

# Transport and Environment Committee

10.00 am, Thursday, 9 August 2018

## Review of Waste and Recycling Strategy

Item number	7.9
Report number	
Executive/routine	Executive
Wards	
Council Commitments	<a href="#">18</a> , <a href="#">23</a> , <a href="#">25</a>

### Executive Summary

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This report discusses the review of the Council's Waste and Recycling Strategy. The Strategy covers the period from 2010-2025. The review outlines progress to date, sets out challenges and opportunities and proposes a forward plan of actions for the coming years.

Following restructuring of the Council in 2016, the review of the strategy and the forward plan of activities both encompass Cleansing and cleanliness actions in addition to those which featured in the original strategy.

## Review of Waste and Recycling Strategy

### 1. Recommendations

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- 1.1 Committee is asked to note the contents of this report.
- 1.2 Committee is asked to note in particular the improvement in recycling performance since 2010, and the decline in waste arisings, as well as several external risks which are expected to impact on future performance.

### 2. Background

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- 2.1 The Council's existing Waste and Recycling Strategy covers the period 2010-2025. This report provides a mid life review of performance since the strategy was published.
- 2.2 In addition it identifies some changes which have taken place since the strategy was published, and identifies emerging risks, challenges and opportunities.
- 2.3 A forward plan is included which outlines a wide range of actions which will take place going forward. These are a combination of actions with a defined end date, or which more often require to take place on an ongoing basis to maintain progress and deliver the strategy.
- 2.4 The Council's Cleansing function did not form part of the original strategy as that role was devolved under Neighbourhood Management. This is no longer the case so the forward plan does include actions relating both to the specific cleansing function, and to delivering cleanliness as an outcome. The two are distinct.
- 2.5 While progress to date has focussed primarily on recycling, the forward plan is perhaps broader and includes actions around prevention, reuse, diversion of waste from landfill, cleanliness, and efficiency.

### 3. Main report

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- 3.1 The Council's existing Waste and Recycling Strategy was published in 2010. This mid life review takes stock of progress, while setting out actions for the years ahead.
- 3.2 The Strategy's main strategic focus to date has from the householder's point of view been on redesigning waste and recycling collections to encourage recycling and minimise landfill. Although enhancements to recycling services will continue

with the redesign of communal bin services in particular, future actions take place across a broader range of activities.

3.3 Overall the strategy seeks to see waste either avoided or treated as a resource.

3.4 The following table sets out some key points:

	2010	Now	Change
<b>Population</b>	486,120 Estimates National Records of Scotland- midpoint 2010 estimate	507,170 Estimates National Records of Scotland- 2011 estimate for 2016 estimate	4.3% increase
<b>Households</b>	220,195 Estimates National Records of Scotland- midpoint 2010 estimate	245,350 Estimates National Records of Scotland- 2011 estimate for 2016 estimate	11.4% increase
<b>Waste Arisings (tonnes)</b>	235,162 Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18	209,846	10.7% decrease
<b>Waste Landfilled (tonnes)</b>	163,788 Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18	115,200	29.7% decrease
<b>Waste Recycled (tonnes)</b>	71,373 Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18	89,322	25.1% increase
<b>Other Disposal (Energy Recovery)</b>	0 Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18	5,324	Increase from zero tonnes
<b>Recycling Rate</b>	30.4 % Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18	42.6%	40.1% increase

### Achievements to Date

3.5 The reduction in waste arisings even as the City has grown is notable. This is a complex area and there are likely to be a number of reasons behind this. In particular changes to behaviours (people reading news online rather than buying a paper) and the decisions of retailers to reduce packaging waste all play a part.

3.6 However the decision of the Council to redesign waste collection to restrict the capacity provided to each household (in kerbside collection areas) for landfill, even as recycling has increased, will have played a part in this.

- 3.7 The recycling rate has increased from around 30% to more than 40% since 2010. This is a significant improvement, and in fact comparison with other cities suggests that Edinburgh's performance is at least creditable, and probably above average.
- 3.8 In areas with kerbside collections, waste composition analysis suggests that our recycling services are particularly good at recycling paper, cardboard and plastic bottles. It is expected that the redesign of communal bin services, which has already commenced, will drive similar improvements in those areas.
- 3.9 During the period since the strategy was published a food reprocessing facility has been developed and work is continuing to open the second phase in 2019. This will cease the Council's reliance on landfill.

### **Emerging issues**

- 3.10 Section 3 of the Review discusses issues which impact on the original assumptions in 2010, and will impact progress either positively or negatively.
- 3.11 A number of issues are identified which represent risk to continued progress. In particular the loss of China as an export market for recyclable materials is expected to mean that recycling rates could fall, even if the materials did not previously go to China. This affects a range of materials, not just plastics as has been reported.
- 3.12 In Edinburgh's case, however, the contractor we use would divert materials to "refuse derived fuel" (i.e. as a cleaner replacement for fossil fuels in power stations). In this event therefore the outcome would be both preferable to landfill and more cost effective.
- 3.13 In the short term this is clearly a problem, and is not in the Council's control. Over time, this could represent an opportunity if it means that developed countries take the opportunity to develop infrastructure to recycle and remanufacture closer to home. The development of an experimental plastics recycling facility in Scotland has recently been announced but it will take time to recover from the current position and this may see recycling rates depressed.
- 3.14 In parallel the focus on single use plastics and the development of a deposit return scheme (DRS) certainly present opportunities to reduce litter and to encourage recycling. However there are risks too.
- 3.15 For example the waste analysis showed that kerbside recycling services were already collecting very high levels of plastic drinks bottles (74% and 85%) but only 26% of aluminium cans. So depending on how it works in detail, the DRS could encourage recycling of one material but also capture other materials which are already being recycled, and negatively impact on the recycling performance of the local authority.
- 3.16 Section 3 also highlights the impact of changes in Council funding. Like all public services there is constant pressure to do more with less, and the pressure grows each year. This has already meant that it had become uneconomic to recycle mattresses (although it is hoped that this will change in the near future).

- 3.17 These financial constraints have led to the introduction of a charge for the garden waste collection, although this will be combined with an increase in collection frequency which serves to reduce risk in this respect.
- 3.18 This garden waste collection services (kerbside collection and Recycling Centres) represent around 25% of the current recycling performance. It remains to be seen the extent to which these two changes combine to impact on the recycling rate, or whether they will actually encourage home composting and so lead to a reduction in waste arisings overall.
- 3.19 It would perhaps be preferable to see more action to require waste producers to contribute to the cost of managing the waste they produce (Extended Producer Responsibility). The DRS does offer the opportunity to deliver this to an extent but otherwise the impact of DRS in the UK seems limited. There is scope for the Scottish and UK governments to do more in this area.

### **3.20 Future Activity**

- 3.21 The Forward Plan included in Section 4 of the review sets out the actions which are currently intended to drive forward the strategy. A number of the actions are not time limited- they are ongoing actions rather than time limited projects with a defined end date.
- 3.22 In addition, it is recognised that while the strategy comprises a range of high level themes such as Waste Prevention, Recycling, Cleanliness, etc, a number of the actions actually deliver on several of these and the Forward Plan highlights this.

## **4. Measures of success**

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- 4.1 Delivery of the Waste and Recycling Strategy will result in a reduction in waste arisings per head of population, more reuse and recycling of materials and the diversion of waste from landfill to generate energy.

## **5. Financial impact**

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- 5.1 There are no direct financial implications are arising from this report. In general terms diversion of waste from landfill will be the most cost effective measure.
- 5.2 Offsetting this, changes in the recycling market do mean that recycling will not be as cheap as it has been in recent times, and the cost savings attributable to this will diminish.

## **6. Risk, policy, compliance and governance impact**

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- 6.1 Implementation of the current waste and recycling strategy will support delivery of the Council's objectives to reduce the use of landfill, and to manage waste more sustainably.

- 6.2 A number of risks are identified in the Review which will, or may, undermine successful delivery of the Council's strategy but these are largely outwith the Council's direct control. The impact of these will be kept under review.

## **7. Equalities impact**

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- 7.1 An integrated impact assessment has been carried out which has not identified any negative equalities impact although some measures such as enhanced access to communal recycling services combined with reduced numbers of bin sites could have both positive and negative impacts for some residents at a local level.
- 7.2 These will be reviewed on an ongoing basis.

## **8. Sustainability impact**

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- 8.1 An integrated impact assessment has been carried out which has identified a positive sustainability impact.
- 8.2 Delivery of the strategy is based on the premise that waste will be diverted from landfill, that waste will be better managed (e.g. in terms of cleanliness, as well as recycling) and that steps will be taken to prevent waste at source in those situations where the Council can influence this.

## **9. Consultation and engagement**

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- 9.1 This report relates to an existing strategy which runs until 2025. The forward plan sets out a number of measures which collectively serve to deliver the strategy. Where appropriate these will be subject to consultation and engagement as appropriate for that measure.

## **10. Background reading/external references**

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- 10.1 Waste and Recycling Strategy 2010-2025  
[www.edinburgh.gov.uk/info/20245/services\\_for\\_communities/413/waste\\_strategies](http://www.edinburgh.gov.uk/info/20245/services_for_communities/413/waste_strategies)

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**11. Appendices**

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Appendix 1 Review of Waste and Recycling Strategy 2018.

**Appendix 1**  
**Waste and Cleansing Services**  
**Review of Waste and Recycling Strategy 2018**



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## Executive Summary

The Council's Waste Strategy was published in 2010, and covers the period to 2025. This means that it is approximately half way through its lifetime.

The purpose of this review therefore is

- to take stock of progress since 2010;
- to consider whether any of the original assumptions have changed;
- where appropriate to highlight risks, challenges and opportunities;
- to set out an action plan for the coming years;
- following restructuring in 2016, include activities which contribute to the cleanliness of the City (Cleansing now sits with Waste Services in the new Council structure)
- replace the separate Waste Minimisation Strategy which was out of date, and pre-dated the Waste Strategy itself.

It should be noted that while the key ambition for the first half of the strategy period has been to boost the recycling performance, and this is expected to continue, during the second half key themes focus more around consolidation and improving standards, with a particular focus on enhancing waste and recycling collection systems for households with communal bins, as well as the infrastructure which supports our ability to manage Edinburgh's household waste.

For this reason it can be seen that many of the actions which will deliver the strategy from this point on do not have defined end dates- this is deliberate because they are ongoing activities which are necessary to deliver and maintain the strategy.

The principles which underpinned the original strategy have not changed however:

- reduce waste at source;
- treat waste as a resource
- maximise recycling;
- where waste cannot be recycled, recover the energy embedded in it;
- minimise use of landfill;
- educate and engage communities;
- redesign services to prompt positive behaviours.

	<b>2010</b>	<b>Now</b>	<b>Change</b>
<b>Population</b>	486,120 <small>Estimates National Records of Scotland- midpoint 2010 estimate</small>	507,170 <small>Estimates National Records of Scotland- 2011 estimate for 2016 estimate</small>	4.3% increase
<b>Households</b>	220,195 <small>Estimates National Records of Scotland- midpoint 2010 estimate</small>	245,350 <small>Estimates National Records of Scotland- 2011 estimate for 2016 estimate</small>	11.4% increase
<b>Waste Arisings (tonnes)</b>	235,162	209,846	10.7% decrease

Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18			
<b>Waste Landfilled (tonnes)</b> Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18	163,788	115,200	29.7% decrease
<b>Waste Recycled (tonnes)</b> Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18	71,373	89,322	25.1% increase
<b>Other Disposal (Energy Recovery)</b> Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18	0	5,324	Increase from zero tonnes
<b>Recycling Rate</b> Waste and Cleansing / Strategy and Insight 2009/10 versus 2017/18	30.4 %	42.6%	40.1% increase

### Key achievements to date

A number of initiatives have been introduced which have changed the way we manage waste:

- food recycling collections;
- managed weekly collections combined with an enhanced kerbside recycling service;
- a move away from operating commercial waste services, to delivering stewardship of commercial waste through our Compliance Team, and the introduction of timed presentation windows which serves to enhance our streetscape;
- the development and opening of our food waste treatment facility at Millerhill, and the construction of the energy recovery facility, in partnership with Midlothian Council;
- not all waste is actually recyclable – we estimate that our collection systems are diverting significantly more than half of the available waste for recycling;
- Edinburgh’s recycling performance compares well with other cities.

These changes, and the support of our residents, have seen the amount of waste we manage reduce even as the City has grown, while at the same time, the amount we recycle has increased sharply. Overall in terms of waste management therefore we can see that the way we manage household waste in Edinburgh has become significantly more sustainable.

## **1. Progress and Achievements to Date**



The purpose of this section is to consider the range of methods used to manage household waste in Edinburgh, and reflect the progress made in these areas since the publication of the waste strategy in 2010.

This includes:

- reducing waste at source, and reusing materials so that they don't become waste;
- diversion of waste from landfill by recycling or reprocessing it, including energy recovery;
- education, enforcement and engagement;
- following the move to combine cleansing with waste services, it provides information about management of litter, flytipped waste and mechanical street cleaning wastes;
- development of the infrastructure which supports the delivery of our strategy.

### **1.1 Prevention – Reduce and Reuse**

Prevention of waste at source comes at the top of the waste hierarchy. In terms of environmental impact, if waste does not occur in the first place there is no environmental impact. Almost as positive is reuse- if having manufactured an item its lifetime can be extended, this means that we are able to make best use of the resources used to make it in the first place.

In reality the Council does not directly control the amount of waste it manages. What it can do is:

- Inform and educate communities and citizens to help them make positive choices;
- Support organisations who can support the diversion of waste (e.g. for repair or reuse);
- Design its collection services to encourage positive decision making.

#### **1.1.1 Achievements to date**

Since the Waste Strategy was published, the following achievements have been delivered:

- By 2017/18, total waste arisings have fallen from 235,162 tonnes to 209,846 tonnes (a decrease of 10.7% which means the Council manages less waste, regardless of how it is disposed of);
- The grant with The Bike Station has supported the repair, reuse or recycling of more than 300 tonnes of bikes since 2010- that's more than 20,000 bikes;
- To date, more than 1,800 garden and other tools deposited at Household Waste Recycling Centres have been refurbished at HMP Saughton and distributed to community organisations;
- Kerbside waste collections have been reorganised to better balance the capacities provided for landfill versus recycling- in particular the capacity provided for landfill has reduced from 240 litres per week to 70 litres per week, while the capacity for recycling has increased from 55 litres per week to more than 160 litres per week (excluding garden waste collections) – as well as increasing recycling activity, this would also be expected to encourage a reduction in the non recyclable part of the waste stream overall;
- Waste prevention information is promoted through direct engagement activities; for example while the new kerbside recycling service was being introduced, the use of real nappies was actively promoted on the door step and at events, as a way to overcome concerns about bin sizes;

- In the most recent 12 month period (to February 2018), the National Reuse Line service has received more than 1,400 referrals from The City of Edinburgh Council's area, almost 90% of which came as a result of advice given by the Council's Contact Centre and our website, resulting in the reuse of items, including furniture, electrical items and leisure goods;
- Measured by local authority area, Edinburgh's residents use this service more than anywhere else in Scotland;
- By offering separate food collections, we are helping people understand exactly how much food they waste which may encourage them to think about ways reduce this.
- We have supported the award of two Zero Waste Town projects in Edinburgh, funded by Zero Waste Scotland and delivered by Changeworks (Leith) and Shrub (south central Edinburgh).
- Our website provides targetted advice on specific ways to avoid waste:  
[http://www.edinburgh.gov.uk/info/20001/bins\\_and\\_recycling/415/reduce\\_and\\_reuse\\_waste](http://www.edinburgh.gov.uk/info/20001/bins_and_recycling/415/reduce_and_reuse_waste)

## **1.2 Diversion- Recycling and Reprocessing**

Once waste has been produced the Council aspires to manage this in the most sustainable way possible. There are two main ways to do this:

- By separating waste at source our citizens can enable us to recycle their waste into new products; this will normally be cheaper to dispose of and allows us to reduce the environmental impact of disposing of these materials-for example making new products out of old ones usually uses significantly less energy, or reduces pressure on finite resources.
- Some waste can't be recycled; by reprocessing this instead of landfilling it we are able to generate energy, and can also recover some additional materials such as steel and aluminium for recycling.

A key element of the development of the Council's waste strategy in the first 8 years has been the overhaul and enhancement of recycling services, while at the same time reconfiguring other waste collection services to proactively encourage use of the recycling services.

### **1.2.1 Achievements to Date**

Since 2010

- The overall recycling rate (as calculated by Strategy and Insight and Waste and Cleansing Services) has increased from 33.1% to 42.5%;
- A food recycling service has been introduced citywide, in both kerbside collection and communal bin areas;
- A new kerbside collection service has been introduced to more than 140,000 households, increasing the range of materials collected to include mixed plastics, small electrical items and a wider range of paper materials;
- Work has commenced to review the numbers and types of bins used across the city in areas where waste is collected in communal bins, to increase the capacity provided for recycling most materials, in particular glass;
- The food reprocessing facility developed by Edinburgh and Midlothian Councils opened during 2016, while the energy recovery facility is due to open during 2019;
- Both facilities will provide the two Councils with secure outlets for these two important waste streams, generate clean energy for the National Grid, create jobs in our community, and

ensure that –by 2019- virtually no waste will go directly to landfill. The opportunities to use excess heat as a local source of power are also being actively explored.

### **1.2.3 How Edinburgh Compares**

Appendix 1 shows the recycling performance of a range of cities in the UK, and the European Union.

Overall it would appear that Edinburgh’s recycling performance (around 42-43% in the most recent years) is respectable in comparison with other cities. The report from which the European data is derived notes some factors which contribute to high recycling rates, notably:

- Edinburgh’s current recycling rate already compares well with the national capitals featured;
- Stable high quality services which deliver good satisfaction over time are important;
- Ongoing commitment to education and engagement over time is important;
- Intelligent service design combined with intelligent payment systems are important.

It should be noted that Edinburgh already seeks to achieve all of these points, with the exception of the last which is not within the Council’s control, and would require changes to legislation. However this is likely to be important because in other countries the payment mechanisms will be designed in such a way as to provide a financial benefit for recycling which is absent in the UK.

### **1.2.4 Comparison of Recycling Rates Internationally**

Recycling rates in the UK, and by extension Edinburgh, have historically been perceived as low compared to those in other countries. This is no longer true, as recycling rates have increased considerably over the past 15 years.

Moreover it has been clear for some time that different ways of measuring recycling performance mean that comparison of recycling rates across countries can be difficult. In particular some national recycling rates include materials as being recycled which are not included in the UK or Edinburgh (waste collected for recycling, but not recycled; ash from incinerators sent for reprocessing as aggregate; construction waste).

A report by the consultants Eunomia (“Recycling- who really leads the world?”: <http://www.eunomia.co.uk/reports-tools/recycling-who-really-leads-the-world-issue-2/> ) published in December 2017 highlights these issues and ultimately concludes that while recycling rates are still higher in some countries than in the UK, the difference is less than previously thought –only Germany, Taiwan , Wales, Austria and South Korea were able to demonstrate recycling rates above 50% under their methodology, which also saw the published recycling rates fall by as much as 27% (Singapore) or 10% (Germany, Netherlands).

In Edinburgh we are currently recycling around 42-43% of our waste, which is slightly below the Scottish average but appears to be significantly better than average for a significant city area (Appendix 1).

### **1.2.5 Recycling Performance by Scheme (Waste Analysis)**

By examining what is in our waste streams we are able to understand how well our services are operating. It is known that even where recycling schemes are provided, it does not automatically

follow that people will recycle everything they can all the time. For example people may have segregated bins in the kitchen but only one bin in the bathroom.

This Council has taken part in a project led by Zero Waste Scotland to examine what is in our bins. The results from Edinburgh and other Councils were combined to deliver a snapshot of the national picture and these make interesting reading: <https://www.zerowastescotland.org.uk/research-evidence/composition-household-waste-kerbside-2014-15>

### **1.2.6 The National Picture**

- 59% of Scottish household waste disposed of to landfill (or energy recovery) could have been recycled in one of the kerbside recycling systems provided to the household (and more could have been recycled by other routes such as recycling points or Recycling Centres);
- The percentage of film plastics in the waste stream (e.g. food pouches) has increased over time; this is hard to recycle, although this result may reflect a deliberate effort on the part of retailers to reduce packaging overall so that there is less metal, card, etc in the waste stream, and less waste overall;
- Recycling “capture rates” (i.e. how much of the recyclable material is actually being put in the recycling bin) vary widely across schemes (for example the capture of card was on average 60% but varied from 17-80% around the country).
- On average, households only recycle around 27% of their food waste, and even the best performing scheme only achieved 48%.

### **1.2.7 The Edinburgh Picture**

Appendix 2 summarises some of the results of the waste analysis of both kerbside and communal bin services in Edinburgh. It should be noted that as this was part of a national study the sample sizes (measure by number of households) in each individual area were relatively small- in the communal bin areas in particular this could literally be just one or two bins. Therefore the latter results in particular need to be treated with a degree of caution.

In kerbside collection areas, where people had access to the full recycling service, as well as a reduced capacity for disposing of waste to landfill:

- 58% by weight of the landfill bin contents could still have been recycled, suggesting that for most people the smaller landfill bin introduced as part of the new kerbside collection service provides more than adequate capacity;
- However 35% by weight was food; during the kerbside recycling roll out there was a substantial increase in food being recycled so it is possible this will have since diminished;
- 13% of the green recycling bin consisted of materials which should not have been present (“contamination”- these may be materials which are not recyclable, or which cannot be recycled in that collection). However the majority of these were materials could easily be removed at the sorting plant, and no particular material stood out as a common contaminant; the national average for this is around 10% but can be as high as 17%
- Capture rates of the common recyclables (i.e. the percentage of recyclable materials which were actually being collected for recycling) varied from 38% (food) to 85% (paper and card)

and 98% (garden waste); Plastic bottles (74%) were more likely to be recycled than plastic pots, tubs and trays (54%).

In communal bin areas, where people have access to some recycling services, the capacity provided is intended to be improved during the coming project to reconfigure communal bin services:

- 63% of the materials collected for landfill could have been recycled, although 7% was glass and 3% textiles; these materials are not collected at all locations in tenement areas.
- Analysis of the mixed Packaging bins suggested a contamination rate of 19%; however this included 6% glass which is at odds with feedback from our reprocessors who do not report this level of contamination. This may therefore relate to the specific sample loads, and the small sample sizes;
- Excluding the glass as an anomaly, the contamination level was 13% which was similar to that for kerbside collection areas;
- Mixed plastics (pots, tubs and trays) at 16% were less likely to be recycled than plastic bottles (33%) but this probably reflects the fact that the Council has historically only collected plastic bottles. Only 29% of cans and tins were recycled but 73% of paper and cardboard.

The key results for Edinburgh as a whole can be summarised:

- The results do not appear to be significantly different to the national picture;
- If anything the capture rates for individual materials in kerbside collection areas are broadly better than the national rates, suggesting that the combination of a reduced landfill bin size coupled with a reduction in landfill collections and an increase in recycling have borne fruit;
- The measures which have already commenced with regards to communal bin collections seek to address the lower capture rates and contamination (through use of bin housings), and the results of the analysis appear to endorse this strategy;
- Although the capture rates of recyclable waste are lower in communal bin areas, it would appear that there may also be fewer recyclable materials being generated- although this result may be anomalous due to the small sample;
- Only 70-75% of our waste is actually recyclable, suggesting that at the current time we are recycling almost 60% of the possible waste.

To improve recycling performance from this point, the analysis highlights that there are particular opportunities to:

- Deliver the planned strategy to enhance services in communal bin areas;
- Encourage recycling of materials with lower capture rates (metals, some plastics, food);
- Target engagement activities at locations with higher turnover of residents (e.g. student areas) to ensure what can and cannot be recycled is understood- and which collection to use. This could be linked to other campaigns or projects such as the Zero Waste Towns projects, or fly-tipping campaigns.

However it is clear from the national and local data that simply providing a recycling service is not in itself enough to capture the levels of recyclable materials to which we aspire- particularly in communal bin areas, where the waste is essentially anonymous and there will in many areas be higher than average turnover of residents, it is particularly challenging to deliver this outcome.

### **1.3 Other waste streams**

The waste managed by the Council is composed overwhelmingly of household waste, with a small amount (by weight) of litter. At the time of the original strategy's publication the Council also offered collection and disposal of commercial waste. This is no longer the case.

The following sections deal with these streams.

### **1.4 Commercial Waste Streams – Trade Waste Collections and Household Waste Recycling Centres**

In contrast to household waste collections, commercial waste services are not paid for through the taxation system, but are paid for directly. Businesses are required by law to put in place a waste and recycling collection but do not have to use the service provided by their local Council.

Central Scotland is a highly competitive market place and this meant that it became increasingly difficult for the Council to recover the cost of collecting this waste, as it is legally required to do, against a declining market share.

At Community Recycling Centres, now being referred to as Household Waste Recycling Centres, where it was previously possible to register to dispose of commercial waste, management of the sites proved problematic and this led to poor sorting of the waste by customers. Ultimately this also meant that this service was losing money.

As a result of these pressures, the decision was made to:

- Stop the collection of commercial waste at Community Recycling Centres;
- Stop the commercial waste collection service (known as the Trade Waste Service);
- Focus on ensuring that commercial waste was being properly managed.

These decisions provided the following benefits:

- Because commercial waste is normally collected alongside household waste in the same vehicles, it was possible to refocus the vehicles and crews to improve route efficiency, and improve the reliability of household waste collections which is our core activity;
- At Household Waste Recycling Centres, improved sorting of the waste is expected to reduce overall costs of delivering that service, while the reduction in landfill of the waste managed by the Council would be expected to have environmental benefits;
- The Council now focuses its attention on the presentation of commercial waste through its policy of providing time windows during which commercial businesses may present their waste. This will serve to minimise the impact of commercial waste bins being stored inconsiderately on the street;
- In addition it will seek to ensure that producers of commercial waste ensure they have in place arrangements for the correct disposal of their waste, as outlined in the section "Enforcement".

#### **1.4.1 Waste From Council Premises**

The Waste and Cleansing Service does continue to operate a collection service for Council buildings. This is the "back door" collection of waste in bulk bins. Collection within buildings, and the provision of the bins there, is the responsibility of the individual building managers and Facilities teams.

Since the Strategy was published, Waste and Cleansing have:

- Worked with Zero Waste Scotland to audit operations in the two main buildings (Waverley Court and City Chambers) to highlight both areas of good practice and areas for improvement;
- Developed a service which offers all Council buildings recycling services for paper, card, cans, plastics, glass and food;
- Developed with Facilities Management a funding package for internal food recycling bins for schools;
- Gained approval for an Internal Waste Management Policy for Council premises.

Implementation of these measures is the responsibility of the individual buildings, with Facilities Management, and so falls outwith this review.

### **1.5 Litter, Flytipped Waste and Mechanical Street Cleaning Wastes**

Litter is highly visible but in fact is a relatively small part of the waste managed by the Council in terms of the tonnage involved; however its impact on the local environment is disproportionate, and the impact on quality of life can be considerable.

Following a structural review in 2016, the Waste Management Service became Waste and Cleansing with responsibility for managing litter which will be reflected in its future activities. This means that this aspect of waste management will be picked up as part of the overall waste strategy.

Since the formation of the Waste and Cleansing Service we have:

- commenced the process of better integrating what were previously a number of services operating independently across the city;
- commenced pilots to assess the impact of using sensors in litter bins to provide fill levels to better target the servicing of litter bins;
- gained approval for a litter bin siting policy, to support the most effective use of litter bins;
- delivered a 65 point programme which focussed on actions across the Waste and Cleansing Service to improve both service reliability, and overall City cleanliness;
- introduced a new pricing structure to encourage participation in the Special Uplift service for bulky waste (which is intended to reduce fly-tipping);
- drafted a Cleansing Improvement Plan;
- supported the development of two Zero Waste Projects in Edinburgh (Leith and South Central Edinburgh)
- developed award winning anti-litter campaigns around the Our Edinburgh branding.

In reality while the Council can deliver a Cleansing Service, it cannot on its own deliver cleanliness. This requires action and behavioural change not only across Council teams (e.g Waste Compliance, Housing, Environmental Wardens, Schools, Parks and Greenspaces, Communities and Families) but also across other stakeholders including businesses, householders and citizens, Housing Associations and many others.

The National Litter Strategy 2014 in effect recognises this. It focuses on the prevention of litter, while the Council itself is developing Locality Improvement Plans which will ultimately lead to targeted improvements across the City.

In terms of the Waste and Recycling Strategy the key original objective was to minimise how much is sent to landfill. Over the years a number of approaches and pilots to collect certain types of litter have been tested but have suffered from high cost and poor quality of materials collected.

For this reason a different approach has been applied; a contract is in place to allow the mixed wastes collected from litter bins, street sweeping and fly-tipping to be sent for sorting prior to landfill.

This approach has allowed typically 25-30% of the waste to be diverted for recycling- including small “fines” which are used as aggregates, but also other materials including metals, wood and plastics.

A parallel contract is in place to reprocess the waste collected by the mechanical street sweepers which wash and brush the streets but create a wet mixed waste. In this case over 95% of the waste is diverted from landfill, overwhelmingly “fines” for use as aggregates.

It should be noted that litter related streams are now being classified as commercial waste and are no longer being included in the “official” recycling rates published by the Scottish Environment Protection Agency. However they will continue to be recorded in the service’s internal reporting to give a truer picture of our overall performance and ensure consistency with previous years.

Going forward key activities will include:

- Responding to the review of CoPLaR (Code of Practice on Litter and Refuse) which is the document which sets out the statutory objectives with regards to the removal of litter;
- It is expected that the new iteration will place additional duties on Councils and will require a service to rezone its activities with a short timescale for compliance;
- Continue to develop the use of fill level sensors on bins;
- Deliver the Cleansing Improvement Plan and support the delivery of the Locality Improvement Plans
- Support the delivery of the two community based Zero Waste Projects (for example by piloting approaches to fly-tipping).

## **1.6 Educating and Engaging Communities**

Consistent and ongoing educational messages is one of the key factors identified in delivering high performance outcomes identified in a recent report for the European Commission on recycling performance in European capital cities (Appendix 1). Waste and Cleansing Services has a history of investing in this area, both directly and through third party partners such as Changeworks.

Ensuring that we all utilise the Council’s recycling services, waste prevention and recycling projects in the city is key if we are to meet our local and national targets for recycling and composting, as well as to enhance our local communities by reducing littering. We need a citywide change in public behaviour towards waste. In order to do this we need to create an understanding and motivation at the local level.

Following the restructuring of the Council, education and engagement will be delivered through Waste and Cleansing promoting specific services or initiatives, through Localities as part of the Localities Improvement Plans, and through partners (Waste and Cleansing funds Changeworks to deliver both

education and engagement activities on behalf of the Waste and Cleansing Service itself, and on behalf of the Localities.) Locality focussed Our Edinburgh campaigns will be developed to target specific issues within communities (e.g. fly-tipping has recently been targeted as part of the Zero Waste Leith project).

### **1.7 Behavioural Change**

Current recycling services and local projects are making it easier for residents to change their behaviour but we need to effect a change in attitude and for that information and support are needed at the local level.

An Education Cabin at Seafield Household Waste Recycling Centre has previously been used to host visits by community and school groups to teach about all aspects of the waste management journey, and will be replaced with a new purpose built facility at the Millerhill complex in 2019/20.

In addition the Waste and Cleansing Service has a long standing service level agreement to deliver formal educational activities in partnership with Changeworks. From the year 2015/16 through to February 2018 this had delivered:

- More than 700 activities and workshops to schools across Edinburgh including Compost in a Bottle, Trash Fashion workshops and Finish Your Food lunches, directly engaging more than 30,000 students
- Training for 45 teachers from primary, secondary and nursery schools across Edinburgh through Changeworks' Continuous Professional Development courses;
- 7 "Community Capow" events.

Following the award of the Zero Waste Towns projects, Waste and Cleansing will also be working with both of these projects to deliver targeted interventions to engage communities particularly in areas with high density housing to focus on recycling household waste, appropriate disposal of bulky waste and preventing waste at source.

### **1.8 Enforcement**

The City of Edinburgh Council has Environmental Wardens teams based within the 4 Localities who investigate and enforce a wide range of environmental crimes such as dog fouling, littering, abandoned vehicles and inappropriate domestic waste disposal.

As a result of the Council's Transformation Programme and the establishment of the Council's new structure, a dedicated Waste Compliance Team was created in Waste and Cleansing, consisting of 5 officers whose focus is exclusively on commercial waste. These officers are also fully trained Environmental Wardens and can deal with every aspect of the Locality Environmental Wardens remit, however their focus is to educate, investigate and enforce trade waste related offences.

They are responsible for

- Ensuring businesses have adequate waste and recycling contracts in place;
- Promoting the requirement for businesses to have waste disposal contracts;
- Ensuring businesses comply with policies around presentation of their waste;
- Investigating inappropriate disposal of trade waste.

Since its creation in September 2016 the Waste Compliance Team has carried out a programme of visits to engage businesses and ensure they are aware of their responsibilities. Whilst the aim is to ensure compliance, where this cannot be achieved informally officers will take enforcement action. To date the Waste Compliance Team has issued 334 Fixed Penalty Notices for trade waste offences, issued 1912 Regulation 4 Notices requiring businesses to provide evidence of a valid trade waste contract and issued 11 section 47 Notices stipulating the type of receptacle and frequency of uplift the business is required to have in place.

In addition to the work the team routinely carries out, it also engages in specifically focussed work to support the delivery of public events such the summer and winter festivals.

### **1.9 Depot development and review**

It is necessary to periodically consider the changing and developing needs of the operation of the Waste and Cleansing Service, in response to a growing and changing city. Having appropriate facilities in the correct locations is fundamental to providing an efficient and cost effective service which meets customer needs.

In February 2016 the Finance and Resources Committee considered and approved a report on the investment strategy for the Council's depots estate which will impact positively on the Waste and Cleansing Service.

In particular, by 2020:

- The waste collection service will benefit from two new or enhanced waste transfer facilities situated at Bankhead and Seafield to provide collection services to the west and east of the City respectively;
- These will link to the previously agreed disposal facilities at Millerhill, and both facilities will provide transfer and bulking operations to reduce vehicle movements between the collection rounds; the existing transfer station at Powderhall has now closed, with interim waste transfer being carried out at Granton until the new facilities are completed.
- In particular it is envisaged that these new facilities will enhance service reliability in the rapidly growing north west of Edinburgh which is currently vulnerable due to the extended travel distance between this area and the current waste disposal facilities;
- The three existing Household Waste Recycling Centres will remain;
- Collectively it is expected that these facilities will further enhance service resilience across the city;
- We will seek to keep the provision of Household Waste Recycling Centres under review as the city grows.

## **2. Case Studies**

This section features case studies which outline different projects which have helped to deliver the waste and recycling strategy to date.

### **2.1 Waste Prevention: Remade in Edinburgh**

Remade in Edinburgh is an award winning community focused campaign to promote zero waste and provide practical repair skills.

With partners including the University of Edinburgh, Lush Cosmetics, Edinburgh Tool Library and CHAI, Remade has also received funding from the Council's Waste and Cleansing Service to deliver its business plan with the aim of reducing its reliance on grants as the business income grows.

Initially focussing on practical initiatives to provide people with the skills they need to prevent waste (i.e. by sewing and mending clothes or carrying out computer repairs) Remade is growing and developing new education initiatives and business services across the city.

The Remakery is a groundbreaking project in Leith, part-funded by Zero Waste Scotland, which provides workshop space which will scale up existing initiatives - trebling landfill diversion from 80 to 240 tonnes a year. It will additionally develop enhanced opportunities to refurbish, upcycle and sell furniture which would otherwise have had little reuse potential and in so doing allow CHAI to continue to provide their furniture service to help vulnerable people furnish starter homes.

### **2.2 Recycling: Kerbside Recycling Service**

The new kerbside recycling service has been introduced to replace the blue and red box service. This provides the following advantages:

- Most materials (paper, card, metals and certain plastics) are collected in a bin, which means less sorting by residents, and reduction in littering;
- The range of papers and plastics which is collected for recycling at the kerbside has increased to encompass plastic pots, tubs and trays, envelopes, and other types of clean paper;
- The blue box is still used and now accepts small electrical items as well as glass, household batteries and textiles;
- The old service provided 55 litres per week for recycling, while the new one provides more than 160 litres per week for recycling;
- This means it has been possible to reduce the landfill bin from 240 litres per fortnight to 140 litres per fortnight for most households. This helps encourage the use of both this recycling service and the weekly food collection service;
- Compared with the blue and red box services, tonnages collected for recycling by the bin and box service increased by 29% in 2015/16;
- In areas with the new kerbside service, food recycling tonnages also increased by approximately 50%.

### **2.3 Commercial Waste: Time Windows for Commercial Waste Presentation**

Following concerns about the indiscriminate storage of waste on street, and the impact on the cleanliness and attractiveness of City streets, the Council consulted similar Councils, and worked with traders in the Rose Street area to pilot an alternative approach whereby designated time windows are provided, during which waste bins may be presented. Bins must be removed from the streets outwith these times.

Three windows were agreed which were acceptable to businesses, waste contractors and the objectives of the project: 9.30am-noon; 2-4pm; 6.30-11pm.

An overall reduction in bins on the street was achieved- an average of approximately 80% by volume. In particular the pilot identified that it was not uncommon for bins which were no longer in use to remain on street indefinitely, and not be removed by the waste contractor.

This has now been rolled out citywide.

During the pilot it was agreed for a temporary period to provide exemptions for the heavier food and glass recycling streams due to the particular challenges involved in moving these bins. Where this did not compromise the overall streetscape unduly, and the waste was properly contained in a locked bin, then it was possible to apply for an exemption to allow these to remain on street. It is expected however that this exemption will cease as it no longer supports the Council's wider objectives, in particular with regard to accessibility and quality of public spaces.

### **2.4 Changeworks Education Service**

The Waste and Cleansing service has a long standing relationship with Changeworks and funds a range of activities which focus on waste prevention, recycling and sustainability.

In particular the Education service is contracted to deliver schools based education programmes within the educational environment. The activities offered are wide ranging and include

- Direct education to pupils, including workshops, assemblies, talks
- Development of a "whole school" approach to embed behaviour change;
- Teaching and learning online resource guide to support teachers;
- Continuous Professional Development sessions for teachers.

In the most recent year, Changeworks has worked with 12 primary schools and 5 secondary schools, and has broadened the range of activities to support anti litter messages.

### **2.5 Litter and Fly-Tipping**

Zero Waste Scotland funded the City of Edinburgh Council to test different approaches to reduce fly-tipping occurring in tenement housing areas in Edinburgh. The project was devised to test the three interventions outlined in the National Litter Strategy; education, enforcement and infrastructure. The interventions were carried out over a seven week period from 1 February to 20 March 2015.

Enforcement: In Leith Walk (Ward 12) the enforcement intervention was tested. Increased Environmental Warden patrols working with public space CCTV operators took place in the identified streets. Additional educational materials such as bin stickers, pavement stencils and lamp post

signage were distributed. These materials included messages about the illegality of dumping items beside bins and the potential for a Fixed Penalty Notice (FPN).

Education: In Gorgie and Dalry (Ward 7) the education intervention was tested. A range of educational materials such as bin stickers, lamp post signs and posters for communal stairs were distributed throughout the identified area. These included messages about the National Reuse Hotline, the Council's Special Uplift Service and information about the potential for fly-tipping to result in the issue of a FPN. An 'upcycling' Workshop for residents was held as part of 'Pass it On' Week, in order to encourage the reuse of materials rather than their disposal.

Infrastructure: In Hillside, the infrastructure intervention was tested as changes were made to the on-street recycling facilities. The number of landfill bins was reduced and the number of mixed recycling bins doubled. Glass recycling was also introduced. Nudge techniques involving stencil footsteps directing the public to the recycling banks were used. Direct mailing was used to inform residents on the new recycling options and provide information on how to dispose of other unwanted household items.

To measure the impact of the different approaches, a number of monitoring techniques were utilised including household surveys, and adapted LEAMs surveys. Assessment of the number of fly-tipping incidents reported by the public and recorded on Confirm was used to provide a baseline of incidents occurring within the project areas.

Using the resources developed and lessons learnt from the project, a toolkit with guidance and communication materials has been developed and is available to support future projects in Edinburgh, and to share with other Local Authorities faced with similar issues.



### **3. Changes and Challenges**

The strategy published in 2010 made a number of assumptions. Since then the City itself has changed and will continue to do so. These will all affect how the Council manages waste. This section seeks to summarise the known changes which have already taken place, as well as to highlight any known emerging issues which are likely impact on the way in which we manage our waste.

In many cases it is not possible to quantify the impact these may have but it is important to be aware of these and seek to monitor and respond to their impact.

### **3.1 Changes Which Have Occurred Since the Strategy Was Published**

#### **3.1.1 Recycling Targets**

The original strategy published in 2010 aimed to deliver an overall recycling rate of 60% by 2017. This comprised 50% being delivered through sorting of waste at source, with an additional 10% being delivered through thermal treatment.

A number of these assumptions have changed:

- The thermal treatment facility (Millerhill) has now moved back to 2018/19 to more closely mirror the ban on sending waste directly;
- Improvements to recycling services in kerbside collection areas have been delivered, but for high density housing areas, enhanced recycling services are now planned for the years 2018-2021;
- The commercial waste collection service has been withdrawn (with the exception of waste from the Council's own buildings);
- The way in which recycling rates are calculated has changed so that the published recycling rate (by SEPA) will diverge from the Council's internal monitoring: in particular the Council's internal calculations include litter and road sweeping materials which are now classed as commercial and not included in the published rate.
- The incoming administration has set a new target of diverting 60% of waste by the end of its term.

#### **3.1.2 Changes to Scope of Strategy**

Following a restructuring in 2016, the Waste Management Service now incorporates the Cleansing function which was previously operated separately under the former Neighbourhood structure. Accordingly the plan of activities going forward incorporates actions related to this.

The Future Activities outlined in Section 4 cover this, as well as being explicit that the strategy encompasses Waste Prevention, replacing the older Waste Prevention Strategy which was out of date.

### **3.2 Emerging Issues Which Are Known**

In terms of delivering the strategy going forward, there are a number of factors which are known and which may or are likely to impact on the delivery of the strategy. In a number of cases these are not sufficiently well developed to be able to state what the impact of these will actually be. However these are discussed in order to provide an indication of the challenges which must be faced, as well as where opportunities for development and improvement may lie.

#### **3.2.1 Legislative and Policy Changes**

A key driver for Waste Management in Scotland has been the Waste (Scotland) Regulations 2012. These put in place clear responsibilities with regard to waste management in Scotland, both to drive recycling as well as to minimise the use of landfill. Key measures include:

- Mandatory recycling services for households (paper, card, cans, plastics, glass, food); the Council exceeds this provision for kerbside collection areas, and is addressing gaps in communal bin areas;
- Mandatory waste segregation for the same materials by business, which the Council supports by its Waste compliance Team including this in their inspections;
- Landfill bans for certain waste, and promotion of energy recovery, which the Council will meet through the development of the facility at Millerhill.

The Scottish Government has developed a charter for the management of household waste. <https://www.zerowastescotland.org.uk/content/charter-household-recycling>

The purpose of this is to develop –as far as possible– common standards for household waste collection across the country, as well as standardised systems to collect waste for recycling. It is intended that this should ultimately lead to common ways of collecting waste nationwide which will in turn increase recycling and improve the quality of materials collected. However this would require most Councils to change their collection systems and there are financial implications. This is subject to ongoing discussion between the Council and Zero Waste Scotland, to consider the implications of this.

It is not currently clear what impact the vote to leave the European Union may have on waste strategy or policy in Scotland (or Edinburgh); however it is likely to have some impact because:

- Most environmental and waste related legislation is derived from European legislation;
- Both raw materials and recyclable materials are traded internationally and so anything which impacts on trade, and the relative values of raw materials versus recyclable ones, may have either positive or negative consequences for waste policy;
- The Council and some of its partners working in this field are in receipt of, and able to apply for, European Funding- at present the Council itself is being funded to develop the use of litter bin sensors, while both Zero Waste Town projects are also supported by European funding. This impact of leaving the EU may not impact these specific projects, however it is likely that this will be a source of funding which does not exist in future.

One emerging issue in relation to this is that the European Council has as of May 2018 agreed new measures to deliver a “Circular Economy” which include:

- Mandatory separate household collections of textiles (already partly met in Edinburgh) and hazardous household waste by 2025;
- Municipal waste recycling targets of 55% by 2025, increasing to 65%.

The UK government has signalled its intention to adopt these measures. The Circular Economy essentially seeks to ensure that as far as possible materials are treated as resources rather than waste and that once extracted they remain in circulation as long as possible. Scotland’s circular Economy Strategy is called Making Things last:

<http://www.gov.scot/Publications/2016/02/1761>

This sets relatively few objectives on local government with emphasis on other sectors of the economy. However we already support the delivery of this in a variety of ways:

- We continue to support a range of reuse projects including Remade, The Bike Station, HMP Saughton;
- Our glass is collected mixed as a single stream; it is reprocessed at Viridor, North Lanarkshire. There it is sorted by colour so that the majority is recycled into new bottles and jars or into a quality medium for water filtration, rather than lower value (and lower environmental benefit) uses such as aggregate.

### **3.2.2 City Growth and Demographic Changes**

Edinburgh continues to grow and change. The National Records of Scotland forecasts that Edinburgh will see household growth of approximately 30% between 2014 and 2039- this is the second highest rate in Scotland, after Midlothian.

This in itself is significant because of the increased demand for waste management services and the links to Council funding. Analysis of the Census data however also points up other factors which may impact on waste management in diverse ways:

[http://www.edinburgh.gov.uk/downloads/file/2936/census\\_2011\\_-\\_city\\_trends](http://www.edinburgh.gov.uk/downloads/file/2936/census_2011_-_city_trends)

For example an aging population may potentially be linked to greater demand for services such as assisted waste collections, if health improvement does not keep pace with life expectancy. However these are complex issues, and analysis of what has happened does not necessarily reflect what will happen. The point is that these may impact in unexpected ways.

One factor which is perceived as an issue in recent years has been the growth in short term lets. This has always existed (e.g. serviced apartments) but has grown in response to internet based platforms becoming available. In reality some “domestic” properties are operating full time as businesses, and in waste management terms may potentially be associated both with increased levels of waste as well as poor levels of waste sorting. The Council is developing approaches to ameliorate the wider impact on communities and the Waste and Cleansing Service has developed a draft policy to cope with these situations.

### **3.2.3 Public participation**

Public participation in recycling has undoubtedly grown. Nevertheless, even with reduced frequencies of collection for landfill waste AND a smaller bin, around 60% of the waste in the landfill bin could have been recycled.

This demonstrates the importance of continued engagement with residents to maximise the use, and proper use of, recycling services. However this will be particularly challenging in Edinburgh as in parts of the city at least, communities can be quite transient, and in addition we are reliant on communal bin collections which may foster a lower level of “ownership” than kerbside bins which are outside the resident’s house.

### **3.2.4 Finances- Funding and Pressures**

Since the publication of the strategy in 2010 two major changes have occurred. There have been ongoing pressures across the public sector to contain spending, while the Waste Management Service has been reconfigured, so that it now provides the Cleansing Service but no longer provides some other services, including public conveniences.

From 2009/10 to 2017/18, the core Waste Management service budget has reduced from £29.9million to £28.6million. Taking these factors into account, and factoring in inflation, this represents a real world reduction in funding of 21.8%\*, while in parallel the number of households in receipt of a collection service has grown by more than 11%.

While the investment in expanded recycling services, coupled with the reorganisation of collection services across the City has undoubtedly delivered a reduction in the cost of disposing of this waste continued investment of this nature will become increasingly challenging, although Waste and Cleansing combined represents just 4.8% of the Council's budget. Going forward, the Council expects it will be required to save a further £151million by 2023.

At the level of local government as the cost base increases more quickly than the funding available and there is a growing demand for services such as social care for older people, there is less scope for funding other services so that financial factors will increasingly drive decision making. For example it has been necessary to introduce a charge for collecting garden waste, which is the largest single recycling stream. This change has however been accompanied by service improvements so that garden waste will also be collected more often which may serve to offset any loss of tonnage resulting from this measure.

However against this backdrop new funding has been allocated in 2018 to commence the improvements in waste and recycling services in tenements, to further develop the Cleansing Service, and to deliver a targeted recycling campaign.

Housing growth in Edinburgh will continue to have a significant impact on waste services in the short, medium, and long term. Thousands of new houses will be built in Edinburgh over the coming years and this will mean a large increase in household waste collections and subsequent waste management and disposal. Housing growth also has an impact on other service areas and there will be a requirement to build new schools and expand existing schools and this will also lead to an increase in waste related services.

An increase in the city's housing stock will ultimately give rise to additional Council Tax income. The Council's long term financial plan assumes that a proportion of this additional Council tax revenue would be used to offset the additional revenue burden on Council wide services, including waste.

### **3.2.5 Funding Streams**

To date household waste and litter collection and disposal have been mainly funded through taxation. Where there are schemes in place to cover the costs associated with waste (Producer Responsibility Schemes) some of these are opaque and do not always directly fund local government which bears the main burden of managing both household waste and litter. This could apply to the schemes which currently exist to support the recycling or recovery of packaging, and the recycling of household batteries.

Although the scheme to support the recycling and recovery of electrical waste DOES fund local government, it achieves its objectives solely by funding collections at Household Waste Recycling Centres which means the service is not open to everyone. Any wider service is directly commissioned by the Council which must pay for it.

In view of the continued pressures on local government it would be desirable therefore to see greater use of Producer Responsibility where appropriate. As part of the discussions around the Scottish Deposit Return Scheme for some types of packaging (see below) the Council's staff will be pushing to ensure that it is entirely funded by the producers, and that there should be no public subsidy.

Where further opportunities arise we will take the same approach to encourage a greater share of the burden of managing materials to be borne by the producers. As well as reducing the cost to the public purse, such an approach is likely to encourage waste prevention at source.

### **3.2.6 Markets and Materials**

The Council's strategy is focussed on diverting waste from landfill, but one of the main ways of achieving this objective is recycling the materials. However because the Council's ability to prevent waste at source or to ensure its reuse is to an extent limited, this is only possible to the extent where markets exist to allow for it to be recycled or used for energy recovery. Recycling performance to date has to some degree been constrained because markets for a number of materials have declined. In particular there have been market failures which have led to the cessation of recycling services for several materials - carpets, paint and mattresses (it is hoped to recommence the latter in 2018). These materials are mainly collected through Household Waste Recycling Centres, or Special Uplift, and the impact of this has largely been offset by the improvements in other recycling services.

However several factors exist which will- or are likely to- have an impact on future performance as they impact on materials which are currently recycled.

### **3.2.7 Impact of restrictions and bans on materials imported into China**

In January 2018 the Chinese government enacted restrictions on the import of certain materials into China. This is wrongly perceived as a ban on plastic imports- in fact it relates to the import of different types of plastics, paper, card and metals. Because China is the source of so much of the world's manufactured goods and so is a key market for a wide range of materials, this has serious implications across the waste industry.

Because China has hitherto been a large user of recycled materials sourced from across the world this has wider implications- even if your paper has previously been recycled in England it will now be competing with materials which were previously exported to China. There may not be enough capacity to process all of it.

It will take time for new markets to develop and there may be an opportunity to develop more localised markets. However this is uncertain and would require significantly more government intervention than we have seen previously. In the short term there is a significant risk that waste which was previously recycled will either be landfilled or used for energy recovery and so recycling rates may fall.

This is probably the single biggest risk to performance and delivery of the waste and recycling strategy, and is one which is almost completely outwith the Council's control.

### 3.2.8 Plastic Reduction Measures

In parallel but separately there has been a significant focus (initially in the media and subsequently at government level) on the impact of plastics on the environment.

In the developed world these issues are primarily linked to littering or unintended escapes to the environment (e.g. from manufacturing) rather than household waste (this may not be the case in some parts of the developing world where the collection systems are less formal).

This has led to a wider public discussion on these issues which could lead to a range of measures such as:

- Restrictions or bans on the use of single use plastics for certain products such as straws and cotton buds;
- Actions by retailers to remove plastics from their packaging (which will generally mean replacing it with other materials rather than having no packaging);

There are a number of implications arising from this in terms of the Council's waste strategy.

- A reduction in some types of waste (e.g. the straws) may lead to a reduction in littering of these items which would be positive;
- If they are replaced by degradable or biodegradable alternatives (e.g. cardboard straws) then clear messaging may be required to emphasise that just because it is (bio)degradable it is not ok to litter it;
- Waste is measured by weight. The retail industry has been increasingly using plastics (included laminated materials such as foil pouches) to meet its packaging reduction targets. If plastic is replaced with alternatives such as cardboard, metals, glass, etc, there may be an **increase** in the weight of packaging, and in some cases there could potentially be an **increase** in energy consumption and carbon impact associated with packaging;
- Some of the alternative packaging types (particularly metals and glass) are easy to recycle; however although clean cardboard and paper are recyclable, those used to package food may be contaminated if there is no plastic barrier and will not be recyclable. These are therefore not suitable for recycling and may therefore lead to an **increase** in waste arisings overall and a **reduction** in the recycling rate. Those materials would be suitable for energy recovery however.
- Overall therefore measures which may be taken to minimise the use of plastic may have both positive and negative implications for the Council's waste strategy, and indeed for the wider environment.

### 3.2.9 Deposit Return Schemes (DRS)

The Scottish Government is currently developing a deposit return scheme which would be applied to certain types of packaging such as cans, plastic bottles etc. Residents would therefore be able to return these to collection points and recover the deposit. These schemes are widely used overseas in order to encourage recycling and /or discourage littering (if a can has a value any disposed of as litter can

be collected by someone else to get the deposit, or the consumer may hang onto it to get back their deposit).

Because the DRS is still being developed there are a number of key issues which still require to be resolved. These include:

- Which materials it will cover- a wide range is being discussed including certain types of plastics, metals and laminated materials?
- How will it be paid for- ideally the scheme should be funded entirely by the producers and there should no public subsidy?
- Where will the collection points be- will they be localised or centralised?
- Localised facilities (smaller shops, and other public sites) may be more likely to attract waste on the go, and so tackle litter;
- Larger sites (such as supermarkets) would seem likely to encourage people to bulk up items at home, and so could divert waste which is already being recycled through council collection systems.
- The latter point means that the delivery of a DRS may lead to a reduction in published recycling rates (because the Council will no longer be collecting the plastic bottles and cans, for example);
- In certain circumstances the DRS might undermine the viability of the local authority service (e.g. if it cherry picks the valuable materials which are already being recycled).

It should be noted that in Edinburgh the kerbside recycling service already delivers a high level of recycling, and steps are already being taken to enhance the equivalent service in areas serviced by communal bins. The waste analysis which was carried out in 2015 revealed that the kerbside collection service was already diverting as much as 85% of PET drinks bottles (e.g. water and fizzy drinks) and 74% of HDPE drink bottles (e.g. milk bottles) although only 26% of aluminium cans.

The development of the DRS should certainly be an opportunity to discourage landfill disposal and littering, but depending on how it is implemented it could have some unintended consequences.

### **3.2.10 Emerging Markets**

While the recycling rate to date has been growing, it has nevertheless been held back by the lack of development around markets, as exemplified by the recent issues around UK exports to China. However there are also opportunities too, albeit these really need to be led at government level. Councils have very limited ability to do so, but national governments or groups of governments can work with industries to support existing markets for materials and to develop new ones. It is to be hoped that the recent impacts of the ban on imports in China may stimulate this process in the UK and other developed nations.

At a much more local level, the development of a local outlet to recommence mattress recycling represents an opportunity to divert around 800 tonnes of materials which are currently landfilled. It is hoped this can start during 2018.

Waste and Cleansing staff will always engage with credible potential outlets where this can be achieved without compromising the Council's legal and wider objectives.



#### **4. Future Activity**

This section sets out the planned activities which will support delivery of the Waste and Recycling Strategy in the coming year.

The following table of activities describes these, as well as how they help to support the strategy. Many of the activities which will be undertaken will support this in a range of ways and the table sets these out, around a number of “themes”, e.g. prevention, recycling, efficiency, and cleanliness.

To date the main focus of the strategy has been to increase the percentage of waste which is recycled, and reorganise other collection services to support this. Recycling services will continue to develop but at a slower pace, and there will be more emphasis on other aspects of the strategy.

Although some activities, such as the opening of the waste treatment at Millerhill will be delivered by a specific date, others such as support for the third sector to deliver waste prevention will take place on an ongoing basis and do not have an end point.

#### **4.1 Key Themes Going Forward**

The broad thrust of the strategy going forward can be summarised as:

- Continued development of waste prevention, reuse and recycling projects and services;
- Continued and increasing focus on cost and efficiency of services to respond to financial constraints;
- Continued focus on service reliability and quality;
- Ongoing investment in our infrastructure;
- Development of cleansing services, while working with partners and stakeholders to deliver cleanliness.

#### **4.2 Major Projects and Other Deliverables**

While the wider list of activities is outlined in the table it is possible to highlight some key activities in the coming years which will particularly serve to deliver the Strategy:

- Development of an enhanced communal bin service which improves the ability of residents to recycle a wide range of materials, while ensuring that all waste streams are properly contained and clutter on the streets is kept to a minimum;
- Completion of the infrastructure which will support the service to continue managing waste after collection- two waste transfer stations, and the energy recovery plant at Millerhill;
- Continued integration and alignment of the Waste and Cleansing Services to maximise efficiency and ensure the services support and complement each other;

- Ongoing delivery of engagement and educational activities, either to support specific activities such as the communal bin review or more generalised campaigns in support of themes such as waste prevention or cleanliness.

## Waste and Cleansing Services June 2018

### Strategy Forward Plan for 2018- 2025

Themes	Action	Timeline
<b>Prevention</b>	Continue to review opportunities to develop or influence and encourage appropriate stakeholders (e.g. government, retailers, individuals) to develop approaches to waste which support the delivery of “Circular Economy” models whether by preventing waste at source or reuse and upcycling of materials.	Ongoing
<b>Prevention</b>	Continue to seek cost effective, sustainable partnerships to deliver waste prevention partnerships	Ongoing
<b>Prevention</b>	Continue to support existing third sector reuse partners where cost effective to do so, and encourage participation in national campaigns	Ongoing
<b>Prevention</b>	Consider the opportunities to build mutually beneficial partnerships among our network of reuse partners (e.g. by exploring whether unusable donations could be used by a different organisation)	Ongoing
<b>Prevention</b>	Consider opportunities to further encourage reuse of collected bulky wastes (e.g. via the Special Uplift service) as well as to encourage uptake of alternative reuse routes for bulky items (e.g. via the national Reuse Phonenumber and charity shops)	Ongoing
<b>Prevention</b>	Seek to develop a pilot Special Uplift service in one Locality, in partnership with the Third Sector to maximise reuse, with a view to developing this into an integrated reuse/recycle/disposal model on a citywide basis	2018/19
<b>Prevention</b>	Consider what opportunities there may be to influence the national debates on waste arisings, either through influencing Government, retailers or householders	Ongoing
<b>Prevention</b>	Work with Changeworks to develop and encourage use of refill points for water bottles to discourage consumption of single use plastics	2018/19
<b>Cleanliness Enforcement Recycling</b>	Work with the 4 Locality services, as required and appropriate to support the delivery of Locality Improvement Plans	Ongoing

<b>Efficiency</b>		
<b>Prevention Cleanliness Recycling</b>	Support the delivery by Changeworks and Shrub of two community focussed Zero Waste Towns projects in Leith and south Edinburgh.	Throughout 2018-2019
<b>Prevention Recycling Efficiency</b>	Introduce a collection charge for the garden waste collection service	Summer 2018
<b>Recycling Cleanliness Disposal Efficiency</b>	<p>Carry out a full review of the communal bin collection service, with a particular focus on those areas where waste is collected on street.</p> <ul style="list-style-type: none"> <li>• In communal bin areas, in particular tenements, carry out an audit of sites, and ensure that ultimately all households are offered convenient access to the full range of statutory recycling services (paper, card, cans, plastics, glass and food);</li> <li>• As far as possible all existing sites are upgraded to offer this (accepting there may be reasons why this is not possible at every location);</li> <li>• Capacities of the different streams will be reviewed to provide a better balance between waste for disposal and recycling;</li> <li>• Servicing frequencies will be reviewed to improve overall cleanliness of the city;</li> <li>• The types of bins, the way these are restrained and the scope to improve appearance by using housings will be tested;</li> <li>• The use of communal bins instead of kerbside services will be reviewed at some locations where it appears that this will provide an enhanced service.</li> </ul>	Summer 2021
<b>Recycling Cleanliness Disposal Efficiency</b>	Develop enhanced materials to engage planners and architects, developers and other stakeholders to ensure that new build properties have fit for purpose waste collection systems which fully integrate the statutory recycling services, and are fit for purpose in terms of operational efficiency, safety and practicality.	Summer 2018 (then ongoing update as required)
<b>Recycling</b>	Engage with external and internal stakeholders to target and minimise contamination in recycling bins (both kerbside and communal).	Ongoing
<b>Recycling Disposal Efficiency</b>	Monitor markets to ensure that the range of materials collected for recycling is maximised, while costs are minimised. Review the range of materials collected on an ongoing basis and expand these where cost effective and sustainable markets can be identified.	Ongoing

<b>Recycling Disposal Efficiency</b>	Ensure that our portfolio of contracts is kept under constant review to maximise opportunities to cost effectively divert waste from landfill, to ensure that all waste arisings have a disposal route, and that all contracts represent best value.	Ongoing
<b>Recycling Efficiency</b>	In view of the growing debate surrounding certain types of waste (e.g. single use plastics) and the continued funding challenges faced by local government, to seek to encourage Government to adopt greater use of producer responsibility for the recycling, recovery and disposal of more types of waste.	Ongoing
<b>Recycling Disposal Efficiency</b>	Deliver Infrastructure Improvement Plan with a view to maximising site efficiency and customer experience at Household Waste Recycling Centres.	Ongoing
<b>Recycling Disposal Efficiency</b>	Review and amend the opening hours of the Household Waste Recycling Centres to ensure that these are compatible with neighbouring Councils, to discourage use of these sites by people from outwith Edinburgh.	
<b>Recycling Disposal Efficiency</b>	Continue to review the provision and location of Household Waste Recycling Centres, and in particular the opportunity to develop one or more new facilities to support the convenient and sustainable disposal of waste as the City grows.	Ongoing
<b>Recycling</b>	Continue to review the provision of public recycling points to ensure that the location and range of materials collected there effectively complements the provision of kerbside collections and communal bin recycling services provided directly to households.	Ongoing
<b>Recycling</b>	We will continue to ensure that all Council buildings are offered the necessary collection systems compliant with the Waste (Scotland) Regulations for segregating waste.  NOTE: Implementation and operation of this is the responsibility of Building Managers, Business Managers and Facilities Management and falls outwith the Waste and Cleansing Strategy.	Ongoing
<b>Recycling</b>	Review and consider the costs, benefits, opportunities and risks associated with the participation in a national waste collection system as proposed by the Scottish Government	Summer 2018
<b>Efficiency</b>	Review the shift patterns and collection days employed for household waste and recycling collections to potentially reduce vehicle movements in the evening, improve the time available for staff training and enhance service resilience, e.g. during severe weather.	Summer 2018
<b>Efficiency Cleanliness</b>	Develop a policy for the siting of litter bins	May 2018
<b>Efficiency Cleanliness</b>	Review the existing locations of the litter bins network, and how the efficiency of these can be maximised.	Ongoing

<b>Efficiency Cleanliness</b>	Review the methods used to keep the city clean (litter presses, barrow beats, mechanical sweepers) to ensure that these are operating at maximum efficiency	Ongoing
<b>Cleanliness Enforcement</b>	Develop a policy for the collection of waste from short term lets, including AirB&B and serviced apartments.	2018:draft already completed
<b>Cleanliness</b>	Respond to the revised national Code of Practice on Litter and Refuse (CoPLaR) and ensure that the city is zoned appropriately to meet cleanliness standards	Timeline not known – dependent on Scottish Government releasing updated CoPLaR
<b>Cleanliness</b>	Work with Zero Waste Scotland, Localities Management Teams, and internal and external stakeholders to develop Litter Prevention Action Plans, and promote the ownership of preventing litter across society.	Ongoing
<b>Cleanliness</b>	Continue to carry out LEAMS and CIMS surveys, subject to the introduction of new methodologies such as a potential new Streetscape management indicator.	Ongoing
<b>Cleanliness</b>	Develop more efficient and responsive approaches to the servicing of litter bins, where appropriate using technology (Routesmart and sensors) to respond more quickly to filled litter bins.	Ongoing
<b>Cleanliness Efficiency</b>	Develop and deliver a Cleansing Action Plan which will seek to ensure the new combined Cleansing service is operating at maximum efficiency and effectiveness	Ongoing
<b>Cleanliness</b>	Monitor the opportunities to segregate litter and fly-tipped items at source for reuse or recycling, and the interaction this may have with the separate contract to sort mixed (unsorted) litter to allow recycling to take place.	2019/20
<b>Cleanliness Education Recycling Prevention</b>	Continue to expand and roll out the ourEdinburgh campaign across the city to engage communities about the appropriate means to prevent waste and littering	Ongoing
<b>Education Recycling Cleanliness Disposal</b>	Continue to promote schools' based education for all ages, and work with stakeholders to develop innovative and consistent projects which promote diversion of waste from landfill, while taking into account the diverse needs of the audiences.	Ongoing

	This is delivered under contract with Changeworks. Targets will be reviewed annually; the target for 2018/19 is 30% of primary and 30% of secondary schools.	
<b>Education Recycling Cleanliness Disposal</b>	Develop a focus on the harder to reach older age groups within the formal education system.	2018
<b>Education Recycling Cleanliness Disposal</b>	Ensure that Changeworks address use of single use plastics in particular as part of the wider messaging on waste, recycling and cleanliness as part of their schools based educational materials.	2018/2019
<b>Education Recycling Cleanliness Disposal</b>	Continue delivery by Changeworks of staff training and CPD sessions as well as online teaching resources.	2018/2019
<b>Enforcement</b>	The Waste Compliance Team will continue to carry out inspections in relation to business waste across the city on an ongoing basis.	Ongoing
<b>Enforcement</b>	The Waste Compliance Team will work in a targetted way with businesses to ensure that waste is managed in a responsible way during major events (e.g. that servicing schedules are adjusted to reflect higher levels of customers)	Ongoing
<b>Efficiency</b>	Enhance service reliability across the city by developing a new waste transfer facilities at Sighthill and Seafield, to replace the previous site at Powderhall	Spring 2019
<b>Disposal Efficiency</b>	Develop a new energy recovery facility to manage non recyclable waste, to generate energy and replace landfill as a mainstream waste disposal method and ensure that the city complies with the ban on disposal of waste to landfill by 1 January 2021.	Commissioning loads autumn 2018; full operation expected mid 2019.
<b>Efficiency</b>	Carry out comprehensive rerouting as required of all kerbside waste collection services to respond to city growth and ensure an efficient and reliable service	Ongoing
<b>Efficiency</b>	Seek opportunities to pilot use of new generation alternative fuelled or electrically powered vehicles to reduce local emissions	Ongoing
<b>Efficiency</b>	Ensure that staff at all levels receive appropriate training throughout the service and that this is regularly refreshed.	Ongoing

<b>Efficiency</b>	Ensure the appropriate maintenance of records, and data, as well as reporting as appropriate to third parties (e.g. Scottish Environment Protection Agency)	Ongoing
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## 5. Appendices

## Appendix 1: Recycling Performance of Other Cities

The purpose of this section is to provide an overview of The City of Edinburgh Council’s performance in terms of its recycling rate. This section seeks to reflect that:

- Methodologies for calculating the recycling rate vary. This makes comparison across different jurisdictions challenging even within the UK. Generally recycling rates appear to be more rigorously calculated in the UK, leading to the reported recycling rates in other countries appearing higher than they would here; this is discussed in more detail in the following report: <http://www.eunomia.co.uk/reports-tools/recycling-who-really-leads-the-world-issue-2/>
- Recycling rates are affected by various factors outwith the control of the local authority. These may include availability of markets for specific materials, whether people live in flats or houses, whether buildings are designed to facilitate recycling, viability and cost effectiveness of operating separate collections, and socio-economic factors;
- Generally we see in Scotland and the UK that recycling tends to be slightly lower than average in cities and very rural areas, and higher in areas that are composed small towns and low or medium density housing with fewer flats. This is likely to be the case in every country.
- Published recycling data is normally at the national level. It is difficult to obtain consistent recycling data for other cities (as opposed to countries) so the information provided in relation to this is slightly older.

### Scotland:

The most recent recycling rates published by the Scottish Environment Protection Agency were for the 2016 calendar year- the data for 2017 calendar year is expected to be published in September 2018.

### The way in which recycling performance is measured has been changed several times by SEPA and the Scottish Government; at present:

- A standardised methodology is being used which will represent the recycling rate for household waste only.
- In future years this is expected to exclude some materials which are used by the Council in calculating its performance internally (e.g. recycling of litter), which could potentially appear to reduce the Council’s performance.
- Only materials which are separately collected will count towards the recycling targets. This is likely to mean that materials such as metals which will be recovered at Millerhill will indeed be recycled, but may potentially be recorded in the official statistics as “other recovery”;
- Material which is composted only counts towards recycling targets if it meets agreed technical standards (called PAS 100 and PAS110). Otherwise these will be recorded as “Other recovery” in the same way as energy recovery;
- The “Other Recovery” figure for Dundee City Council is higher than for other Councils because incineration and energy recovery, rather than landfill, is the primary disposal route used by this Council.
- The data for all Scottish authorities are published at: <https://www.sepa.org.uk/environment/waste/waste-data/waste-data-reporting/household-waste-data/>

City	2016 Published Recycling Rate (%)	Other Recovery Landfill Diversion Rate (%)	Waste Landfilled (%)

Aberdeen	39	0.6	60.4
Dundee	33.6	59.6	6.8
<b>Edinburgh</b>	<b>44.6</b>	<b>1.8</b>	<b>53.6</b>
Glasgow	25.2	2.8	72.1
<b>Scotland</b>	<b>45.2</b>	<b>9.5</b>	<b>45.3</b>

### United Kingdom

The datasets for most local authorities across the United Kingdom are published here:

<http://www.sita.co.uk/waste-as-a-resource/recycling-in-the-uk>

This site has been used for the following table except where otherwise stated; the data covers the year 2016/17. A broad range of cities is provided but this is not intended as a comprehensive list. There are still likely to be major differences between these cities which will impact on recycling performance. For example Oxford and Cambridge will be similar to Edinburgh in terms of transient populations and large numbers of students, but are much smaller and will have few people living in tenements.

City	Recycling Rate (% , 2016/17)
Bath and NE Somerset	54.1
Belfast	35.5
Birmingham	26.6
Brighton and Hove	27.0
Bristol	43.5
Cambridge	46.1
Cardiff*	58.1
Leeds	37.9
Liverpool	28.1
London (all boroughs)**	33.0
Manchester	36.0
Newcastle	42.3
Nottingham	29.8
Oxford	49.0
Sheffield	29.6

#### Notes:

\*Welsh recycling rates were calculated using a different methodology which allows incinerator ash to be counted toward the recycling rate.

\*\*London boroughs report individually and vary between 14.1% and 52.7%; the combined figure was sourced from <https://www.lwarb.gov.uk/londons-recycling-rate-increases-201617/>

### Europe:

International comparisons of recycling rates are highly problematic because a range of different methodologies are used to calculate them.

The following data was published on behalf of the European Commission in 2015, and uses the methodology of household waste collected separately for recycling.

[http://ec.europa.eu/environment/waste/studies/pdf/Separate%20collection\\_Final%20Report.pdf](http://ec.europa.eu/environment/waste/studies/pdf/Separate%20collection_Final%20Report.pdf)

This is broadly the same as the methodology used to calculate recycling rates in the UK, and excludes (for example) the recovery of incinerator ash for aggregate, which can add substantially to the recycling rates quoted in relation to other countries.

However it should be noted that just because it is collected separately it does not necessarily mean that in all cases it will have been recycled- each load is likely to have a certain level of contamination. The methodology in the UK deducts contamination from the recycling rate but this may not be the case in every country- making those recycling rates appear higher than they are.

For example, the Eunomia report on national recycling rates (<http://www.eunomia.co.uk/reports-tools/recycling-who-really-leads-the-world-issue-2/>) concluded that Slovenia's recycling rate would fall by more than 8% - on this basis Ljubljana's recycling rate would fall to around 47%, only slightly more than Edinburgh's.

As a result of this issue and some variations in the age of data available by municipality this table should be read as a *broad outline* of the recycling rates achieved by 2015, rather than an exact comparison.

City	"Recycling Rate" (Separately Collected %)
<b>AVERAGE</b>	<b>19</b>
Amsterdam	12.4
Athens	16.1
Berlin	27.4
Bratislava	14.2
Bucharest	2.9
Budapest	7.6
Brussels	20.9
Copenhagen	23.7
Dublin	36.6
Helsinki	38.6
Lisbon	11.5
Ljubljana	55.4
London (Combined total across boroughs)	25.4
Luxembourg	28.4
Madrid	11.6
Nicosia	6.1
Paris	11.6
Prague	14.3
Riga	18.3
Rome	16.3
Sofia	4.0
Stockholm	21.5
Tallinn	47.2
Valletta	7.9
Vienna	29.2
Vilnius	5.5
Warsaw	4.5

Zagreb	1.0
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**Summary**

From this data it appears that while some cities do still demonstrate higher recycling rates than Edinburgh, it is also true that Edinburgh's performance does not appear to lag significantly in comparison with other large cities and if anything it outperforms them. On several occasions Edinburgh has been the highest performing Scottish City Council.

## Appendix 2: Results of Waste Analysis

Waste analysis is a tool to estimate what our waste is comprised of; if we know what is in it we can understand how to manage it more effectively. In 2014/15 Zero Waste Scotland worked with a number of Scottish local authorities. Samples of waste were taken from the various waste and recycling services operated across the country and these were combined to give a picture of how Scotland as a country manages its waste.

This work is published by Zero Waste Scotland at:

<https://www.zerowastescotland.org.uk/content/5-key-takeaways-composition-household-waste-report>

This work revealed:

- In Scotland, 59% of the waste in the landfill bin could have been recycled in one of the services people already had;
- In Edinburgh the picture is broadly similar regardless of whether the waste is collected from a household landfill bin, or a communal landfill bin;
- Scottish people are very reluctant to recycle their food (there is some evidence that Edinburgh is better than average);
- The kerbside collection in Edinburgh demonstrates particularly good levels of recycling “capture rates” for some key materials (paper, plastic bottles);
- Communal bin services in Edinburgh as currently constituted demonstrate lower capture levels than kerbside collection, but broadly similar levels of recyclable waste in the landfill (actually slightly higher) which demonstrates the scope to develop and enhance communal bin services as planned;
- However this result should perhaps be treated with caution due to the small sample sizes; moreover where communal bins are used there is less scope for the Council to drive individual behaviour- if people do not do the right thing they are essentially anonymous as the bin does not sit outside their house.

The following table shows what was in Edinburgh’s landfill bins in kerbside collection and communal bin areas.

KERBSIDE LANDFILL BINS Level 1 category	Phase 1		Phase 2		Phase 1&2	
	% weight	kg/hh/wk	% weight	kg/hh/wk	% weight	kg/hh/wk
Glass waste	4%	0.29	5%	0.15	5%	0.22
Glass waste (non target)	0%	0.00	0%	0.00	0%	0.00
Paper	4%	0.25	4%	0.13	4%	0.19
Card	4%	0.26	3%	0.12	4%	0.19
Paper (non target)	6%	0.37	4%	0.28	5%	0.32
Books	0%	0.01	0%	0.00	0%	0.01
Metal - ferrous and non-ferrous	2%	0.16	2%	0.08	2%	0.12
Metal - ferrous and non-ferrous (non target)	1%	0.07	1%	0.04	1%	0.05
Plastic bottles	2%	0.13	3%	0.10	2%	0.12
Dense plastic	3%	0.17	2%	0.12	2%	0.14
Dense plastic (non target)	1%	0.08	1%	0.05	1%	0.06
Plastic film	10%	0.64	5%	0.43	8%	0.53
Polystyrene	0%	0.02	0%	0.01	0%	0.01
Garden wastes	0%	0.02	1%	0.04	0%	0.03
Garden wastes (non target)	0%	0.01	0%	0.01	0%	0.01

Food wastes	37%	2.44	33%	1.99	35%	2.21
Food wastes (non target)	0%	0.00	0%	0.02	0%	0.01
Wood wastes	0%	0.02	6%	0.01	3%	0.01
WEEE	1%	0.06	0%	0.03	1%	0.04
WEEE (non target)	0%	0.00	0%	0.01	0%	0.00
Tyres	0%	0.00	0%	0.00	0%	0.00
Miscellaneous combustible	1%	0.06	2%	0.06	1%	0.06
Textiles & footwear	3%	0.19	6%	0.33	4%	0.26
Textiles & footwear (non target)	1%	0.04	1%	0.05	1%	0.05
Misc. non-combustible	0%	0.02	0%	0.14	0%	0.08
Hazardous wastes	1%	0.03	0%	0.02	0%	0.02
Hazardous wastes (non target)	0%	0.00	0%	0.00	0%	0.00
Healthcare waste	17%	1.14	17%	1.11	17%	1.13
Fines (<10mm)	1%	0.03	5%	0.29	3%	0.16
<b>Total</b>	<b>100%</b>	<b>6.51</b>	<b>100%</b>	<b>5.59</b>	<b>100%</b>	<b>6.05</b>
<b>COMMUNAL LANDFILL BINS</b>	<b>Phase 1</b>		<b>Phase 2</b>		<b>Phase 1&amp;2</b>	
<b>Level 1 category</b>	<b>% weight</b>	<b>kg/hh/wk</b>	<b>% weight</b>	<b>kg/hh/wk</b>	<b>% weight</b>	<b>kg/hh/wk</b>
Glass waste	10%	0.79	3%	0.34	7%	0.57
Glass waste (non target)	0%	0.00	0%	0.00	0%	0.00
Paper	5%	0.44	4%	0.47	5%	0.46
Card	6%	0.51	6%	0.31	6%	0.41
Paper (non target)	5%	0.40	5%	0.23	5%	0.31
Books	0%	0.00	0%	0.00	0%	0.00
Metal - ferrous and non-ferrous	3%	0.24	3%	0.13	3%	0.19
Metal - ferrous and non-ferrous (non target)	1%	0.12	1%	0.07	1%	0.09
Plastic bottles	4%	0.36	6%	0.25	5%	0.31
Dense plastic	4%	0.34	3%	0.17	4%	0.26
Dense plastic (non target)	1%	0.09	1%	0.05	1%	0.07
Plastic film	7%	0.57	5%	0.29	6%	0.43
Polystyrene	0%	0.02	1%	0.02	0%	0.02
Garden wastes	0%	0.01	1%	0.02	0%	0.01
Garden wastes (non target)	1%	0.11	1%	0.01	1%	0.06
Food wastes	32%	2.62	27%	1.61	30%	2.12
Food wastes (non target)	0%	0.00	0%	0.00	0%	0.00
Wood wastes	6%	0.46	9%	0.62	7%	0.54
WEEE	0%	0.04	0%	0.02	0%	0.03
WEEE (non target)	0%	0.00	0%	0.00	0%	0.00
Tyres	0%	0.00	0%	0.00	0%	0.00
Miscellaneous combustible	1%	0.04	3%	0.11	2%	0.08
Textiles & footwear	3%	0.26	2%	0.34	3%	0.30
Textiles & footwear (non target)	1%	0.11	0%	0.07	1%	0.09
Misc. non-combustible	1%	0.11	0%	0.00	1%	0.05
Hazardous wastes	1%	0.10	0%	0.00	1%	0.05
Hazardous wastes (non target)	0%	0.00	0%	0.00	0%	0.00
Healthcare waste	3%	0.26	15%	0.91	9%	0.59
Fines (<10mm)	1%	0.10	4%	0.23	3%	0.16
<b>Total</b>	<b>100%</b>	<b>8.09</b>	<b>100%</b>	<b>6.28</b>	<b>100%</b>	<b>7.19</b>

The following table shows the capture rates of a range of materials in the mixed recycling or packaging bin samples in Low Density (kerbside collection) areas and High Density (communal bin) areas. Note in communal bin areas, paper is collected separately.

These represent the percentages of the different materials being placed in the relevant recycling bins.

Level 1 material	Level 2 material	LD S1	LD S2	LD S3	LD S4	LD Weighted	HD only
Paper and Card	Newspaper, magazines	99%	97%	94%	83%	95%	
Paper and Card	Other recyclable paper	75%	61%	77%	83%	75%	
Paper and Card	Board packaging	76%	84%	96%	87%	85%	55%
Paper and Card	Thin card packaging	81%	77%	89%	72%	79%	45%
Paper and Card	Other card	100	79%	100	0%	90%	0%
Paper and Card	Books	100	-	100	-	100%	
Paper and Card	Yellow Pages/Directories	77%	68%	73%	79%	72%	37%
Paper and Card	Cardboard beverage	89%	76%	85%	82%	81%	45%
Metal - ferrous and non-ferrous	Cans - steel	83%	85%	91%	74%	83%	21%
Metal - ferrous and non-ferrous	Cans - aluminium	23%	41%	9%	27%	26%	14%
Metal - ferrous and non-ferrous	Aerosols - aluminium	40%	51%	44%	54%	49%	7%
Metal - ferrous and non-ferrous	Aerosols - steel	37%	35%	38%	69%	41%	27%
Plastic bottles	HDPE drink bottles	79%	64%	84%	80%	74%	29%
Plastic bottles	PET drink bottles	94%	74%	92%	86%	85%	42%
Plastic bottles	Other plastic bottles	71%	60%	75%	73%	67%	28%
Dense plastic	Dense plastic packaging	67%	51%	56%	54%	54%	16%