

## Agenda Item 6

### Living in Hackney Scrutiny Commission - 16<sup>th</sup> October 2017

<b>Title of Report</b>	Waste and Recycling - performance and latest developments regarding North London Waste Authority
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#### 1. Purpose of the paper

1.1 The purpose of this paper is to:

- Explain the relationship between Hackney Council and the North London Waste Authority.
- Provide the current waste and recycling performance of the Council and the constraints the Council and similar authorities face in delivering improved recycling performance.
- The steps being taken to improve recycling participation and performance
- The residual waste collection options for further consideration.
- The financial cost of residual waste treatment and disposal.

#### 2. Waste treatment and disposal - North London Waste Authority (NLWA)

2.1 The NLWA is a Waste Disposal Authority comprising seven boroughs: Barnet, Camden, Enfield, Hackney, Haringey, Islington and Waltham Forest, responsible for managing the treatment and disposal of residual waste for all boroughs. It also manages recycling treatment for all boroughs except Enfield.

2.2 Costs are apportioned to constituent boroughs on the basis of an Inter Authority Agreement agreed between the NLWA and the constituent boroughs in May 2016, underpinning future disposal and treatment arrangements and changing the levying regime at that time. The introduction of the new levying scheme – menu pricing – delivered a more equitable allocation of the costs of waste disposal and treatment, by charges being directly related to the amount and type of waste and recycling delivered. This agreement aims to strengthen partnership working in north London, while rationalising the costs of waste management and introducing a financial driver to incentivise recycling and waste reduction. Consequently the elevated costs of waste disposal relative to recycling provides a significant financial driver to deliver continued improvements in performance across the authorities.

2.3 The main waste treatment facility under the control of the NLWA is the energy from waste plant at the Edmonton EcoPark. The 550,000 tonnes-per-year capacity residual waste facility has been operational since the early 1970s and

is reaching the end of its operational life. Cost and time whilst maintenance is carried out is increasing and full shutdowns may be required in future to enable the required servicing and replacement of plant and equipment. The difference between the efficiency of the current plant compared to a modern plant is increasing over time and the plant currently operates under a derogation agreed with the Environmental Agency in relation to the management of combustion gases and there is a risk that this may be removed or emissions requirements tightened.

- 2.4 The NLWA agreed at its December 2016 meeting, with unanimous support across its seven constituent boroughs, to pursue the development of a replacement Energy from Waste (EFW) facility, the development of a new Recycling and Recovery Centre and a wider redevelopment, all on the Edmonton site. This option was the cheapest of all those explored, though there will still be a significant cost increase from what we are currently paying for the current facility at Edmonton. This is because capital investment for the existing facilities at Edmonton was effectively paid many years ago and boroughs have had the benefit of maximising the usage of this asset over the past five decades paying only for necessary refurbishment and operational costs.
- 2.5 Under the option being taken forward, the NLWA/seven constituent boroughs would finance the replacement facilities via the Public Works Loans Board (PWLb) over a 40 year time period for the EFW facility and 15 years for the Recycling and Recovery Centre. All related costs will be charged to boroughs via menu pricing meaning that boroughs will pay for costs in proportion to their usage of the facilities (i.e. actual tonnages of waste processed across the differing waste streams).
- 2.6 Plans to build a major new energy recovery facility to replace the Edmonton EcoPark in north London received backing from the Department for Business, Energy & Industrial Strategy (BEIS) on 24 February 2017. The Secretary of State for Business, Greg Clark, issued a development consent order (DCO) for the proposals after a lengthy scrutiny of the plans by the Planning Inspectorate. A DCO is awarded to any development classified as a nationally significant infrastructure project and is intended to speed up and simplify the planning process. The planned new plant will cost an estimated £450-500 million and will have the capacity to treat up to 700,000 tonnes per year of waste, with the Authority also planning to use heat from the facility through a district heating network. Work is in hand to develop a strategy for delivering the scheme and construction preparation work could start in 2019. The existing plant would be decommissioned and demolished once the new facility is up and running by the end of 2027 at the latest.
- 2.7 There is a significant amount of work currently being undertaken to progress the procurement process, notably detailed financing arrangements, the project delivery model and further refinements to the facilities specification, all of which are interlinked. A recent update on the project was reported to the North London Waste Authority meeting held on 28<sup>th</sup> September 2017:

[http://nlwa.gov.uk/docs/2011/8-nlhpp-works-procurement-\(web\).pdf](http://nlwa.gov.uk/docs/2011/8-nlhpp-works-procurement-(web).pdf)

### **3. Hackney's recycling service history**

- 3.1 Throughout recent years a wide range of works, including data collation, project delivery and service changes, have been carried out to advance services and gather intelligence on which to build future change.
- 3.2 The borough-wide change in 2013 introduced significant enhancements to the waste and recycling service, transferring recycling operations from an external contractor to in-house delivery. A change to all street level properties from a source segregated box service to a fully commingled sack service was implemented simultaneously. This was followed by borough wide alignment of collection days in autumn 2013, introducing same day waste and recycling collections for all street level properties. This change delivered financial savings of £200,000 per annum over 4 years and a recycling rate increase of 1.1% (from 24.3% in 2012/13 to 25.4% in 2013/14). The move to in-house service delivery has also provided further opportunities, with greater flexibility and scope to develop services without defined contractual boundaries.
- 3.3 Estates and high rise properties are all provided with a similar service, with a commingled dry recycling service, by communal bins in communal areas, mimicking that of the waste services. Over recent years, service density has increased, with additional bins and additional sites across many estates, improving service accessibility.
- 3.4 Food waste recycling services are also readily available to the majority of residents, with communal facilities provided at estates, and door-to-door services at street level properties.
- 3.5 Recycling performance has followed an improving trend since services were introduced in 2001, with a gradual increase in service provision, from bring site services only to comprehensive kerbside collections of food and dry recycling for all street level and estate properties. Performance plateaued between 2009/10 and 2012/13 and then with the introduction of the commingled service in March 2013, 2013/14 saw an increase of over 1% that was sustained for the following year. Changes in regulations governing materials recovery facilities meant that monitoring of contamination levels in delivered recycling improved in 2015/16 and this was seen in the recycling rate with a decrease to 24.8%. However in 2016/17, with contamination stabilised and Hackney beginning to receive apportioned recycling from neighbouring reuse and recycling centres, the recycling rate improved to an all-time high of 27.3%. The figures are depicted in Chart 1 below.

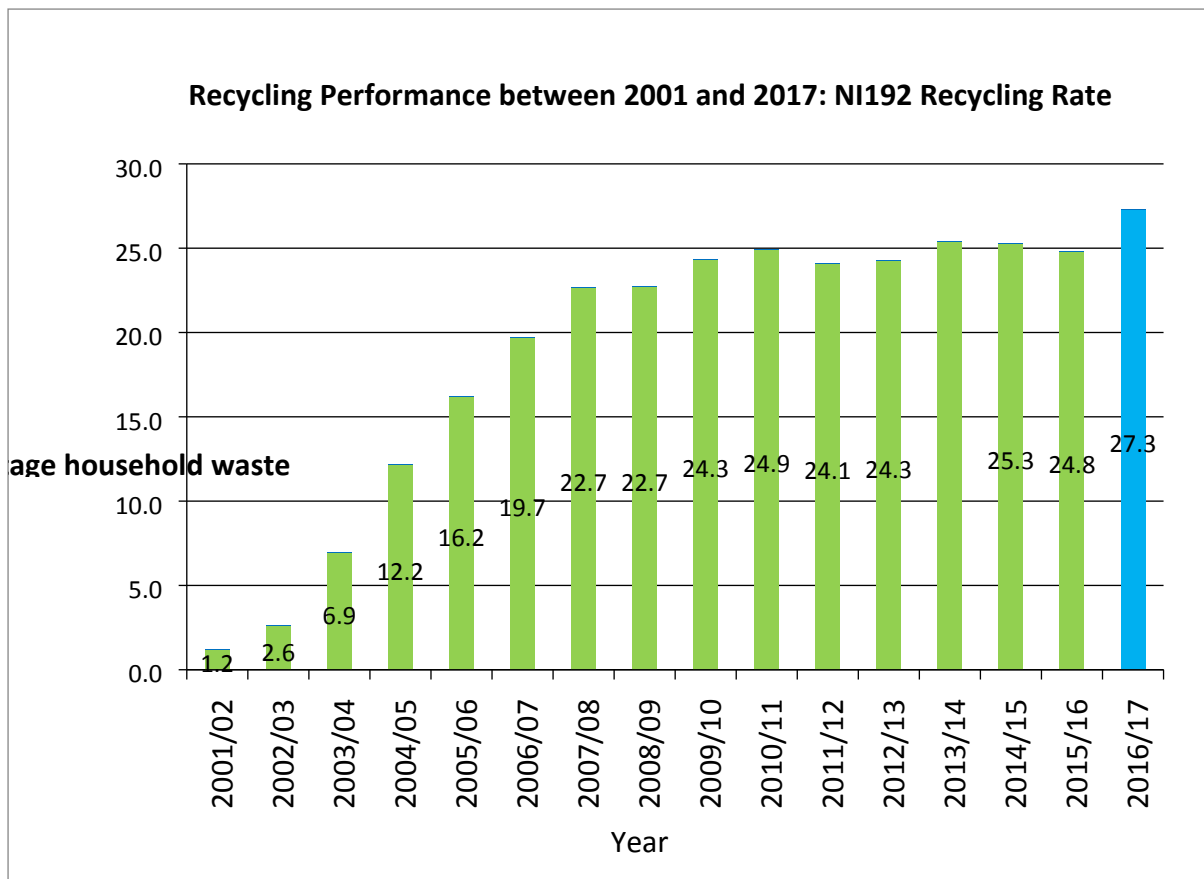


Chart 1: Recycling Rate between 2001 and 2017

#### 4. Data collection

- 4.1 Intensive data collation has been carried out to provide further evidence on the performance of the service and gather an intelligence base for future required changes.
- 4.2 Recycling participation was intensively monitored to obtain street level participation rate data by service and by round area. Participation cannot be monitored or measured for estates due to the communal nature of the bins, however there is national recognition that estates participation is significantly lower than that of street level properties. Overall participation across the borough in the street level dry recycling service stood at 84.4% with individual round areas ranging from 62.2% to 93.9%. This overall level is deemed excellent by the Government supported Waste Resources Action Programme (WRAP). The lower participation areas showed scope for improvement, in particular Shoreditch, Haggerston and Cazenove. Food waste service participation across the borough was at 31.44%, with individual rounds ranging from 17.82% to 46.75%. The lowest performing area was Cazenove, with extremely low levels of foods waste service users. This highlights scope for some improvement in the food waste collection service. An intensive communication and behaviour change campaign was delivered to build on this evidence, with targeted activity in lower performing areas; a 27% increase in

food waste tonnage was achieved across the borough. Scope for improvements in the food and dry recycling services therefore remain in some areas, particularly the Cazenove ward.

- 4.3 A two phase composition study of household residual, recycling, food waste and garden waste was conducted to gain robust data and intelligence about waste and recycling behavioural patterns. The findings identified the variation in the composition and quantity of waste and recycling arising within the six main social demographic groups in the borough. There is a greater proportion of waste not recycled in estate based properties when comparing them to street level properties. Total waste arisings from estates were unusually high, showing not only poor performance in the recycling services but also excessive total waste production. Key findings also highlighted excessive total waste production in the Cazenove, Stamford Hill and Springfield area of the borough, with relatively low recycling performance. The proportion of recyclable materials remaining in the residual waste stream was 65.5% (borough wide average by weight), therefore highlighting a significant proportion of recyclable materials not currently captured by the recycling services. The lowest capture rates were for food waste and plastics.
- 4.4 Detailed tonnage analysis conducted highlights similar trends to the waste composition, with elevated waste levels in the north of the borough, most notably in Cazenove, Stamford Hill West and Springfield wards, where waste levels are in excess of double that of the borough average (and well above national averages). Furthermore, these wards demonstrate food waste recycling tonnages of less than half that of other areas in the borough, and low dry recycling levels in relation to the total waste produced. The elevated waste and low recycling performance in this small area has a substantial impact on the borough recycling performance, negating some of the excellent performance evidenced across other areas of the borough. Significant behaviour change is required to deliver change and the required improvements. The Shoreditch area (Hoxton West and Hoxton East and Shoreditch wards) also show some anomalous waste and recycling tonnages, but this is attributed to the dense housing stock and complex collection arrangements, rather than a true reflection of resident performance in this area.
- 4.5 The waste and recycling property survey has been maintained, to ensure up to date information is held on the service eligibility by property (UPRN) and the potential storage space available for additional waste and recycling receptacles.

## **5. Key issues affecting recycling performance**

- 5.1 Increasing housing growth of around 2000 households per year (based on Greater London Authority's housing-led projections), is producing additional waste that requires collection, treatment and disposal capacity. Significantly, the ratio of estates based housing compared with street based housing is growing and with the current recycling performance on estates holding back

overall recycling performance improvement, the exposure to increasing disposal costs is clearly evident. Combined with the need to fund new waste disposal infrastructure, the future financial impact on Hackney is considerable.

5.2 Hackney's situation is not unique to inner London boroughs and the challenges that the borough faces spread across most aspects of waste management. The Council has consistently addressed these challenges and provides one of the most comprehensive waste management and recycling services in London and our approach is well regarded in the waste management sector. Despite this Hackney's low recycling performance is influenced by:

- Lower recycling performance on estates (52% of total housing stock in Hackney)
- 60% of street level housing is flats
- Smaller % of garden waste contributing to recycling
- High levels of deprivation
- Recycling contamination on estates
- Low level of food waste participation (streets and estates)
- Limited legislation to enforce compulsory recycling
- High levels of unregulated waste generally

5.3 All of the above issues are recognised at a London level and the Mayor of London through the London Waste and Recycling Board and Resource London has initiated projects to look specifically at estates recycling, contamination and food waste. Hackney officers are supporting all 3 initiatives.

5.4 Nationally, recycling rates have started to plateau and in 2015/16 actually fell by 0.9% to 43.9%. All but one of the top ten authorities had a reduction in their recycling rate. The one authority that increased their rate went up by 0.1%.

5.5 Further improvement in recycling performance can mainly be driven by improved recycling provision on estates and the restriction of residual waste collections for street based households.

## **6. Estates recycling programme**

6.1 The estates recycling programme was established with the aim of trialling a range of initiatives across 13 pilot estates to investigate the effectiveness of them and their impact on recycling performance. With estates performing poorly in Hackney and many other urban areas, the programme has been recognised as a forward thinking initiative and has obtained interest from many other Local Authorities, WRAP and LWARB/Resource London. The first trials - Phase 1 - were implemented in August 2014 and performance monitoring has been ongoing to date. Phase 2 trials are still ongoing, with the infrastructure works due for completion within Q3 of 2017/18 and evaluation of these trials complete by Q4 2017/18. Plans are in hand to extend Phase 2 type works to a further 7 estates. The phase 1 trials delivered a range of results with the biggest successes to date as follows:

- *Reusable Sacks & Extra Recycling Bins:* A recycling increase of 0.8kg/household has been delivered through the introduction of additional communal bins on estates, combined with a new innovative bespoke communications campaign. This equates to an increase in the recycling rate of 10%.
- *Reusable Sacks, Extra Recycling Bins & Bespoke Communications:* A recycling increase of 0.5kg/household, and a recycling rate increase of 9% was delivered through the introduction of additional communal bins on De Beauvoir estate, combined with reusable bags and a new innovative bespoke communications campaign.
- *Extra Recycling Bins:* A 0.5kg/household increase in recycling was delivered through the addition of recycling bins and sites on Nisbet estate. This equates to a 5% recycling rate increase.
- *Single Use Sacks:* The introduction of Single Use Sacks on Blackstone estate has delivered increase of 0.5kg recycling per household. Residents were provided with single use sacks (carrier bag style) to make break down barriers in transporting waste to communal recycling bins. This has not lead to an overall increase in the recycling rate due to significant increases in residual waste. This intervention is being re-tested through WRAP funded trials.

6.2 Phase 2 trials aim to test the impact of chute closure and the construction of new infrastructure for co-located waste and recycling facilities. The trials also aim to investigate the impact of reducing residual waste capacity and frequency of collections and this element is planned for completion by end of 2017/18.

## 7. Incentives programme

7.1 Funding secured from DCLG Rewards and Recognition Fund to the value of £637,037 over 3 years has been used to introduce a borough wide incentives scheme. Programmed procurement was undertaken as a joint procurement initiative with London Boroughs of Bexley and Camden, delivering economies of scale through a combined procurement value of £1.5m. The contract was awarded to a specialist provider, Local Green Points and the scheme commenced in October 2016.

7.2 The incentives scheme is based on a community points model with additional prizes for estate-based residents. The model includes discounts in more than 100 local Hackney businesses for all resident members, voucher rewards of £40 and £100 for selected individuals in each ward (total annual voucher value £33,600) and donations to charities and community groups to the value of £15,000 each year. The scheme aims to embed sustainable waste behaviours through the rewards, in turn driving an increase in the recycling rate as well as reducing waste arisings. There is a strong community element which is based around the 21 wards, driving inter-ward competition to be the best performing ward. The communications campaign delivered with the programme, includes borough wide door-knocking and high level outdoor advertising, and aims to drive behaviour change through increased awareness of both the scheme and the services.

## 8. Waste & Recycling Modelling for street based collection services

- 8.1 In addition to the estates recycling programme detailed in section 6 above, officers have looked at alternative residual waste collection options for street based households to gauge the potential impact on recycling performance and waste treatment and disposal costs. Waste and recycling modelling was commissioned by Hackney to scope and assess a range of future household collection options for the street level services, and their impact on improving performance and reducing cost, while maintaining the quality of the street scene. Consultants Eunomia modelled five scenarios up to 2020 (see Figure 1 below) identifying the service design, likely performance, financial costs, environmental benefits and constraints on their introduction in Hackney.
- 8.2 The range of scenarios modelled all include the continuation of recycling services unchanged with changes introduced to the waste services only. A restriction in waste production, through restrictions on capacity of waste containment or reduced frequency of collections, is known to be the strongest driver for behaviour change relating to waste and recycling. The options modelled range from business as usual (BAU) with closed lid policies to fortnightly collections of 140litre bins with no side waste, with the form of restriction becoming more strict across the range from options 1-5. Properties without off-highway storage space for bins would be allocated the equivalent capacity in single use sacks.

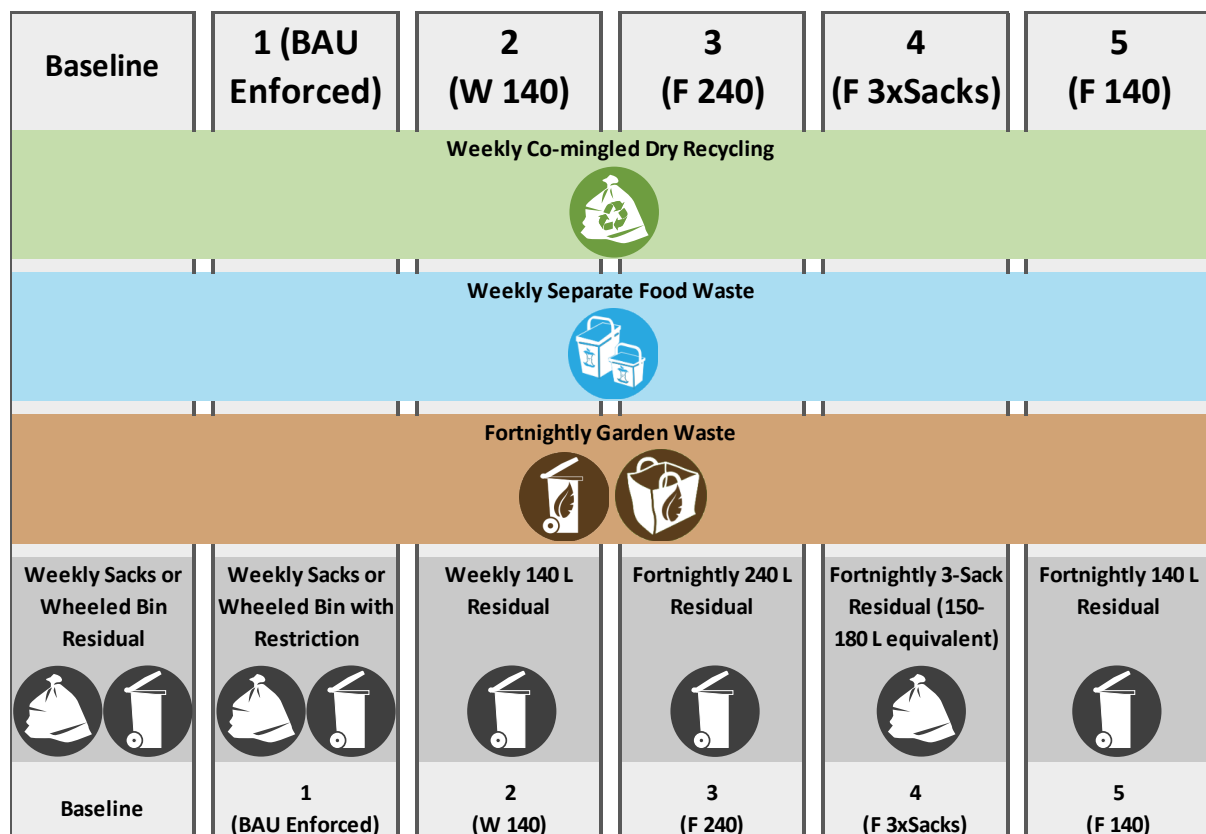


Figure 1 – Modelled Scenarios (aka Modelled Options)



- 8.3 Eunomia's key modelled results showed a reduction in residual waste and an increase in recycling performance as the restriction becomes increasingly strict. The modelled outcomes are based on a benchmarking and assumptions exercise which forms projections based upon evidence gained from other local authorities that have implemented similar services with the relevant characteristics, combined with application of the consultants' expert knowledge.
- 8.4 Officers have combined Eunomia's findings with the latest available performance data for 2016/17 and have started to input projected tonnages for the above collection scenarios into a financial model compiled by PWC on behalf of the NLWA. The model provides the projected levy estimates for Hackney up to 2030, taking into account estimated household and waste growth and costs for the provision and operation of new waste treatment facilities. Completed modelling of a base case and option 4 (fortnightly collection limited to 3 residual sacks) is shown in this paper.
- 8.5 Option 4 utilises fortnightly sack collections from all street based properties (no wheeled bins), and proposes to significantly reduce waste arisings, whilst driving an increase in the dry and food recycling captured.
- 8.6 The waste and recycling tonnages modelled for both baseline and restriction Option 4 results in a clear difference in recycling rate projections (see Chart 2 below). In terms of tonnage, Option 4 modelling predicts that 5,600 tonnes of waste would be removed from street-level collection, with 63% of the waste being moved into the recycling stream and the remaining 37% being displaced as residual waste to reuse and recycling centres (the model assumes that no waste is removed from the waste stream altogether as a result of restriction). The effect of this is that in the first year of the introduction of a restriction policy the borough's street-level recycling rate increases steeply from around 37% to 50%. During the same period the estates recycling rate experiences an increase of 1% from 17% to 18%. In both areas performance is then predicted to remain relatively constant to the limit of the modelling in 2031.

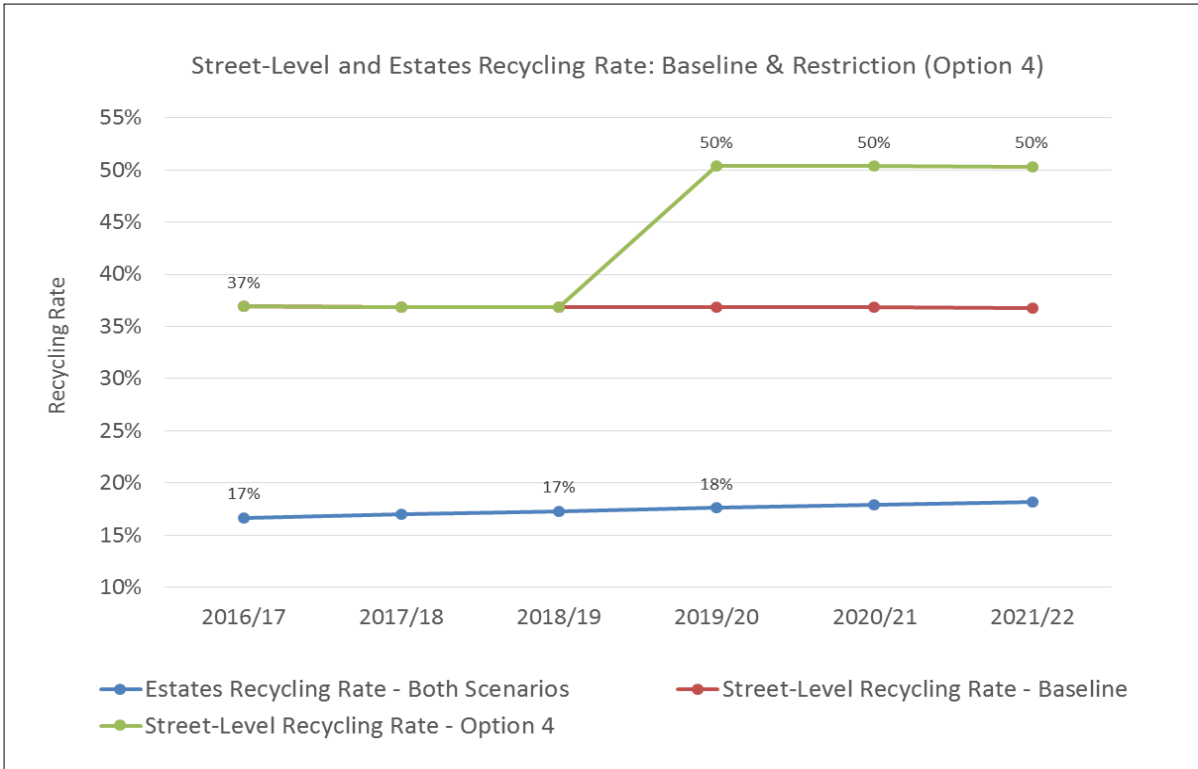


Chart 2: Recycling rate change at street-level and on estates with the introduction of waste restriction Option 4 in 2019/20

8.7 Recycling sorted by the waste transfer station, such as metal, wood, mattresses, WEEE is modelled to grow at 7.5% and the voluntary recycling and reuse sector by 3%. Also, non-kerbside tonnages such as street-cleansing, fly-tipping and bulky waste are modelled to increase by 1.5%, roughly in line with housing growth. This may be an over-estimate and we will continue to review projections with best available information. The overall effect of this coupled with street-level waste restriction is that Hackney’s street-level recycling rate increases steeply from around 27.7% to 31.3% in the first year of restriction policy being introduced. Performance is then predicted to remain relatively constant making small gains per year up to the limit of the modelling in 2031 (see Chart 3 below).

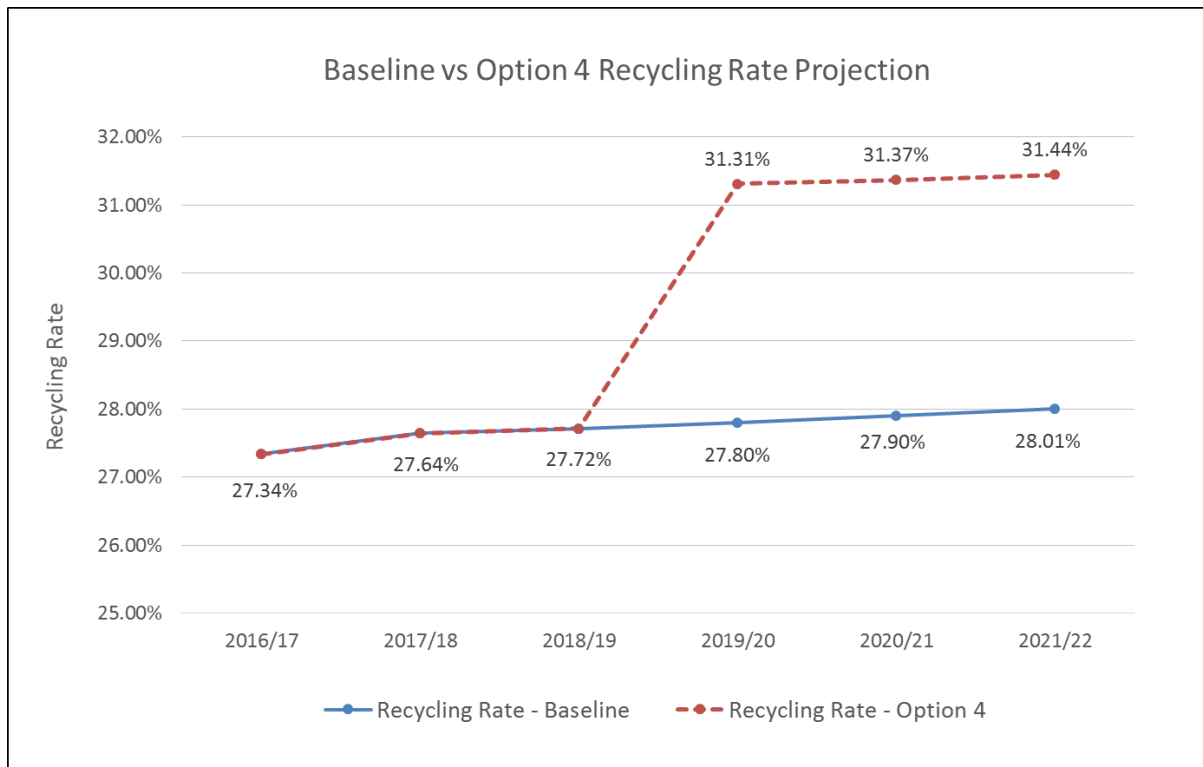


Chart 3: Recycling Rate change with the introduction of waste restriction Option 4 in 2019/20

8.8 The key risk in relation to implementing any restriction or reduced frequency of collection option is having sufficient operational, communication, education, and enforcement resources available to ensure that the roll out goes smoothly. The cost of this, along with the cost of the potential impact on other collection systems was not part of the scope of the original modelling carried out by Eunomia and should be considered separately.

8.9 The key to making restriction work operationally, is the initial and ongoing enforcement policy the Council implements. This would rely on a combination of ongoing education to householders explaining the service changes and how they should use the new service. But also setting out and publishing a clear residual waste collection and enforcement policy which is then implemented by the Council's enforcement service in a robust and consistent manner from the start of the new service.

## 9. Financial cost of waste treatment and disposal

9.1 Section 2 of this paper explained the relationship between the Council and NLWA and how waste treatment and disposal costs are levied under the principle of 'menu pricing'. Charges are now directly related to the amount and type of waste and recycling delivered by boroughs and Hackney will see a significant increase in levied waste treatment and disposal charges in the coming years, as boroughs begin to finance the new waste and recycling facilities at Edmonton.

9.2 For context, in 2008/09, Hackney’s domestic charge was £5.2m, and in the current financial year, we are paying £7.3m.

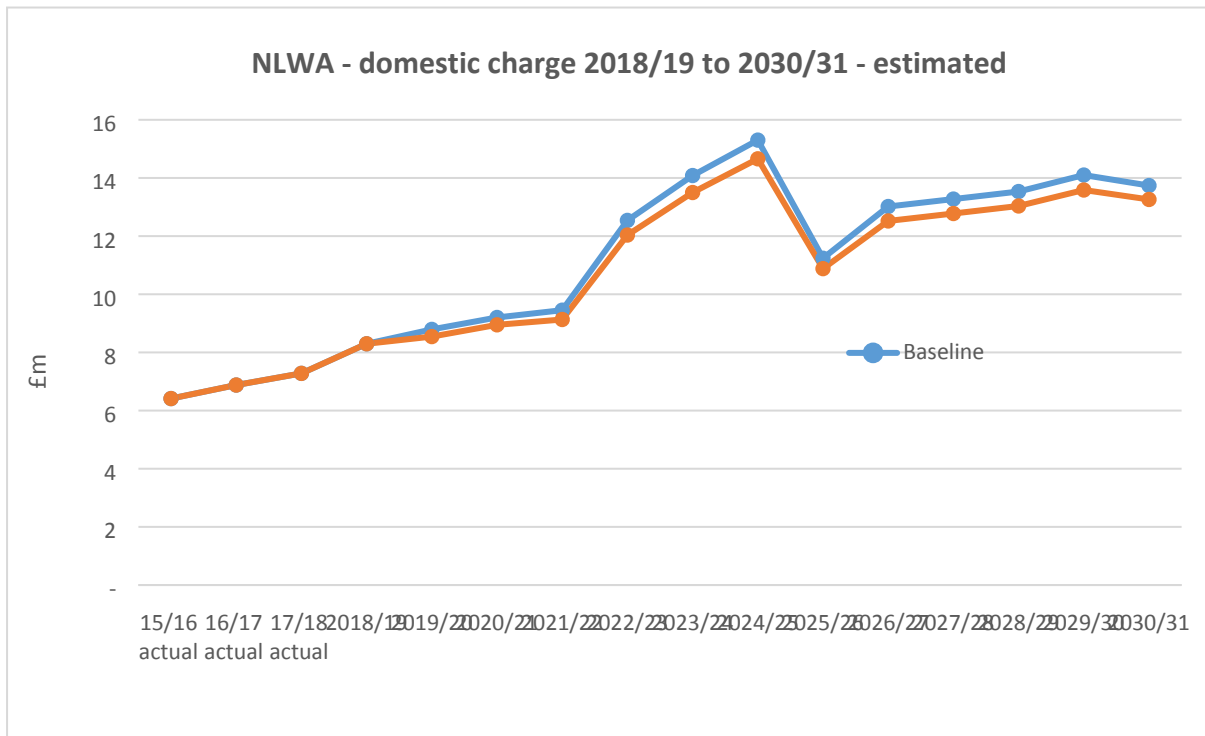


Chart 4: Estimated Domestic Waste Charges- comparison between baseline and restriction Option 4

9.3 The baseline position (i.e. tonnages modelled based on current service provision) will see costs increasing, through £12.5m in 2022/23 to a spike of £15.3m in 2024/25 (see Chart 4 above). This is during the 3 year construction period when interest is paid on debt but no revenue is received (for third party waste that the new facility is modelled to take). Post construction, our domestic charge reduces to between £13-14m annually for remainder of period.

9.4 A restricted service (option 4 of the modelling explained in section 8 above) follows a very similar cost profile, but the lower tonnage attracts a lower annual charge of around £0.5m for most of the period shown.

9.5 The numbers shown remain indicative – whilst the decision to proceed with construction of new facilities was made last year, the detail around contracting and financing arrangements are being finalised in 2018/19.