



The Effects of Competition on Municipal Waste Collection Performance

Peter Jones
Sam Taylor
Alex Davies
Steve Watson

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Prepared by Sam Taylor, Peter Jones, Alex Davies and Steve Watson

Approved by



.....
Sam Taylor
(Project Director)

Eunomia Research & Consulting Ltd
37 Queen Square
Bristol
BS1 4QS
United Kingdom

Tel: +44 (0)117 9172250
Fax: +44 (0)8717 142942
Web: www.eunomia.co.uk

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Foreword

Jacob Hayler, Executive Director, ESA

The Government's Resources and Waste Strategy – published in December 2018 – heralds the introduction of the most radical changes to recycling and waste policy for over a decade. All parts of the value chain will need to be aligned if we are to get close to achieving the huge step-change in recycling performance now envisaged.

Meeting future municipal recycling targets will require an almost 30% increase on current recycling volumes, across both the household and commercial sectors. The introduction of radical reform of our producer responsibility systems, along with more consistent collections, will necessitate service changes for huge numbers of local authorities around the country. It will be vital that both the public and private sectors work together to turn all of this ambition into reality.

In commissioning this research, ESA deliberately turned to Eunomia as independent experts in the field. Eunomia works both for public and private sector clients and has applied its usual academic rigour and scrutiny to the fieldwork, analysis and reporting of results in this report.

Therefore, this independent research is an important piece of work in this context. **It demonstrates that competition for collection services drives higher recycling performance and better value for money for the public purse.**

One of the key challenges in producing this research has been the lack of consistent and comparable cost data for waste services. We believe that there is a strong case for the Government to improve revenue outturn reporting to enable local authorities to make objective decisions based on actual evidence and hard data.

Despite the data limitations, we believe the results speak for themselves. The research shows real benefits delivered through competition, with contracted services delivering 10% improvements on the key measure of value for money.

As producers of packaging take a greater share of the financial responsibility for waste management, policy-makers need to be responsive to their understandable desire to ensure the contributions they make are spent effectively. In our view, competition has an important role to play in delivering a resource-efficient circular-economy, which will both help deliver 'better' services at home and help British businesses more effectively compete abroad.

Whether this takes the form of open competition, a reinvigoration of the concept of 'best value' or a successor to these approaches, the important thing is that challenge is regular, transparent and evidence-based. We believe that the evidence presented in this report shows this process can lead to meaningful change in the way services perform.

These are especially important findings given the current political climate, in which it is now Labour Party policy to prioritise in-house waste management over outsourcing. This research contradicts the belief that in-house services provide better value for money. On the contrary, our findings demonstrate that competition drives better outcomes for councils across a range of metrics.

The stakes have never been higher with a new Resources & Waste Strategy opening the door to a new world in which local authorities will be expected to reach significantly higher recycling targets and businesses expect better value for money in return for funding the system. At the same time, with interest in sustainability at a new high, more residents are putting a value on resources and expect better customer service.

Industry practitioners, policy makers and commissioners must make a renewed case for the benefits of competition and challenge, both at a national level in public procurement policy, and at a local level reaching their own commissioning decisions. Now is the time for more open competition, not less, in order to find the right solution for every authority.

Executive Summary

Waste collection is perhaps the most visible service any local authority offers to its residents, and one of the few that is used by every household. It is of critical importance to every local authority that this flagship service is convenient, and above all reliable – while also being responsive to the direction set by national policy.

Eunomia Research and Consulting Ltd (Eunomia) was commissioned by the Environmental Services Association (ESA) to undertake research to compare the high-level outcomes achieved through contracted services and in-house services. This report analyses data regarding England's waste collection authorities (WCAs) to see whether conclusions can be drawn regarding their service performance.

To this end, we examined aspects of service performance, including:

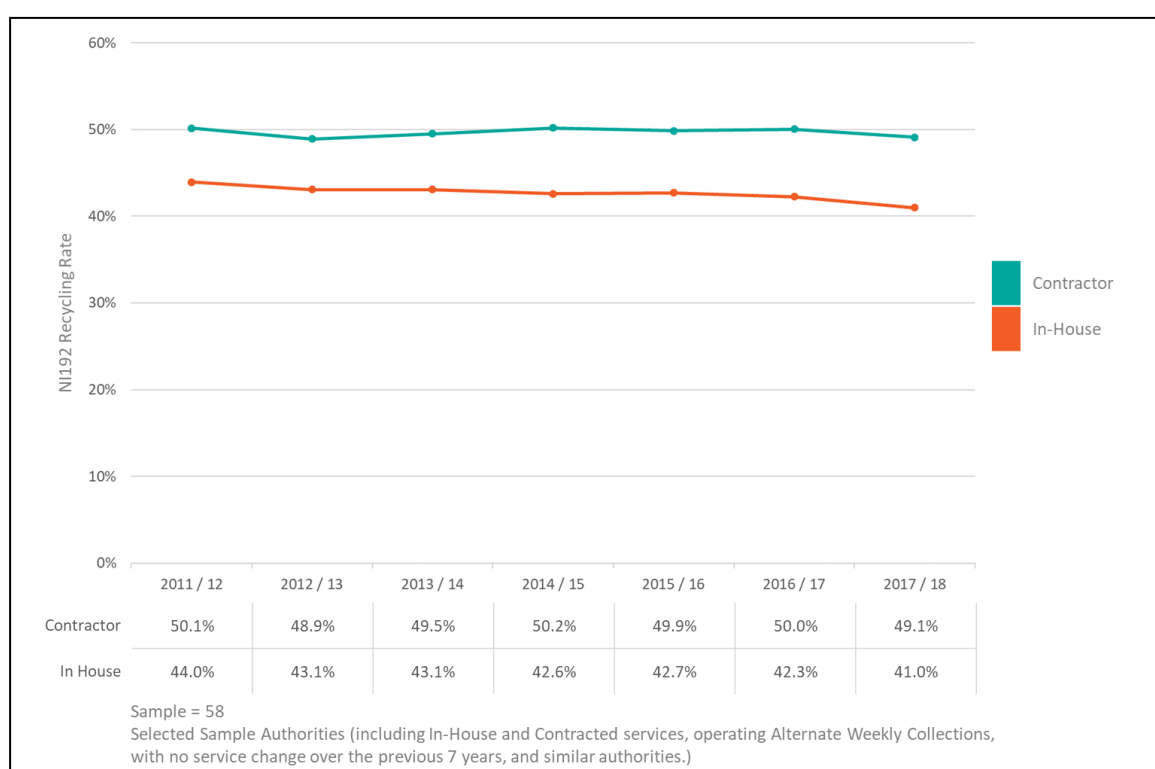
- Recycling performance
- Service costs and value for money

E.1.0 Recycling Performance amongst Like-for-Like Authorities

It is necessary to compare local authorities on a like-for-like basis so to ensure that differences relating to whether services have been contracted out or delivered in-house are explored. To do this, a data sample was created of authorities which operate across similar geographical areas, and have not undergone services changes over the sample period. Furthermore, authorities with similar dry recycling service provision¹ were also selected, so to ensure that service provision was not responsible for any large difference in recycling performance. **Based on the sample of 58 similar authorities, contracted out services have consistently achieved higher recycling rates than in-house services. Over the 7-year period, the average recycling rate for contracted out services was 50%, compared with 44% for in-house services.**

¹ As explored in the previous section, service provision is a key determining factor in recycling performance and influenced by authorities whose services have been competed for and those delivered in-house.

Figure 1: NI192 Recycling Rates for Sample Authorities



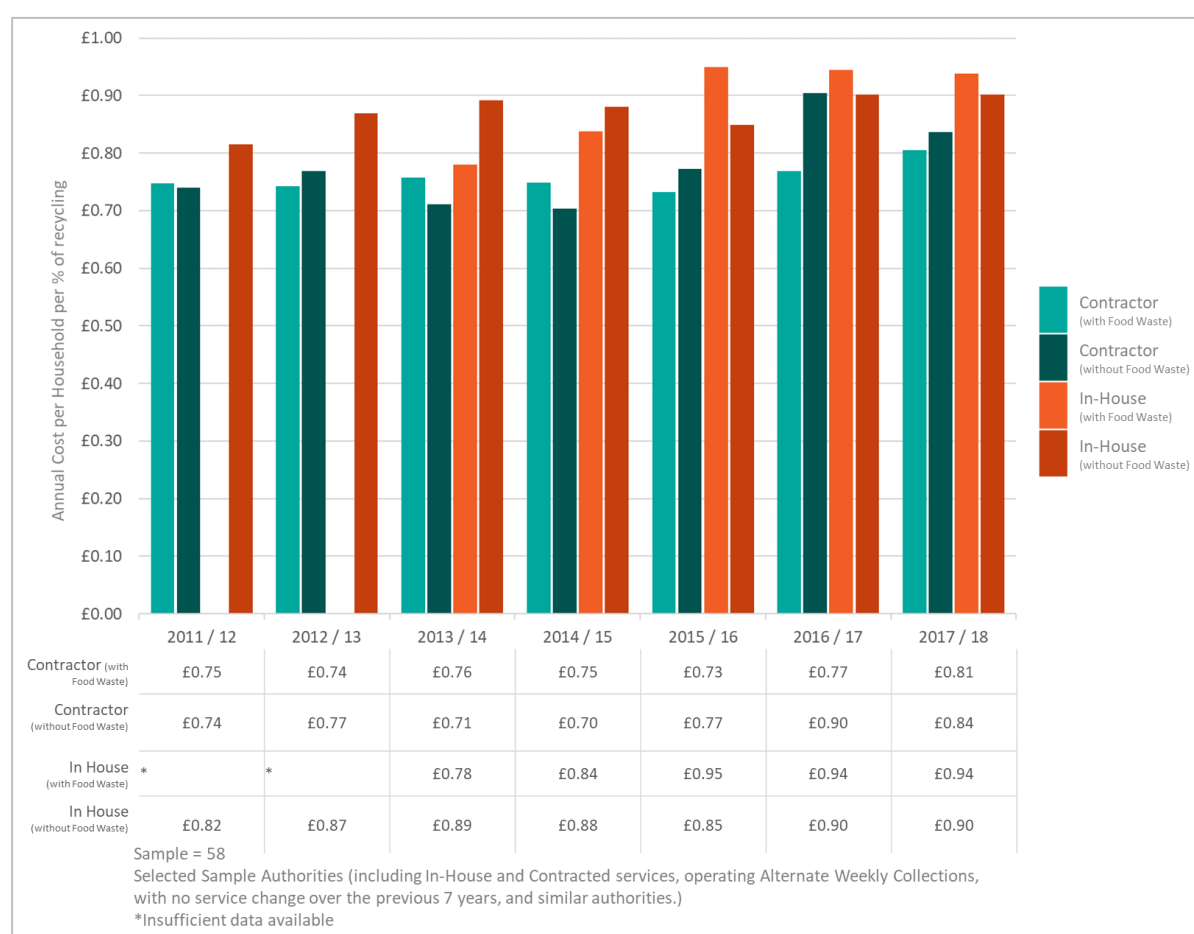
Source: Defra

As England's aspirations to achieve higher recycling rates strengthen, it is important that models for services delivery are carefully considered. Our research has identified that contracted out services have consistently outperformed in-house services in delivering higher recycling rates.

E.2.0 Service Costs and value for money

Analysis of the data, shown in Figure 10, produces a consistent finding over the seven years examined. Even with the imbalance in the way costs are reported, **authorities that contracted out their services achieved a lower cost of service per household per percentage point of recycling achieved than those who did not. The average annual difference was 10%. On this measure, it appears that contracted services deliver better value for money.**

Figure 2: Cost per Household per year per Recycling Percent



Sources: MHCLG and Defra

Note: Figures presented in Real Terms (2017/18 prices)

The metric of ‘cost per household per year per recycling percent’ can be used as a proxy for value for money delivered by a service. This allows an assessment of whether contractors are providing better results for the expenditure incurred.

Contracted services achieve 10% greater value for money on the ‘cost per household per year per recycling percent’ measure.

E.3.0 Key Observations and Recommendations for Policy Makers

The analysis carried out for this study reveals examples of excellent performance and low cost amongst both contracted and in-house services. However, it strongly indicates that, **despite official figures that risk overstating the costs of contracted services, contracted services on average deliver better recycling performance and a lower cost**

per percentage point of recycling performance, than do those that are delivered in-house.

This finding has been produced at a time when local authorities in England are about to embark on major changes in waste collection. Collectively, they will need to increase their recycling performance by over 20 percentage points in the next fifteen years. Measures that can help to boost recycling performance will be at a premium.

Authorities will also need to adapt to a funding model where Extended Producer Responsibility makes packaging producers major funders of local waste collection services. They will need reassurance that the services they are required to pay for are efficient, well run, and cost no more than is necessary to deliver the recycling results that are mandated by law. **Subjecting services to competition is likely to be one of the ways in which producers' can be reassured regarding value for money.**

Contents

1.0 Introduction	1
2.0 Methodology	3
3.0 Achievement of Recycling Rates	7
3.1 Recycling Performance amongst Like-for-Like Authorities.....	10
4.0 Service Costs	13
4.1 Value for Money.....	17
5.0 Quality of Service	19
5.1 Number of Missed Collections	19
5.2 Complaints.....	21
6.0 Conclusion and Key Observations and Recommendations for Policy Makers	23
A.1.0 Methodology.....	25
A.2.0 Like-For-Like Authority Selection	28

1.0 Introduction

Waste collection is perhaps the most visible service any local authority offers to its residents, and one of the few that is used by every household. It is of critical importance to every local authority that this flagship service is convenient, and above all reliable – while also being responsive to the direction set by national policy.

Collection of recycling and residual waste has been transformed over the last twenty years. It is no longer sufficient to simply empty dustbins: economic and environmental considerations now require local authorities to provide modern collection services that are able to help achieve high recycling rates. Members of the public, too, want the opportunity to manage their waste responsibly. In the context of ever-growing budgetary pressure, ensuring that waste collection services deliver value for money has become an integral part of every council's priorities.

While local authorities have a legal duty to arrange for household waste collections, this does not necessarily mean delivering the service themselves. There is now an almost even split across England between the two principal delivery models for waste collection:

- contracting out the service to a private company, selected through a competitive public procurement process ('contracted services'); and
- delivering services directly through an in-house operation, without the need for a procurement process ('in-house services').

Which of these models offers the best value for money has been a matter of contention since compulsory competitive tendering opened up waste collection to competition in the 1980s. However, as local authorities' budgets have become increasingly constrained, this debate has become all the more urgent, with authorities exploring alternatives to their current approach. Indeed, a small number have created their own, local authority owned companies to deliver services – although the number doing so remains small, and the changes too recent for reliable analysis of how they compare with the more established approaches to be possible.

Both contracted and in-house services are widespread across WCAs in England. In-house services remain somewhat more prevalent in lower tier authorities than contracted out, while the opposite is the case for unitary authorities. A profile of the delivery models used by WCAs is shown in Table 1.

Table 1: Prevalence of Delivery Models

	In-House	Contracted	Other*	Total
Unitary Authorities	22	25	9	56
Lower Tier Authorities	136	110	22	268
Total	158	135	31	324

Notes:

* Other refers to local authority companies and authorities that use a variety of service delivery models (e.g. refuse collection is in-house but recycling is contracted)

Source: Eunomia research

In this context, Eunomia Research and Consulting Ltd (Eunomia) was commissioned by the Environmental Services Association (ESA) to undertake research to compare the high-level outcomes achieved through contracted services and in-house services. This report analyses data regarding England's waste collection authorities (WCAs to see whether conclusions can be drawn regarding their service performance.

To this end, we examined three aspects of service performance:

- Recycling performance
- Service costs and value for money
- Quality of service

The approach taken to the analysis is explained below.

2.0 Methodology

To allow us to compare in-house and contracted waste and recycling collections, we have collated and analysed data on:

- service costs;
- recycling performance;
- quality of service; and
- collection scheme and providers.

Box 1 explains the data sources we have used in the course of this study.

Box 1: Data Sources

Timeframe

If we were to focus on a single year's data, there would be a risk that the results might be skewed by outliers or anomalous figures. Data were therefore collected, where possible, for a 7-year period covering 2011/12 through to the most recent full year for which many figures are available, 2017/18.

Cost of Service

The Ministry of Housing, Communities and Local Government publishes annual Revenue Outturn data on local authorities' expenditure and income.² Report RO5 presents authorities' revenue expenditures on cultural, environmental, regulatory and planning services, including waste collection. In the detailed breakdown, we looked specifically at lines 281 – 286 within the RO5 group, which reports the financial performance of waste management services. These lines include "Waste collection", "Waste disposal", "Trade waste", "Recycling", "Waste minimisation", and "Climate change costs". We analysed the Net Current Expenditure for all lines except Waste disposal, as disposal costs generally fall to Waste Disposal Authorities (WDAs) rather than WCAs.

Unitary Authorities were included in the cost analysis, though recognise that some of their costs, whilst on waste collection lines may be associated with waste disposal. In the subsequent like-for-like assessment, Unitary Authorities (UAs) were excluded.

Recycling Performance

Recycling rates were taken from local authorities' WasteDataFlow returns. We examined NI192 recycling rates, as well as separated dry recycling and composting rates. Data for the number of dwellings within each authority was also obtained from this source.

² See <https://www.gov.uk/government/collections/local-authority-revenue-expenditure-and-financing>.

Service Quality

Data on several key indicators, such as complaints and missed collections, was collected through Environmental Information Requests (EIR) that were sent to a sample of 130 local authorities with 79 responses received. To avoid creating an undue burden on authorities, we requested data for 2017/18 only.

Collection Scheme and Providers

Data were taken from several sources regarding authorities' collection schemes and delivery models over the past seven years. Information gathered included frequency of refuse and recycling collections, as well as details on garden and food waste services, and whether the service is run in-house or contracted out. WRAP's Local Authority Portal was used as an initial source, but was cross checked against Eunomia's internal database amongst other sources, to ensure that there was robust data for the entire study period.

The data was cleansed and sense checked before use. Details of the cleansing process can be found in the accompanying Technical Report.

The analysis sought to undertake a comparison of similar authorities to ensure that any differences in costs were attributable to the delivery model, rather than to other characteristics of the services. Comparative analysis of the performance and costs associated with waste collection services is made more complex by the many ways in which authorities across England differ. One key dimension of difference, which affects both recycling performance and collection cost, is the frequency with which residual waste and recycling are collected. Details of the frequency of residual waste and dry recycling collections provided by WCAs are shown in Table 2.

Table 2: Collection Frequencies

Residual Frequency	Recycling Frequency	In-House	Contractor	Other	Total
Fortnightly	Fortnightly	112	81	25	218
Weekly	Fortnightly	15	15	2	32
Fortnightly	Weekly	8	14	4	26
Weekly	Weekly	16	18	0	34
Other		7	7	0	14
Total		158	135	31	324

Notes:

* Other refers to local authority companies and authorities that use a variety of service delivery models (e.g. refuse collection is in-house but recycling is contracted)

Source: Eunomia research / WRAP local authority portal

For context, a service which operates a weekly refuse and recycling collection on average costs £60 per household per annum; one that operates the same collections on a fortnightly basis has an average cost of £43 per household per annum. Unless these service differences are taken into consideration, incorrect conclusions could be drawn regarding the relative costs of different delivery models.

Other differences that have a bearing on costs and performance include:

- collection methodology (e.g. co-mingled, two-stream, multi-stream);
- whether food waste is collected separately, mixed with garden waste, or only as residual waste; and
- whether garden waste collections are charged for or free; and
- treatment and disposal costs.

Issues of geography, demography and housing stock also have an impact. For example, rural, less densely populated authorities, incur additional collection costs due to the longer drive time between collections; while dense urban authorities with a high proportion of communal bin properties in their housing stock, can have greater challenges in achieving high recycling rates.

The responsibilities of UAs extend beyond collecting waste; they are also responsible for its disposal, as well as the operation of household waste recycling centres. The data that local authorities routinely report does not distinguish between the costs associated with the additional services that UAs undertake, and those that both they and WCAs undertake. It was therefore decided that UAs should be excluded from the analysis to avoid the distorting effect of these additional costs.

Some useful analysis can be carried out upon data from all English local authorities – and this report includes results derived from this larger data set. However, based on the reasons set out above, no fair comparison can be made of data from all English local authorities regarding recycling performance, value for money and quality of service.

Therefore, to allow for an analysis to be undertaken, we sought to find comparable authorities to pinpoint the extent to which delivery method influences performance. We used several criteria to produce a sample of 58 authorities, which represented an equal and comparable selection of both in-house and contracted out services. This sample is equivalent to approximately 25% of lower tier waste collection authorities. The method by which the sample authorities were selected is explained in Box 2.

Box 2: Sample Selection

The criteria used to select the 58 sample authorities included:

Collection Authorities: Only WCAs were included to reduce the impact of disposal costs being included within the data from Unitary Authorities.

Alternate Weekly Collections: Initial analysis showed that fortnightly refuse, and fortnightly recycling collections were the most common waste collection frequencies.

Similar Geography & Demographics: Using Eunomia's analysis of demographics and geography we removed authorities from the sample that were least similar to the rest of the sample.

Consistent Service: Ensuring that the sample only included authorities where collection methodology and delivery method had been consistent over the seven year period.

Validated Cost Data: An initial analysis of the Revenue Outturn cost data showed some anomalous results. Authorities whose results appeared anomalous were subject to a case by case review and were removed, or included for the remaining data after the above steps.

Food Waste Collections: The sample aimed to include authorities who do and don't provide a food waste service. Of the 22 contracted authorities, 13 provided a food waste service. Of the 36 in-house authorities, 8 provided a food waste service.

Garden Waste Collections: The sample aimed to include both authorities that provide a charged garden waste service, and those that provide a free garden waste service. Of the 22 contracted out authorities, 15 operated charged garden waste. Of the 36 in-house authorities, 28 offered a charged garden waste.

The complexities and limitations of the available data make this a challenge, however, by drawing together multiple findings regarding each of these aspects, together with a qualitative understanding of how each model operates, we are able to provide commentary on the value for money case for each approach.

Given the prevalence of both in-house and contracted out services across England, it would be surprising if it were to emerge that one definitively had the advantage over the other; however, analysis can indicate where a change of delivery method is most likely to yield benefits.

For the analysis undertaken in this report, local authorities that operated their services through a local authority company have been categorised as 'in-house'. The small number of authorities that have split services utilising both in-house and outsourced provision in their operation have been excluded from the sample.

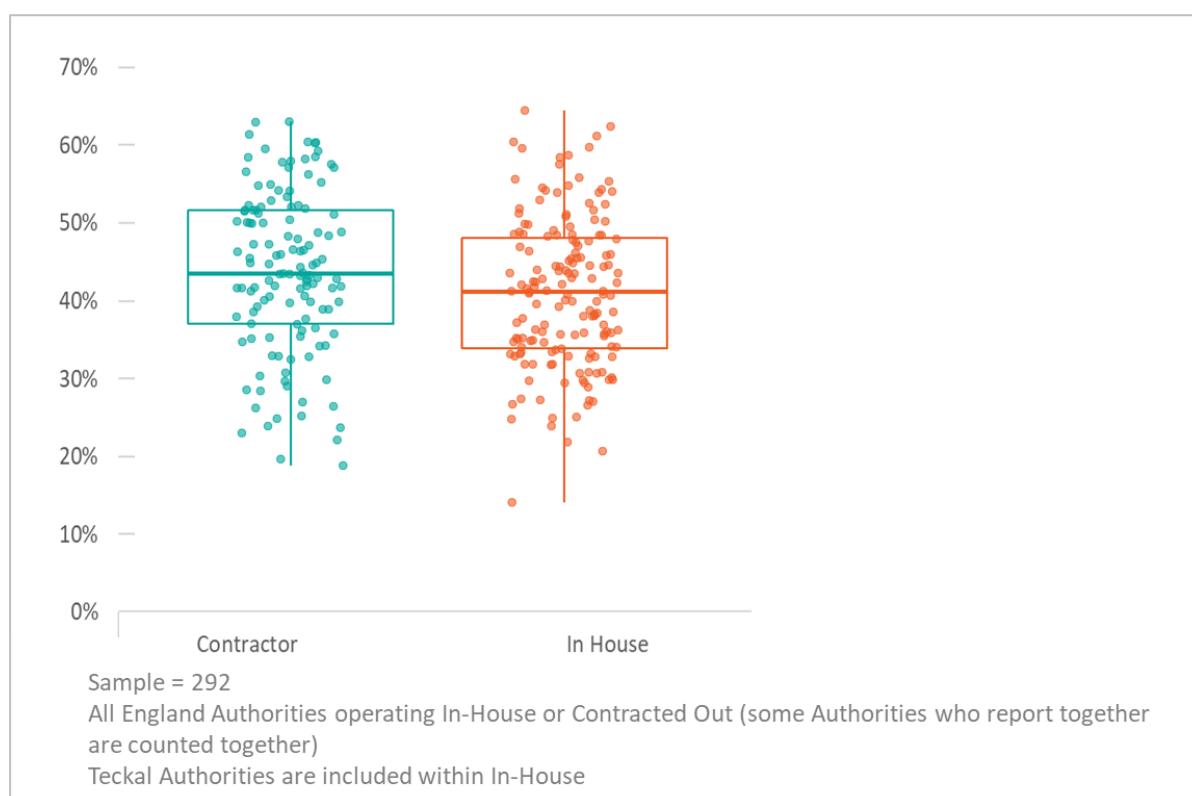
3.0 Achievement of Recycling Rates

In this section, we examine whether there is any significant difference in recycling performance between in-house and contracted out waste collection services.

The NI192 recycling rate calculation method provides a standard measure of the reuse, recycling and composting performance of local authorities across England. Looking at the 2017/18 (the latest year for which data is available), we see a great deal of variation in the results authorities achieve, whether they operate services in-house and contracted out. This is unsurprising, given the range of different collection systems in use across England and the influence of factors of demographics, housing stock and rurality.

Figure 3 and Table 3 show the spread of recycling performance across all English authorities. While there are significant issues attached to any comparison across all authorities, it is instructive to begin with the wider data set. A comparison of performance across 'like-for-like' authorities is presented in Figure 6 and Figure 7 below.

Figure 3: NI192 Recycling Rates England 17/18



Source: Defra - Local authority collected waste management - annual results

Table 3: Recycling Rates 17/18

	Private Contractor	In-House
Highest	63%	64%

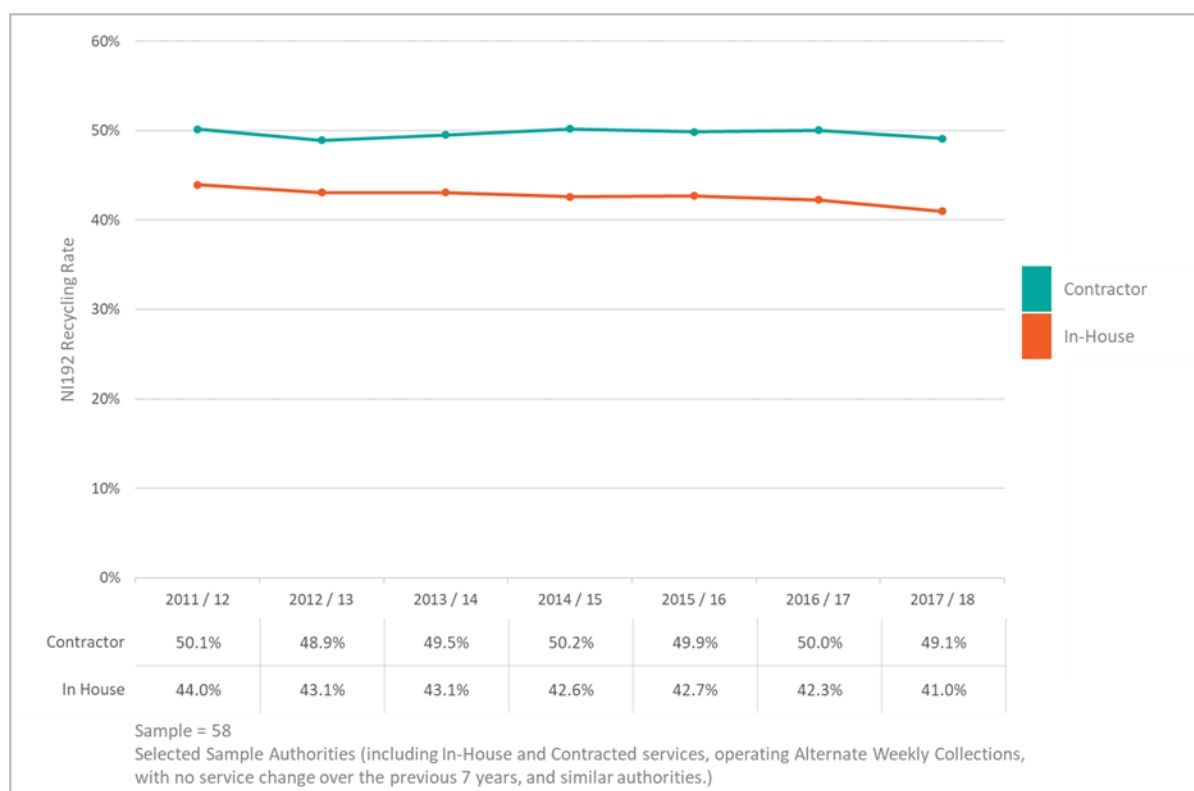
Average (Mean)	44%	41%
Lowest	19%	14%

Source: Defra - Local authority collected waste management - annual results and Eunomia research

An initial analysis appears to show that those local authorities whose services are provided by a contractor achieved, on average, a higher recycling rate than those whose services are delivered in-house. However, it is also clear that either operating an outsourced or an in-house service is no bar to achieving a high recycling rate.

This pattern is not simply a feature of the 2017/18 data, but reflects a long-term trend, as shown in Figure 4.

Figure 4: NI192 Recycling Rates England Between 2011/12 and 2017/18



Source: Defra - Local authority collected waste management - annual results and Eunomia research

Given that the difference in recycling performance between contracted out and in-house services is a long-term trend, it is important for both local authorities and policy makers to understand why this is the case.

This difference may be the product of multiple factors, some of which we explore in greater detail in subsequent sections. However, one plausible explanation is that the need to periodically engage with the market during the procurement process provides opportunities for authorities to (re)evaluate their service design and how it can be improved.

The resulting changes can be built into the service specification that service providers must satisfy and this can include performance deductions for failing to meet recycling targets. This periodic reset enables changes to be implemented without major capital expenditure on the part of the authority, as each new contractor will typically refresh much of the fleet at an early stage in the contract.

The procurement process enlists the creativity of several different companies' teams to create a solution that meets the authority's requirements; and where dialogue is used, the authority and potential contractors can work together to optimise service design. Processes like these constitute a 'challenge' to established practices and methods of service provision, and can highlight opportunities for improvements.

In-house services can also accommodate changes of service design, and a robust process of service review can deliver a similar challenge to the operational status quo, giving rise to increases in performance and cost-effectiveness. However, the authority needs to make an active decision to undertake such an exercise, rather than it arising as a matter of course.

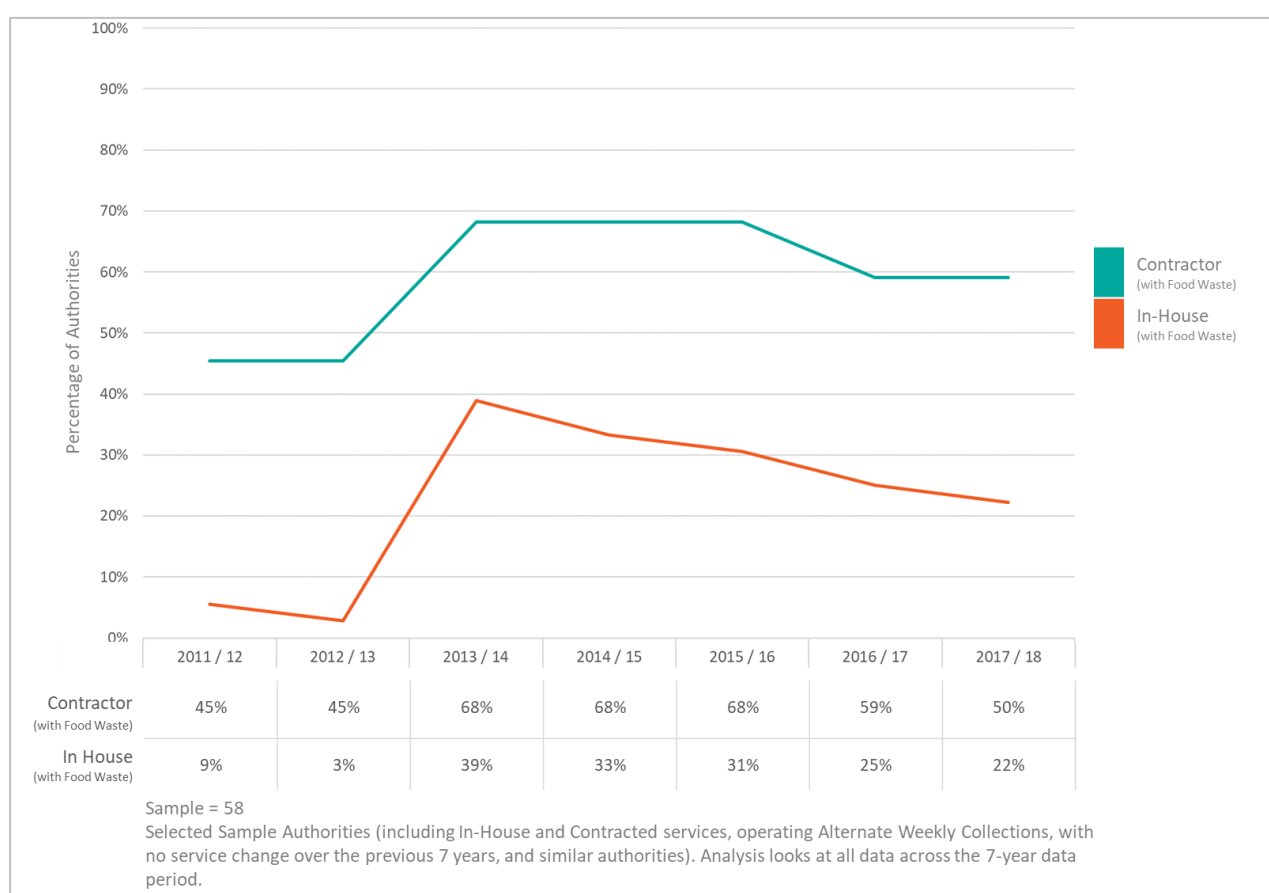
While the data does not in itself explain why the recycling performance of contracted out services is higher, it is a clear trend and this is an important factor for policy makers and procurers to take on board as England refocuses on the new, higher recycling targets that household waste collections are expected to achieve during the 2020s and 2030s.

Greater Service Provision

One way in which the challenge process can support and grow performance is through the development of new and additional services that can help improve recycling rates.

Food waste collections provide an interesting example. As Figure 5 shows, the number of authorities within the sample that offer food waste collections has grown in the last seven years, with the quickest uptake being from authorities where the services are contracted out. Almost 60% of contracted out services now provide food waste collections, compared with 22% of in-house authorities.

Figure 5: Percentage of Local Authorities Providing Food Waste Collections



Source: WRAP/Eunomia research The higher propensity of food waste collections in contracted out authorities may be a result of the regular opportunity (highlighted above) offered by the contract lifecycle to revisit service design. It may also reflect the ability of contractors to draw on expertise derived from their experience in other authorities to implement new services, which removes some of the barriers to service change.

3.1 Recycling Performance amongst Like-for-Like Authorities

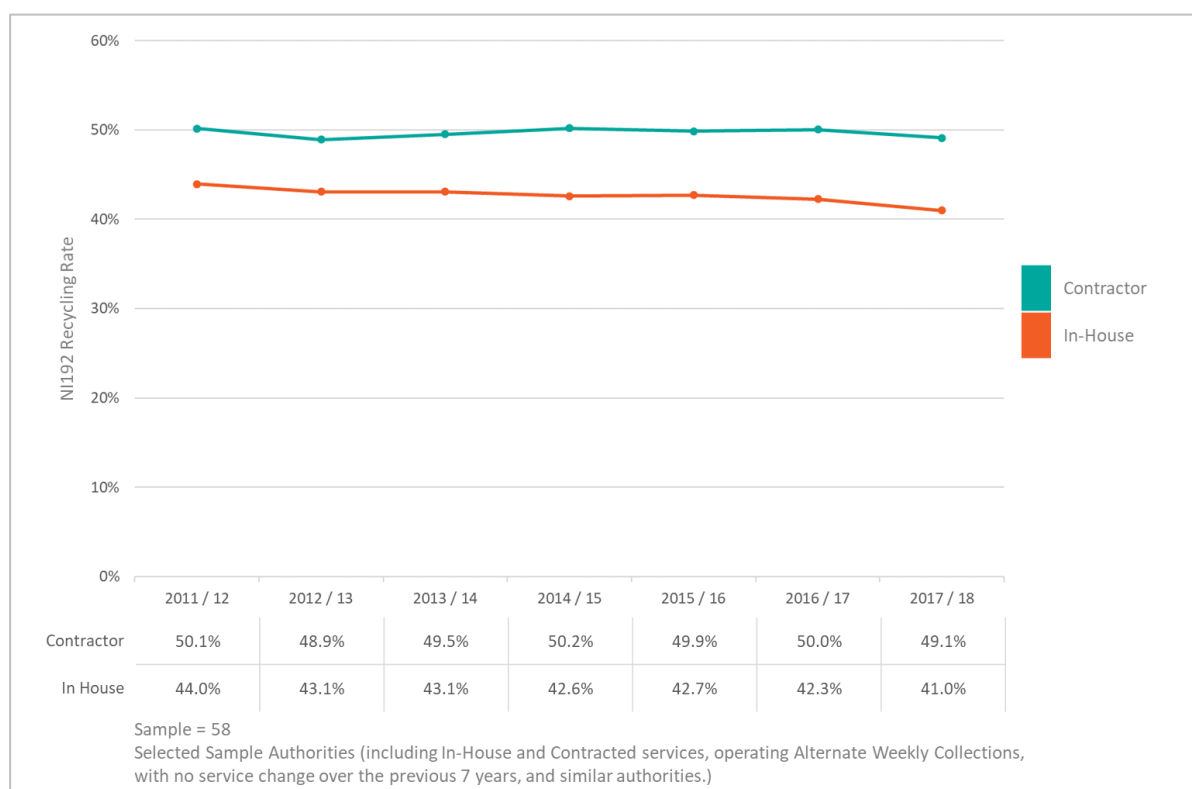
Whilst exploring recycling performance across all authorities in England gives us a broad insight into the differences in recycling rates, there several underlying factors, such as demographics and geography of the local authorities that could explain the differences between recycling rates.

It is necessary to compare local authorities on a like-for-like basis so to ensure that differences relating to whether services have been contracted out or delivered in-house are explored. To do this, a data sample was created of authorities which operate across similar geographical areas, and have not undergone services changes over the sample

period. Furthermore, authorities with similar dry recycling service provision³ were also selected, so to ensure that service provision was not responsible for any large difference in recycling performance. Based on the sample of 58 similar authorities, contracted out services have consistently achieved higher recycling rates than in-house services. Over the 7-year period, the average recycling rate for contracted out services was 50%, compared with 44% for in-house services.

The average recycling rate performance 'gap' between services provided in-house and contracted out has also increased in the past 7 years, rising to 8% in the most recent year (2017/2018).

Figure 6: NI192 Recycling Rates for Sample Authorities

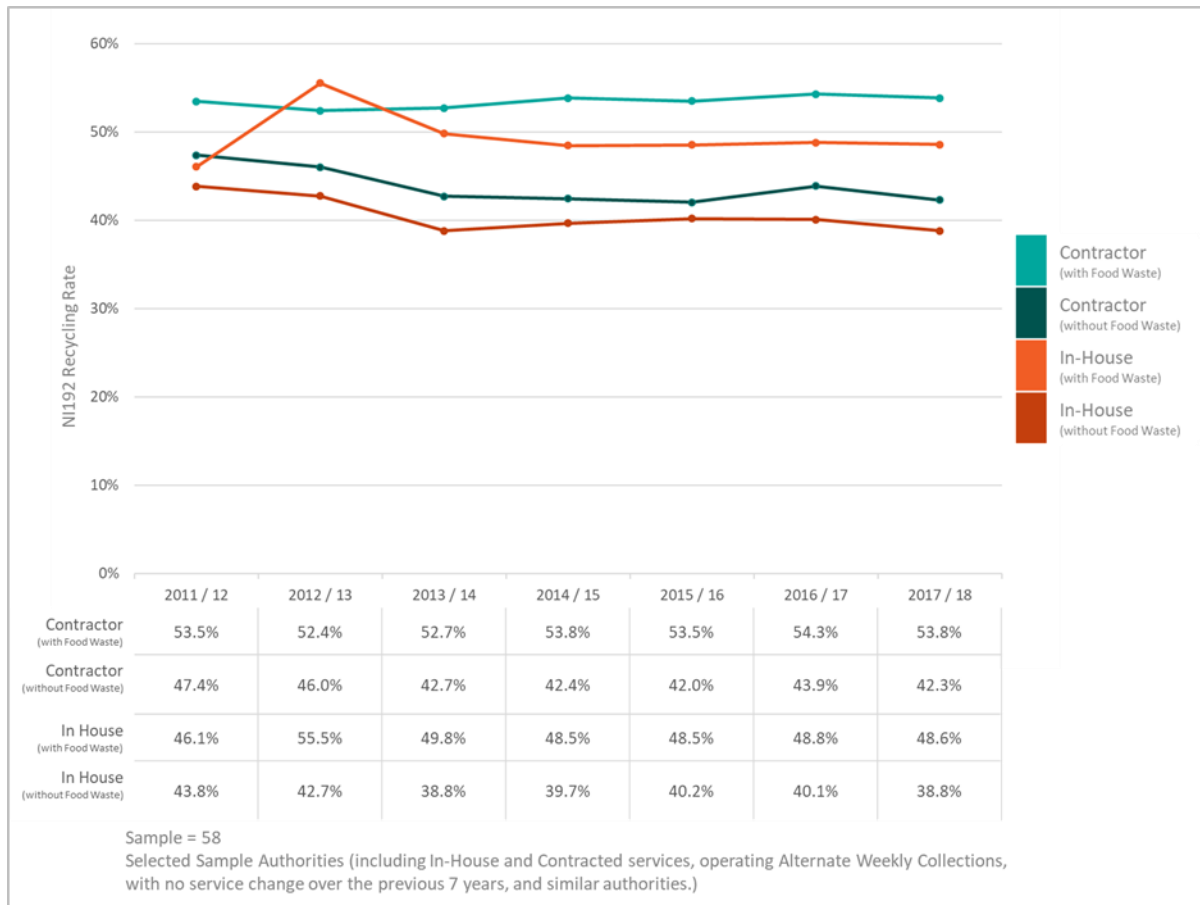


Source: Defra

A more detailed review of the sample of authorities reveals that the provision of food waste recycling services improves recycling performance. In Figure 7 we can see that within our sample, where food waste collection is offered, recycling rates are indeed higher across both contracted and in-house services. Alongside this trend, it can be observed that contracted services have delivered high recycling rates that in-house services on a like for like basis.

³ As explored in the previous section, service provision is a key determining factor in recycling performance and influenced by authorities whose services have been competed for and those delivered in-house.

Figure 7: NI192 Recycling Rates (Including and Excluding Food Waste Services)



Source: Defra

As England's aspirations to achieve higher recycling rates strengthen, it is important that models for services delivery are carefully considered. Our research has identified that contracted out services have consistently outperformed in-house services in delivering higher recycling rates.

4.0 Service Costs

Whether services are contracted out or provided in-house, local authorities have a duty to ensure that they are providing value for money. In this section, we examine revenue outturn ('RO') data submitted by local authorities to explore whether there is a difference between the value for money of contracted and in-house services.⁴

Prior to considering value for money, it is necessary to understand the costs of services. Differences in cost might arise for several reasons including the following:

- waste contractors that work across multiple authorities may be able to achieve economies of scale that local authorities cannot, or may be able to procure vehicles or containers more cheaply;
- waste contractors can reduce staff costs compared with local authorities by employing workers (other than those that have acquired rights) on different terms and conditions;
- the cost of in-house services does not need to include a profit margin;
- the process of competition may drive efficiencies that are otherwise more difficult to achieve; and
- the allocation of overheads can be inconsistent (this is explored further below).

To make meaningful cost comparisons, it is necessary to take account of the relationship between costs and service performance, and of a range of underlying factors, such as demographics and geography of the local authorities, that can drive differences in costs. Therefore, in order to understand the cost-effectiveness of contracted services, it is necessary to present data on more of a 'like-for-like' basis.

⁴ As outlined in the introduction to this research, the data quality relating to the costs of service is less reliable than that relating to the recycling performance. Whilst derived from RO5 data, there is significant uncertainty whether all authorities are reporting the data in a similar fashion.

Figure 8: Annual Cost per Household with Food Waste Service (Like-for Like Authorities)

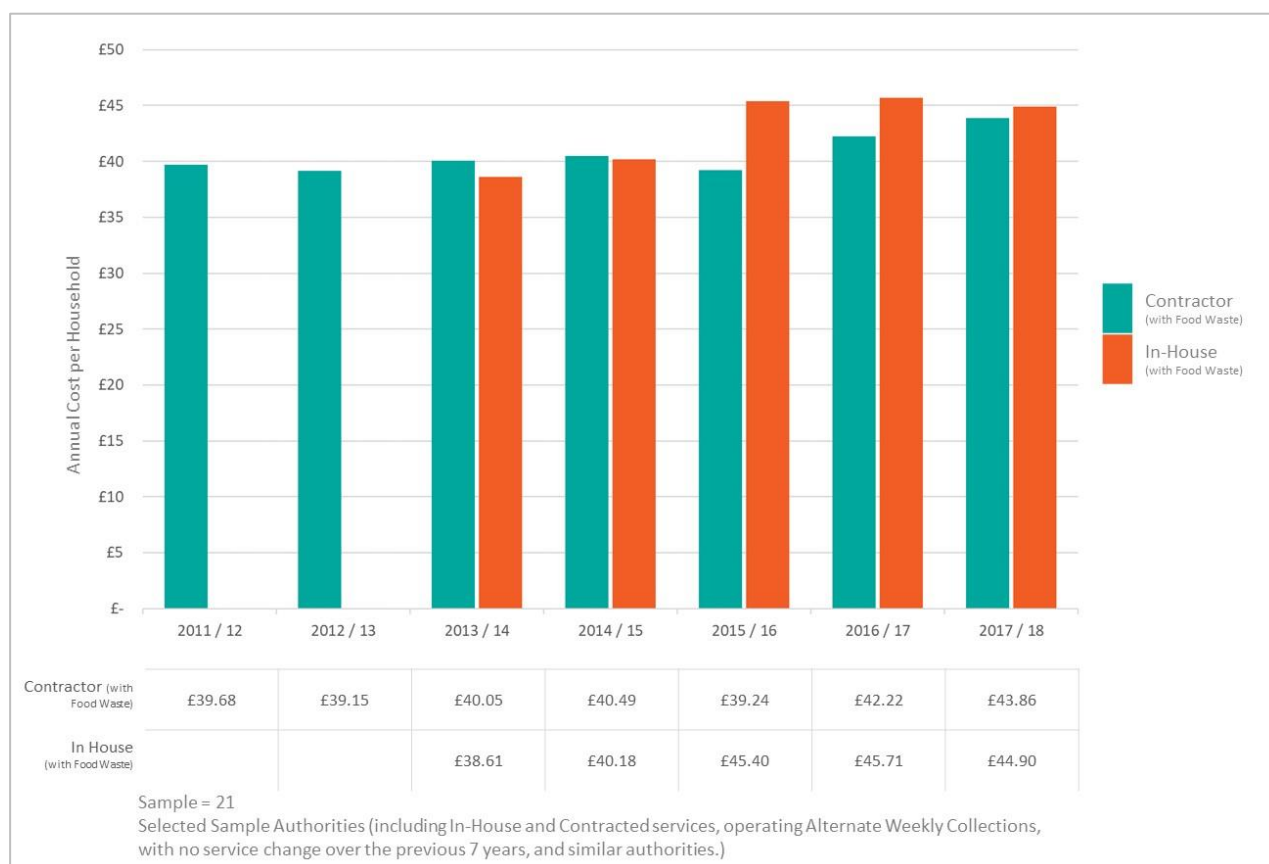


Figure 8 and Figure 9 analyse the waste management costs of a sample of 58 authorities that operate collections with the same frequency and that are demographically comparable (see Box 2 for details of how the authorities were selected).

Figure 9: Annual Cost per Household without Food Waste Service (Like-for-Like Authorities)



Source: MHCLG and Eunomia research

Note: Figures presented in Real Terms (2017/18 prices)

This analysis of the like-for-like authorities allows for the presentation of a more accurate picture of costs on a comparable basis from the data. The magnitude of the cost difference has fluctuated over the past seven years, but amongst the sample authorities in-house services appear on average to be £1 more expensive per household per annum when offering a food waste service. Without food waste, amongst the sample authorities contracted services appear on average to be £1 more expensive than authorities with in-house services.

Some differences in reported costs may be explained – wholly or in part – by differences in the way overhead costs and capital investments are treated and reported under the two delivery models in the RO5 expenditure data. These differences arise due the different ways in which contracted and in-house services are managed – although there may well be variations in reporting practices amongst authorities that have the same delivery model.

Typically, the contractor's invoice will capture the full costs of providing the service (excluding any costs that the client incurs directly, such as contract management – although these costs would still typically be included in the RO5 data that authorities

report). In addition to the direct costs of service delivery, this will include capital charges for investments in plant and fleet; it will also include local and central administration, as well as a proportion of central corporate overheads (e.g. payroll, HR, safety, property, insurances and ICT).

The analysis of the RO5 data shows that, for in-house waste services, some of the costs that would typically be expected to appear in a contractor's invoice (e.g. capital costs and some central overheads) are not consistently included within local authorities reporting. Where they do not appear in the costs of waste management, they are dealt with in other expenditure lines, which report central costs or overheads. In any case, the allocation principles that authorities use to apportion central costs also differ, which may result in a larger or smaller share being notionally borne by the waste service.

Research was undertaken across the authorities included within the sample, to understand how internal costs are recharged and reported within the RO5 data for authorities operating in-house services. The results of this show a somewhat inconsistent approach to reporting the costs associated with the service mostly around depreciation of capital, and pension costs. Largely authorities reported that HR, call centre and IT costs were re-charged within RO5 reports.

	Call Centre	IT	HR	Pension	Depreciation
Included in RO5	19	19	19	17	9
Excluded from RO5	2	2	2	4	12

The biggest inconsistency concerned the reporting of depreciation of capital costs, including vehicles and infrastructure. Of the 21 authorities that responded, nine said that this cost was included within RO5 reports; while of the 12 that said depreciation was reported elsewhere in the RO data, only nine were able to provide details of depreciation costs, and not all were able to separately identify depreciation for waste services.

It appears that several significant areas of cost are consistently captured across contracted out services, but less consistently captured across in-house contracts. The effect is to somewhat deflate the reported cost of in-house collections.

It would be helpful in reaching a full understanding of the cost effectiveness, and value for money, of different delivery models if all costs, including central overheads, capital costs and internal purchased services, were consistently captured and correctly attributed in the RO5 reporting of both in-house and contracted out arrangements. This might be achieved through more precise accounting guidance for local authorities. This will enable more meaningful comparisons to be made, and allow authorities and commissioners to make better, more informed and more transparent sourcing decisions in the future.

Whether or not there is any significant difference in costs (and costs per household fluctuate across the sample of authorities), at the individual authority level contracted services can offer greater certainty regarding many aspects of the cost of providing a service than does the in-house option. Within a waste collection contract, many costs will be fixed or subject to predictable annual increases based on indices. If actual delivery costs increase to a greater degree than contractual payments, much of the operational risk sits with the contractor – although for budget lines that are genuinely outside the contractor’s control, such as material values for recycling, contracts will generally share risks. Where the authority opts to vary the services required, there is typically a clear mechanism by which the additional costs will be calculated, and once agreed the contractor is likely to bear part of the risk if actual delivery costs are greater.

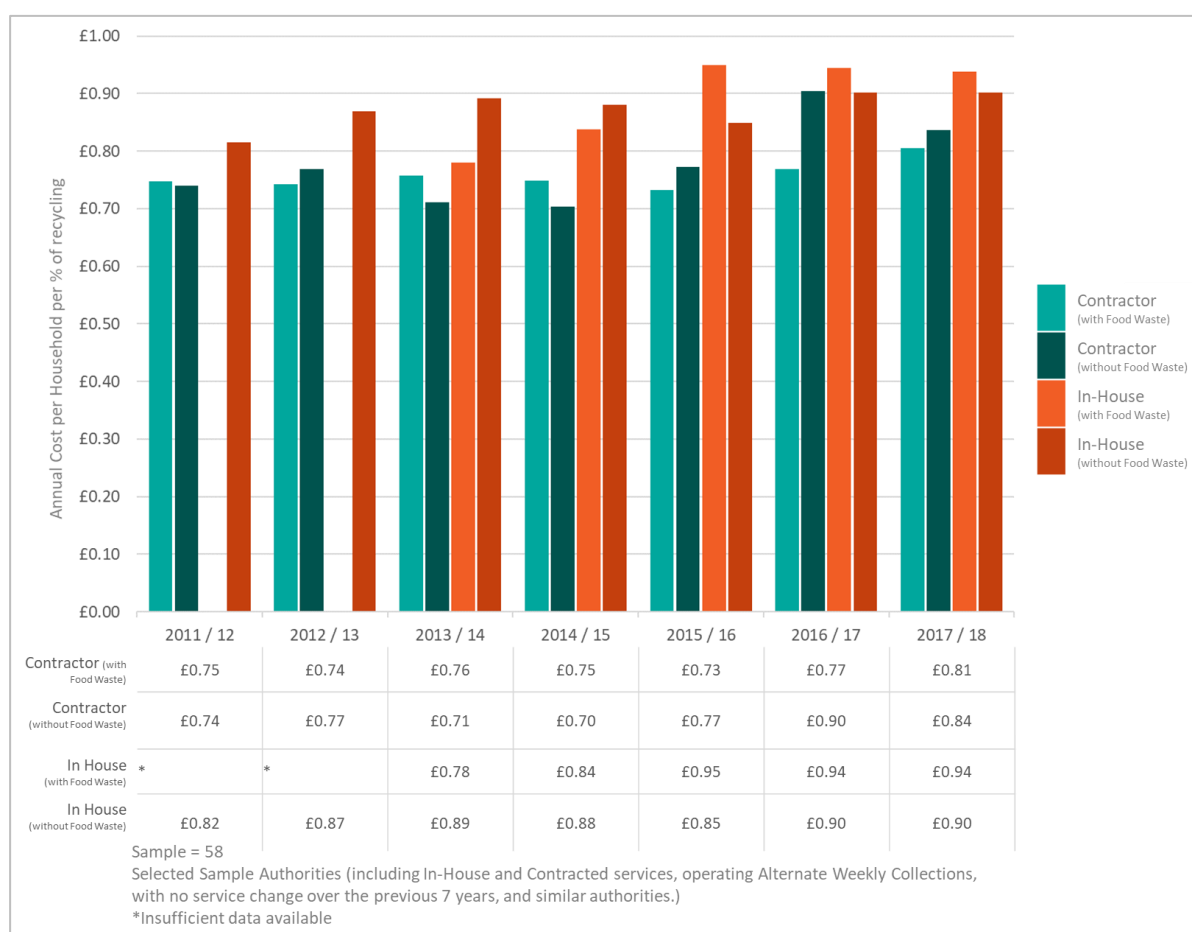
Well-managed in-house services may also be able to control costs, but where unexpected costs arise there is a greater risk of going over-budget. There is no protection from increasing costs or declining income, and while service changes may be simplified by the absence of the need to vary a contract, all cost risks sit with the council.

4.1 Value for Money

Having looked both at costs and recycling performance, it is possible to bring these data sets together to look at the results achieved through the expenditures incurred. In this section we focus on the like-for-like authorities to examine the difference between contracted and in-house services in terms of the cost per point of recycling performance.

Analysis of the data, shown in Figure 10, produces a consistent finding over the seven years examined. Even with the imbalance in the way costs are reported, discussed above, authorities that contracted out their collection services achieved a lower cost of service per household per percentage point of recycling achieved than those who did not. The average annual difference was 10%. On this measure, it appears that contracted services deliver better value for money.

Figure 10: Collection Cost per Household per year per Recycling Percent



Sources: MHCLG and Defra

Note: Figures presented in Real Terms (2017/18 prices)

The metric of ‘cost per household per year per recycling percent’ can be used as a proxy for value for money delivered by a service. This allows an assessment of whether contractors are providing better results for the expenditure incurred.

The difference in recycling performance has implications for any authority’s commissioning strategy. Where authorities are looking to increase recycling performance, one of the options to consider may well be to market test the service. The improved recycling outcomes are also likely to affect the overall cost of service delivery – our financial analysis excluded disposal costs, and therefore differences in avoided disposal costs achieved through higher recycling rates were not considered. In making a commissioning decision, authorities should carefully assess the financial benefits of a potentially higher recycling rate as part of any prospective business case for a change in approach.

Contracted services achieve 10% greater value for money on the ‘cost per household per year per recycling percent’ measure.

5.0 Quality of Service

No council would assess the performance of its waste and recycling service solely on the basis of the amount of recycling that is collected, or the range of services that are offered. They are sensitive to the fact that residents expect to receive a service that they can rely on. Two key indicators of poor performance are the number of missed collections, when the client has set out their bins but they are not emptied; and the number of complaints received. Both can be examined relative to the number of collections or households served to create a metric where a low score is an indicator of high-quality delivery.

This information is not generally publicly available and was gathered from authorities using Environmental Information Regulations (EIR) requests. There is also some inconsistency in whether the information is gathered at all, as there is no duty upon authorities to collect it. As part of a contracted service, the contractor will typically be required to carry out self-monitoring and to report the results to the authority so that this aspect of performance can be taken into account in contract management. Where services are operated in-house, most (but by no means all) authorities monitor these metrics.

5.1 Number of Missed Collections

In response to EIR requests, 60 local authorities provided data on the number of missed collections during 2016/17. The resulting sample included a comparable and representative spread of contracted out and in-house services.

Some authorities were able to provide a breakdown of missed collections by service (e.g. residual waste, dry recycling, food waste), while others could only provide the total number of missed bins per year. This limits the analysis that can be carried out, as ideally the data should be standardised to take account of factors, such as the number of separate streams and proportion of flats. Unfortunately, this was not possible, although the overall figure for missed collections does enable an assessment to be made of the likelihood of any individual household experiencing the inconvenience of a missed collection.

Accepting the limitations of the data, analysis of the sample shows that, while there are a wide range of results for both contracted and in-house services, the proportion of reported missed collections is on average 16% lower in contracted services (see Table 4).

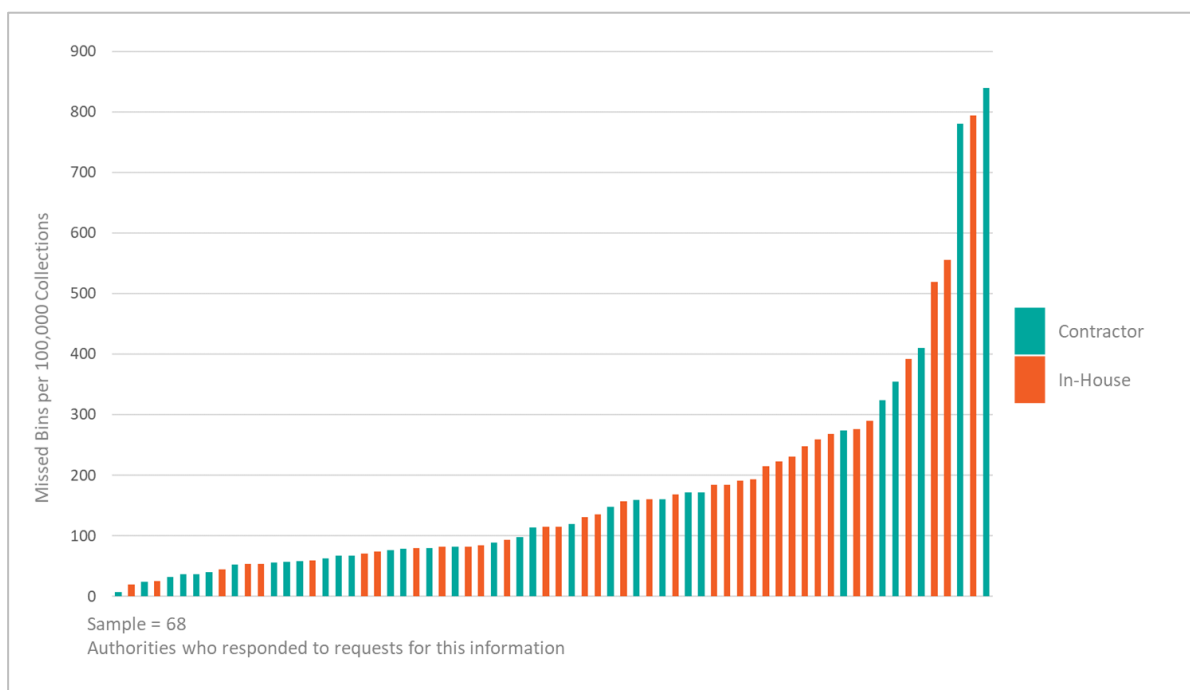
Table 4: Number of Missed Collections per 100,000 Collections (2016/17)

	Contractor	In-House
Sample	32	36
High	840	794
Average	160	190
Low	7	19

Source: Eunomia survey

The range of results is shown in Figure 11. There is clearly a greater concentration of in-house services towards the upper end of the missed collection range, with a preponderance of contracted services towards the lower end of the range.

Figure 11: Missed Collections per 100,000 Collections (2016/17)



Source: Eunomia survey

The difference in performance may reflect the impact of contract management placing a focus on missed collections. In many contracted services, there are contractual levers, including service default credits, that the council can deploy when there are missed collections, and which may serve to focus attention on these aspects of service quality.

However, in the light of the issues encountered in collating and analysing this data there appears to be a case for greater consistency in how it is collected and reported by local authorities. There is an argument for local authorities to be obliged to publish information on missed collections, which might form part of the minimum service standards for local authority waste collections proposed in Defra's recent consultation on consistency.⁵ The guidance proposed by Defra could usefully incorporate:

- a standard definition of a 'missed collection' (e.g. whether only genuine service failures should be counted, or all complaints regarding missed collections; and

⁵ DEFRA (2019) *Consultation on consistency in household and business recycling collections in England*, February 2019

whether missed collections that are rectified within 24 hours should be counted); and

- a requirement to report on a “per stream” basis, so that patterns in performance can be identified, together with information on collection frequency, to help assess the degree to which householders have been inconvenienced.

5.2 Complaints

Complaints can be made regarding waste and recycling services for several reasons. Missed collections are a significant cause of complaints, especially if they occur repeatedly – and so there is some correlation between the measurement of missed collection and the measurement of complaints. However, a variety of other issues (e.g. failure to return containers to the correct location, the behaviour of waste collection operatives) may also lead to complaints.

A survey of authorities carried out for this study found that, across the entire sample of respondents, the complaint rate for 2016/17 was low, at 253 complaints per 100,000 households served. This equates to each household making one complaint every four thousand years and is indicative of high levels of service reliability and overall customer satisfaction with waste collection services, no matter how they are delivered.

On average, in-house services reported a lower level of customer complaints than do contracted services, with 246 complaints versus 326 per 100,000 households served – a difference of 24%. A summary of the results is provided in Table 5.

Table 5: Incidence of Complaints per 100,000 households (2016/17)

	Contractor	In-House
Sample	32	36
High	1,402	947
Average	324	246
Low	6	7

Source: Eunomia survey

As with the data for missed bins, the data set showed significant variability in the results reported by different authorities. While this may reflect real variations in performance and satisfaction, other factors may also be contributing to the differences.

It seems likely that authorities that record extremely low numbers of complaints may be taking a different approach to recording them than do those reporting much higher figures. Some authorities may be classing householder contacts as complaints when others are classing them as general customer feedback or comments. In common with the commentary offered regarding missed collections above, a standardised approach to measuring and reporting on complaints could be helpful in providing greater clarity about the quality of service the public receives.

However, differences in the services offered by authorities are also likely to have an impact. For example, where an authority offers additional separate collections – such as food waste, or nappies or adult hygiene products – this should be an overall benefit to householders, and may lead to a better recycling performance. However, an increase in the number of containers to empty and the number of collection rounds to operate gives rise to a greater opportunity for missed collections, or other complaint-occasioning events, to occur.

As mentioned in connection with missed collections, the contract between the authority and the service provider may drive better recording and monitoring of complaints. Many contracts stipulate that the collections service provider must operate a call centre, or otherwise manage complaints, and the authority will expect to receive regular updates on complaints management performance. There may also be contract incentives to manage complaints appropriately. Where services are delivered in-house, complaints are likely to be dealt with by a central customer helpline, and there may be less emphasis on recording which service they relate to. It is possible that, in some in-house authorities, complaints may be understated.

As with missed collections, any measurement of complaints should be carried out in a way that enables the drivers of statistical differences to be understood. Ideally, it should be set alongside other, more positive satisfaction measures, to provide a balanced viewpoint. Defra's proposals for a minimum service standard for local authority collections, building on the 2018 Waste and Resources Strategy for England, provides an important opportunity. It could allow for the development of a set of more consistent, national definitions and standards which will support more accurate analysis, benchmarking and comparison than is currently the case.

Two key measures of service quality – missed collections and complaints – show a high standard of service across the board. Contracted services show better performance on missed collections, but somewhat less good performance on complaints. However, there are reasons to think that recording of instances of poor performance may be more rigorous where services are contracted out.

6.0 Conclusion and Key Observations and Recommendations for Policy Makers

This report provides important insights and evidence in relation to the impacts of contracting out on the cost and quality of local authority waste services. It does not purport to be exhaustive nor definitive, and is limited by the availability of data, but it seeks to initiate a more nuanced debate in relation to service commissioning.

The analysis carried out for this study reveals examples of excellent performance and low cost amongst both contracted and in-house services. However, it strongly indicates that, **despite official figures that risk overstating the costs of contracted services, contracted services on average deliver better recycling performance and a lower cost per percentage point of recycling performance**, than do those that are delivered in-house.

It also appears that **contracted services achieve lower rates of missed collections**, despite there perhaps being a greater priority on monitoring service failures of this kind as part of regular contract management procedures.

This finding has been produced at a time when local authorities in England are about to embark on major changes in waste collection. Collectively, they will need to increase their recycling performance by over 20 percentage points in the next fifteen years. Measures that can help to boost recycling performance will be at a premium.

Authorities will also need to adapt to a funding model where Extended Producer Responsibility makes packaging producers major funders of local waste collection services. They will need reassurance that the services they are required to pay for are efficient, well run, and cost no more than is necessary to deliver the recycling results that are mandated by law. **Subjecting services to competition is likely to be one of the ways in which producers' can be reassured regarding value for money.**

The commissioners and authors of this research are pleased to share the full findings of our work and to enter into a constructive debate about the potential role that competition has to play in delivering better public services in the future.

APPENDIX 1: Technical Report

A.1.0 Methodology

To compare in-house and contracted waste and recycling collections, we have collated and analysed data on:

- service costs;
- recycling performance;
- quality of service; and
- collection scheme and providers.

The following sub-sections seek to outline the method used to gather and analyse the data.

A.1.1 Data Gathering

The first stage within the method was to gather sufficient data to effectively compare the service delivery options used by local authorities.

During the data gathering stage, several key decisions were made based on the available data and initial reviews. Data was collected and analysed for the following aspects of the research:

- Local Authority Revenue Outturn;
- Local authority recycling performance; and
- Local authority service quality.

A.1.1.1 Timing

Data were collected over seven years, between 2011/2012 and 2017/2018. The seven-year period was decided as it is the standard contract length, and is associated generally with the useful life of most waste collection vehicles. Using a seven-year period also allows for variations in costs to be considered.

A.1.1.2 Geographic Scope

It was also decided to focus local authorities within England. Revenue Outturn data that was used as a key data source within the analysis is collected, and reportedly across the UK and devolved administrations. Although similar data is available for Scotland and Wales, it is not provided in as great as detail as it is for England. Other data, including data used for assessing the rurality and population is only available for England.

Another key consideration for the decision to look at England only, was that the Welsh Government had historically invested in recycling services across Wales using the

Sustainable Waste Management Grant. This is a factor which is not replicated elsewhere in the UK, and does not allow for a comparable analysis to be undertaken.

A.1.1.3 Service Cost Data

Revenue outturn expenditure data⁶ provided from the Ministry of Housing, Communities & Local Government was used to compare the financial performance of local authorities. The relevant data set is RO5. This includes data which addresses expenditure relating to cultural, environmental, regulatory and planning services.

Revenue outturn reporting is compulsory and requires all local authorities to report their annual expenditure, evaluated in specific groups with guidance from the Ministry of Housing, Communities and Local Government. Group 280 requires all local authorities to report their “waste management” expenditure which itself is comprised of:

- Line 281: Waste collection;
- Line 282: Waste disposal;
- Line 283: Trade waste;
- Line 284: Recycling;
- Line 285: Waste minimisation; and
- Line 286: Climate change costs.

For this study, the expenditure associated with Line 282, waste disposal was disregarded from the analysis.

The reported expenditures are presented in 2017/18 prices (real terms).

The data were analysed for consistency and to ensure that data was correctly recorded against authorities. Where authorities jointly report within WasteDataFlow, for example in partnerships, the RO5 data for these authorities were combined.

It was decided that the inclusion of the cost of disposal may create some issues when comparing authorities. Unitary Authorities were included in the cost analysis, though recognise that some of their costs, whilst on waste collection lines may be associated with waste disposal. In the subsequent like-for-like assessment, Unitary Authorities were excluded.

A.1.1.4 Waste Scheme & Service Provider Data

To define the collection schemes and service provider types utilised, both currently and historically, annually published data in WRAP’s local authority portal⁷ has been collated and further verified using Eunomia’s internal resources, for every English local authority. Where multiple schemes exist within one local authority, a ‘main scheme’ has been

⁶ <https://www.gov.uk/government/collections/local-authority-revenue-expenditure-and-financing>

⁷ <http://www.wrap.org.uk/content/local-authority-waste-and-recycling-information>

identified. The categorisation of the ‘main scheme’ was based on the scheme with the largest number of households using it.

There were discrepancies between Eunomia’s knowledge and the data contained within WRAP’s local authority database. Where these inconsistencies were highlighted, further checks were made with local authority service information to ensure the information gathered was as accurate as possible.

A.1.1.5 Waste Performance Data

Data was taken from WasteDataFlow⁸ for the seven-year period between 2011/2012 and 2017/2018 including dwelling stock, recycling rates and tonnages collected. Local authorities have an obligation to report their data to WasteDataFlow quarterly, and the data is verified and nationally published on an annual basis.

Over the seven-year period analysed, some inconsistencies became apparent in reporting of a number of local authorities. Where they had, for example transitioned to a waste partnership, and started to report together. This was identified and for the years were reported together the analysis was combined into a single authority.

A.1.1.6 Quality of Service Data

Quality of services data isn’t provided through publicly available sources. An approach was taken to obtain performance data through Environment Information Requests, which were sent to local authorities.

An initial request was sent to a sample of 30 authorities, to gauge the availability of data and response rate. It was then sent to a further 100 authorities.

The data request was comprised of four sections:

- History of service delivery, and previous contract;
- Waste and recycling collections during the period April 2016 – March 2017;
- Street cleansing during the period April 2016 – March 2017; and
- Number of staff required during the period April 2016 – March 2017.

A small number of authorities were also asked about their RO5 data reporting, to gain some clarity in the difference in reporting between authorities, and what parts of the service may or may not be included within the overall RO5 data.

Overall 79 authorities replied to the data request, with some unable to complete due to the time estimated to gather the data. Of the completed responses, there were several

⁸ <https://www.wastedataflow.org/>

authorities who weren't able to respond to all questions. Largely this was due to the data not being collected.

A.2.0 Like-For-Like Authority Selection

For some of the analysis it was necessary to ensure that similar authorities can be compared against one another. It is recognised that there are several factors that impact on both, the cost and performance of services offered by local authorities. These can include the frequency of collection, and the rurality of the authority's area.

This makes it difficult to draw a meaningful comparison between authorities that use contracted services or deliver them in-house without considering these variables.

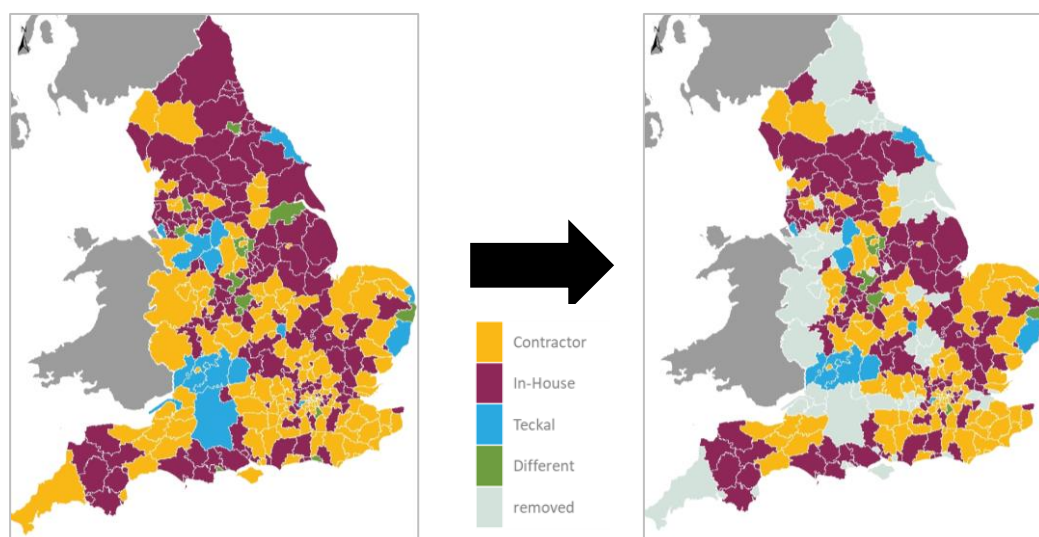
Therefore, a dataset was created of comparable authorities, that would standardise a number of these external factors.

Consideration was given to standardising the frequency of collection, rurality, demographics, quality of the data available, and change over the 7-year period.

There are a number of difficulties in creating this dataset, in that a significant number of authorities needed to remain within the sample to allow for a fair comparison, it also needs to remain even between both in-house services, and contracted services. Therefore, it has not been possible to include every possible external factor. However, within the analysis an attempt has been made to cover where it has not been possible to remove an external factor from the data.

The first step in creating a data sample was to remove all unitary authorities, due to the uncertainty as to whether the additional costs attributable to these authorities would be included within the analysis (see Figure 12). This step removed 56 authorities.

Figure 12: Step 1 – Removal of Unitary Authorities



The next step was to remove all authorities who had only one contracted service, i.e. recycling was contracted and refuse was provided in-house, as well as authorities who were part of a Joint Venture arrangement. These were removed due to how these companies are run, in which is similar to both in-house and contracted services. This made it difficult to classify them between the two. This step removed 13 authorities.

Figure 13: Step 2 – Removal of Authorities with One Contracted Service or Part of a Joint Venture Arrangement

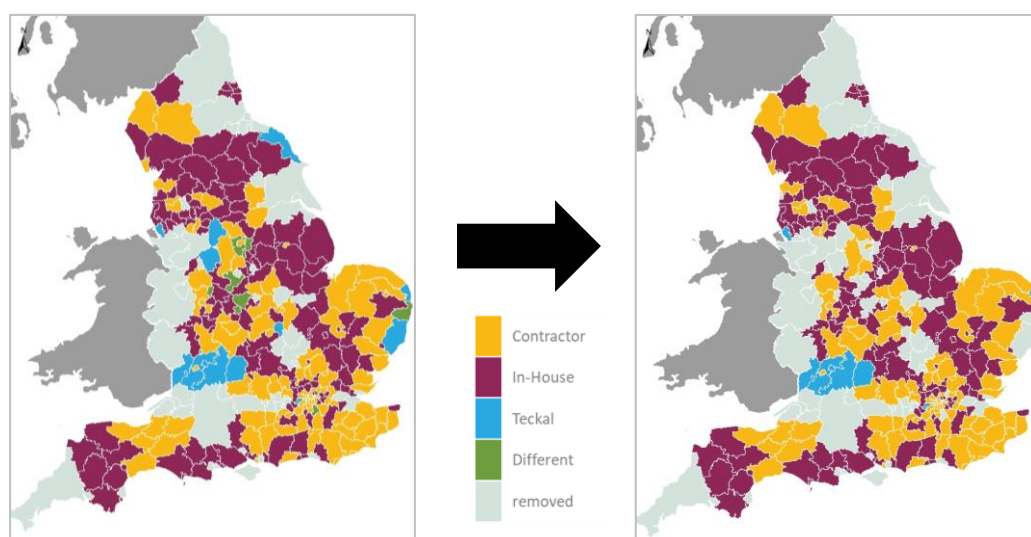


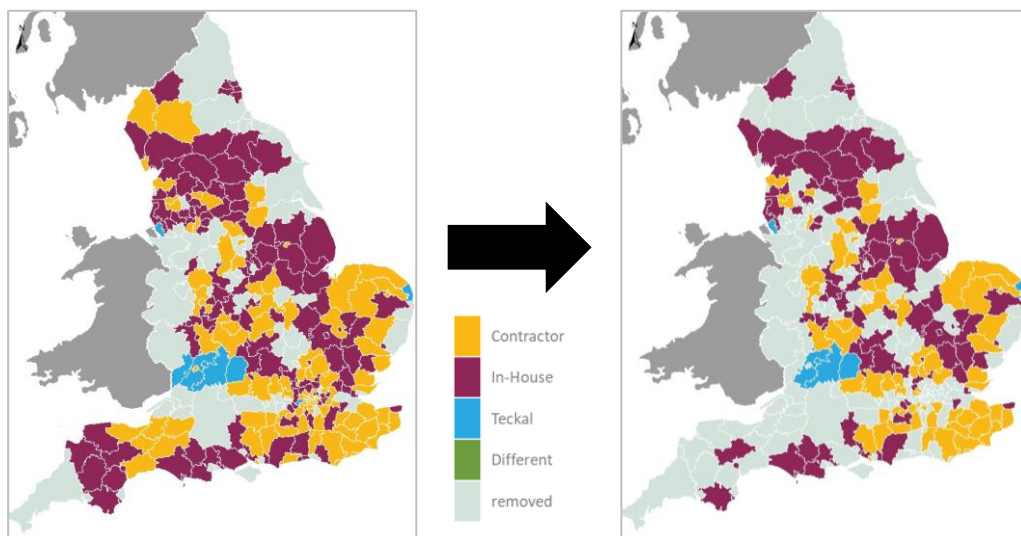
Table 6 shows the service frequencies across all local authorities in England and their service provision method. Most common service frequency across authorities in the UK, as of 2017/18 was Alternate Weekly Collections (AWC), in which recycling is collected one week and refuse the next week. In order to give the largest sample size, this was picked as a key factor within the sample. This step removed 82 authorities.

Table 6: Collection Frequencies in England

	In House	Contractor	Other	Total
AWC	112	81	25	218
Weekly Ref, Fortnightly Rec	15	15	2	32
Fortnightly Ref, Weekly Rec	8	14	4	26
Weekly	16	18	0	34
Other	7	7	0	14
Total	158	135	31	324

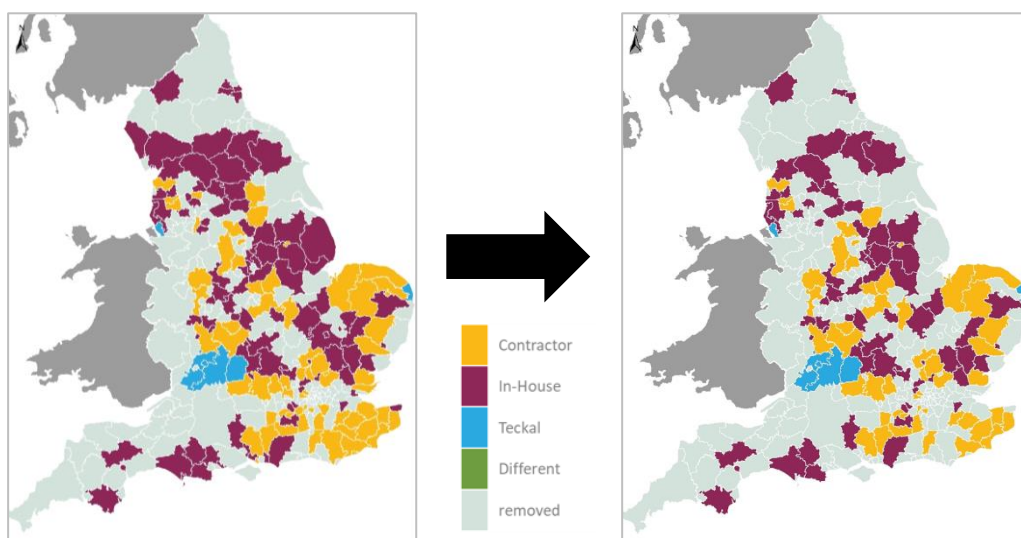
*Isles of Scilly and City of London Corporation have been excluded from the analysis

Figure 14: Step 3 – Selection of Authorities only with Alternative Weekly Collection



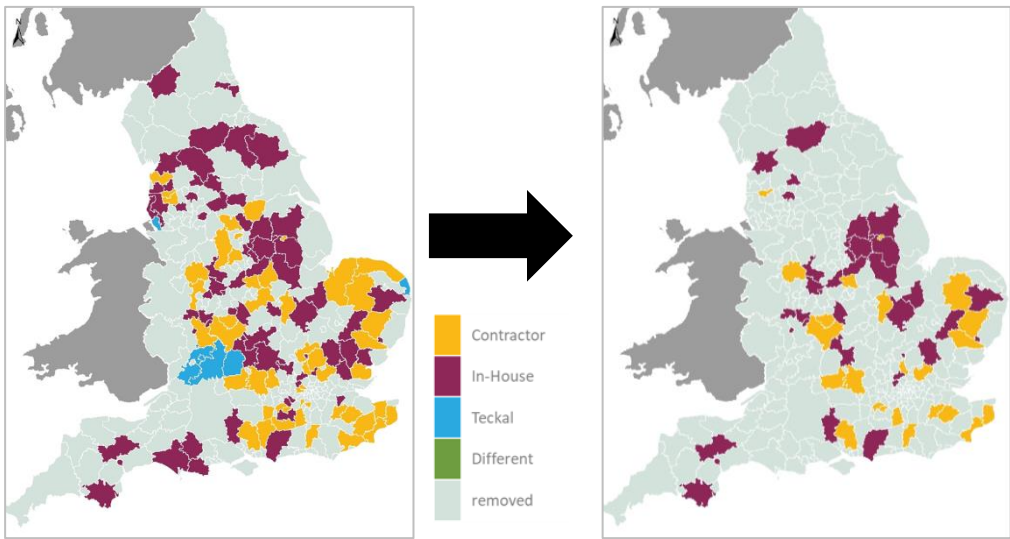
At this point authorities that were dissimilar in terms of their rurality and demographics. This removed authorities that were likely to be extremely rural, extremely urban, or demographically were dissimilar to others remaining in the sample. In total 44 authorities were removed.

Figure 15: Step 4 – Selection of Authorities with Similar Characteristics



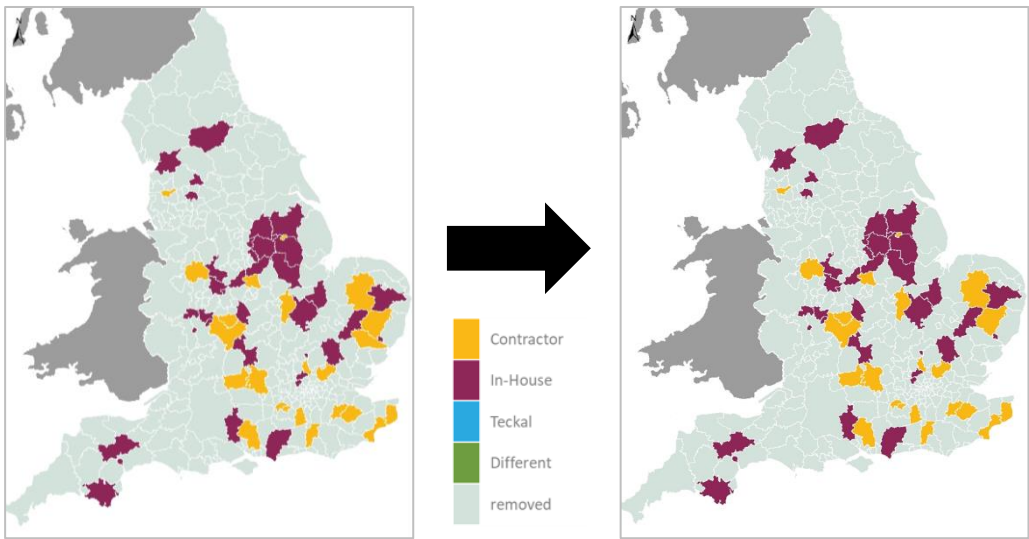
Step 5 involved removing any authority which had changed its service within the last 7 years. In total, 69 authorities were removed.

Figure 16: Step 5 – No Service Change



The final stage was to remove any authorities with data anomalies, or inconsistent data that could not be verified across the 7 years. In total 1 authority was removed.

Figure 17: Step 6 – Removal of Authorities with Anomalies, or Inconsistent Data



Following the completion of this exercise 58 authorities were left within the sample, of which 22 contracted out their services and 36 provided their services in-house. A full list of the select authorities, is provided in Table 7.

Table 7: Authorities included in the Like for Like Sample

Authority	In – House / Contractor	Food Waste	Garden Waste
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Bassetlaw	In-House	No Food Waste	Charged Garden Waste
Breckland	Contractor	No Food Waste	Charged Garden Waste
Bromsgrove	In-House	No Food Waste	Charged Garden Waste
Charnwood	Contractor	No Food Waste	Charged Garden Waste
Cherwell	In-House	Food Waste	Free Garden Waste
Chichester	In-House	No Food Waste	Charged Garden Waste
Dover	Contractor	Food Waste	Charged Garden Waste
East Northamptonshire	Contractor	Food Waste	Charged Garden Waste
East Staffordshire	In-House	No Food Waste	Free Garden Waste
Epping Forest	Contractor	Food Waste	Free Garden Waste
Exeter	In-House	No Food Waste	Charged Garden Waste
Fenland	In-House	No Food Waste	Charged Garden Waste
Gedling	In-House	No Food Waste	Charged Garden Waste
Harrow	In-House	Food Waste	Charged Garden Waste
Hertsmere	In-House	Food Waste	Free Garden Waste

Huntingdonshire	In-House	Food Waste	Free Garden Waste
Ipswich	In-House	No Food Waste	Free Garden Waste
Lancaster	In-House	No Food Waste	Charged Garden Waste
Lichfield	In-House	No Food Waste	Charged Garden Waste
Lincoln	Contractor	No Food Waste	Charged Garden Waste
Maidstone	Contractor	Food Waste	Charged Garden Waste
Mansfield	In-House	No Food Waste	Charged Garden Waste
Mid Devon	In-House	Food Waste	Charged Garden Waste
Mid Suffolk	Contractor	No Food Waste	Charged Garden Waste
Mid Sussex	Contractor	No Food Waste	Charged Garden Waste
Mole Valley	Contractor	Food Waste	Charged Garden Waste
Newark & Sherwood	In-House	No Food Waste	Charged Garden Waste
North Kesteven	In-House	No Food Waste	Charged Garden Waste
North West Leicestershire	In-House	No Food Waste	Free Garden Waste
Pendle	In-House	No Food Waste	Charged Garden Waste

Redditch	In-House	No Food Waste	Charged Garden Waste
Richmondshire	In-House	No Food Waste	Charged Garden Waste
Rossendale	In-House	No Food Waste	Charged Garden Waste
Rugby	In-House	No Food Waste	Charged Garden Waste
Rushcliffe	In-House	No Food Waste	Charged Garden Waste
Shepway	Contractor	Food Waste	Charged Garden Waste
South Hams	In-House	Food Waste	Free Garden Waste
South Kesteven	In-House	No Food Waste	Charged Garden Waste
South Norfolk	In-House	No Food Waste	Charged Garden Waste
South Oxfordshire	Contractor	Food Waste	Charged Garden Waste
South Ribble	Contractor	No Food Waste	Free Garden Waste
St Edmundsbury	In-House	No Food Waste	Charged Garden Waste
Stafford	Contractor	No Food Waste	Free Garden Waste
Stevenage	In-House	Food Waste	Free Garden Waste
Stratford-on-Avon	Contractor	Food Waste	Free Garden Waste

Surrey Heath	Contractor	Food Waste	Charged Garden Waste
Tamworth	In-House	No Food Waste	Charged Garden Waste
Test Valley	In-House	No Food Waste	Charged Garden Waste
Tonbridge & Malling	Contractor	Food Waste	Free Garden Waste
Uttlesford	In-House	Food Waste	Charged Garden Waste
Vale of White Horse	Contractor	Food Waste	Charged Garden Waste
Warwick	Contractor	Food Waste	Free Garden Waste
Welwyn Hatfield	Contractor	No Food Waste	Charged Garden Waste
West Lindsey	In-House	No Food Waste	Charged Garden Waste
Winchester	Contractor	No Food Waste	Free Garden Waste
Woking	Contractor	Food Waste	Charged Garden Waste
Worcester	In-House	No Food Waste	Charged Garden Waste
Wyre Forest	In-House	No Food Waste	Charged Garden Waste