

# Dundee City Council

## Waste and Recycling Strategy Action Plan

# 2020 - 2025





**“...if we are bold, if we are ambitious, then there’s no limit to what we can achieve...”**

## Foreword

Dundee is the city of Discovery, it is a city with a proud heritage and a bright future. We are rightly proud of our city and its innovative history and are delighted to see Dundee take its place on the map as the best place to live in Scotland 2019 as voted by the Sunday Times.

That’s why it is so important that we do all we can to ensure that Dundee remains a great place to live, work, study and visit by taking care of our environment both now and in the future.

In recent years there have been a number of significant changes to waste & recycling collections, trade waste services and litter management in the City and it’s been great to see residents, businesses and visitors embrace these changes and start to make changes which see them recycle more and send items for re-use rather than disposal.

But we must do more. We must all commit to making bigger changes, taking responsibility for our actions and thinking of the future of our beautiful city. This means creating less waste, making the effort to recycle everything we can, putting the right things into the right bins and understanding the importance of these actions for the future of Dundee.

Only if we manage the waste that we create in a sustainable way can we hope to meet the challenges of the future. This strategy sets out the plan to manage Dundee’s waste over the next five years in a sustainable way – increasing recycling to meet national targets, decreasing the amount of waste we produce and disposing of what waste we do create responsibly.

I’m very proud of all of the hard work and effort by Dundee citizens in recent years and I’m confident that we can – and will – do more.



**Councillor Anne Rendall**  
Convenor, Neighbourhood Services

# Waste and Recycling Strategy Action Plan

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**2020 to 2025**

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# Introduction & Background



Dundee City Council, formerly Dundee District Council, first introduced recycling services to the city in 1989, allowing residents to recycle paper, card and garden waste. Waste disposal in Dundee also progressed from landfill to simple incineration before finally to Energy from Waste in the late 1990's. This purpose-built facility, created in the eastern edge of the City, fed the national grid with electricity created from the incineration of Dundee's general waste. This early adoption of both recycling and alternative forms of waste disposal led Dundee to having the lowest level of landfill for any Scottish mainland authority during the last 30 years and being named "Scotland's Recycling City" in 1991.

Waste strategy in Dundee was further developed through the creation of the National Waste Strategy for Scotland in 1999, followed by the Tayside Area Waste Plans. From 2010 onwards the strategic direction for the council was led by national policy and legislation such as the Zero Waste Plan, the Waste (Scotland) Regulations 2012 and the Charter for Household Recycling in Scotland 2016.

This strategy provides an update on actions taken to implement national policy and meet legislative requirements in Dundee and sets out the strategic direction for the Council going forward. It provides a clear action plan to ensure that waste is managed more efficiently, ensuring that every recycling opportunity is taken over the next five years in order to work towards national recycling targets and once again becoming "Scotland's Recycling City".

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## Development process

The creation of the Waste and Recycling Strategy Action Plan began with a review of historical waste strategy in Dundee. This included evaluation of existing service provision and assessment of the forthcoming changes to policy framework and legislation in Scotland. A project team was established to:

- co-ordinate the review process;
- determine the reasons, scope and terms of reference of the Strategy and Action Plan;
- agree an implementation programme for the next five years.

A critical evaluation of Dundee's current strategic approach and the steps undertaken to date, to tackle the City's waste & recycling then followed.

This has allowed consideration of ongoing issues, service gaps, and provided opportunity to consider best practice within other local authorities, making use of the Local Government Benchmarking Framework (LGBF) to ensure focus on those authorities with similar characteristics to Dundee.

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## Terms of Reference

The specific terms of reference were identified as follows:

- Review the existing waste policies and service provision within Dundee;
- Highlight significant progress achieved to date and provide details of the relevant legislative and policy context;
- Determine the scope to make sure that all strategic and operational aspects of waste management are fully considered;
- Identify new and emerging legal and policy issues likely to impact on Dundee's future obligations to manage waste;
- Undertake horizon scanning to ensure readiness for future challenges; and
- Define a clear work programme for the next five years which allows further progress to be made towards a waste free Dundee.

## Waste Strategy in Dundee – progress to date

Following publication of the National Waste Strategy for Scotland in 1999, the Scottish Executive created 11 distinct areas across Scotland and worked with the Councils in those areas to create Area Waste Plans which would implement this strategy at a local level.

The Tayside Area Waste Plan was developed and this focused on waste prevention initiatives, recycling and composting, other waste treatment and finally disposal to landfill in accordance with the principles of the waste management hierarchy.

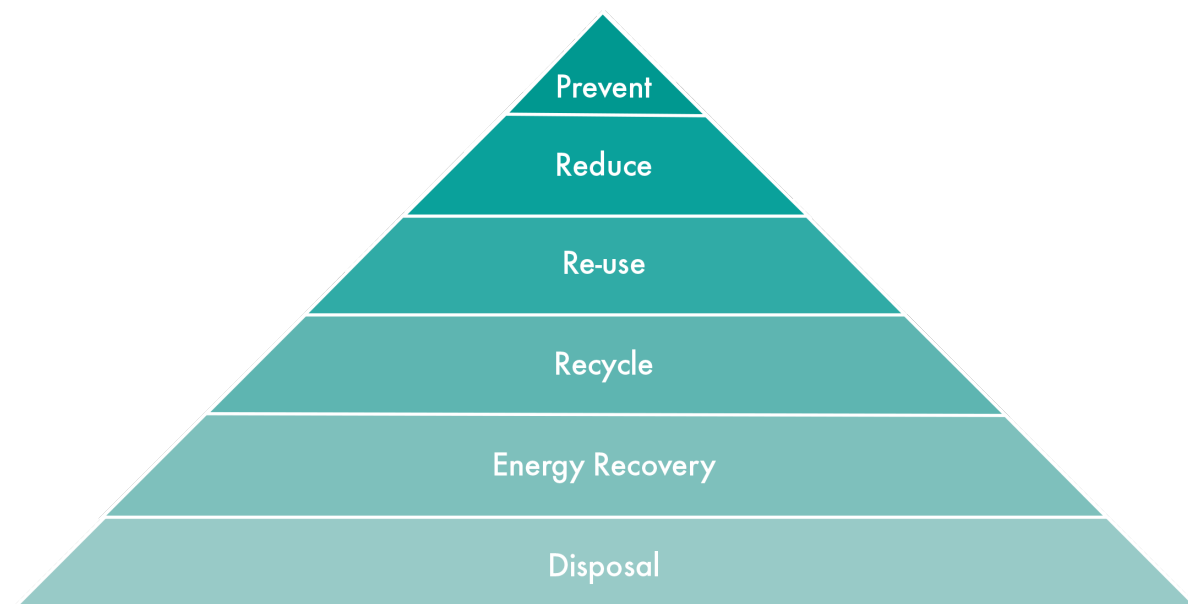


Figure 1: The Waste Management Hierarchy

Already using Energy from Waste incineration as an alternative to landfill, Dundee then focused on increasing recycling provision across the city whilst introducing a number of waste reduction initiatives.

This began with expansion of existing recycling collections for paper, card and garden waste, followed by the introduction of kerbside boxes for recycling glass, plastics and cans in 2004. Local recycling “bring” sites known as neighbourhood recycling points were then introduced in 2006. Further infrastructure changes took place throughout 2005/6, leading to improved Household Waste Recycling Centre facilities for residents, whilst expansion of the trade waste collection service saw the council’s customer base increase. The changing face of waste in Dundee was a national exemplar for a number of years as recycling rates increased each year, well above the national average.

Alongside achieving a positive impact on recycling rates, these various changes did result in a number of different household waste & recycling collection systems operating across the city, with some areas in receipt of collection services for garden waste, paper, card, plastics, metals and glass, whilst others had only paper & card and/or garden waste recycling facilities.

Trade waste services were similarly varied with the availability of services in a given area being largely dependent on which domestic collections operated in that same area.

In addition, most tenements had little or no recycling provision and had a significant number of general waste wheelie bins stored either to the front or the rear of the properties, both unsightly and a considerable fire risk.

Publication of the Scottish Zero Waste Plan in 2010 and the Waste (Scotland) Regulations in 2012 gave a new strategic direction for waste management in Scotland and provided Dundee with a blueprint for service changes to bring local collections in line with these national drivers.

A number of significant changes to waste & recycling collections were then implemented between 2011 – 2016, further improving infrastructure and increasing service coverage to enable residents to recycle more materials in their kerbside bins and at the City's Household Waste Recycling Centre's, enhancing service provision for trade waste customers as a result.

The launch of the Charter for Household Recycling in Scotland in 2016 led to further changes to ensure Dundee's waste & recycling collections were compliant with the national model, despite which, recycling performance did not improve as significantly as hoped.

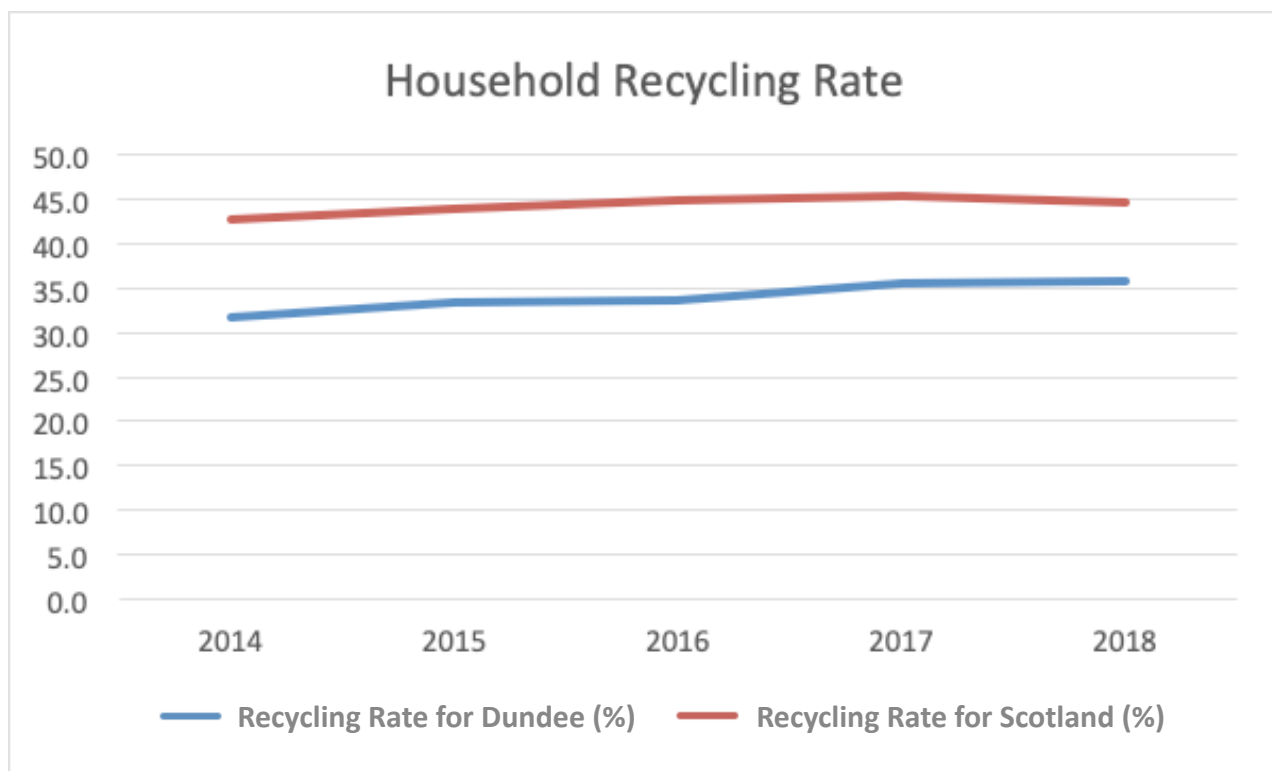


Chart 1 – Recycling rates in Dundee & Scotland. SOURCE – SEPA published statistics

This strategy has therefore been created to build on Dundee's progress to date in developing infrastructure and providing services which align with national policy and legislative drivers and to shift focus towards behavioural change to ensure future performance improvement.

## Dundee's strategic waste achievements to date

- Early introduction of recycling services in 1989
- Scotland's Recycling City in 1991
- Creation of a long-term waste disposal via an Energy from Waste treatment solution
- First Council in Scotland to align services with National Charter & Code of Practice
- Comprehensive range of recycling services for residents of flatted properties

# Where we are now

## Service profile

The council has a statutory responsibility for managing and delivering the city's waste and recycling provision.

Waste management is undertaken by the council in Dundee through Neighbourhood Services. This service is responsible for providing collections across the city, operating household waste recycling centres (HWRC's) and the Riverside Composting Site. These operations are supported through staff involved in route planning and monitoring, developing waste disposal and recycling policy, and managing recycling contracts.

The service uplifted 77,053 tonnes of waste in 2018 from approximately 74,809 residential properties and over 1,400 business premises. Of this, 35.5% was recycled and only 7.3% landfilled. Published recycling rates in Scotland focus on household waste only and within Dundee, 35.8% of household waste was recycled in 2018.

A full breakdown of operations is detailed below;

## Domestic Services

### Refuse collection

The council, provides a wide range of refuse collection services across the city. The way waste is collected depends on the type of property; and the access required for households and businesses.

### Residual waste collections

General waste is collected every two weeks from households which place their waste on the kerbside for collection and twice per week from flatted and similar properties.

This amounts to around 1.6 million collections every year.

### Recycling services

Recycling collection is provided to both kerbside and flatted households:

## Kerbside provision



**Blue Bin**  
Paper, card and cardboard  
Collected 4-weekly



**Burgundy Bin**  
Metals, plastics and cartons  
Collected 3-weekly



**Food Waste Containers**  
Cooked and uncooked food waste  
Collected weekly



**Bring Site**  
Glass bottles and jars  
Collected weekly



**Grey Bin**  
Household waste that can't be recycled  
Collected fortnightly



**Brown Bin**  
Garden Waste  
Collected fortnightly March-Nov

Figure 2 – Current kerbside household service provision in Dundee

## Flatted provision



Figure 3 – Current flatted household service provision in Dundee

Yearly recycling collection totals for these services are summarised below.

• Kerbside mixed recyclate*	720,000 collections per year
• Kerbside paper & card	540,000 collections per year
• Kerbside/Flatted garden waste	840,000 collections per year
• Kerbside food waste	2,150,000 collections per year
• Flatted mixed recyclate*	120,000 collections per year
• Flatted paper & card	120,000 collections per year
• Flatted food waste	90,000 collections per year

\*cartons, plastics and metals

In addition, a number of public recycling sites across all areas of the city are provided. These include:

- 2 household waste recycling centres;
- 321 glass recycling points;
- 31 recycling points for a variety of materials

## Bulky uplift service

A special collection service is provided to residents for bulky items which can't be uplifted in the normal refuse service. This includes items such as furniture, household appliances and carpets.

This is a chargeable service & full details can be found on the council website -

[www.dundee.gov.uk/service-area/neighbourhood-services/environment/bulky-uplift-service](http://www.dundee.gov.uk/service-area/neighbourhood-services/environment/bulky-uplift-service)

Around 3,000 tonnes of bulky waste is uplifted every year.



## Commercial Waste Services

The council has a statutory obligation to offer or arrange for the collection of commercial waste and recycling materials. This includes providing collections of residual waste, paper and cardboard, metals and plastics, glass, food and garden waste in this sector.

Commercial collections are arranged via a number of services:

- Collection of Bins – capacities of 140/240/660/1100/1280 litre
- Uplift of Commercial trade sacks
- Short/long term skip hire – various capacities
- Special Collections for bulky and/or one off uplifts.

Collections are provided daily, weekly, fortnightly and 4 weekly, depending on customer requirements. A total of 173,000 commercial collections are undertaken by the council each year.

The council's pricing structure is reviewed annually to ensure all associated costs are recovered. Prices per waste/recycling stream are set annually reflecting the associated disposal costs and the current market conditions for these materials.

The current pricing structure is two tier, with a reduced rate in place for customers with both refuse and recycling contracts and higher rates for those with recycling contracts only. A discount is provided to registered charities.

Waste disposal advice is provided to new and existing customers on request. Contracts are assessed according to the nature of the business and the likely volume of waste/recycling commodities produced. The council has an environmental compliance team who provide advice to businesses citywide.

Interaction with SEPA is also conducted on an ad-hoc basis when information or advice is required from either party.

## Waste Transfer & Treatment Sites

The service manages:

- 3 waste transfer stations;
- 1 open windrow composting site;
- 1 closed landfill site; and
- 1 waste treatment and recycling facility to treat gully waste and street sweepings.

## Waste Disposal

In 2014 Dundee City Council began a joint procurement process, in collaboration with Angus Council, to secure a residual waste treatment contract. The existing Energy from Waste facility which had been in operation since 1998 was coming to the end of its working life and a new contractor was sought to take over the existing site and either maintain and repair this or build a replacement facility. A new contract was awarded in late 2017, with the contractor continuing to utilise the existing facility whilst constructing a new plant on an adjacent site, scheduled for opening in 2020.

Energy from Waste (EFW) is the preferred form of waste disposal over landfill as it creates a clean, usable output from the disposal of general waste.

At the current facility, waste is shredded before being fed into an incinerator which, as the waste is burned, generates energy which is fed back into the national grid, while some of the ash produced during the combustion process is sent for recycling.

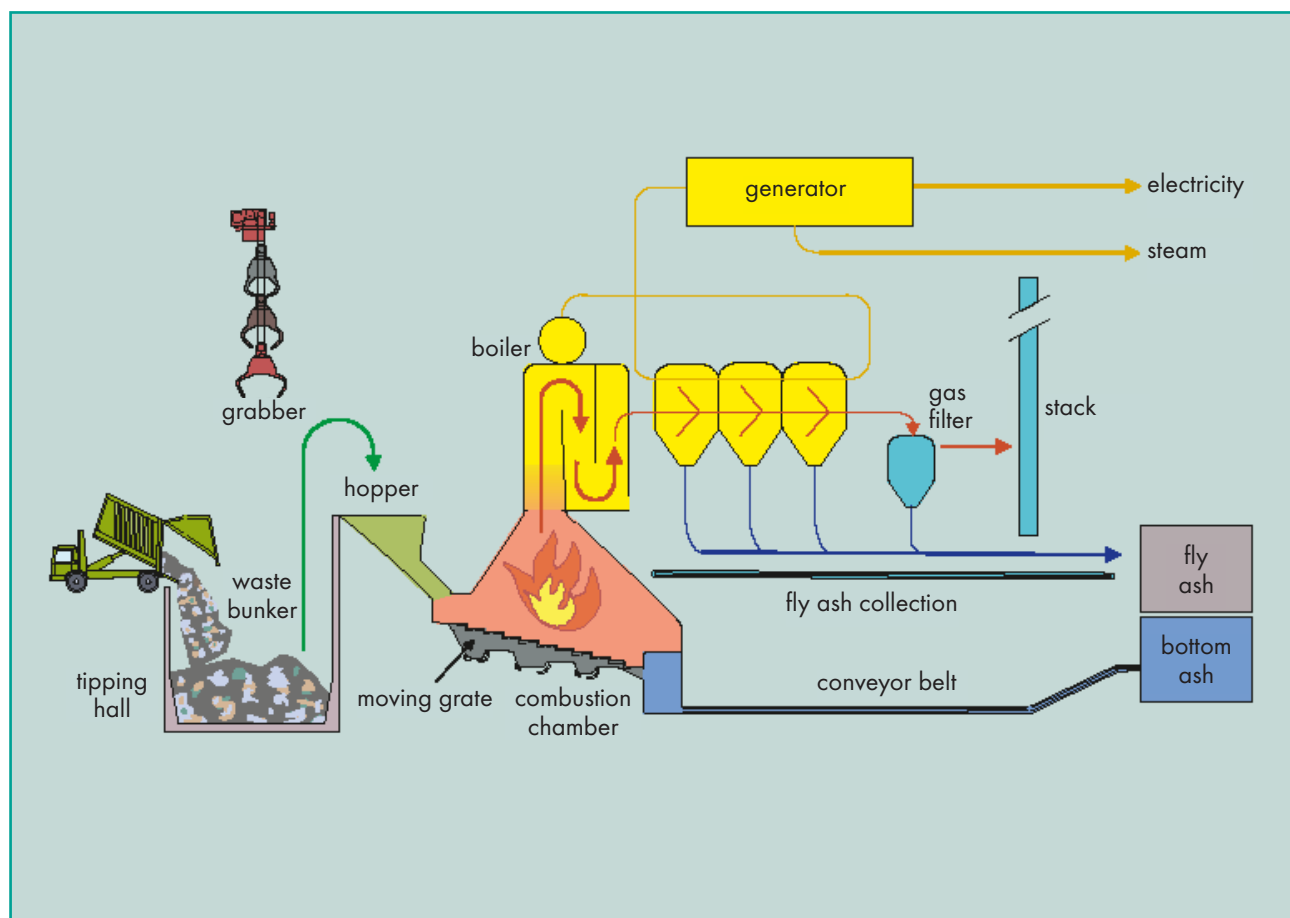


Figure 4 – The Energy from Waste process

The new contract for residual waste treatment & disposal via Energy from Waste provides Dundee with a secure and sustainable means of waste disposal. This removes reliance on landfill and was introduced to ensure that the city had a long-term solution in place ahead of the landfill ban which was due to commence in 2021 as detailed in the Waste (Scotland) Regulations 2012. The implementation date has subsequently been postponed until 2025.

MEB, the council's Energy from Waste contractor, has committed to a range of community benefits to be provided as part of the conditions of their contract. These benefits include a range of training opportunities for local young people and a number of educational and awareness-raising activities to be held each year. In addition, a challenge fund of £3,000 is available annually for Dundee schools to help them run educational projects related to waste & recycling.

A collaborative working partnership has been established between the Council and MEB and these continue to be developed fully in order to maximise the potential for community benefits and enduring legacy of this long-term sustainable waste management solution for Dundee.

## Composting

Dundee manages all green waste collected in the city at its own composting site at Riverside.



The green waste is screened to remove any contaminants before being shredded to an even size and piled into large open-air columns called windrows. The naturally occurring microbes within the mix then begin to digest the material, creating heat which will kill off any harmful bacteria. These windrows are monitored and turned regularly to ensure an even temperature and plentiful oxygen within the mix. The composting process takes approximately 14-16 weeks. The end product, known as “Discovery Compost”, undergoes a number of quality checks to ensure it meets the required standards before being offered for sale to local residents and businesses.

Discovery Compost produced at Dundee’s Riverside site is certified to PAS100 – a nationally recognised quality standard, monitored by SEPA.

## Home Composting

Home composting is encouraged by the council, with home composting bins available to buy and information on how to get started on the council’s website. It is offered as an alternative to using the chargeable garden waste collection service available to householders and is promoted to plot-holders at local allotment sites, with a composting guide included in all new plot holder welcome packs.



## Re-use

In 2015 funding was obtained from Zero Waste Scotland to create a Re-use facility within Dundee's Baldovie Household Waste Recycling Centre.

This Re-use Hub is operated in partnership with a local social enterprise organisation and this outlet accepts non-recyclable items which can be prepared for re-use. This allows for furniture, toys, bikes, bric-a-brac, exercise and gardening equipment to be re-used and saved from disposal.

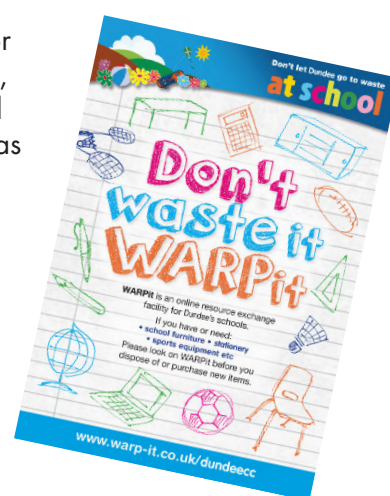
Since 2015, approximately 238 tonnes of goods have been recovered for re-use.



**WARPiT** (Waste Action Re-Use Portal) is an online tool that makes it easy for organisations in Dundee to locate and obtain surplus items (such as furniture, office consumables, electrical items, fixtures and fittings, books and technical equipment) thereby reducing procurement spend and waste disposal costs, as well as minimising waste, promoting re-use and reducing associated carbon emissions.

Since launching in 2014, Dundee City Council's use of WARPiT has saved over £320,000 in costs and 53 tonnes in waste disposal. Items totaling almost £69,000 have been donated to local charities.

A Tayside Charities WARPiT account has also been established with over 20 members, through which charities and social enterprises across Dundee and the wider Tayside region can sign up, donate their surplus resources, promote re-use through partnership working, and record and track their collective monetary, waste and carbon savings.



## Education and Awareness

Provision of the above collection, recycling and disposal services is only part of the overall management of waste within the city. Without the appropriate level of buy-in from householders and businesses alike, it is recognised that collection schemes will not alone deliver the required results. Consequently, the council undertakes a wide range of education and awareness raising activities and endeavours.

Staff regularly attend meetings of community groups, residents associations and local forums in order to provide face to face information and advice. In 2018 funding was obtained to allow temporary specialist recycling advisors to be appointed to undertake doorstep engagement visits to approximately 20,000 households.

In addition to providing service information, staff also ensure that they engage with residents across the City on a proactive basis in order to raise the profile of waste reduction, reuse and recycling and encourage the necessary behaviour change to improve usage of these services. Drop-in sessions and events are held throughout the year and communications campaigns focus on certain aspects of waste awareness are run, making full use of social media and web-based services.

As part of the ongoing commitment of the council to ensure that waste awareness becomes an integral part of the school curriculum, a comprehensive programme of waste education was first devised in 2008 and has been regularly delivered to schools across Dundee. The waste education strategy and full menu of educational activities can be found on the council website.

Service information is routinely communicated to households in Dundee whenever a service change occurs. The council website has pages with useful information for residents, alongside more detailed information on recycling processes - <https://www.dundee.gov.uk/recycle-for-dundee>

## Resources

### Budget

The waste service has an annual net revenue expenditure budget of £14m. This comprises gross expenditure of £16.5m offset by income from commercial waste contracts, sale of recyclates and other fees and charges. This budget covers the costs of staff, vehicles, collection and disposal/reprocessing of all waste & recyclates. Street cleaning costs are incorporated within the streetscene and land management budget. The net budgeted revenue cost of providing street cleaning is £2.5m per annum, this includes staff, equipment and materials and transportation. Detail on the allocation of these budgets is provided below.

The greatest element of cost relates to third party payments for disposal of general waste, which accounts for 54% of the overall gross waste services budget. The costs of providing a rapid response uplift service for flytipped material and excess street waste is reflected in the street cleaning costs.



Chart 2 – Financial resources, Waste management source: Final Revenue Budget 2019/20.

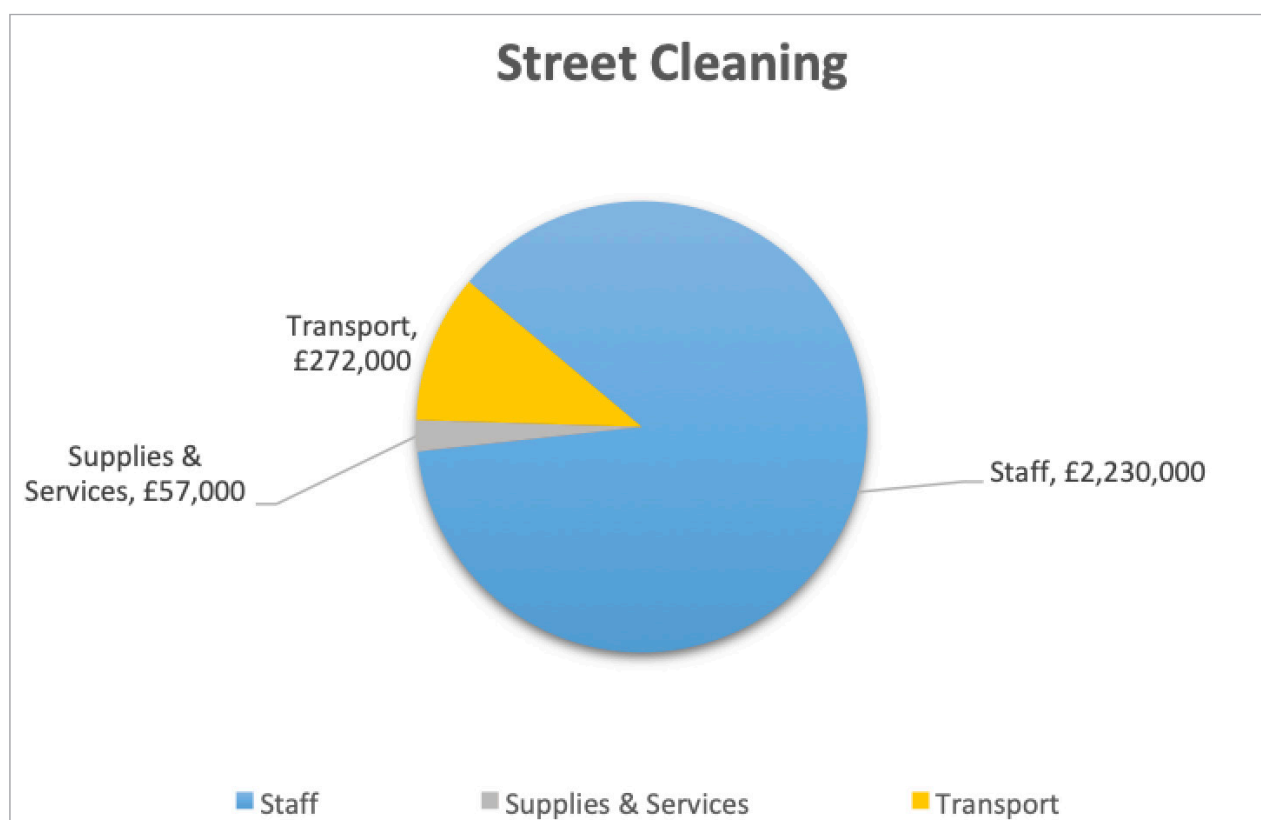


Chart 3 – Financial resources, Waste management source: Final Revenue Budget 2019/20.

## Staff & Equipment

There are currently over 230 front line employees covering waste related operations, split into a number of service areas and covering both Waste and Street Scene Divisions. The Waste division is overseen by a Service manager and supported by a team of 8 officers covering functions such as routing, contract management, waste strategy, waste projects and data reporting. The Street Scene Division is part of the Environment Management Section, overseen by a Service Manager. This section includes street cleaning operations, Grounds maintenance service delivery and development, work planning and scheduling, environment management strategy, project delivery, landscape design, greenspace and events.

The overall breakdown of operational staff is shown below.

Service Area	Number of Staff
Supervisory Staff	15
Waste Drivers	44
Refuse Collection Operatives	83
Disposal Site Operatives	16
Mobile Street Cleaning Operatives	50
Manual Street Cleaning Operatives	25
Mechanical Street Sweepers	6

Table 1 – Breakdown of operational staff by service area

## Operatives

The service has a fleet of over 100 vehicles and plant. This includes refuse collection vehicles, vans, articulated trucks, high reach loaders and mechanical sweepers.

## Locations

The Environment service operates from a number of locations around the City.

## Marchbanks

- Main Operational Depot - refuse collection
- Transfer Station - food waste and street sweeping residues
- Base for office staff

## Baldovie

- Transfer Station – recycling and general waste
- Household Waste Recycling Centre (HWRC)
- Operational Depot - refuse collection
- Gully waste and street sweeping treatment facility

## Riverside

- Open Windrow Composting site
- Compost transfer station
- Household Waste Recycling Centre (HWRC)
- Ecological treatment facility for street cleaning residues from road gully and sweepings waste
- Gas and water monitoring of former landfill site

## City Square

- Main base for office staff

## Street Cleaning Operational Depots

- Gellatly Street
- Caird Park
- Baldovie
- Maitland Street
- Marchbanks
- Logie Avenue

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## Waste strategy and council strategic priorities

The Waste Strategy is linked to the council's wider strategic priorities as outlined in the City Plan and the Council Plan.

- Dundee will have a strong and sustainable city economy that will provide jobs for the people of Dundee, retain more graduates and make the city a magnet for new talent;
- Dundee will offer real choice and opportunity in a city that has tackled the root causes of social and economic exclusion, creating a community which is healthy, safe, confident, educated and empowered;
- Dundee will be a vibrant and attractive city with an excellent quality of life where people chose to live, learn, work and visit.

These plans outline the five strategic priorities to be addressed within the City around the themes of;



Fair Work and Enterprise



Community Safety and Justice



Children and Families



Building Stronger Communities



Health, Care and Wellbeing



The council is committed to delivering Best Value, Fairness and Sustainability by creating stronger, more resilient, influential and inclusive communities and neighbourhoods. Waste and recycling feature in the key priorities identified for reaching this goal:

- Recycling waste to meet Scotland's zero waste ambitions
- Providing sustainable waste management systems which comply with national policy and legislation and achieve Scottish Government targets

Actions detailed within this strategy have therefore taken account of the above key priorities as well as those outlined in other related council strategies, such as the City Plan, the Council Plan, Climate Action Plan (CAP) and the Take Pride Action Plan.

## Performance management

Waste Management contributes to a range of key performance indicators (KPIs) which are detailed within the Council Plan. This measures progress and helps to identify how well the Council is performing in particular areas.

In the area of waste management, KPIs are used to measure the cost of refuse collection, waste disposal and street cleansing, as well as resident satisfaction with these services.

The indicators are also used to measure the proportion of waste that is recycled, composted and landfilled.

The following KPIs will continue to be used to monitor progress of the implementation of the waste strategy from 2020 – 2025;

- Tonnage of biodegradable municipal waste landfilled
- Net cost of waste collection per premise (£)
- Percentage of adults satisfied with refuse collection services
- Percentage of household waste recycled or composted
- Percentage of household waste landfilled
- Advance communication and behavioural change in promoting recycling
- Percentage of abandoned vehicles removed within 14 days
- Percentage of adults satisfied with street cleaning
- Net cost of street cleaning per 1,000 population (£)

## Waste Data Management Reporting

All local authorities in Scotland hold a statutory duty to report waste data to SEPA on an annual basis. This involves reporting on all waste collected by or on behalf of the council and detailing how this waste is processed, treated, recycled or disposed.

SEPA then check and verify the data submitted by councils before publishing this each year. Since 2013 recycling rates have been measured for household waste only, although Councils must submit data relating to all collections, whether these are household or commercial. SEPA's league tables are based on calendar year figures, whilst all council internal KPI's monitor progress against financial year figures.

## Local Government Benchmarking Framework (LGBF)

As with all local authorities, as well as monitoring key performance indicators such as recycling rates internally, Dundee also benchmarks performance against other Scottish local authorities with broadly similar characteristics. Developed in collaboration with the Improvement Service, the “family group” of local authorities considered similar to Dundee includes Glasgow, Falkirk, Edinburgh, Aberdeen, North Lanarkshire, West and East Dunbartonshire, i.e. all authorities classed as “urban”.

The LGBF Overview Report 2017-18 showed a breakdown of waste management performance indicators by council and compared these both to the national average and to the other authorities within the family grouping.

Whilst some indicators, such as % of adults satisfied with street cleaning showed positive performance trends for Dundee, others, most notably recycling performance, were poor.

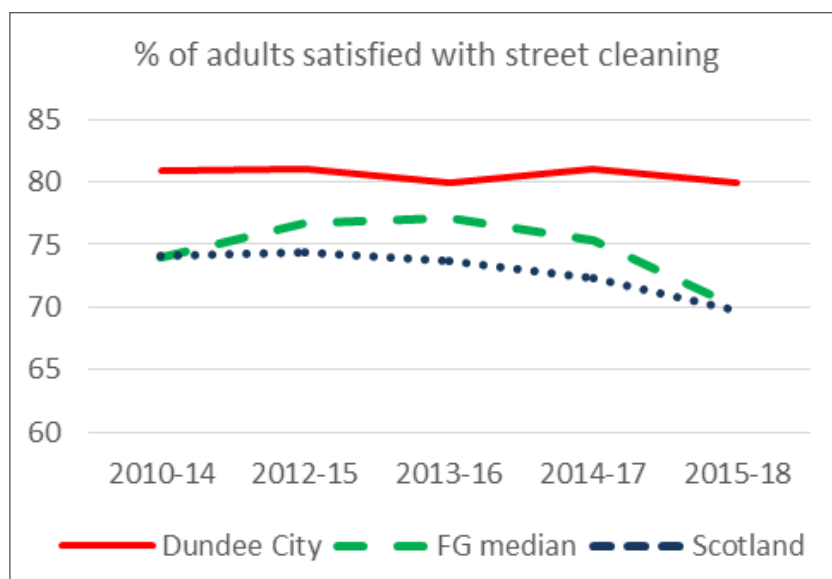


Chart 4 – Dundee street cleaning satisfaction score against LGBF family group & Scottish average SOURCE: LGBF Overview Report 2017-18

The street cleaning satisfaction data compiled by the Improvement Service is presented in 3 year rolled averages to deliver the required level of precision at a local level. By rolling the data across the 3 years, the confidence intervals for all figures reported are within 5.5%.

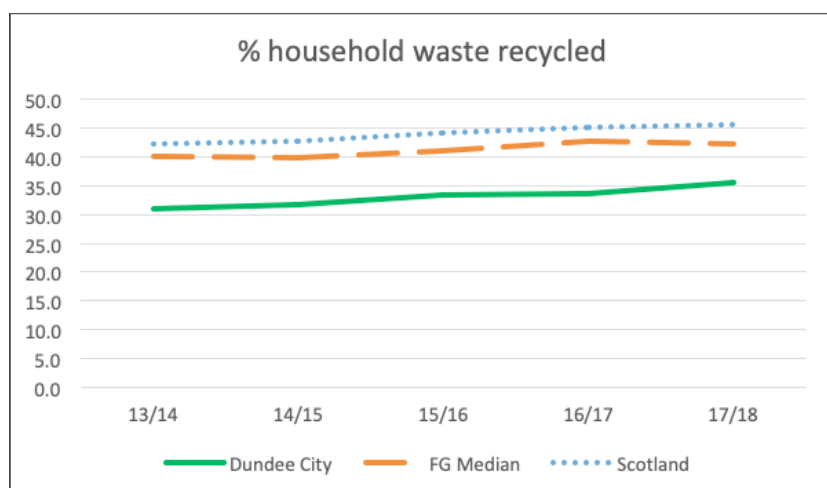


Chart 5 – Dundee recycling performance against LGBF family group & Scottish average SOURCE: LGBF Overview Report 2017-18

## Refuse and recycling

Dundee has, historically, had one of the lowest levels of landfill in Scotland and usually the lowest level of landfill amongst all mainland authorities, with only Shetland landfilling less than Dundee annually and the gap between Dundee's performance and the rest of Scotland being significant.

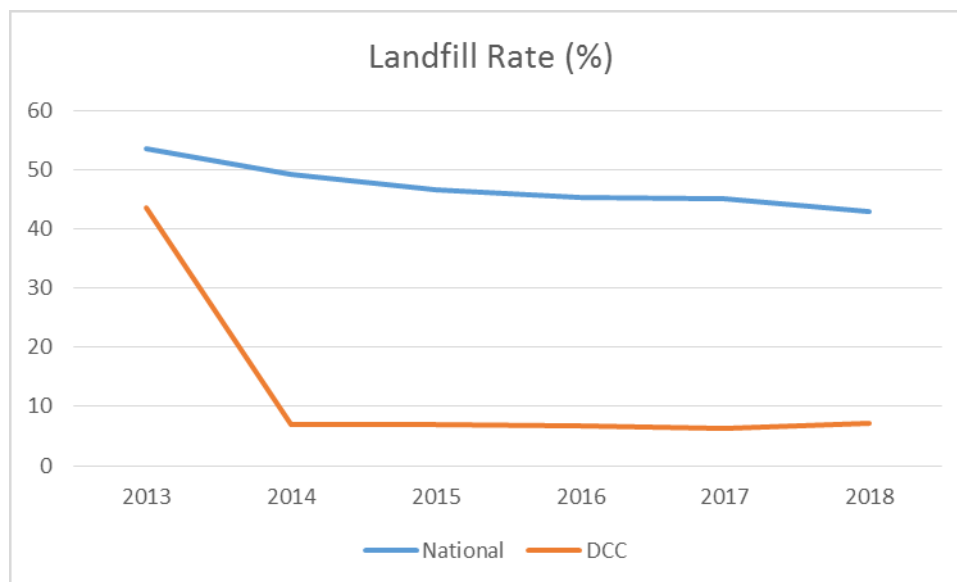


Chart 6 – Dundee's landfill rate versus national rate. SOURCE: SEPA

This is a significant achievement which highlights Dundee's long-standing commitment to finding alternatives to landfill. The forthcoming landfill ban and growth in the Scottish EfW market means that all Scottish authorities are required to develop similar solutions which match Dundee's lead in this area, following the implementation of the Dundee & Angus joint residual waste partnership in 2017.

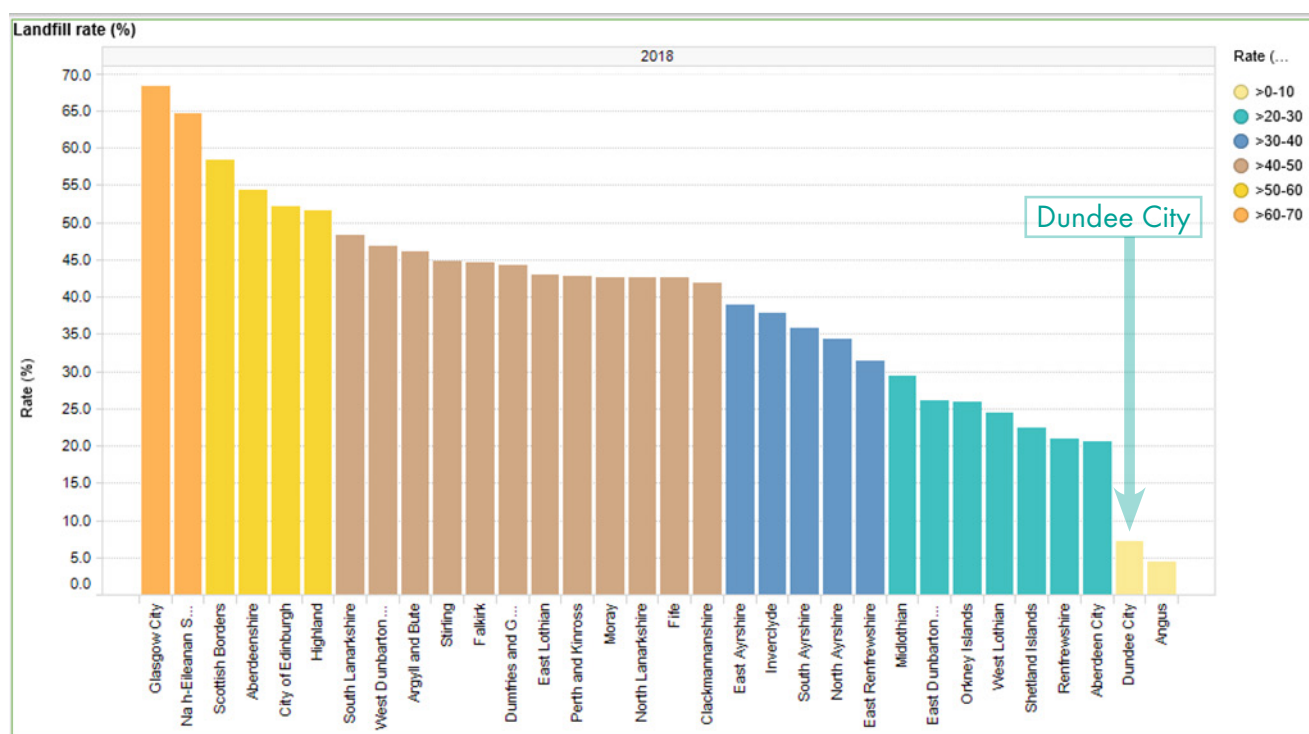


Chart 7 – Dundee's landfill compared to other local authorities in 2018. SOURCE: SEPA

Dundee's recycling performance was excellent in the early 2000's with Dundee routinely ranking high in SEPA's league tables of local authority recycling rates. In recent years, however, Dundee's recycling rate has fallen significantly below the national average and the proportion of household (HH) waste collected which is sent for disposal versus the proportion collected for recycling shows the scale of the problem.

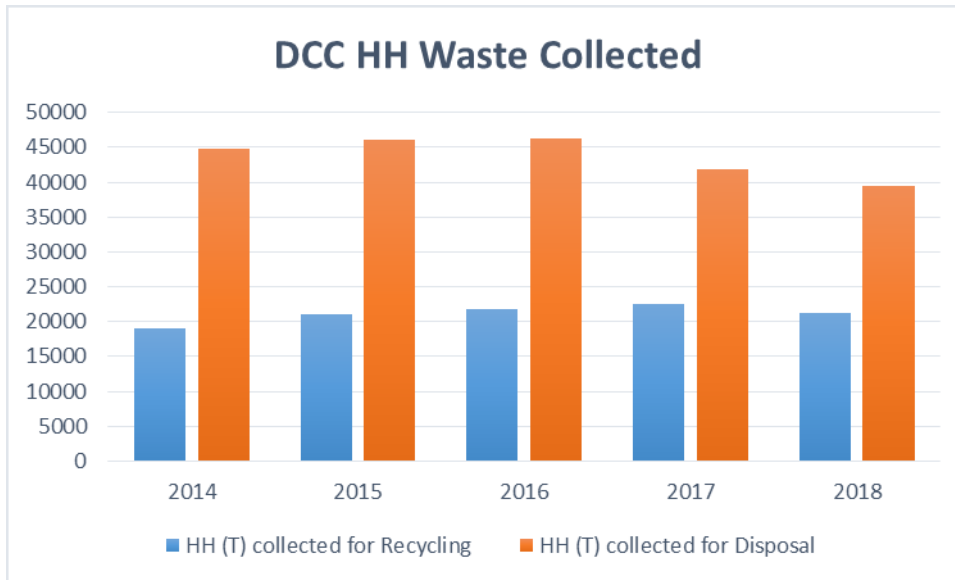
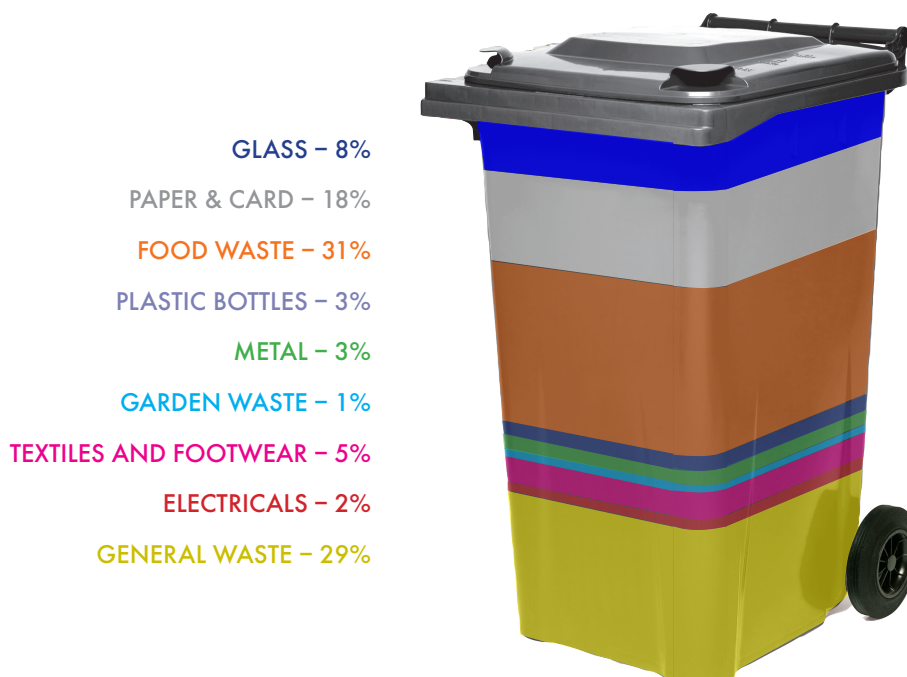


Chart 8 – Household waste collected for recycling & disposal SOURCE - SEPA

In order to assist in evaluation of this situation, detailed compositional analysis of household bins has been undertaken. This process helps identify the reasons for low recycling in some areas and involves organising samples of collected waste to be taken to one of the council's sites and examined. This allows detailed categorisation, according to whether it is general waste, recyclable paper, plastic, food waste etc. This helps to identify how much recyclable material is still being disposed of in the general waste bins by residents. The breakdown of the contents of sample load of general waste wheelie bins in Dundee is shown below.



It is noted that Dundee differs from most other authorities due to its urban make up and high proportion of flats and tenements, which make up around 50% of households in the city. These properties present significant challenges in terms of participation in recycling services and contamination of recycling bins. A recent sample of bins serving flatted properties in the city was analysed and results showed that communal general waste bins outside flatted properties are still routinely used for disposing of all wastes despite recycling bins being located alongside general waste bins. In addition, a significant amount of bulky waste is being disposed of in communal bins rather than being taken to recycling centres or collected via the bulky uplift service. Bulky waste refers to items which should not be disposed of in household bins such as furniture, electrical items, exercise equipment, carpets etc.

	GENERAL WASTE	RECYCLING	BULKY WASTE
	%	%	%
Sample 1	31%	35%	34%
Sample 2	27%	19%	54%
Sample 3	23%	44%	33%

Table 2 - SOURCE: Council compositional analysis September 2017

Where residents do not segregate their waste and make use of the recycling bins provided, or where they use communal bins for disposal of bulky wastes, these general waste bins fill more quickly and residents then tend to deposit surplus bags of waste into recycling bins instead, creating knock-on issues with contamination of the recycle material.

Further compositional analysis has also been undertaken in communal bins for paper & card and Metals, Plastics & Tetra Paks (MPT). This confirmed that there is an extremely high proportion of contamination due to these bins being misused to dispose of general waste:

	RECYCLING	CONTAMINATION
	%	%
Sampled paper & card bins	78%	22%
Sampled MPT bins	24%	76%

Table 3 - SOURCE: Albion Environmental Compositional Analysis, April 2018

Contamination is classed as any material within the recycling bins which should not be there and can range from small-scale contamination such as plastics, paper & cardboard, glass and food residues placed in the wrong bin to large-scale contamination where whole bags of general waste are routinely placed into recycling bins. There is recognition within the waste industry that contamination can be either;

- DELIBERATE** where recycling bins are used indiscriminately for general waste;
- NON-DELIBERATE** where incorrect materials are deposited in recycling bins in the mistaken assumption that the behaviour is correct.

Where contaminated bins are presented from kerbside properties in wheelie bins it can be relatively simple to identify the source of the contamination and attempts can be made to address the issues with the householder directly. However, there remains no formal process of sanctions for repeat offences. Collection crews often have to resort to making ongoing alternative arrangements for contaminated bins to be emptied, to avoid contaminating entire vehicle loads of segregated recycle.

Where such contamination occurs in communal on-street bins it is both more difficult to identify the likely specific source of the contamination, hence making it extremely problematic to try to address the issue. Contaminated loads of recyclate sent to reprocessors can incur a significant fee. These contaminated loads also render a significant proportion of carefully segregated recyclate unsuitable for reprocessing and consequently needs to be sent for disposal. Such outcomes are damaging to the public mindset and the council's recycling performance, as well as being costly.

Information leaflets have been provided to residents of flatted properties on multiple occasions. Doorstep visits from recycling advisors have also been undertaken to engage directly with householders, to explain how to recycle and answer queries face to face, but the problem persists.

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## Street cleansing and litter performance

The cleanliness of Dundee's streets remains a key priority for the council.

The council provides a comprehensive street cleansing and litter service to the city, 52 weeks a year. This service is responsible for maintaining 645 km of streets; managing 4500 hectares of public spaces; uplifting street bins in all neighbourhoods across the city; collecting and disposing of all street litter.

New street furniture provided by the Council, such as new litter bins, solar powered compactor bins with 'Just Bin it' signage and recycling pods in the city centre bins, is aimed at encouraging people to use the bins thereby improving environmental performance. They will also provide residents and visitors with the option to recycle when they are away from home.

Through the ongoing, 'Take Pride in Your City' campaign, launched in 2015 and refreshed in April 2019, the Council aim to encourage positive changes to people's behaviour; improving the image of the city's environmental quality and the public perception of Dundee as a good environment to live, work, shop and visit. In addition, recognising the national strategy which outlines three cornerstones of intervention to tackle litter and fly tipping:

- Information - ensuring effective and consistent messaging
- Infrastructure - improving the facilities and services needed to reduce litter and promote recycling
- Enforcement - strengthening the deterrent effect of legislation

Four key strategic groups were identified to build on previous efforts:-

- Local Environmental Quality
- Recycling
- City Centre Businesses
- Communications

Specifically in relation to litter management, the campaign will encourage increased public participation through promoting and facilitating community litter picks. The Council assisted with 44 litter picks throughout 2019. Further encouragement of personal and shared responsibility is planned, through increasing the number of city wide Litter Prevention Action Plans, delivery of a litter nudge campaign, along with an ongoing focus on education and enforcement.

Street cleansing and litter performance is measured by the Local Environmental Audit and Management System (LEAMS), managed by Keep Scotland Beautiful (KSB).

LEAMS measures the percentage of areas assessed as 'clean' rather than completely litter free and challenges authorities to tackle problem areas to achieve better results.

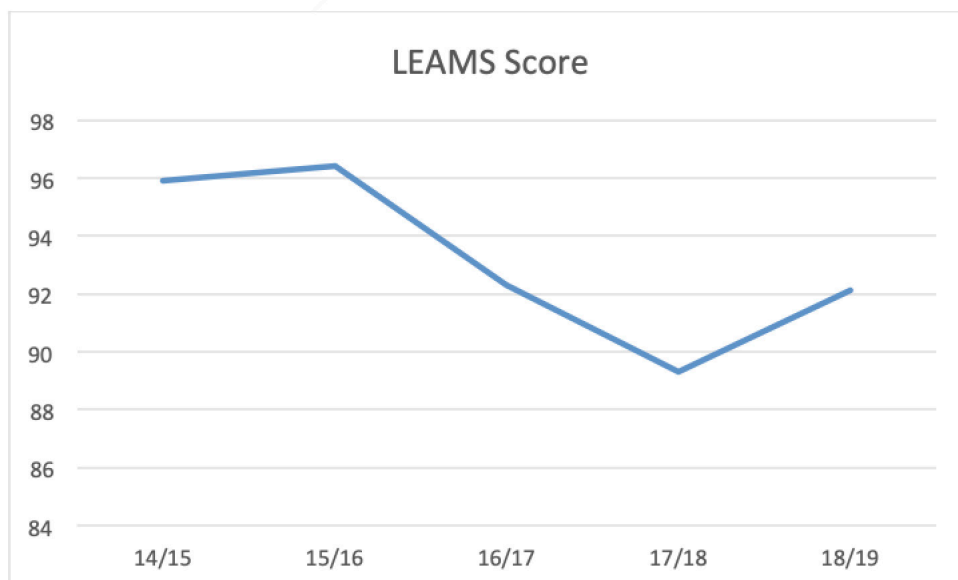
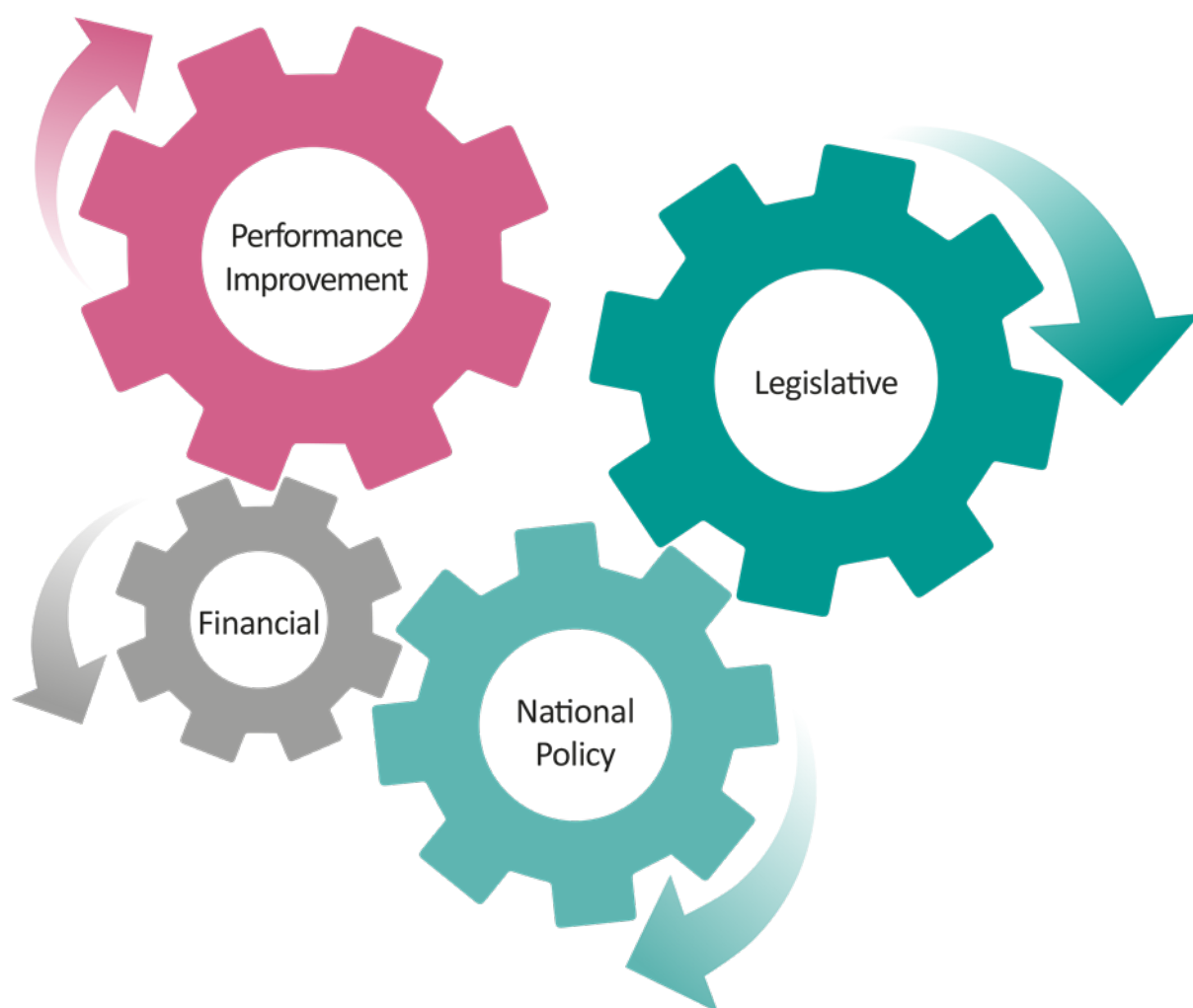


Chart 9 – Dundee Citywide LEAMS Performance 2014/15 to 2018/19

From 2018 to 2019, Dundee's LEAMS rating rose by 2%.

# Legislative and policy drivers



There have been a number of national policy and legislative changes introduced in Scotland in the last decade, sitting alongside the long-established pieces of legislation which govern how waste should be collected and managed in Dundee. This is set within the context of extremely challenging budgetary pressures currently facing local authorities in Scotland.

## European Waste Framework Directive

The Waste Framework Directive (WFD) was introduced in 2006 and revised in 2008 and again in 2018. It provides an overarching legal framework for the management of waste across Europe, covering recycling targets and waste management plans and introducing the concept of the Waste Hierarchy.

## Scotland's Zero Waste Plan

The Scottish Government's [Zero Waste Plan](#) (ZWP) was launched in June 2010 and sets out the vision for a zero waste society, introducing aspirational targets both for recycling and for reducing the volume of waste simply sent for disposal each year. The mission and vision outlined in the Zero Waste Plan set the strategic direction for waste policy in Scotland where all waste is seen as a valuable resource, and is managed appropriately in order to fully capture that resource value.



**Mission:** “To achieve a zero waste Scotland, where we make the most of efficient use of resources by minimising Scotland’s demand on primary resources, and maximising the re-use, recycling and recovery of resources instead of treating them as waste.”

**Vision:** “This vision describes a Scotland where resource use is minimised, valuable resources are not disposed of in landfills, and most waste is sorted into separate streams for reprocessing, leaving only limited amounts of waste to go to residual waste treatment, including energy from waste facilities.”

The Zero Waste Plan also introduced a number of aspirational targets for Local Authorities, a summary of which can be found below.

Zero Waste Plan - Target and cap		Year	Source
1	40% recycling and or composting and preparing for re-use of waste from households	2010	Scottish Government target
2	No more than 2.7 million tonnes of biodegradable municipal waste to be sent to landfill	2010	Article 5(2) of the EU Landfill Directive
3	50% recycling and or composting and preparing for re-use of waste from households	2013	Scottish Government target
4	No more than 1.8 million tonnes of biodegradable municipal waste to be sent to landfill	2013	Article 5(2) of the EU Landfill Directive
5	The preparing for re-use and the recycling of 50% by weight of waste materials such as paper, metal, plastic and glass from household waste and similar	2020	Article 11(2)a of the EU Waste Framework Directive (WFD)
6	60% recycling and or composting and preparing for re-use of waste from households	2020	Scottish Government target
7	No more than 1.26 million tonnes of biodegradable municipal waste to be sent to landfill	2020	Article 5(2) of the EU Landfill Directive
8	70% recycling and preparing for re-use of construction and demolition waste	2020	Article 11(2)(b) of the revised EU WFD
9	No more than 5% of all waste to go to landfill	2025	Scottish Government target
10	70% recycling and or composting and preparing for re-use of all waste by 2025	2025	Scottish Government target
11	Reduction of total waste arisings in Scotland by 15% against 2011 levels by 2025	2025	Scottish Government target
12	33% reduction in food waste against 2013 levels by 2025	2025	Scottish Government target

Table 4 – Summary of waste targets

To date, Scotland has achieved the 2010 and 2013 targets on lowering the amount of biodegradable waste sent to landfill. The 2010 and 2013 recycling targets were not achieved nationally, although some local authorities did reach these recycling rates individually.

## Waste (Scotland) Regulations 2012

In 2012, the Scottish Government introduced the Waste (Scotland) Regulations which built on the ethos of the Zero Waste Plan and introduced stringent measures for local authorities and businesses to improve how waste is managed within Scotland. The Regulations are designed to realise the true value of resources that are discarded and to play a key role in helping Scotland reach its ambitious target of 70% recycling of all waste by 2025. The range of new measures included:

- Requirement for all Scottish Local Authorities to collect certain prescribed commodities – paper, card, plastic, metal, glass and food waste– as part of their statutory obligations by 1st January 2016 (rural exemptions apply for food waste collections);
- A ban on biodegradable municipal waste (BMW) being sent to landfill from 1st January 2021 (since extended to January 2025);
- A ban on material collected for recycling being sent to landfill or incineration from 1st January 2014;
- All businesses and organisations to present key recyclable material for collection from 1st January 2014;
- Businesses producing over 50kg of food waste per week to present it for separate collection from 1 January 2014 – threshold falls to 5kg food waste from 1st January 2016;
- A ban on the use of macerators to discharge food waste into the public sewer from 1 January 2016.

## Charter and Code of Practice

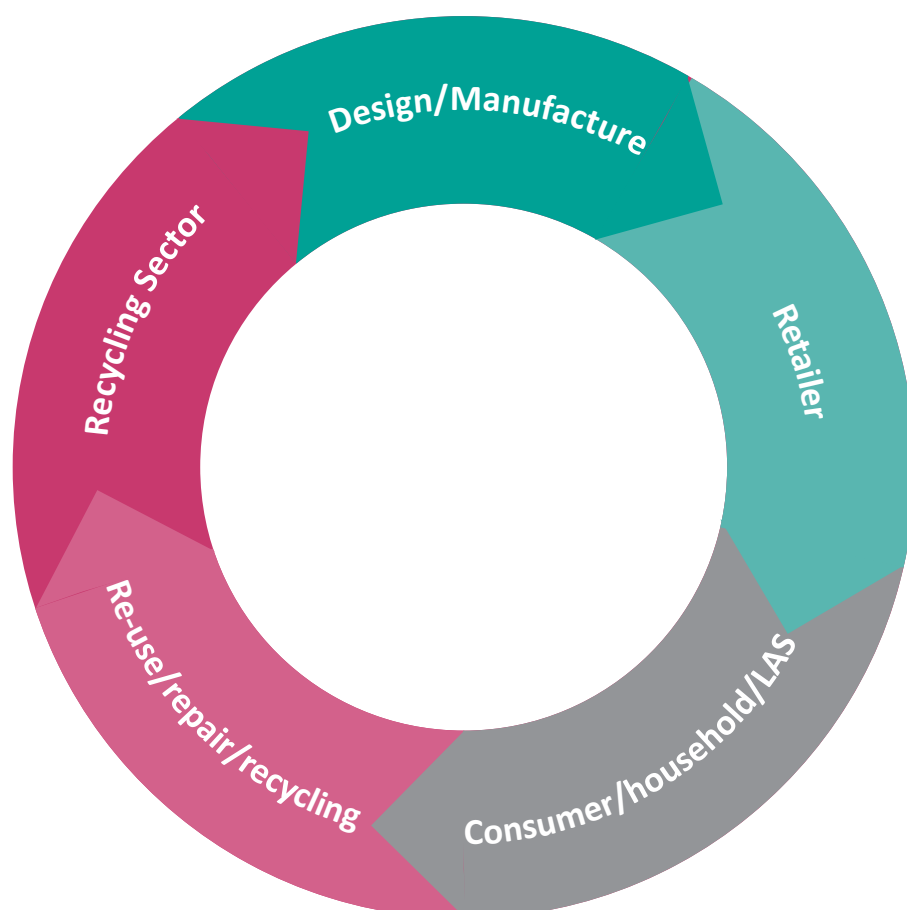
In 2016, the Scottish Government launched their Charter for Household Recycling in Scotland – a voluntary agreement for Local Authorities, intended to increase both the quantity and quality of recyclate collected across Scotland. By signing the Charter, local authorities committed to introducing specific services and policies as detailed in the associated Code of Practice (CoP). The CoP outlined a single collection model which all Scottish local authorities should implement, with the intention being to ensure that the same materials were collected in the same colour of bins throughout the country, making it easier for residents to recycle regardless of where they lived, worked & visited.

Dundee signed the Charter in June 2016 and became the first Local Authority in Scotland to introduce the Charter-complaint single collection model in April 2018.

## Circular Economy

A circular economy is an alternative to a traditional linear economy (make, use, dispose) which aims to keep resources in use for as long as possible, extract the maximum value from them whilst in use, then recover and regenerate products and materials at the point of disposal.

This is a closed loop model which can offer new commercial opportunities, as well as reducing resource costs and carbon emissions.



The Scottish Government developed a circular economy strategy for Scotland – “Making Things Last” – in 2016. This strategy incorporated waste prevention, product design, recycling systems, remanufacturing, skills, opportunities for businesses, climate change issues and the policies required to develop a successful circular economy. Producer responsibility was a key focus of this strategy, as was collaborative approaches between public, private and third sector organisations.

Making Things Last also provided a commitment from the Scottish Government to give further consideration to the role that a Deposit Return System could play in Scotland.

## Climate Change Plan

The Climate Change (Scotland) Act 2009 provided the initial legislative framework for the introduction of a Deposit Return Scheme in Scotland as well as providing annual targets for the reduction of greenhouse gas emissions and making provisions about the mitigation of and adaptation to climate change.

The Climate Change Plan 2018 – 2032 was produced in 2018 which set out the framework for how the Scottish Government intended to continue to drive down emissions. This included specific targets for household waste reduction. It noted that household waste accounts for less than 25% of all Scottish waste by weight, but a growing majority of the carbon impacts is due to the high carbon value of household waste. Food waste in particular has a high carbon impact, accounting for 2% of all waste but 22% of all carbon impacts.

A new Climate Change Bill was introduced to parliament in 2018 which seeks to amend the Climate Change (Scotland) Act 2009 by introducing more ambitious emissions reduction targets – seeking 70% and 90% emissions reduction targets for 2030 and 2040 respectively and setting a target date of 2045 for reaching net-zero emissions. Sustainable management of waste in Dundee is a key factor in reaching these targets.

## Deposit Return Scheme

Scotland was the first country in the UK to announce the introduction of a Deposit Return Scheme (DRS).

These are effective in many countries around the world in encouraging more people to recycle drinks containers such as plastic and glass bottles and metal cans. The scheme works by charging anyone who buys a drink in a single use container a 20p deposit for the bottle or can it comes in. They can get this deposit back when they return the empty bottle or can to a collection point to be recycled.

The public consultation on a deposit return scheme for Scotland received more than 3,000 responses from individuals and organisations, indicating the high level of public interest.

The final scheme design has now been published and the Scottish Government laid the proposed Deposit and Return Scheme for Scotland Regulations 2020 before parliament in September 2019. It is anticipated that these regulations will be passed in early 2020 and that the Deposit Return Scheme will be operational by April 2021, providing 17,000 return points nationwide capturing an anticipated 90% of all single use drinks containers sold in Scotland.

It is estimated that the scheme will generate an additional 67,000 tonnes of recycling each year Scotland-wide. The consequential impacts on Local Authority recycling rates are unknown as it is anticipated that much of the material currently captured in household recycling bins and collected by Councils will then be taken by the consumer directly to the DRS collection point. In order to minimise this impact, Dundee must therefore take greater steps to encourage recycling of all other household wastes in the City – focusing on those materials outwith the scope of DRS such as food waste, plastic pots, tubs and tray, glass jars, paper, card and cartons.



## Revised Code of Practice

Following publication of the preferred DRS model, Zero Waste Scotland has recently acknowledged that the current Code of Practice which sits alongside the Charter for Household Recycling would need to be revised as the DRS would remove a significant amount of material from Local Authority collections and hence the previously stipulated collection frequencies and material mixes may no longer be appropriate.

A revised Code of Practice is being prepared at the time of writing and is expected to be launched in 2020/21. It is anticipated that this will include requirements for local authorities to collect textiles and garden waste from 2025, in line with the 2018 amendment to the European Waste framework Directive.

## Extended Producer Responsibility

The Extended Producer Responsibility (EPR) regulations are expected to come into force across the UK in 2023 following widespread public consultation on Government proposals in early 2019. The purpose of the regulations is to introduce a full net cost recovery model for household and household-like packaging which is implemented at the point of products being placed onto the market. Such a cost recovery model would mean producers meeting the costs of:

- Collection/transportation, sorting and treatment less revenue from material sales;
- Treating/disposing of packaging in the residual waste stream;
- Providing information to consumers.

Effectively, this would mean that any product being placed onto the market for sale to householders (food and drink, toys, household goods, clothing etc) would incur a charge for the producer of that product for the packaging – e.g. a manufacturer producing 20,000 Easter eggs in plastic casing inside a cardboard box would face a bill for the recovery costs of each of the materials used to package their product. It is anticipated that this will drive both enhanced recycling capability within the UK and a drive towards less (and more easily recyclable) packaging.

Producers of drinks containers who are part of the DRS scheme will be exempt from the EPR regulations.

Local Authorities will be eligible to recover their collection and treatment/disposal costs under the terms of the regulations but this will be subject to certain, as yet undefined criteria, although the Scottish Government have indicated that these criteria will be based on methodology of collection & quality of material and are likely to be reliant on the Local Authority being compliant with the revised Code of Practice.

## Zero Waste Scotland's Corporate Plan

Zero Waste Scotland launched their Corporate Plan in September 2019, focussing on the need to accelerate progress towards a circular economy. The key focus of the plan is to drive the fundamental changes in consumer and business behaviours in order to tackle climate change.

Four strategic outcomes are identified within this plan:

- Responsible consumption
- Responsible production
- Maximising value from waste and energy
- Transforming Zero Waste Scotland

It is noted that the only strategic outcome directly relevant to Dundee is maximising value from Waste and Energy. The partnership arrangement with Angus Council and MEB confirms that the city is already well set up for the future in this regard.

## Extension of Landfill Ban

On 19th September 2019, the Scottish Government announced a delay in the implementation of the 2021 landfill ban, proposing instead a transitional approach to the ban with full enforcement delayed until 2025.

Whilst this does not directly affect Dundee due to the proactive approach taken by the council in establishing a long-term EfW contract locally, it is a significant amendment to the regulatory position by the Scottish Government. The wider implications of this extension are currently being assessed through dialogue with Zero Waste Scotland, SOLACE and the national Waste Managers Network.

## National Guidance

In addition to the legislative and policy provisions which drive forward waste strategy in Scotland, there are a number of regulatory guidance documents and codes of practice which have been published in recent years which provide further direction on the sustainable management of wastes.

Guidance Document	Aim of guidance	Impact on local authorities
Kerbside Good Practice Guide - 2012	Provide guidance and examples demonstrating good practice in waste collection services	For reference when amending or introducing new services
Duty of Care: A Code of Practice - 2014	To ensure compliance with Section 34 of the Environmental Protection Act as amended by the Waste (Scotland) Regulations 2012	Outlines specific duties Local Authorities have in fulfilling the requirements of the DoC Duty to make sure when waste is transferred it is sufficiently well described to enable its safe recovery or disposal without harming the environment Duty to take reasonable steps to increase the quantity and quality of recyclable materials
Thermal Treatment of Waste Guidelines - 2014	Sets out SEPA's approach to permitting thermal treatment of waste facilities	Details what is required of any planning application for a thermal treatment of waste facility and what pre-treatment of wastes are required as a condition of permitting
Code of Practice on Sampling and Reporting at Materials Reclamation Facilities - 2015	To measure quality of recycling materials sent to sorting facilities	Provides evidence of composition and contamination levels for reporting & billing purposes as well as identifying key contaminants to help inform resident communications
Guidance on Applying the Waste Hierarchy - 2017	Provides guidance on discharging duties to apply the Waste Hierarchy as specified in the Environmental Protection Act 1990	Builds on the information available within the Kerbside Good Practice Guide to help Local Authorities make informed decisions on service provision
Code of Practice on Litter and Refuse (CoPLAR) - 2018	Provides statutory guidance to organisations with a duty to fulfill under section 89 of the Environmental protection Act	Explains duties and responsibilities and provides guidance on a preventative approach to designing services

Table 5 – additional waste regulations and guidance

## Waste prevention

At the heart of all legislation, policy and guidance documents is the message that waste prevention should underpin any sustainable waste management system if the overall vision is to be achieved. Waste prevention or minimisation initiatives have been run locally and nationally over the past decade with varying degrees of success, including the Real Nappy Campaign, Love Food Hate Waste initiative and the introduction of a 5p carrier bag charge.

In recent years the “blue planet effect” has seen widespread public awareness of the problems caused by an overabundance of single-use items being produced in today’s throwaway culture and there is now a greater appetite than ever before to accept the need for behavioural change.

Waste prevention and re-use go hand-in-hand as, to minimise the waste created there is a need to look for reusable alternatives to single use items such as plastic bottles, bags and wrap and pass on our unwanted furniture, clothing and household items for reuse rather than disposal.

Waste prevention is defined within the Waste Framework Directive as measures taken before a substance, material or product has become waste, to reduce:

- the quantity of waste, which includes the re-use of products, the extension of the life span of products, reductions in packaging and so on
- the adverse impacts of waste on the environment and human health
- the content of harmful substances in materials and products

Re-use is defined within the Directive as “any operation by which products or components that are not waste are used again for the same purpose for which they were conceived”.

Development of the ‘Revolve’ accreditation quality standard for re-use has helped to raise awareness of the availability and quality of re-usable goods for households and business in Scotland. Dundee’s Social Enterprise partner in the Baldovie HWRC site Re-use Hub, Tayside Re-users, has full ‘Revolve’ accreditation and accepts a wide range of items for re-use.







## Strategic themes and key outcomes

This strategy seeks to consolidate the work already undertaken to further improve sustainable waste management within Dundee to ultimately meet the aspiration of an entirely waste free Dundee. Actions have been identified to achieve this overall aim. This will increase Dundee's recycling rate, influence widespread behavioural change and foster a greater sense of civic pride amongst residents, visitors and businesses.

In order to affect any significant change in Dundee's overall recycling performance, a step change in the behaviour of service users is required.

Whilst many Dundee citizens are committed recyclers, others have not yet made the shift away from their reliance on the general waste bin to dispose of all wastes indiscriminately. In common with other city authorities, this is a particular issue in flatted property areas with communal bins in central locations due to lack of ownership and reduced efforts to recycle. Random sampling through repeated compositional analyses of these bins confirms that there is a significant amount of recyclable material, as detailed earlier in the document, still being thrown away in Dundee by residents.

There are also ongoing issues in the city with households which have acquired multiple general waste bins and present these for collection each fortnight without making efforts to segregate or recycle any of their waste. Similarly, there are areas of the city where recycling bins – both individual and communal, are routinely used for the disposal of general waste. Allowing these behaviours to remain unchallenged effectively provides these residents with no incentive or pressure to change, nor any acceptance of personal responsibility for sustainably managing the waste they create.

Amongst those citizens making use of their recycling facilities, further action must be taken to address contamination issues, whether deliberate or unintended. Contamination is costly and can in many cases be easily addressed through communicating simple, easy to understand messages about what can and cannot be recycled and why. The impacts of deliberate contamination and the need for all citizens to take personal responsibility are equally important messages which must be communicated. Feedback from recycling advisor engagement and results of compositional analyses clearly highlights the scale of the challenge and it is therefore essential that a multi-faceted approach is taken in order to tackle this issue fully.

Whilst it is vital that the Council continues to ensure that accurate, up to date information on services are readily available to householders and trade customers and that any changes to services are widely communicated well in advance, it is equally important that residents and customers are made aware of the importance of waste minimisation and recycling and of their own responsibilities for doing so. In the case of trade waste, businesses must be made fully aware of their legal responsibilities under the Environmental Protection Act, The Controlled Waste Regulations and the Waste (Scotland) Regulations 2012.

Without action, recycling rates are unlikely to increase further, and the 2020 & 2025 targets will not be reached. Further, the costs for disposal of general waste and contaminated recyclates will continue to put increased pressure on budgets while potential income from clean, high quality recycle collections will remain unrealised. Collections of general waste in the city will remain stretched to accommodate a population which, in part, fails to engage with the services provided.



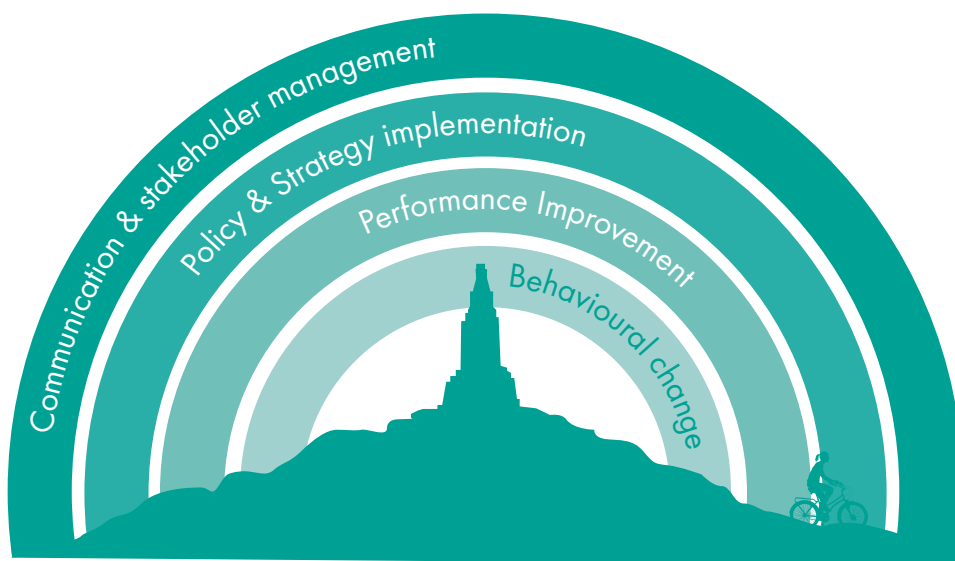
As a council, there is a requirement to take urgent action to address the issues in order to fulfil the vision set out in the City and Council Plans, tackle the impacts of climate change and take steps to meet the carbon reduction targets as identified within the 2019 Climate Action Plan, to encourage our citizens to Take Pride in their city. Changes in the national policy framework show that producer responsibility is coming to the forefront as packaging reforms and plastic taxes put increasing pressure on waste producers to change their methods. Producer responsibility must sit alongside citizen responsibility, both householders and businesses cannot be allowed to opt-out of their responsibility towards the behaviour change that will be required for Dundee to achieve its vision for the City and take its place in contributing positively to the Circular Economy.

## Strategic Aims

Four overarching strategic aims have been identified to help Dundee achieve these goals;

- Develop and implement Policy & Strategy
- Commit to Communication & stakeholder management
- Emphasise and promote Behavioural change
- Focus on Performance Improvement

The following pages outline how each of these strategic aims will be taken forward and the supporting action plan to ensure that significant progress is made in each area.





## Policy & Strategy Implementation

In order to affect meaningful change towards a waste free Dundee, there is a need to have a plan with key actions measured within a clear programme.

In Dundee there have been a number of major changes to services in recent years as a result of national policy & legislation that significantly improved the services available to residents in Dundee, through;

- Re-Use hub created at Baldovie HWRC.
- City-wide recycling services introduced in line with Waste (Scotland) Regulations 2012.
- Comprehensive recycling services – including food waste – available to all households in Dundee.
- First authority in Scotland to become compliant with Charter & associated Code of Practice.
- Secured a long-term Energy from Waste solution for disposal of general waste ahead of the landfill ban.

Previous sections of this report have highlighted a number of areas where new priorities are emerging from the Scottish Government. During the next 5 years these are likely to significantly influence how waste services should be managed and delivered in the future.

In order to ensure that Dundee is best prepared for these changes, the strategy has identified actions to ensure that ongoing policy is monitored throughout this period and that solutions are developed to match these new arrangements and to tackle the challenges currently faced in Dundee.

On a practical level, this will require a number of policies to be developed to tackle the issues of side waste and contamination of recycling bins as well as restricting the number of general waste bins to one per household in kerbside properties, other than in exceptional circumstances. Staff will be fully trained on the implementation of these policies and residents and businesses provided with information and advice on a regular basis.

### Key outcomes

- Reduction in the number of households presenting multiple general waste bins for collection
- Increased participation in recycling services
- Decrease in volume of recyclables disposed of as general waste in Dundee
- Reduction in contamination levels of recycling collections
- Increased Re-Use tonnage
- Decrease in single-use plastic waste
- Reduction in side waste collected
- Development of policies for side waste, contamination and bin provision
- Implement local policies in line with national drivers



## Communication and Stakeholder Management

Closely aligned to the further development of Policy and Strategy is the need for clear communication with residents, businesses and visitors of Dundee.

Households have routinely received letters and information leaflets from the Council anytime a service change takes place, as well as kerbside properties receiving their annual bin collection calendar each December. These direct mailings aside, information is provided on the website and via social media platforms, such as facebook and twitter, year-round.

Funding awards from Zero Waste Scotland has allowed specialist recycling advisors to be recruited on a temporary basis several times in the last five years. This has enabled targeted, face to face householder visits to help understand any barriers to residents using their services and also to facilitate recycling.

Commercial waste officers also undertake visits to advise businesses of their obligation to segregate and recycle waste.

In order to ensure that recycling increases and waste is minimised there is a requirement to further increase communications and positive messaging around this subject. A detailed plan will be developed as a key action of this strategy with supporting targets to improve stakeholder engagement.

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### Key outcomes

- Decrease in number of routine queries and complaints received
- Increased number of website & social media hits for information pages
- Improved staff survey results regarding communication and information
- Increased participation in recycling services
- Recognise commercial customer needs whilst maintaining service efficiency
- Regularly update stakeholders with progress reports
- Proactively ensure that council staff are reminded of the importance of their role in developing and maintaining a quality service
- Ensure best value for the council through contractor engagement



## Behavioural Change

The gradual increase in Dundee's recycling rate following the introduction of charter compliant collection service confirms that some progress is being made. Residents have responded to the need to adapt their behaviour to accept the changes to their waste services which has improved the overall recycling performance in Dundee.

However, it has been confirmed that too much recyclable material is still being discarded within general waste bins. Therefore, there is a need for further progress in this area with residents accepting changes and adapting behaviours accordingly. This is fundamental in ensuring that waste is minimised and recycling is increased.

There is also a need to focus on supporting initiatives which support waste prevention, reducing the amount of waste produced in the city and shifting focus towards reuse. This will also require further behavioural change by residents.

In order to support this change it is important that key messages are communicated to confirm that;

- inaction is no longer an option
- opting out of changing habits is not acceptable
- it is every residents personal responsibility to reduce waste

This change in behaviour should also be led by the council which should act as an exemplar to residents and businesses alike.

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### Key outcomes

- Reduced contamination in household recycling bins
- Improved quality and volume of recyclate collected
- Reduced flytipping
- Reduced littering
- Increase in number of local businesses which Take Pride in their environment and help improve their local area



## Improving Performance

In recent years Dundee has seen significant performance improvement, both in terms of recycling rate and extended service provision.

LEAMS scores fell below 90% for the first time in 2017/18, only to recover again in 2018/19 to reach a 92% result. Landfill remained at one of the lowest levels in Scotland whilst recycling saw gradual increases as service provision was enhanced to meet the requirements of the Waste (Scotland) Regulations and the Charter-aligned Code of Practice.

Dundee residents consistently report high levels of satisfaction with refuse collection and street cleaning services and the Energy from Waste contract procured in 2017 with energy company partner MVV will ensure a highly efficient and sustainable long-term solution for waste disposal.

Further work is needed however to ensure that Dundee achieves further success. Internally, the council must continue to focus on making improvements to services, making these as efficient as possible whilst maintaining the level of service expected by citizens.

Residents and businesses must themselves continue their efforts to make full use of these services and Take Pride in their City in order to drive up recycling, reduce the amount of waste sent for disposal and keep Dundee Bonnie.

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### Key outcomes

- Optimise collection route efficiency
- Review recycling provision annually
- Review and revise waste data recording
- Implement smart waste technology systems within the City
- Increase recycling
- Decrease contamination of recyclates
- Decrease waste arisings



Strategic Aim	Objective	Start date	End Date	Measurable Outcomes
Develop & Implement Policy & Strategy	1 Develop and implement zero tolerance policies on side waste and contamination of recycling bins which detail proactive and reactive actions to deal with these issues in kerbside, communal and commercial properties.	2020	2025	<ul style="list-style-type: none"> <li>• Policies implemented;</li> <li>• Decrease in contamination percentage detailed in compositional analysis and recorded by reproprocessor;</li> <li>• No of Pledges to increase year on year;</li> <li>• Monitoring &amp; reduction of single use plastic used by council;</li> <li>• Increased participation in recycling services;</li> <li>• LEAMS Score maintained above 90%;</li> <li>• Work alongside ZWS/ scheme administrator to enable effective delivery of DRS in Dundee;</li> <li>• Reduction in the number of households presenting multiple general waste bins for collection</li> <li>• Increased Re-Use tonnage</li> <li>• Reduction in side waste presented and collected</li> <li>• Reduction in waste arisings year on year</li> </ul>
	2 Undertake surveys to identify the number of additional general waste bins in use across the City and notify residents of the multiple bin policy – removing any additional bins from households which do not meet the criteria.	2020	2021	
	3 Develop and implement revised waste education strategy in schools across Dundee to promote waste awareness and positive recycling messages.	2020	2025	
	4 Link with the Take Pride campaign to launch a Plastic Pledge to reduce or eliminate single use plastic waste both internally and externally and explore ways of eliminating or reducing the use of other single use items.	2020	2025	
	5 Develop and implement an annual communications strategy for recycling.	2020	2025	
	6 Implement a contamination intervention strategy which outlines the steps to manage persistent contamination of recycling containers.	2020	2025	
	7 Undertake strategic options appraisal following launch of revised Code of Practice and other ZWS initiatives in order to determine the best practicable option for Dundee in taking these forward.	2020	2025	
	8 Devise a policy to support the introduction of the new Deposit Return Scheme in Dundee in line with policy & legislative parameters.	2020	2022	
	9 Promote the extended development and adoption of litter prevention action plans across Dundee with Zero Waste Scotland and Keep Scotland Beautiful.	2020	2025	
	10 Determine the implications of the forthcoming Extended Producer Responsibility legislation on Dundee City Council	2021	2023	
	11 Develop and implement a policy for promoting increased Re-Use within Dundee.	2021	2022	
	12 Create a policy to support a shift in strategic focus towards waste prevention & minimisation, the reduction in the overall the waste sent for disposal.	2021	2025	

Commit to Communication & Stakeholder Management	13	Produce a communications plan to engage with residents and businesses citywide, through multiple media platforms to harness increased buy-in and support significant behavioural change.	2020	2025	<ul style="list-style-type: none"> <li>Improved participation in recycling services;</li> <li>Reduced complaints;</li> <li>Reduced fly tipping;</li> <li>Annual Take Pride in Your City Community Awards;</li> <li>Increased number of engagement events scheduled year on year;</li> <li>Improved recycling rates</li> <li>Early engagement on emerging policies and partnership support</li> <li>Continued improvement in KPI scores for resident satisfaction with street cleaning &amp; waste collection services;</li> <li>Widespread awareness of recycling processes;</li> <li>Improved employee survey results;</li> </ul>
	14	Increase contact with residents and businesses to directly advise of service changes and schedule amendments, prior to their introduction.	2020	2025	
	15	Regularly review and update website information to ensure this is accurate and continuously pushing positive messaging.	2020	2025	
	16	Provide regular briefings to elected members on emerging policy or forthcoming service changes.	2020	2025	
	17	Undertake an annual programme of frontline staff policy briefings to ensure communication of key messages on best operational practice in dealing with contamination, side waste, fly tipping, additional containers etc.	2020	2025	
	18	Promote the use of HWRC's for reuse and recycling via social media posts, online information videos detailing recycling journeys and annual calendar distribution.	2020	2025	
	19	Link with Take Pride In Your City campaign to promote local pride, recognise excellence and publicising positive engagement within local communities.	2020	2025	
	20	Develop stakeholder engagement and awareness-raising events in partnership with MEB's Community benefits team.	2020	2025	
	21	Develop engagement with existing recycle processors and contractors in order to maximise environmental benefits to Dundee.	2020	2025	
	22	Continue to foster strong working partnerships with Scottish Government, Zero Waste Scotland & SEPA in the preparation for and delivery of forthcoming policy & legislative changes to benefit the city.	2020	2025	
	23	Deliver staff briefing sessions on the importance of sustainable waste management within the Council & across Dundee as a whole.	2020	2025	



Emphasise and promote behavioural change	24	Undertake compositional analysis of household bins in order to identify primary contaminants and utilise these findings to inform communications to householders to support behavioural change.	2020	2025	<ul style="list-style-type: none"> <li>• Reduced contamination in household bins;</li> <li>• Improved quality and volume of recycle;</li> <li>• Reduction in waste arisings;</li> <li>• Increase in Re-Use tonnage;</li> </ul>
	25	Target areas where ongoing contamination of recycling bins is identified and provide detailed information, advice and support to assist residents in utilising the bins for the correct purpose, implementing the actions outlined in the Contamination Strategy.	2020	2025	<ul style="list-style-type: none"> <li>• Decrease in recycle found in general waste bins;</li> <li>• Increased use of social media to highlight key aspects of behavioural change;</li> <li>• Positive reception to social media posts highlighting behavioural change &amp; recycling messages;</li> </ul>
	26	Identify key messages for residents regarding primary contaminants and the difficulties these create, thereafter creating multimedia clips for social media & website distribution which clearly explains the recycling journey & informs and educates	2020	2025	<ul style="list-style-type: none"> <li>• Increased number of businesses undertaking litter picks, reducing use of single use plastic and decreasing waste arisings;</li> <li>• Increased number of litter picks undertaken year on year across city</li> <li>• Reduced flytipping</li> </ul>
	27	Identify local recycling champions who are keen to be involved in promoting the Take Pride in your City message via online messages and multimedia.	2020	2025	
	28	Support a multi-agency/service approach (including enforcement, waste and city centre ambassadors) to promote the message of 'Your rubbish, your responsibility - when it comes to flytipping its a crime not to care.'	2020	2025	
	29	Engage with businesses, residents and visitors to develop widespread understanding of issues surrounding waste management in the City and help them change habits and behaviours so that they generate less waste and recycle more.	2020	2025	
	30	Increase city centre business awareness of 'Take Pride' campaign. Encourage businesses to take personal and shared responsibility for their environment in eight key areas including litter & flytipping.	2020	2025	
	31	Encourage people to take personal and shared responsibility for their environment through the Take Pride in your City campaign in the key area of litter: Harnessing all available support from ZWS/KSB, liaising with stakeholders in an educational and enforcement campaign targeting secondary schools, associated shopping centres and city centre.	2020	2025	
	32	Deliver a litter nudge campaign in pilot area, such as city centre (e.g. include use of bin wraps, posters, combine with promotion in the media)	2020	2025	



Focus on performance improvement	33	Develop a "Don't ditch the good stuff" social media campaign to promote the materials which can easily be recycled but are usually discarded.	2021	2022	<ul style="list-style-type: none"> <li>Increased recycling rate;</li> <li>Improved network of public recycling points;</li> <li>Route optimisation software implemented and operational;</li> <li>Communal bin locations optimised;</li> <li>Decreased recyclates disposed of in general waste bins;</li> <li>Increase in number of litter picks year on year;</li> <li>Smart waste technology trialled &amp; outcomes reported;</li> <li>Waste data systems optimised and fully compliant with SEPA reporting methodologies;</li> <li>Decreased waste arisings;</li> <li>Routes operate efficiently, with fewer journeys made by vehicles than 2019 baseline.</li> </ul>
	34	Review existing public recycling points on an annual basis to improve accessibility for residents, refurbish and/or replace where necessary and ensure signage and labelling is clear and easy to understand	2020	2025	
	35	Implement route optimisation software by 2022 to improve operational efficiency of collection routes.	2020	2022	
	36	Undertake bi-annual reviews of capacity and locations of bins for communal sites across the city - utilising findings to make any required amendments and target communications messages to help influence behaviour change.	2020	2025	
	37	Implement programme of quarterly compositional analyses to be undertaken across various collections in order to identify the primary contaminants across all recycling collections and develop a suite of communication materials inform communications campaigns and target specific areas of concern to support performance improvement.	2020	2025	
	38	Promote, facilitate and encourage registration of litter picks across the city (in partnership with the community, KSB, community officers, and businesses), encouraging an even spread across wards.	2020	2025	
	39	Trial Smart waste technology to improve waste monitoring and collection efficiencies in the city.	2022	2025	
	40	Undertake full review of waste data reporting mechanisms within the Council to ensure continued compliance with national strategy	2020	2021	
	41	Review collection methodologies and frequencies alongside fleet requirements in order to ensure that the carbon impact is minimised.	2020	2025	

# Glossary of Terms

**Association of Public Sector Excellence (APSE)** is a not-for-profit membership based organisation dedicated to promoting excellence in the delivery of frontline services to local communities. They work with more than 300 local authorities across the UK to share information and expertise in services including; waste and refuse, parks and grounds, highways, street lighting, leisure, school meals, housing and building maintenance and strategic policy advice.

**Bulky Uplift** Collection of large household items which should not be placed into household waste bins such as furniture, carpets, exercise equipment and large electrical items.

**Energy from Waste (EfW)** A means of waste disposal whereby the general waste is shredded and incinerated which generates heat & steam which is then converted into electricity

**Environmental Protection Act (EPA) 1990** – Part two deals with regulations surrounding the controlled disposal of waste (household, industrial or commercial).

**Household Waste Recycling Centre (HWRC)** a site provided for residents for the recycling and disposal of household waste. HWRCs, or recycling centres, are also known as civic amenity sites.

**Keep Scotland Beautiful (KSB)** is the charity that campaigns, acts and educates on a range of local, national and global environmental issues to change behaviour and improve the quality of people's lives and the places they care for. They are committed to making Scotland clean, green and more sustainable.

**Materials Reclamation Facility (MRF)** A facility to process waste for the purpose of recovering materials using a variety of processes to separate out different materials, ranging from manual sorting to advanced mechanical sorting techniques. The contents of the burgundy recycling bins are processed via this route.

**Rapid Response Teams (RRT)** Dedicated council street cleansing teams charged with delivering flexible and responsive front-line services to communities to remove litter, fly-tipping and graffiti in open spaces.

**Scottish Environment Protection Agency (SEPA)** Role in protecting the environment and human health including environmental regulation, mitigating and adapting to climate change, monitoring and reporting on the state of the environment, raising awareness of environmental issues, engaging with the public through citizen science projects, and resolving environmental harms.

**Society for Local Authority Chief Executives (SOLACE)** Solace is the representative body for Chief Executives and senior managers working in the public sector in the UK.

**Third Sector Organisations** a term used to describe the range of organisations that are neither public sector nor private sector. It includes voluntary and community organisations (both registered charities and other organisations such as associations, self-help groups and community groups), social enterprises, mutuals and co-operatives.

**Transfer Station** Facility where waste is taken to after being collected by refuse collection vehicles where it is stored and bulked prior to onward transport for treatment or disposal.

**Waste Compositional Analysis (WCA)** a study that provides information on the weight of materials that are in a given waste stream and usually involves obtaining samples of these waste streams and sorting them into pre-defined categories which are then weighed.

**Waste Management Licence (WML)/Pollution Prevention Control (PPC):** Permit issued by SEPA where waste is either being stored, treated or disposed of. Issued to operators of waste management facilities to ensure that they do not cause pollution of the environment or cause harm to human health and which becomes seriously detrimental to the amenities of the locality.

**Zero Waste Plan (ZWP)** sets out the Scottish Government's vision for a zero waste society. This vision describes a Scotland where all waste is seen as a resource; where waste is minimised; valuable resources are not disposed of in landfills; and most waste is sorted, leaving only limited amounts to be treated.

**Zero Waste Scotland (ZWS)** Funded by the Scottish Government to support the delivery of the Zero Waste Plan, the Circular Economy and other low carbon and resource efficiency policy priorities.

# References

Scotland's Zero Waste Plan June 2010

The Waste (Scotland) Regulations 2012

European Waste Framework Directive 2008/98/EC

Climate Change (Scotland) Act 2009

Kerbside Good Practice Guide September 2012

Making Things Last: a circular economy strategy for Scotland 2016

Duty of Care: A Code of Practice 2014

Charter for Household Recycling & Code of Practice – Household Recycling in Scotland 2016

Thermal Treatment of Waste Guidelines 2014

Code of Practice on Sampling and Reporting at Materials Recovery Facilities 2015

SESO – Scottish Environment Statistics Online

Dundee City economic profile 2016

Waste – Full Markets Study 2019

Improvement Service – Local Government Benchmarking Framework report 2017/18

## Figures, Tables and Charts

### Figures

Figure 1 The Waste Management Hierarchy

Figure 2 Current kerbside household service provision in Dundee

Figure 3 Current flattened household service provision in Dundee

Figure 4 The energy from waste process

### Tables

Table 1 – Breakdown of operational staff by service area

Table 2 - Compositional analysis September 2017

Table 3 - Compositional analysis, Source: Albion Environmental, April 2018

Table 4 – Summary of waste targets

Table 5 – additional waste regulations and guidance

## Charts

Chart 1	Recycling rates in Dundee & Scotland
Chart 2	Financial resources, Waste management source: Final Revenue Budget 2019/20
Chart 3	Financial resources, Waste management source: Final Revenue Budget 2019/20
Chart 4	Dundee street cleaning satisfaction score against LGBF family group Source: LGBF Overview Report
Chart 5	Dundee recycling performance against LGBF family group Source: LGBF Overview Report 2017-18
Chart 6	Dundee's landfill rate versus national rate. Source: SEPA
Chart 7	Dundee's landfill compared to other local authorities in 2018. Source: SEPA
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Chart 9	Dundee Citywide LEAMS Performance

## Supporting Information

All supporting information can be found on our website:

<http://www.dundee.gov.uk/recyclefordundee>

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