waste-prevention-plan-2016-18.pdf

4. A1 The Partner Authorities are gravely concerned about the year-on-year growth in waste and would urge greater action from Government to minimise waste and will lobby Government to achieve this.

On a two-yearly basis the Authority develops a Waste Prevention Plan in consultation with the constituent boroughs. The Plan is agreed at an Authority meeting and sets out in more detail how the waste prevention objectives within the NLJWS will be implemented and met. This regularly updated plan details a series of short to medium term actions to minimise the amount of waste produced by north London. The implementation of the Plan is carried out by the Authority and the constituent borough councils (together or separately).

The North London Waste Prevention Plan to which this annual monitoring report refers is for 2016-18 and is available to view on the Authority's website on the 'Authority Strategies' page.

During the financial year 1 April 2017 to 31 March 2018, the Authority worked in partnership with the seven constituent boroughs to reduce waste arisings in north London. Three priority waste streams were identified for action: food waste, furniture and textiles. These waste streams were complemented by other activities promoting the reduction of unwanted mail and plastic bags and reusable nappies).

Key highlights of the year were:

- Delivery of **145 outreach events**, directly engaging a total of **9,636 residents** to encourage a reduction in food waste - raising awareness of the issue and changing behaviour.
- Delivering waste prevention talks to **32** local community groups, engaging **558** people.
- Attendance at 20 large outdoor summer festivals engaging with 1,922 people.
- Working with colleges, universities and offices on food waste resulting in **direct engagement with 1,233 people** (both students or staff) at 11 events and **232 members of staff** at various offices in north London during Green Office Week.
- A trial with Middlesex University Halls of Residence were 32 kitchens were equipped with portion-measuring tools to help students reduce the amount of food waste they produce.

- **26 food waste prevention displays** were set up in libraries and community centres.
- Staff also provided food waste reduction tools and tips to **2,543 attendees** at seven 'Waste Less, Lunch Free' events in addition to 1,525 **conversations regarding food waste recycling**.
- Two projects were funded through the NLWA Waste Prevention Community Fund to support waste prevention initiatives in the north London area, namely Bright Friday delivered by Hubbub as a response to the textile waste created by Black Friday and Mapping of Reliable Repair Businesses project delivered by The Restart Project . The aim was to provide community organisations with access to funding in order to develop new approaches to tackling waste prevention, and to extend the reach and impact of waste prevention activity in north London.
- The Sew Spooky project around Halloween to raise awareness and change behaviour regarding textile waste created due to costumes. Three day-long events were hosted at universities to engage students in swapping, making and mending Halloween costumes, and reducing textiles waste. Free surplus pumpkins with recipe cards on how to use pumpkin carvings for cooking, as well as tasters of pumpkin cake were offered to participants. A total of 638 people attended the costume swapping and crafting events, 655 people were engaged in food waste prevention conversations and 75 students were involved in the costume design competition. As a result, 978 Halloween costumes (0.2 tonnes) and 0.23 tonnes of pumpkins were diverted from disposal.
- Participation, for the eighth year running, in the **European Week for Waste Reduction (EWWR)**. EWWR is a Pan-European project aiming to promote the implementation of awareness-raising actions about sustainable resource and waste management during a single week. In 2017 the week ran from Saturday 18 to Sunday 26 November. NLWA's flagship activity was designed to promote furniture reuse and upcycling, namely the London Upcycling Show attended by 280 residents and diverting directly 560kg of furniture. The event showcased reuse, repair and upcycling, featuring inspirational and practical workshops, interactive demonstrations and creative exhibitions from local businesses, as well as the exhibition and judging of entries from the upcycling competition that took place in north London.
- A series of **14 Community Exchange events**, namely Give and Take Days, attracting **670** residents and diverting **12.7** tonnes for reuse.
- **Seven Swish and Style events** to promote reuse, repair and upcycling of textiles through clothes swaps (swishing), repair services and upcycling workshops were delivered. These events were attended by 341 people who brought 972.6kg of clothes for reuse.
- The **North London Waste Prevention Exchange**, a one-day conference to share information on how behaviour change can be achieved via waste prevention activities, focusing on 'Public engagement as a tool for tackling food waste'. The conference was attended by 95 delegates, including officers from central government, regional authorities, local authorities, the third and private sector. During the afternoon session, Ricardo AEA led a workshop in which 51 delegates explored priorities when devising a food waste prevention

programme based on the 4Es behaviour change model (enabling people to make a change, encouraging actions, engaging with the community and exemplifying what is being done by others).

- Worked in partnership with small retailers and their customers to encourage **reduction of single use plastic bags**. Seven large events took place in north London throughout February. Prior to the events, officers held discussions with the retailers as to how the message could be best communicated to their customers and offered promotional posters for their shop. Seven events were delivered, directly engaging with 736 residents; 1,100 bags (an average of 157 per event) were handed out and 64 residents entered into a prize draw.
- An **intensive education programme** delivered in 14 north London primary schools from September 2017 to February 2018 by the environmental charity ecoACTIVE. Specialised educators led a number of hands-on sessions in each school covering all aspects of the waste hierarchy. A total of 4,703 pupils, 190 members of staff and 60 parents were engaged. 237 pupils took part in workshops and the project saw reduction of 924kg in waste in participating schools.
- **A 'Say No to unwanted mail' campaign** aimed to raise awareness of unwanted mail reduction and offer householders useful information about the different ways by which they could take action to reduce the amount of unwanted mail they received. During 2017/18, a total of 8,537 requests for Mailing Preference Service registrations were received.
- A total of **917 reusable nappy vouchers and cash back claims** were issued and an estimated 392.5 tonnes of nappy waste will be avoided as a result of the scheme.

4 Home composting

4.D1 The Partner Authorities will provide a concerted and on-going promotional campaign to encourage home composting throughout the period of this strategy, offering residents purpose built bins at subsidised rates and providing support to residents wishing to compost at home.

4.D2 The Partner Authorities will aim to ensure that 25% of all residents with gardens compost at home by 2014 to divert approximately 40,000 tonnes from the waste stream.

To encourage composting at home for those who have the space, all the north London Boroughs offer home composting bins available at a discount to residents.

5 Community composting

4.E The Partner Authorities will actively support appropriate community compost projects in north London, particularly where these contribute to statutory compost targets, through patronage of bids for external funding, direct support and through payment of third party recycling credits.

In the light of financial constraints, the Authority agreed to cease its direct financial support for community composting in 2010. Hackney ran its own projects however up to 2012/13.

Through contractual arrangements with the Authority, LondonEnergy Ltd, the Authority's wholly owned contractor, delivered 3,673 tonnes of compost made from north Londoner's food and garden waste to allotment sites and community gardens free of charge in 2017/18 (see section 28, Objective 3).

6 Public awareness campaigns

8. A The Partner Authorities are committed to an ongoing Public Awareness Campaign throughout the period of this strategy and undertake to coordinate their respective contributions to this campaign where this will be beneficial.

During 2017/18 the Authority's public awareness work principally focused on:

- promoting and encouraging waste prevention amongst residents and local businesses;
- promoting the Authority's consumer facing services (including reuse and recycling centres - RRCs);
- Promoting recycling to target demographic aged between 18 – 34 through the 'Save Our Stuff' three-year campaign.

This was provided to support the work of the seven north London boroughs which deliver a range of communications to their own residents about local recycling services in particular.

The Authority's consumer facing waste prevention and consumer facing service campaigns, which are designed to encourage north London residents to prevent waste and recycle more, are delivered using the Authority's **'Wise Up To Waste'** campaign brand identity. In addition to promoting the reuse and recycling centres across north London, this communications work included promoting food waste prevention ('waste less food, save more money'), 'give and take' days and swishing (clothing exchange). Within this communications work the Authority promoted the financial benefits of wasting less, and provided residents with practical tips and advice to enable them to waste less; this was

done through advertising campaigns, media relations and digital communications (web and social media). Further information is available on the Wise Up to Waste website.

Work began in 2016 / 2017 to deliver a **recycling communications campaign**, under the title 'Save Our Stuff'. This three-year campaign is a high-level, non-instructional campaign to motivate residents to recycle. The campaign targets north Londoners aged 18 to 34 through a media mix and channels that they regularly use in the home and 'on the go' in a way that will engage them. This second year's activity (2017/18) was delivered in two phases (referred to as 'bursts') 4 September to 30 October 2017 and 6 January to 26 February 2018. The activity centred around a 30 second advert featuring a character called Arjen (in *A warning from the Netherlands* – an imagined future in which the Netherlands has run out of a number of basic materials to make regular consumer items such as glasses). The advert was delivered via a range of media including Sky (Adsmart), Video On Demand and You Tube). The campaign resulted in a total of 3.103 million views of the advert and 6.390 million impressions through Sky and 1.363 million impressions from Video on Demand (impressions are the number of times the advert was shown to members of the target audience across all media)

As noted above, the advert was watched all the way through (number of completed views): 3,103,057 times. This was 25% more views than the original objective to achieve 2,239,448 views.

Social and digital communications - The Authority has actively continued to use Twitter and Facebook to encourage residents to waste less and recycle more. The 'Wise Up To Waste' brand achieved 961 Facebook 'likes' to date (up from 529 in the previous year) and 2,100 Twitter followers to date (up from 1,906 in 2016-17). The Authority also launched an Instagram account which had 392 followers by the end of the year. The Wise Up To Waste website received a total of 162,870 visits within a nine month period (compared to 193,556 visits for the 12 months of the year before) and had over 201,913 page views over a nine month period (compared to over 239,962 page views for the 12 months previously). Figures are only available for a nine month period for 2017/18 as a result of a change to the content management system (CMS) for the NLWA websites.

During the year the Authority improved the scheduling of its digital communications and kept the impact of its social media activity under review by using online digital communications tools.

PR and press - At a local level and in the trade press, the Authority received a good amount of positive press coverage about waste prevention and recycling. Positive press coverage included coverage on a range of waste prevention initiatives.

7 National programmes

8.D The Partner Authorities will seek to obtain support for north London projects from National funding programmes, including the Waste and Resources Action Programme (WRAP) and the Waste Implementation Programme (WIP), as these arise.

The Partners continue to seek support from national funding programmes, when they are available.

In 2017/18 no external support from national funding programmes was received by NLWA.

8 A key role for the community sector

8.B1 The Partner Authorities welcome the support of community sector organisations in implementing this strategy and will actively encourage community sector involvement in delivery of waste services wherever this can be demonstrated to offer Best Value.

8.B2 The Partner Authorities will consider developing a Waste Community Compact in partnership with the Community Sector to build trust and encourage further involvement of this sector in implementing this Strategy.

In the north London area, the community and voluntary sector continues to provide services to the Partner Authorities. The value of contracts awarded to this sector for re-use and recycling is shown in Table 8.1 below. The services described here are in addition to the support described in Section 9 on re-use below.

In 2017/18 contracts and services to the value of £156,345 were awarded to the voluntary and community sector. Details of the work awarded to different organisations are provided in Table 8.1 below.

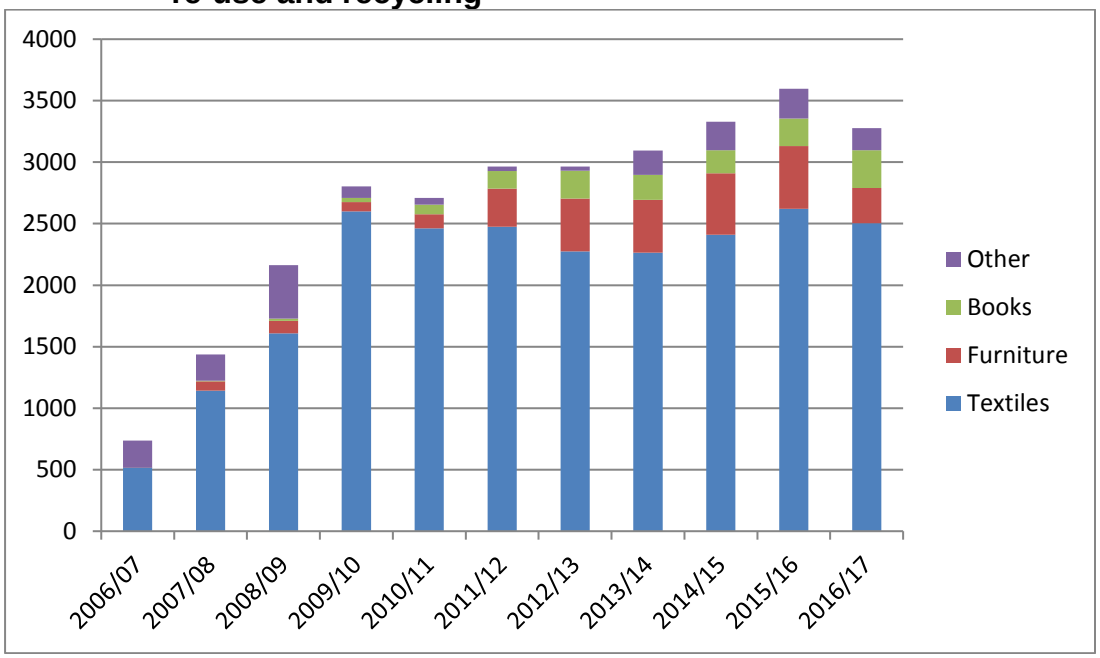
Table 8.1: Contracts and services awarded to the community sector in 2016/17 and total value

Fair in the Square	Community event
Angel Canal Festival	Community event
British Heart Foundation	Media banks
East Finchley Community Trust	Community event
Ecoactive Education	Intensive education project
Fair in the Square	Community event
Forest Recycling Project	paint recycling
Homestore	Furniture reuse
Hubbub	Sew Spooky, Community Fridges, Bright Friday
Islamic Relief	Textile banks
Jester Festival	Community event
Keep Britain Tidy	Waste Less, Lunch Free events,Swish and Style
Palmers Green Community Interest Company (CIC)	Community event
Real Nappies for London (part of London Community Resource Network)	North London real nappy subsidy
TRAID	Textile banks
Well Street Common Festival	Community event
Waltham Forest Community Hub	Community event
Enfield Town Show	Community event
Islington Play Association	Community event
West Hampstead Summer Festival	Community event
The Restart Project	Mapping of reliable repair businesses
Groundwork London	London Upcycling Show
London Environmental Education Forum	Membership services
Total Value	**£306,783.7**

Table 8.2: Waste collected by the community and voluntary sectors

	2016/17 (tonnes)
Textiles collected	2,503
Furniture collected	288
Books collected	307
Other[2] materials collected	178
Total waste collected by the Community and Voluntary Sectors on behalf of the Partners	**3,276**

Figure 8.1: Waste collected by the Community and Voluntary Sectors for re-use and recycling



[2] 'Other' materials are paper, card, food waste, green garden waste, metals and waste electrical and electronic equipment.

9 Re-use

4.C1 The Partner Authorities will continue to actively support the development of best practice in waste re-use and will encourage the development of community sector and other Partnerships to deliver effective re-use services.

4C2 The Partner Authorities will continue to support bids for external funding of re-use services and will seek to develop a means of rewarding effective re-use services directly through a “re-use credit” to reflect the avoided or deferred cost of disposal

The Partner Authorities continue to support charities and other third sector organisations through the Authority paying re-use and recycling credits for waste that is diverted from disposal by these organisations. Credits are paid to organisations for the amounts of waste that are collected for re-use and recycling. The credits are paid on a per tonne basis with the level of the payment reflecting the savings made by NLWA from avoided disposal costs.

17 organisations received the total sum of £184,001 for the reuse or recycling of 2,550 tonnes of wastes that would otherwise have had to be managed by the Partners in 2017/18.

NLWA’s flagship activity in 2017-18 was designed to promote furniture reuse and upcycling, namely the London Upcycling Show, which was attended by 280 residents and diverting directly 560kg of furniture. The event showcased reuse, repair and upcycling, featuring inspirational and practical workshops, interactive demonstrations and creative exhibitions from local businesses, as well as the exhibition and judging of entries from the upcycling competition that took place in north London.

In addition, NLWA delivered 14 Give and Take Days across north London (two events per borough). Give and Take Days are free community exchange events where residents are invited to bring unwanted household items and take away something they need for free. For 2017-18 two Give and Take Day events were delivered in each north London borough, split into two rounds and resulting in a total of 14 events. Round 1 ran between 1 October 2017 to 12 November 2017 and round 2 ran from 28 January 2018 to 4 March 2018. The events attracted 670 attendees who brought 12.7 tonnes of items and took away 10.4 tonnes for reuse.

In October 2017, a third Halloween-themed waste prevention activity took place in north London in partnership with environmental charity Hubbub. Although the previous two years’ projects aimed at tackling food waste, and particularly pumpkin waste, this year the project reached beyond pumpkin food waste to incorporate clothing reuse messages. A total of 638 people attended the costume swapping and crafting events, 655 people were engaged in food waste prevention conversations and 75 students were involved in the costume

design competition. As a result, 978 Halloween costumes (0.2 tonnes) were diverted from disposal.

As part of the Waste Prevention Community Fund and as a response to the textile waste being created by Black Friday, Hubbub delivered Bright Friday, a project targeting textiles waste. Bright Friday consisted of three events, an online social-media campaign, an art installation, a fashion magazine called 'Faux' and online videos (Vlogs). The three events consisted of a large scale clothes swap, drop-in sewing, mending and refashioning workshops, styling sessions and photo booths. A total of 298 people attended the events, 137.5 kg of textiles were diverted from direct disposal and 1.1 tonnes of textiles were diverted indirectly.

Finally, seven Swish and Style events were delivered, one in each of the seven north London boroughs. Swish and Style are community events with the aim to encourage reuse, repair and upcycling of textiles, helping to conserve valuable resources and divert reusable items from disposal. The main element of the events is a clothes swap (swish) alongside a repair/alteration service, which this year was delivered by Keep Britain Tidy's subcontractor 'PoP East London'. In total 972.6kg of material was brought along to the seven events and 341 residents attended. Material that was not deemed good enough quality of be swished was donated to TRAID, a textile recycling charity.

10 Reuse and Recycling Centres (RRCs)

4.G1 The Partner Authorities will provide continuously improving re-use and recycling centres in excess of the minimum statutory provision throughout the period of this strategy, which shall be freely available for the deposit of household waste by all Londoners on a reciprocal basis.

4. G2 The Partner Authorities will aim to achieve 60% recycling and composting diversion rates at all north London re-use and recycling centres by 2015.

In the north London area, the Partners provide eight RRCs. Park View Road RRC closed in November 2017 due to the redevelopment of the site by London Borough of Haringey. All residents in the north London area have access to all of the RRCs. The level of provision has been approximately 1 site per 100,000 dwellings since the North London Joint Waste Strategy was implemented.

In 2010 the Authority adopted a policy to aim to have 95% of residents within 2 miles (measured in a straight line) of a Reuse and Recycling Centre as it seeks greater coverage and improved services. At present an estimated 76% of residents fall within this distance.

The reuse and recycling rate at these facilities has increased from 54% overall in 2006/07 to 71% in 2017/18 with a 1%increase from those achieved in 2016/17. In the last year there was a decrease in the amount

of residual waste collected at RRCs, whilst re-use and recycling tonnes have slightly increased compared with 2016/17.

The target of diverting at least 60% of the wastes delivered to RRCs for re-use, recycling and composting was reached before the target date of 2015 and this target continues to be met.

Figure 10.1: Reuse and Recycling Centres in North London

Table 10.1: Reuse, recycling and composting activity at north London Reuse and Recycling Centres (RRCs)*

	2017/18
Total tonnes of material collected at RRCs	59,791
Reuse tonnes collected at RRCs	789
Recycling tonnes collected at RRCs	35,479
Composting tonnes collected at RRCs	6,166
Residual tonnes collected for disposal at RRCs	17,276
Reuse, recycling and composting rate at RRCs	71%
Number of RRCs	8
Number of RRCs per 100,000 people	0.4

*Closure of Park View Rd RRC November 2017

Second Time Around - Reuse Shop

In November 2015 the Partners launched a reuse shop at the Kings Road Reuse and Recycling Centre. Branded as Second Time Around, the shop sells

a range of items including furniture, toys, sports equipment, clothes, and other household items.

The items for sale have been donated to Second Time Around for reuse by residents, or collected from the other Reuse and Recycling Centres managed by the Authority and would have otherwise been thrown away.

All reuse items are inspected and safety checked before entering the reuse shop for sale. Records of each item inspected are logged. Items which fail the quality inspection will be sent for recycling where possible or disposal.

Income generated from the shop is used to cover the cost of providing the reuse shop service. Any surplus amounts will be used to enhance the Authority's wider waste prevention work.

During 2017/18 the reuse shop diverted 67 tonnes for reuse.

11 Liquid wastes

5.H	The Partner Authorities will continue to provide statutory collection services for liquid household wastes during the period of this strategy, and will develop such new facilities as may be required to manage waste in accordance with new legislation.

Liquid waste of cooking oil and engine oil are collected from the Reuse and Recycling Centres in north London. During 2017/18, 46 tonnes of engine oil and 13 tonnes of cooking oil were collected and sent for recycling.

12 Hazardous wastes

5.J1	The Partner Authorities will continue to provide or procure an effective household hazardous waste service for north London residents throughout the period of this strategy.
5.J2	The Partner Authorities will support and promote the Corporation of London's current household waste collection and disposal service and make appropriate arrangements for the separate collection of fluorescent tubes.
5.J3	The Partner Authorities will continue to collect the maximum range of household hazardous waste and waste electrical and electronic equipment at their re-use and recycling centres.

A range of hazardous wastes are routinely collected in the north London area. Batteries, mineral oil, paint[3], gas bottles and asbestos are collected at RRCs. Additionally, electrical items (5.J3 refers) such as refrigeration equipment, televisions and monitors and fluorescent light tubes are also classified as hazardous waste and small waste electrical and electronic equipment (SWEEE).

Other than for waste electrical and electronic equipment (WEEE), for which there are separate arrangements, all residents in north London are able to request a collection of household hazardous waste by the City of London's household hazardous waste collection and disposal service. This is a pan-London service for which individual boroughs pay to be a part of. The service includes the collection and disposal of asbestos and chemicals and in most cases this service is provided free of charge to residents.

Table 12.1: Total hazardous waste arising

	2017/18 (tonnes)
Asbestos	21
Automotive batteries	26
Household batteries	13
Mineral oil	46
Paint	31
Gas bottles	19
Total tonnes of hazardous waste collected[4]	**156**

Table 12.2: Waste Electrical and Electronic Equipment (WEEE) collected at Re-use and Recycling Centres.

	2017/18 (tonnes)
Large household appliances (Category A)	623
Cooling appliances (Category B)	1,290
Televisions and computer monitors (Category C)	454
Gas discharge lamps (Fluorescent tubes) (Category D)	10

[3] Not all types of paint are classified as hazardous.
[4] Excluding fluorescent tubes, televisions, monitors and refrigeration equipment.

All other WEEE (Category E)	1,580
Total tonnes of WEEE collected at Re-use and Recycling Centres	**3,896**

Additional WEEE is collected from residents at the kerbside and in bring-banks as well as other designated collection facilities in north London. The amount is included in the quantities recorded in Section 15, ozone depleting substances.

13 Kerbside recycling collection services

4.H1 The Partner Authorities will aim to provide door-to-door recycling services to 95% of relevant households and achieve 65% capture rates of targeted recycling materials during the period of this strategy.

4.H2 The Partner Authorities will offer door-to-door collections of biodegradable waste for all relevant households where home or community composting services are not provided in the period of this strategy.

4.I1 The Partner Authorities will work to provide all residents in multi-occupancy housing with either door-to-door collection services or a minimum of one “near entry” recycling site per 500 households as soon as possible.

4.I2 The Partner Authorities will work to achieve 65% capture rates of targeted recycling materials for recycling services serving multi-occupancy housing during the period of this strategy.

All households[5] in the north London area now have access to kerbside or communal recycling collections of dry recyclables and over three quarters are able to separate suitable biodegradable wastes for composting.

The number of bring sites per person has fallen since 2006/07 as more residents receive a collection directly from their homes. This change has contributed to the increase in the amounts collected for recycling.

All of the Boroughs now collect the following set of targeted materials from residents every week: paper, cardboard, cartons, glass, metal cans and plastics including bottles, pots, tubs and trays. Most residents are also offered a separate kerbside collection of kitchen and garden waste.

[5] ‘Households’ are that proportion of the ‘dwelling stock (see Chapter 2) that are occupied.

It is more difficult to provide an organic waste collection service to some properties such as those that are above shops due to the space required for the collection containers, and so fewer properties receive this service than the collection of mixed dry recyclable materials, which can be collected in bags.

Different types of kerbside container are used to collect (i) dry materials for recycling (ii) kitchen and garden wastes for composting or anaerobic digestion and (iii) residual waste for disposal.

Some of the Boroughs now collect food waste separately from garden waste because research shows residents will separate more food waste for collection this way. The food waste can then be sent for anaerobic digestion which produces energy and a bio fertiliser instead of compost.

Table 13.1: Households receiving kerbside collections for recycling and composting

	2017/18
Number of households receiving a door-to door, near entry or communal collection of dry recyclables	811,810
% of households receiving a door-to door, near entry or communal collection of dry recyclables	100%
Number of households receiving a door-to-door, near entry or communal collection of biodegradable waste	746,084
% of households receiving a door-to-door, near entry or communal collection of biodegradable waste	92%
Number of bring sites per 100,000 people	19

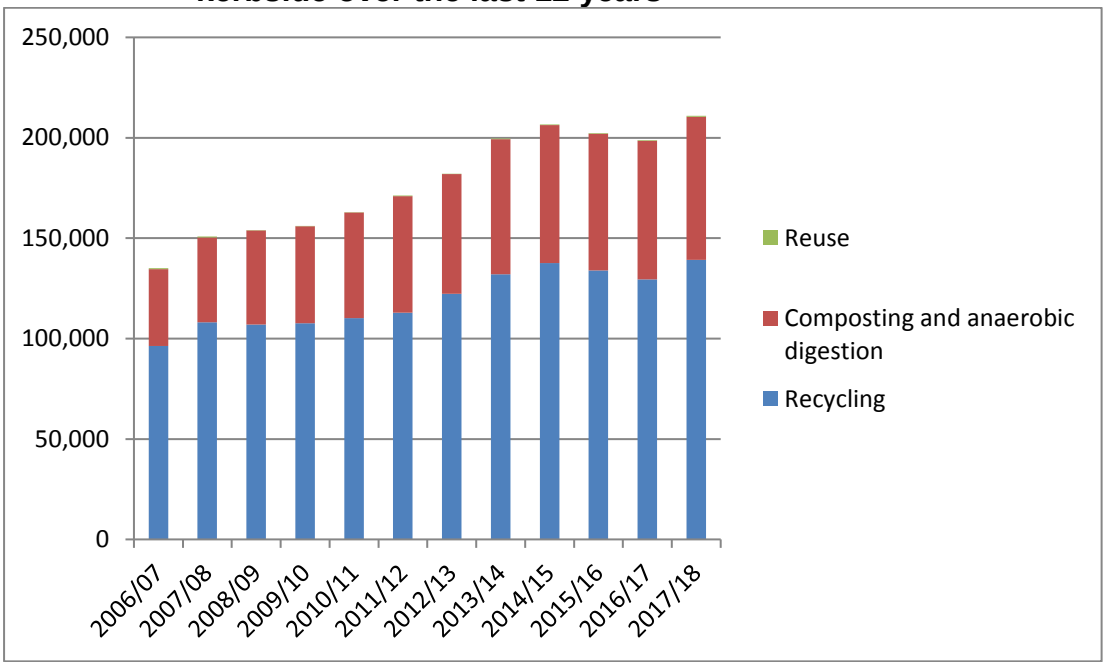
Table 13.2: Tonnes of household waste collected for re-use recycling, composting and anaerobic digestion at the kerbside

	2017/18
Total household waste collected at the kerbside (tonnes)	469,892
Household waste collected at the kerbside for re-use (tonnes)	407

Household waste collected at the kerbside for recycling (tonnes)	139,237
Household waste collected at the kerbside for composting and anaerobic digestion (tonnes)	71,307
Capture rate of waste collected at the kerbside	45%

Figures in Table 13.2 relate to the collection of materials at the kerbside by or on behalf of the Partners.

Figure 13.1: Tonnes of household waste collected separately for re-use, recycling, composting and anaerobic digestion at the kerbside over the last 12 years



The figures above excludes the tonnages of material collected at Reuse and Recycling Centres.

The increase in recycling tonnage seen in 2017/18 could be due to the growing housing stock and promotion of recycling in the media. However, there are still incidences of incorrect items being put out for collection with mixed dry recyclables, and these incorrect items then being rejected at the MRFs. The level of monitoring of these incorrect items at the MRFs has increased in accordance with the 'code of practice' for the operation of materials recovery facilities.

14 Other recycling options

4.K1 The Partner Authorities will make arrangements to compost street leaves, parks and other green waste wherever practicable in the period of this Strategy.

4.K2 The Partner Authorities will work to increasingly recycle and compost more street litter and non-household biodegradable waste to ensure that the need to purchase Landfill Allowances is minimised

On-site composting by boroughs in parks where the waste is generated keeps a large proportion of parks waste out of the measured local authority waste stream. This is because the parks departments do not have weighbridges in the parks, so do not record the tonnage of material they turn into compost for themselves. However, because the parks leaves and other green waste which is composted within the parks is not measured within either the total tonnage of municipal waste being generated or within the amount being composted, the net effect on the local authority composting rate is broadly neutral.

Following Environment Agency guidance published in 2012, the Partners ceased collecting street leaf sweepings for composting. Other green waste collected by the Partners continues to be composted. Details of tonnages composted in 2017/18 are detailed in table 14.1 below.

Table 14.1: Amounts of "other" waste composted and recycled

	2017/18 (tonnes)
Street leaves, parks and "other" green waste composted	476
Street litter and "other" waste recycled	580

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15 Ozone-depleting substances

5.K The Partner Authorities undertake to support appropriate projects promoting the re-use of fridges, and will ensure that the remaining fridges are reprocessed and ozone-depleting substances and metals recovered throughout the period of this strategy.

Currently there are 17 Designated Collection Facilities (DCFs) registered by the Partner Authorities. Refrigeration equipment collected at the DCFs is treated

at specialist facilities so that ozone depleting substances are captured, and other materials are recycled where possible. During 2017/18 1,290 tonnes of refrigeration equipment was reused and recycled from all sources.

Refrigeration equipment collected at Reuse and Recycling Centres is also reported in Section 12, Table 12.2 above.

16 Recycling and composting summary

4.L1 The Partner Authorities undertake to individually achieve the statutory recycling and composting standards set by Government and to exceed these standards wherever practical.

4.L2 The Partners Authorities will work to achieve 35% recycling and composting standards by 2010, 45% by 2015 and 50% by 2020 in line with the Government's Waste Strategy for England 2007.

Since the start of the Strategy period the rate of recycling, composting and re-use has risen from 23% to 31% of the household waste stream in 2017/18, although this figure and the borough figures at Table 16.1 remain subject to confirmation by DEFRA.

The recycling and composting data reproduced in Tables 14.1, is calculated in line with the methodology previously used to calculate National Indicator 192[6] and includes household waste collected for re-use, recycling and composting or anaerobic digestion. Some types of household waste as well as non-household (commercial and industrial waste) are not included in this calculation.

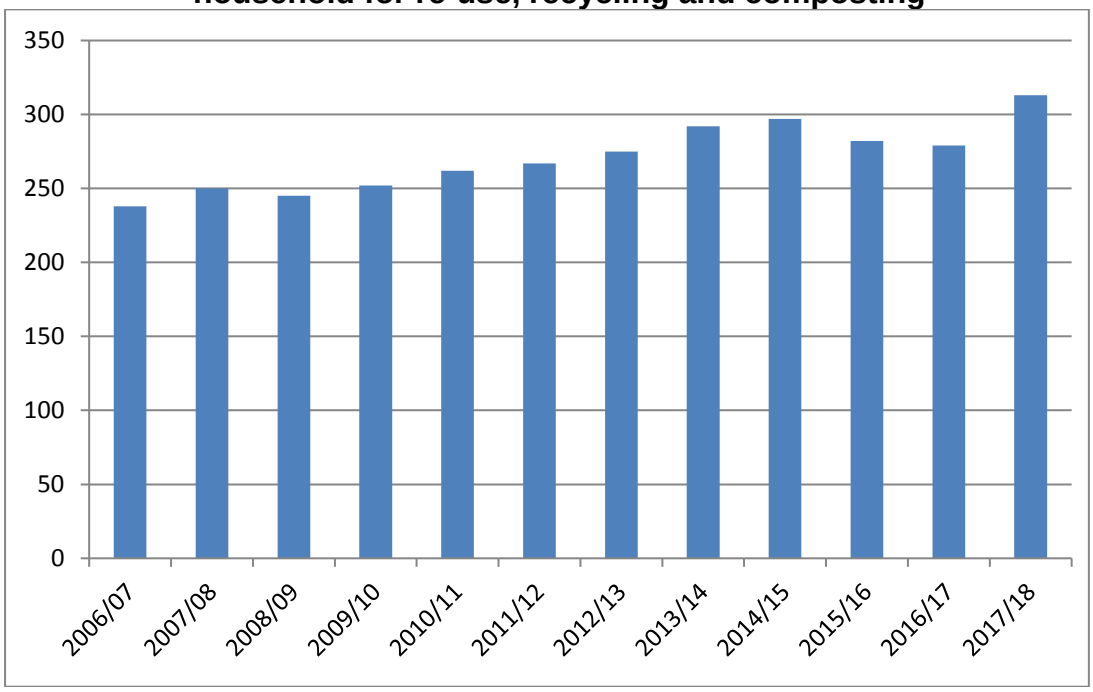
Table 16.1: Total amounts of household waste collected for re-use, recycling and composting (incl. RRCs) by tonnage, kgs <u>per household</u> and recycling rate.

	Total amounts of household waste (tonnes) collected for re-use, recycling and composting by all methods	**Total amounts of household waste (kgs) collected per household for re-use, recycling and composting**	**Household waste recycling rates in the north London area**
Barnet	53,132	370	37%
Camden	18,340	257	30%

[7] Local authorities no longer have to report against a standard set of 'National Indicators', but reporting of waste tonnages and reporting against a number of additional parameters is still required via the national waste reporting system WasteDataFlow. This assists the Government to ensure that European-wide targets such as for the diversion of waste from landfill are being met at a national level.

Enfield	41,979	351	36%
Hackney	23,529	310	27%
Haringey	27,386	306	33%
Islington	16,851	242	30%
Waltham Forest	32,153	356	33%
North London Area	213,370	**313**	**32%**

Figure 16.1: Average amount of household waste (kgs) collected per household for re-use, recycling and composting



On average each household in north London separated 313 kilograms of waste for re-use, recycling or composting during the last year. This amount has increased the last twelve months possibly due to the increased population density and housing stock.

However, during this period the Partner Authorities have also seen an increase in material rejection from the MRFs following on from the introduction of the Environmental Permitting (England and Wales) (amendment) Regulations 2014 which applied the material recovery facilities code of practice.

17 Batteries and accumulators

5.C	The Partner Authorities will work to increase the level of recycling of household batteries in north London wherever practicable.

During 2017/18 13 tonnes of household batteries were collected by the Partners for recycling.

The European Union Batteries Directive, which was implemented into UK Regulations in February 2010, sets a requirement for retailers that supply more than 32 kilograms of portable batteries per annum to operate a free of charge take-back scheme. Tonnages of portable batteries collected via in-store take-back schemes are not recorded separately in the national waste data management system for local authorities (WasteDataFlow), and therefore are not reported here.

18 Bulky waste

5. D2	The Partner Authorities undertake to maximise the potential of reusing and recycling materials from the bulky waste stream with the aim of providing a more sustainable service in partnership with community sector or commercial organisations.

During 2017/18 the Partners worked with their own providers (after Restore Community Projects ceased operating in July 2016) to reuse and recycle their bulky waste items.

Table 18.1 below details the tonnes of bulky waste collected by the Partners in 2017/18. This measure includes items of bulky waste that are separated by or on behalf of the Partners from the waste stream for re-use and recycling. Some recyclable materials are extracted from the bulky waste stream at the Edmonton Bulky Recycling Centre.

Table 18.1: Bulky waste recycling

	2017/18
Total bulky waste collected (tonnes)	17,850

Bulky waste re-used or recycled (tonnes)	3,113
Bulky waste not re-used or recycled (tonnes)	14,737
% of bulky waste stream re-used or recycled	17%

19 Abandoned vehicles

5.A1 The Partner Authorities will continue to share information and best practice on abandoned vehicles arising to ensure an integrated approach to provision of inspection, collection and disposal services across north London.

5.A3 The Partner Authorities will encourage the introduction of Authorised Treatment Facilities in appropriate locations in north London, will ensure that the general public are encouraged to use them appropriately, and will seek to secure sufficient facilities within the proposed North London Waste Development Plan Document.

During 2017/18 the Partner Authorities collected 590 abandoned vehicles.

There are currently 17[7] authorised treatment facilities for end-of-life vehicles in the Partner Authorities area. There remains sufficient capacity to treat the amount of vehicles collected.

20 Construction and demolition waste

5.G1 The Partner Authorities will continue to support the provision of sufficient construction and demolition reprocessing facilities in the north London region.

5.G2 The Partner Authorities undertake to separate and re-use or recycle as much municipal construction and demolition waste from the municipal waste stream as is practicable.

[7] Source – Environment Agency

Table 20.1: Construction and demolition waste recycling

	2017/18 (tonnes)
Total construction and demolition waste recycled	11,712
Recycled from Re-use and Recycling Centres	10,338
Recycled from other sources	1,374

These figures include construction and demolition waste collected at Re-use and Recycling Centres, waste collected from borough highways and property maintenance activities, and other miscellaneous sources.

21 Local Authority Collected Waste arising

2B This Strategy employs the Prime Minister's Strategy Unit recommended growth rate for municipal waste when planning for the new waste management facilities that will be needed in north London.

'Local authority collected waste' (previously known as 'municipal waste') is the term that is used to describe all wastes collected by the seven waste collection authorities in the north London area, and by the Authority at the RRCs. Local authority collected waste includes all types of waste collected by the collection authorities, whether for reuse, recycling, composting, recovery or disposal and whether collected from households or businesses in the area[8].

The amount of local authority collected waste in the north London area is shown in Table 21.1 below. The figures are taken from WasteDataFlow which continues to use definitions which were previously employed for measuring performance against 'National Indicators' (a series of indicators against which local authorities' performance on a range of issues was measured).

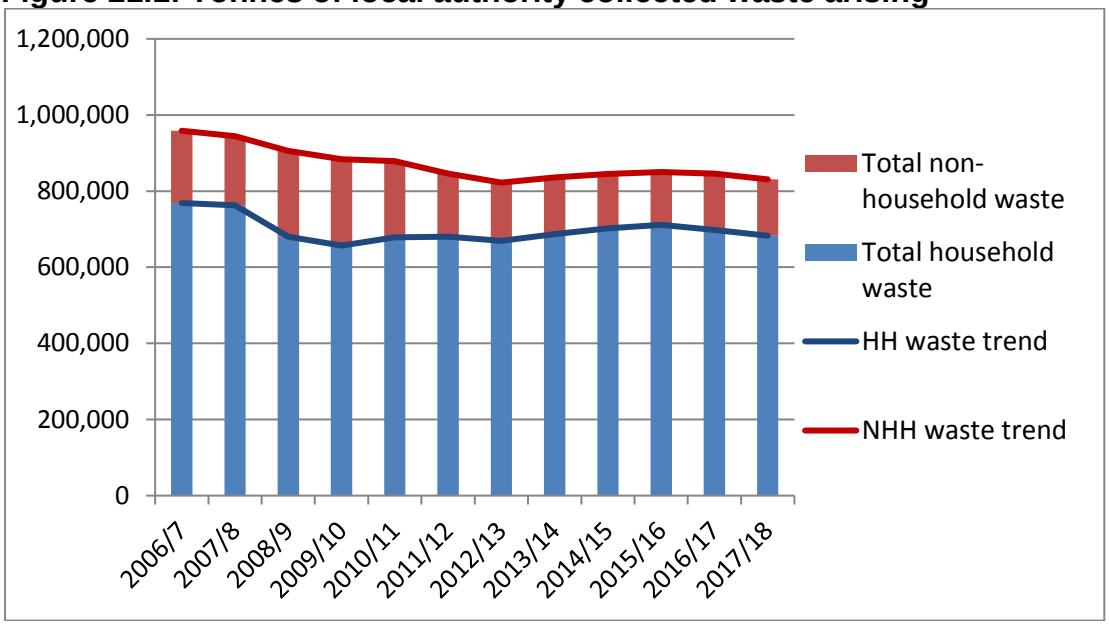
[8] In 2012, the Department for Environment Food and Rural Affairs revised the definition of 'municipal waste' to be consistent with the European Union Landfill Directive and introduced a new definition of Local Authority Collected Waste to be used in the future to refer to what was previously described as municipal waste in this report. This change in terminology was introduced in the 2012/13 Annual Monitoring Report and the new waste definitions apply to the waste streams being reported.

Table 21.1: Amounts of local authority collected waste in north London

	2017/18 (tonnes)
Total local authority collected waste (in accordance with the definitions of the former 'National Indicator' 193)	830,825
Local authority collected waste from households (in accordance with the definitions of the former 'National Indicator' 192)	683,172
Local authority collected waste from commercial and industrial producers	147,653

Figure 21.1 below shows the total amount of local authority collected waste broken down into the household and non-household (business waste) components.

Figure 21.1: Tonnes of local authority collected waste arising



At the outset the North London Joint Waste Strategy employed the Prime Minister's Strategy Unit[9] recommended growth rate for municipal waste of 3% until 2010 and 2.5% thereafter. Additional lower growth rates of 2%, 1% and 0.5% were included in the NLJWS as sensitivity analyses, as it was recognised that growth may be lower than predicted.

However, as can be seen in Figure 21.1 and Table 21.1 above the actual amount of local authority collected waste decreased between 2006/07 and

[9] This no longer exists.

2012/13 despite an increase in both the population of north London and the dwelling stock over the same period. The decline in the size of the local authority collected waste stream was not expected when the North London Joint Waste Strategy was published; although total local authority collected waste rose between 2013/14 and 2015/16, it shows a decline in 2017/18.

Economic uncertainty during the year may have led to a decrease in waste produced in 2017/18.

The Authority has prepared more recent tonnage projections for its North London Heat and Power Project; these are available at http://www.northlondonheatandpower.london/document-library/waste-modelling.

The Partners will continue to assess waste tonnages by comparing 'actual' tonnage information as it becomes available with the projections.

22 Disposal to landfill and energy recovery

4.N	The Partner Authorities will seek to minimise disposal to landfill throughout the period of this strategy and undertake to seek the recovery of energy from landfill gas wherever practicable.

The amounts of local authority collected waste sent to landfill are measured using the methodology for calculating National Indicator 193.

As described above it should be noted that local authority collected waste is waste that was previously described as "municipal waste" and is waste that is collected from households as well as commercial waste producers. This definition is not the same as that used to calculate the more commonly cited "household" re-use, recycling and composting rates reported elsewhere.

All local authority collected waste that is sent to landfill from the north London area is sent to sites that recover energy from the waste in the form of landfill gas which is then used to generate electricity.

The amount of local authority collected waste sent to landfill has declined in recent years. 2017/18 has seen a sharp decline in landfill tonnages continued from 2016/17 due to restructured services with additional material from the Hendon waste transfer station being transported to the Edmonton EcoPark for energy recovery and the shredding of RRC residual waste and some bulky waste to make it more suitable for the energy recovery facility.

Waste that is currently used for energy recovery produces electricity that is sold to the National Grid. Enough electricity to supply some 85,000 homes is generated every year.[10]

Table 22.1: Management of local authority collected residual waste

	2017/18
Local authority collected waste sent for energy recovery by incineration (tonnes)	505,864
Local authority collected waste sent to landfill (tonnes)	78,959
% of total local authority collected waste sent for energy recovery by incineration	61%
% of total local authority collected waste sent to landfill with energy recovery	9.5%

Figure 22.1: Local authority collected residual waste disposal (tonnes)

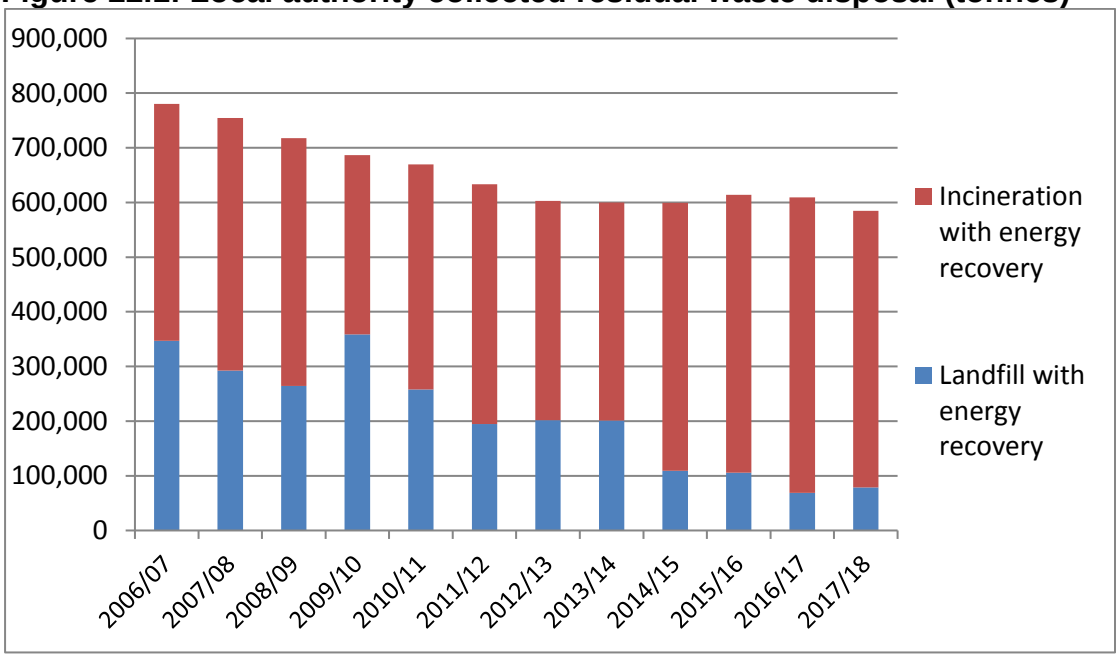


Figure 22.1 shows the total amount of waste in tonnes that is sent for disposal and the breakdown between the amount of waste sent for energy recovery by incineration and the amount sent to landfill with energy recovery.

[10] This assumes the average household's annual electricity consumption as 3.4 MwH (Medium level electricity usage Profile Class 1 credit meters) and is based on an average EcoPark energy centre electricity exported generation figure of 290,000 MwH per annum. Data supplied by the Office of Gas and Electricity Markets (OfGEM). The medium level electricity usage assumes meter readings every half hour for a working family of four.

Photo 22.1: Waste bunkers at the Edmonton energy-from-waste facility

23 Non-household waste

5.F2	The Partner Authorities will take rigorous enforcement action to minimise the amount of unpaid-for commercial and industrial waste entering the municipal waste stream.

The Partner Authorities have a number of elements in place to prevent commercial and industrial waste entering the waste stream via the Reuse and Recycling Centres. Van procedures are in place at all Reuse and Recycling Centres where users either need to pre-book or apply for a permit before taking a van to the centres.

Automatic number plate recognition equipment is also in operation at the majority of Reuse and Recycling Centres and is used to identify traders and commercial outlets attempting to use the Reuse and Recycling Centres to dispose of trade waste illegally.

Additionally, a substantial amount of non-household waste (waste from local businesses) is collected by the Partner Authorities from a variety of commercial and industrial sources. This is described in Section 27 “Commercial and industrial partners” below.

For the purposes of calculating the re-use, recycling and composting rate in accordance with national definitions, fly-tipped waste is not counted as

household waste because it is often of a very different nature. Nevertheless, Partner Authorities do manage fly-tipped waste and take enforcement action against fly-tippers where possible. Details of tonnages collected in 2017/18 are set out in table 23.1 below.

Table 23.1: Fly tipping in the North London area

	2017/18
Tonnes of “fly-tipped“ waste collected	56,696
Number of “fly-tip” incidents reported	65,859

24 Polychlorinated biphenyls

5.M The Partner Authorities confirm that equipment containing polychlorinated biphenyls will be registered with the Environment Agency where required under the Environmental Protection (Disposal of Polychlorinated Biphenyls and Other Dangerous Substances) Regulations 2000.

Since 2000 electrical equipment containing PCB must be registered with the Environment Agency but since the commencement of the North London Joint Waste Strategy in 2006/07 no equipment has been registered by the Partners. The use of PCB in electrical equipment was discontinued in the United Kingdom in 2000 and since then it has been replaced with more suitable alternatives.

25 Waste disposal service implications

7.B1 The Partner Authorities undertake to develop sufficient materials recycling facilities and in-vessel composting facility capacity to enable north London to meet the collective recycling and composting targets within this strategy.

7. B2 The Partner Authorities undertake to develop sufficient residual waste treatment facilities as are necessary to ensure that the purchase of additional Landfill Allowances is avoided wherever possible, having regard to the proposed North London Joint Development Plan Document and the best option identified within this strategy.

The waste treatment capacity required is a reflection of the increasing amounts of material collected for re-use, recycling, composting and anaerobic digestion. Sufficient capacity to treat all of the wastes collected has been sourced by the Partners. Most of the recycling and composting capacity is within the north London area with additional capacity in the Home Counties.

Table 25.1: Recycling and biodegradable waste treatment capacity required.

	2017/18 (tonnes)
Separated dry recyclables bulking capacity (incl. RRCs) required	32,003
Materials recovery facility (MRF) capacity required	114,608
Total dry recycling capacity required	**146,611**
In-vessel composting capacity required	44,797
Open windrow composting capacity required	29,641
Anaerobic digestion capacity required	10,932
Total organic treatment capacity required	**85,370**

Fewer tonnes were sent to landfill during 2017/18 due to additional capacity being available at the Edmonton facility for energy recovery, and services being restructured with new equipment to secure maximum benefit of the facility for the Partners.

The Authority continues to make use of the Edmonton energy-from-waste facility to generate electricity from waste that cannot be recycled or composted. LondonEnergy Ltd exports around 290,000 MwH per year, which is enough electrical power for some 85,000 homes throughout the year[11]. The energy-from-waste facility exports some 87% of the energy it produces with the remaining 13% powering the needs of the recycling, compost and other centres on the LondonEnergy EcoPark.

[11] This assumes the average household's annual electricity consumption as 3.4 MwH (Medium level electricity usage Profile Class 1 credit meters) and is based on an average EcoPark energy centre electricity exported generation figure of 290,000 MwH per annum. Data supplied by the Office of Gas and Electricity Markets (OfGEM). The medium level electricity usage assumes meter readings every half hour for a working family of four.

The Partners continuously monitor the growth in the waste stream to ensure that all separately collected wastes are suitably treated and this monitoring continues as part of the Partners' forward planning.

26 Transport implications

7. C1 The Partner Authorities will support transfer of waste by rail wherever this can be shown to offer Best Value and is in accordance with this strategy.

7. C2 The Partner Authorities will support transfer of waste by water wherever this can be shown to offer Best Value and is in accordance with this strategy.

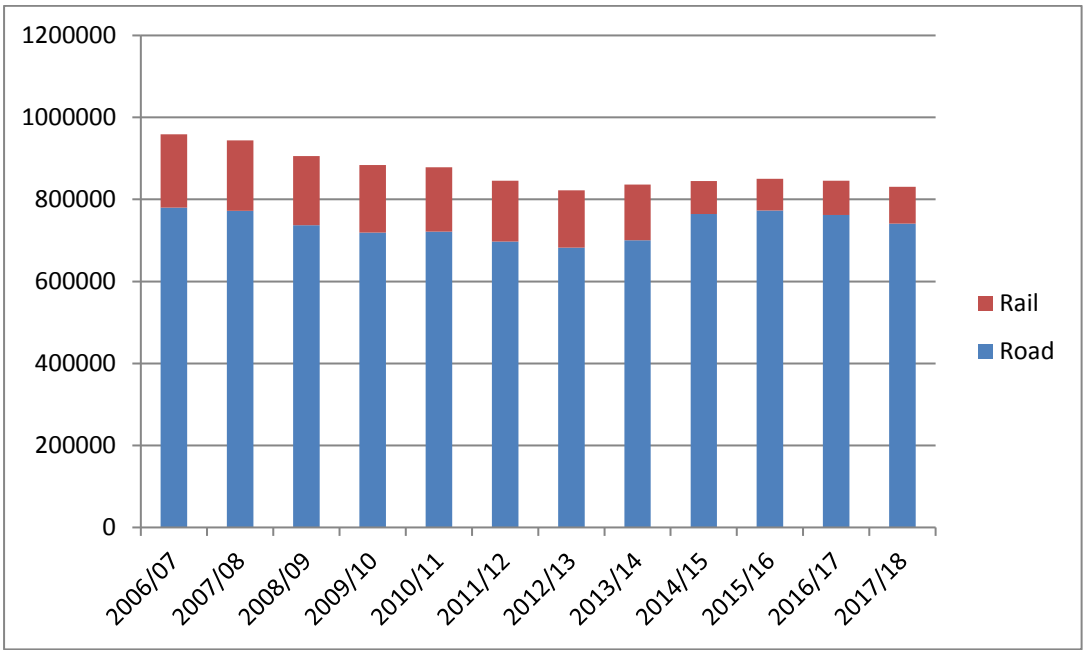
10% of waste in 2017/18 was transported to landfill by rail from the Hendon waste transfer station. Since April 2014 an average of approximately 45,000 tonnes per annum of residual material from the Hendon waste transfer station has been transferred by road to the Edmonton EcoPark for energy recovery, resulting in a decrease in tonnages transported by rail from the site. In 2017/18 this figure was 33,041 tonnes.

Transporting waste by water in the north London area continues to be an area of interest to the Partners. While waterborne transport is presently not economically viable, the future viability of canal or river transportation will continue to be monitored.

Table 26.1: Transportation of waste

	2017/18
Waste collected – all by road (tonnes)	830,825
Waste then transported by rail (tonnes / %)	89,602 (11%)
Waste then transported by water (tonnes / %)	(0%)
Remaining waste used locally for energy recovery or transported by road (tonnes / %)	741,223 (89%)

Figure 26.1: Transport methods for waste arising in the North London area



27 Commercial and industrial partners

8.C1 The Partner Authorities will provide commercial waste services in accordance with statutory requirements or beyond and will seek external support to establish sustainable commercial recycling and composting services where this offers improved value for money to council tax payers to work towards London Plan objectives.

8.C2 The Partner Authorities will seek to ensure that sufficient household, commercial and industrial waste management sites are provided in north London through development of the North London Joint Waste Development Plan Document.

The total amount of commercial waste collected by the Partners has reduced, during 2017/18 compared to previous years. It is believed this could be due to the economic downturn; however, the amount of commercial waste collected for recycling has increased over the strategy period, which may in part be because recycling is cheaper for businesses than residual waste disposal.

Table 27.1: Commercial and industrial waste collected

	2017/18 (tonnes)
Total commercial and industrial waste collected	111,787
Commercial and industrial waste re-used, recycled or composted	12,707
Commercial and industrial waste sent for disposal	99,080

28 Strategic Environmental Assessment (SEA) monitoring

The Strategic Environmental Assessment (SEA) of the North London Joint Waste Strategy includes some additional targets that the Partners have agreed to aim for.

In order to measure progress towards these targets the parameters described beneath each objective have been approved as indicators to be included in future NLJWS progress reports.

Some objectives will not be measured until the sites of new facilities are planned so that a baseline can be established and data compared against this when these facilities are constructed.

Some objectives cannot be measured as they require data to be submitted by contractors that is not required under current contracts. This will be addressed in future contracts so that over time the collection of data becomes more complete. Some objectives are already measured and where possible this data is included in this report.

Objective 1 *To conserve and enhance natural habitats and wildlife especially priority habitats and species*.

In June 1992 the Convention on Biological Diversity was signed by 159 countries including the United Kingdom at the Earth Summit in Rio de Janeiro. It came into force 29 December 1993.

The “biodiversity convention” is a legally binding agreement that requires signatories to conserve, protect and enhance biological diversity. In 1994, the UK Biodiversity Action Plan was published and led to the creation of Local Biodiversity Action Plans. Collectively these action plans identify and seek to protect 391 priority species and 45 priority habitats.

The Biodiversity Action Reporting System is used to report the UK’s Biodiversity Strategies and Action Plans. Reports are available through the website at www.ukbars.defra.gov.uk and are regularly updated. The latest report for the North London area shows that several of the North London Boroughs have set objectives and are making progress towards them.

On a very localised level, land owned or controlled by the Authority is appropriately managed in relation to invasive plant species, currently Japanese knotweed, giant hogweed, Himalayan balsam and Russian vine.

Objective 2 *To maximise the health and well-being of the population*

Measures: Number of complaints received by contractors operating municipal waste facilities in north London.

Table O2: Number of complaints recorded by contractors operating municipal waste facilities in north London

LondonEnergy Ltd reports annually on the number of complaints received regarding the municipal waste facilities operated in north London, as detailed in Table O2 below.

	2017/18
Edmonton Energy from Waste facility	0
Edmonton In-vessel composting facility	4
Edmonton Bulky Waste Recycling Facility	0
Hendon Rail Transfer Station	0

Four complaints were received by LondonEnergy Ltd in 2017/18 regarding the Edmonton in-vessel composting facility.

Objective 3 *To conserve and enhance soil quality*

Measures: Percentage of north London's compost (product made from north London's local authority collected waste) used within the NLWA area.
Percentage of north London's compost used outside the north London area.

Table O3: Compost product used in the north London area[12]

	2017/18
Compost product made from local authority collected waste (tonnes)	9,864
Compost product used by residents and Boroughs in the north London area (tonnes)	3,673
% of compost product produced from local authority collected waste used inside the north London area	37%
% of compost product produced from local authority collected waste that is used outside the north London area	63%

The compost recorded as being used in the north London area has been applied to parks, gardens and allotments. The remainder of the compost was applied to agricultural land or was supplied to industry for landscaping or restoration.

See also sections 4, 5 and 13 for additional information about composting in the north London area.

[12] The figures above refer only the compost made in north London, and not to compost made outside of north London with our local authority collected biodegradable waste.

Objective 4 *To improve air quality*

Measures: Lifecycle assessment of air acidification (WRATE output)
Facility emissions as reported for pollution prevention control permits as appropriate
Air quality in terms of NOx, SOx and particulates

The Table below shows the emissions from the Edmonton Energy from Waste facility operated by LondonEnergy Ltd, where the majority of waste that has not been re-used, composted or recycled is sent for energy recovery. These figures are reported to the Environment Agency as a condition of the pollution prevention permit.

Table O4: Emissions from the Edmonton Energy from Waste facility

	2017
NOx tonnes per annum	24,882.89kgs
SOx tonnes per annum	6.15
Carbon dioxide tonnes per annum	847,190.6kgs
Dioxin grams per annum	BRT

*BRT - below the reporting threshold

NOx and SOx mean the oxides of nitrogen and sulphur respectively that contribute to air pollution and can cause acid rain. Carbon dioxide is the main greenhouse gas and is considered to be the leading cause of climate change.

Dioxins are complex chemicals that are known to bio accumulate in living organisms and are linked to health problems at high levels of exposure. It should be noted that while most quantities are reported in tonnes, the amounts of dioxins emitted is recorded in grams. One gram is 1/1,000,000 of a tonne (one million times less mass).

The above emissions are all within the limits prescribed by the Environment Agency.

Objective 5 *To improve water quality*

Measures **Life cycle assessments of water eutrophication (WRATE output)**
Life cycle assessments of freshwater aquatic ecotoxicity (WRATE output)
Number of notifiable water quality incidents

This monitoring will need to commence at sites that are newly identified for waste management facilities in advance of any contracted operations to ensure that a baseline showing the emissions and air quality before construction is established. This can be used as a comparison with data after construction and during operation.

Objective 6 To achieve the wise management and sustainable use of water resources

Measures **Net water usage for waste facilities**

It is not possible to obtain this data from contractors under the Authority's existing contracts but this will be incorporated as a contractual requirement into future contracts.

Objective 7 *To address the causes of climate change*

Measures **Life cycle assessment of climate change (WRATE output)**
Percentage of waste transferred by road, rail and water
Tonnes of waste transferred by road, rail and water
Amount of energy used by proposed facilities
Per capita reduction in CO2 emissions (National Indicator 186)

This monitoring will need to commence at sites that are newly identified for waste management facilities in advance of any contracted operations to ensure that a baseline showing the emissions and air quality before construction is established. This can be used as a comparison with data after construction and during operation.

The amount of waste transported by road, rail and water is reported under 7C1 and 7C2 above (section 26).

The Partners are no longer required to collect data for carbon dioxide national indicator monitoring. However, the Mayor for London has now produced a municipal waste management strategy which contains an emissions performance standard for greenhouse gasses. This is reported instead of National Indicator 186.

The London Mayor's emission performance standard sets targets for the overall carbon impact of waste management activities and the amount of carbon dioxide that is produced in converting waste into energy.

The data presented in Table O7 below shows the estimated amounts of carbon dioxide equivalent that were produced by the Partners waste management activities in comparison to what would have been produced if all the waste had been sent to landfill. A negative figure shows that less greenhouse gas was produced than would have been the case if all of the waste had been sent to landfill without any re-use, recycling, composting or energy recovery.

In 2017/18 33, 264, tonnes of waste was transferred by road from Hendon (where it would normally have been sent by rail for disposal) to the Edmonton EfW for energy recovery.

Further information on the emissions performance standard can be found here Making the most of waste

Table O7: Estimated amounts of carbon dioxide equivalent produced by waste management in North London

	2008/09		2013/14	2014/15	2015/16	2016/17	2017/18
Tonnes of CO_2 equivalent produced by waste management	30,482		-37,737	-53,502	0.00	-131,545	-129,240
Target tonnes of CO_2 equivalent produced by waste management	36,231		-55,179	-82,814	-110,539	-120,100	-117,977
Actual tonnes of CO_2 produced per tonne of waste managed	0.031		-0.045	-0.063	0.000	-0.156	-0.153
Target tonnes of CO_2 produced per tonne of waste managed	0.040		-0.066	-0.098	-0.130	-0.142	-0.139

Although the London Mayor's emission performance standard was introduced in 2011 it is possible to calculate performance back to 2008 using a version of the WRATE lifecycle analysis software. The amount of carbon dioxide produced by waste management activities has fallen considerably since 2008/09. The carbon dioxide (CO_2) equivalent is a method of standardising all the emissions from waste management activities and representing them as if they were all carbon dioxide. This allows meaningful comparisons of a range of different technologies and strategies to be made. A negative value means that less carbon dioxide equivalent was produced than if the untreated waste had been sent to landfill and is therefore considered to be beneficial to the environment.

The Partners' services performance in relation to the amount of CO_2 in 2017/18 has decreased slightly compared to 2016/17, however it should be noted that the London Mayor's targets for CO_2 reduction are becoming more challenging year-by-year. During 2017/18 with the continued delivery of waste from Hendon transfer station to the Greatmoor Energy from Waste facility, instead of landfill reductions in CO_2 have been achieved.

Objective 8 *To adapt to the unavoidable consequences of climate change*

Measures **Percentage of developments with sustainable urban drainage systems (SUDS)**

It is not possible to obtain this data from contractors under the Authority's existing contracts but this will be incorporated as a contractual requirement into future contracts at new sites.

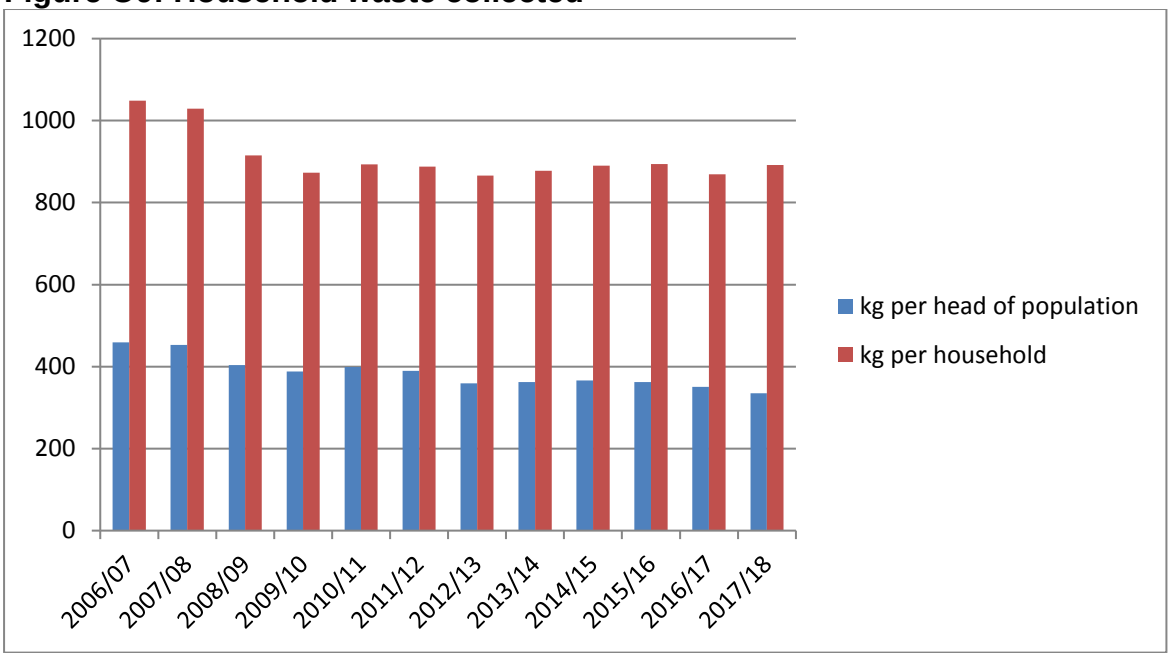
Objective 9 *To minimise the production of waste arising from households and local authority customers*

Measures **kg of household waste collected per head**
kg of household waste per household
Tonnes of commercial and industrial waste collected

Table O9: Household waste collected in the north London area

	2017/18
kilograms of household waste produced **per head** of population	335
kilograms of household waste collected for **recycling and composting** per **household**	313
kilograms of **residual** household waste per household waste collected **per household** (National Indicator 191)	579
kilograms of total household waste **per household**	892

Figure O9: Household waste collected



The amounts of residual household waste per household collected in north London are recorded for National Indicator 191. Since 2006 the amount of residual waste per household has declined significantly. This is likely to be due to the combination of many factors including reductions in the amounts of packaging waste produced, an increase in the amounts of waste that are collected for recycling and composting, the increasing introduction of "take back" schemes for large items by high street retailers, the effects of the economic recession meaning that fewer items are purchased than previously, and the Partners' waste prevention work.

Table O9.2: Commercial and industrial waste collected

	2017/18
Non-household (commercial and Industrial) waste collected (tonnes)	147,653

The total amount of commercial waste collected by the Partners has increased since 20167. It is believed the amount of commercial waste collected for recycling has increased over the strategy period, which may in part be because recycling is cheaper for businesses than residual waste disposal.

Objective 10 *To maximise re-use, recycling and recovery rates by viewing waste as a resource.*

Measures

Percentage of household waste sent for re-use, recycling and composting (National Indicator 192)
Percentage of municipal waste sent to landfill (National Indicator 193)
Life cycle assessment of resource depletion (WRATE output)
Number of bring sites per 100,000 people
Number of Re-use and Recycling facilities per 100,000 people
Percentage of households served by recycling and composting collections
Percentage of trade waste customers offered a recycling and/or composting collection service

The percentage of household waste sent for re-use, recycling and composting is reported in Section 13 above. The percentage of municipal waste sent to landfill is reported in Section 22 above.

It is important to note that the National Indicators reported in these sections (NI 192 and 193) show different denominators. National Indicator 192 only shows the amounts of household waste that were sent for re-use, recycling and composting but National Indicator 193 shows the amount of municipal waste (described as local authority collected waste elsewhere in this report) that was sent to landfill.

The measure of municipal waste includes household waste but also includes non-household waste from shops and other businesses that are collected by local Authorities and fly-tipped wastes. Hence the two National Indicators do not relate to the same waste stream.

The percentage of waste that is separately collected for recycling and composting continues to rise as more residents have access to the services. The decrease in waste to landfill is a consequence of increased recycling activity and a fall in the total amount of household waste generated.

The number of bring sites per 100,000 population, reported in Section 13 above has fallen since the commencement of the strategy period. This is partly due to a fall in the provision of sites as kerbside collection services have been expanded and partly due to an increase in the population served.

The number of residents receiving a collection service for recyclable and/or compostable materials has increased annually. Nearly all residents have a kerbside or near entrance collection point for these materials.

The percentage of trade waste customers offered a recycling and/or composting collection service has not yet been calculated due to inadequate data being available to calculate it. It is hoped that this data will be published in the future.

Objective 11 *To minimise the global, social and environmental impact of the consumption of resources*

Measures Life cycle assessment of resource depletion

It is not possible to determine this until sites have been identified and technologies selected. It is intended that this indicator will be reported in future when appropriate.

Objective 12 *To enable waste to be disposed in one of the nearest appropriate facilities*

Dry recyclable waste is delivered to one of two Materials Recycling Facilities (MRFs) to be separated for reprocessing. These are located in Enfield and Tower Hamlets.

Separately collected food and green waste is delivered to Edmonton to be composted locally or taken to off-site composting or anaerobic digestion facilities in London, or in the Home Counties if insufficient local capacity is available.

Residual waste collected by the north London Partners is delivered to one of three sites in the north London area located in Hendon, Edmonton and Islington. Additionally, there are eight re-use and recycling centres distributed across north London where residents of any borough are allowed to deposit a wide variety of waste materials for re-use, recycling, composting, recovery or disposal.

Objective 13 *To enhance and protect the existing built environment including heritage assets and the wider historic environment*

Measures **Number of waste management facilities that are intrusively visible from historic buildings**
Number of new waste management facilities that have an unreasonably negative impact on heritage assets and the wider historic environment

The Authority is not aware that any of the waste management facilities that are used are intrusively visible from historic buildings or that any have an unreasonably negative impact on heritage assets or the wider historic environment. This consideration was assessed during the planning stage of existing facilities and will be assessed during the planning stage of new waste management facilities in the future.

Objective 14 *To ensure new buildings and associated infrastructure are designed and constructed in a sustainable way*

Measures: **Number of new waste management facilities designed and built to meet minimum BREEAM standards**
Percentage of recycled content material used in any new waste facilities that are built
Percentage of new waste infrastructure that is built on previously developed or industrially used land
Tonnage of waste processed per hectare

It is not possible to report against these indicators until sites have been identified and waste facilities specified. It is intended that these indicators will be reported in future when appropriate.

Objective 16 *To stimulate redevelopment and urban renaissance that benefits the most deprived areas and communities*

Measures: Percentage of jobs created in areas of above average deprivation or unemployment

It is not possible to determine this figure at this time. It is intended that this will be reported in future as new facilities and services are commissioned.

Objective 17 *To encourage a strong, diverse and stable economy*

Measures: Number of direct jobs in waste services

It is not possible to determine this figure at this time. It is intended that this will be reported in future as new facilities and services are commissioned.

Objective 18 *To improve the resilience of businesses and their environmental, social and economic performance*

Measure: Percentage of organisations delivering waste services with a recognised environmental and quality standard accreditation

All of the organisations that deliver recycling, composting and residual waste disposal services to the Partner Authorities are accredited to ISO 14001:2004 and ISO 9001:2008.

Objective 19 *To maximise the accessibility and equality of services*

Measure: **Number of re-use and recycling centres per 100,000 people**
Number of bring sites per 100,000 people
Percentage of households served by recycling and composting collections
Percentage of trade waste customers offered a recycling and/or composting collection service
Percentage of residents using waste services
Percentage of residents satisfied with waste services

The number of re-use and recycling centres per 100,000 people is reported in Section 10 above.

The number of bring sites per 100,000 people is reported in Section 13 above. The percentage of households served by recycling and composting collections is reported in Section 13 above.

The percentage of trade (business) waste customers offered a recycling and/or composting collection service is discussed in Section 28 and Objective 10 above, but the data is not currently available.

The percentage of residents using waste services is 100%.

The percentage of residents satisfied with waste services was previously taken from the Place Survey 2008 conducted by the Audit Commission. On 10 August 2010 the Minister for Housing and Local Government wrote to all local Authorities Chief Executives advising them of the cancellation of the Place Survey with effect from August 2010. Local Authorities are therefore no longer expected to report against the National Indicators measured by this survey. No further data is currently available in respect of this objective but will be reported in future if available.

29 Conclusion

In 2017-18, a total of 830,825 tonnes of local authority collected waste was managed by the Partner Authorities from households and businesses in the north London area. The total amount of waste collected decreased by14,951tonnes (1.8%) from the previous year.

Of the total waste collected 213,280 tonnes was sent for re-use, recycling and composting making an overall recycling and composting rate of 26% of the local authority collected waste stream.

505,864 tonnes of residual waste 61%) was sent for energy recovery by incineration. This is a decrease from the previous year when 541,278 tonnes of residual waste was sent for energy recovery.

The amount of waste sent to landfill was 78,959 tonnes which was 9.5% of the total, an increase of 10,019 tonnes from the previous year.

During 2017/18, 683,172 tonnes of waste was collected from households. Of this, 213,280 tonnes was sent for re-use, recycling and composting. This represents 31% of the household waste stream which is slightly down from the previous year.

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30 Further information

The Authority publishes its Annual Report every June:
http://www.nlwa.gov.uk/governance-and-accountability/annual-reports.

There is also a report available that sets out the Authority's work on waste prevention, recycling and composting:
http://www.nlwa.gov.uk/about/authority-strategies/

If you would like any further information about the North London Joint Waste Strategy, please contact North London Waste Authority:

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