Recycling Waste Management Strategy

Cardiff Council - Updated Strategy 2018-21







Introduction

Cardiff is one of the UK's fastest growing cities. While this growth is a signal of strength and a period of opportunity for the city's economy, it will bring challenges too. It will put pressure on both the city's physical infrastructure - like our roads and public transport system - and our public services. With Cardiff projected to grow by more than every other Local Authority in Wales combined over the next 20 years, more waste will be created. Not only does this waste need to be dealt with sustainably, but the Council must also increase the amount it recycles to meet statutory recycling targets whilst dealing with waste collection in the most cost effective way possible.

Cardiff is already Britain's leading major city for recycling, with recycling and composting rates having increased from 4% to 58% over the last 15 years. This represents an important achievement by the residents of the city, and Capital Ambition makes clear the administration's commitment to increasing the levels of recycling whilst providing an effective and efficient waste collection service.

Moving forward, Cardiff could become one of the world's leading recycling cities if recycling rates could be increased beyond 70 % by 2025. What this means in practice is that the Council will need to recycle a further 17,000 tonnes of the city's waste by 2025 to meet Welsh Government's 70 % target. Every tonne missed from the target could cost the Council £200 in fines. If the city's recycling rates do not increase, and remain at 58 %, the resulting fine by 2025 could be as high as £10m.

The city is well placed to respond. The Council's Recycling Waste Management Strategy 2015-18 - which set out the Council's approach for reducing waste and increasing reuse and recycling opportunities for residents and businesses - has delivered real progress.

It is clear, however, that there is more to be done. There are challenges in increasing recycling and achieving efficiencies in waste collection in a city as large and diverse as Cardiff. The fact that the Council must collect waste from several different property types - including terraced housing, houses with multiple occupants, medium and high density flats - means that finding a solution that meets the needs of citizens as well as the aspirations of a sustainable city is difficult. There can be no "one-size-fits-all" solution, and we need to work with communities to tackle waste and improve recycling across Cardiff.

We also know that in some of the more disadvantaged areas of the city, recycling rates are persistently low. This is a challenge that must be met with greater support and improved education. More broadly, the world market for waste is changing, meaning that, as a city, we will all have to do more. Unless we do so, the financial cost of dealing with waste in the city, not to mention the global environmental cost, will simply become too high.

This strategy will play an important role in helping to keep Cardiff streets clean. To do this staff from across the Council will work across departmental and organisational silos, integrate services, build new partnerships and use new technology to help keep streets clean, as part of a Total Street approach.

The updated Recycling and Waste Management Strategy 2018-2021 will therefore help the city meet its recycling targets, deliver a cost effective waste collection service and, more generally, deal sustainably with household waste.

Cllr Michael Michael

Cabinet Member for Clean Streets, Recycling and Environment



1. Overview

The Council's Recycling and Waste Management Strategy is reviewed every three years, with the last strategy covering the period 2015-18.

This update to the strategy is informed by:

- the administration's Capital Ambition commitments to increase recycling, deliver an efficient waste service and ensure Cardiff streets are clean;
- the need to comply with legislation;
- a review of the Recycling Waste Management Strategy 2015-18; and
- a formal consultation process which will run from June to August 2018.

The strategy reaffirms the Council's core principles for increasing recycling and the actions identified in the previous strategy, which will continue to be driven forward in addition to new and emerging actions that also need to be progressed during 2018-21. The following appendices provide further detail..

- **Appendix A1** Separate collection of glass
- Appendix A2 Wheeled Bin Expansion
- **Appendix A3** Minimisation, Education, Reuse and HWRCs (Household Waste Recycling Centres)
- **Appendix A4** Planning Ahead Infrastructure and Partners
- **Appendix A5** Service Standards
- **Appendix A6** Recycling performance
- **Appendix B** Gap analysis
- **Appendix C** Compliance with Welsh Government "Collections Blueprint"
- **Appendix D** Equality Impact Assessments and Screening Tool



2. Cardiff's Recycling Waste Management Strategy

2.1 Key Principles

The Recycling Waste Management Strategy 2015-18 established a series of key principles that provided the policy foundations for increasing recycling and dealing effectively with waste management in the city. These key principles included:

Key Principle	Purpose	
Waste Minimisation	To inhibit the growth of Municipal Solid Waste per capita by promoting waste minimisation initiatives with a long term aim of reducing growth to zero.	
Awareness and Education	To raise awareness with the public and the Council of the need to enhance reuse, high quality recycling and composting throughout the city through comprehensive stakeholder engagement.	
Maximise high quality Reuse, Recycling and Recovery	To ensure compliance with all legislation and guidance produced, with the ultimate aim of achieving 70% reuse/recycling/composting rate by 2024/25.	
Minimise Waste to Disposal	To minimise the amount of Municipal Solid Waste sent for disposal, by not exceeding the maximum amount of energy from waste facility targets set by Welsh Government.	
Partnering	To work with local partner organisations, where practicable, to deliver local, regional and national benefits.	
Cost Effective Service	To provide a value for money waste management service which is cost effective and efficient.	
Sustainable Management	To offer waste management services that offer substantially improved sustainability, and much reduced carbon emissions and carbon footprint.	

These principles, which have served the Council well, must continue to underpin the Council's strategy as it seeks to increase recycling rates and improve the operating efficiency of the waste service. They will also underpin the delivery of a Total Street approach to keeping streets and public spaces clean whilst joining up Council services.



The 2018-21 strategy will therefore continue with the core principles of the Council's Recycling and Waste Management Strategy, which have also been reinforced by the policy commitments set out in Capital Ambition.

2.2 Key Achievements

Cardiff's Recycling Waste Management Strategy 2015-18 has delivered successfully, with appropriate investment, changes to operational practices as well as behavioural change. It has resulted in overall recycling, reuse and composting rates rising from 53 % in 2014/15 to the current rate of over 58 %.

The increase in overall recycling rates is significant, and the Council thanks its residents for their cooperation in the waste restriction scheme. Over the last three years, the strategy has also enabled Cardiff to:

- Increase recycling performance and meet statutory targets
- Deliver a new and improved Household Waste Recycling Centre (HWRC) at Lamby Way
- Provide a free bulky waste collection service for recyclable items
- Introduce a reuse partnership at Bessemer Close and Lamby Way HWRCs
- Move closer to the Welsh Government's "Collections Blueprint", which is its recommended approach for the collection of household waste
- Move to the provision of 140L wheeled bins and equivalent restriction via the provision of red striped 'bespoke' bags across the city
- Replace single use bio-bags for garden waste with re-useable sacks across most of the city
- Deliver the organic waste treatment contract for food and green waste recycling
- Prevent non-Cardiff residents from using HWRCs by introducing a requirement to provide proof of residency
- Secure new recycling markets for tyres, mattresses, carpet and uPVC
- Charge £25 for replacement of lost or stolen wheeled bins
- Commence regional contracts to process food waste and garden waste within Wales



3. Informing the Updated Strategy

3.1 Review of the Recycling Waste Management Strategy 2015-18

The previous strategy was broken down into five separate phases that were reviewed as part of the ongoing process of delivery. The review has also informed the updated strategy for 2018-21, with progress summarised below:

Phase	Progress Review		
Phase 1: Residual waste restriction programme	Phases 1 and 2 have been delivered in full, and have resulted in our overall recycling performance rising from 53% in 2014/15 to 58% in 2016/17.		
Phase 2: Household Waste Recycling Centres, new markets and reuse options			
Phase 3: Recycling collections change requirements	Phase 3 was completed in 2015. Further review will be required t continue to move with market and performance requirements.		
Phase 4: Recycling infrastructure	A new Household Waste Recycling Centre was completed in 2017.		
Phase 5: Additional recycling performance; commercial, cleansing 2017/18	Additional recycling performance was achieved though the treatment and recycling of street sweepings and mattresses. Phases 4 and 5 will continue to be delivered through the updated strategy.		

The current approach has also moved the Council closer to Welsh Government's preferred Collections Blueprint, which outlines their recommended approach for collecting household waste and aims to increase the rates of high quality recycling, achieve cost savings, and deliver sustainable development. It should be noted that no Local Authority in Wales currently meets all the requirements of the Collections Blueprint. Actions contained within this revised strategy will mean further improvements in accordance with the Collections Blueprint.

A full gap analysis was also undertaken to identify both the actions delivered and actions outstanding since 2015. This is included as **Appendix B** to this strategy.

3.2 Comparative Performance

In comparing Cardiff's performance, the Council performs well in many areas. The biggest difference between Cardiff and other Local Authorities in Wales is the high volumes of commercial waste produced and the pressures that a city centre economy brings. Large-scale events and businesses do not always recycle the same quantities of waste as households, although this is improving.

Only the waste collected - and subsequently recycled - by the Council from these businesses is included in the tonnages that contribute to the overall recycling figures for the Council. Commercial waste collections can therefore have a significant impact on slowing down overall recycling rates if the recycling rate of waste collected from businesses does not perform as highly as national targets demand.

The proportion and sources of waste collected by the Council and included in recycling performance definitions are outlined below:



Commercial waste recycling services provide an income stream that supports the Council to deliver all of its waste recycling services. When Cardiff is benchmarked against other UK Core Cities, who face similar challenges to Cardiff, it is clear that the city delivers a much higher recycling performance than other major UK Core Cities, even when accounting for the differences in collection data.

Area	Recycling performance 2016/17 (%)
Wales	63.8
CARDIFF	58.1
Edinburgh	42.3
Bristol	43.4
Manchester	36
Glasgow	26

3.3 Legislative Requirements and Statutory Recycling Targets

The Welsh Government has set demanding statutory targets for all Welsh Local Authorities. Failure to meet these targets carries a £200 per tonne penalty, and the statutory targets for Cardiff are summarised below:

Waste collected by Local Authorities (Cardiff)	2019/20 Targets	2024/25 Targets
Minimum overall recycling	64%	70 %
Maximum level of landfill	10 %	5 %
Maximum level of energy from waste	36 %	30 %
Biodegradable Landfill Allowance	33,557t	-

The statutory target of 58% that was set for 2015/16 must be maintained or improved upon until 2019/20. Incremental increases are required year on year to achieve or exceed the required 64% in 2019/20. To date, no fines have been issued to any Welsh Local Authorities provided that a clear improvement plan was presented to the Welsh Government. This is entirely at the Welsh Government's discretion, and the risk of larger fines could escalate to £10.45m by 2025 if the Council were to remain at the current recycling rate.

Do Nothing option based on 2016/17 (58%) performance	Local Authority Recycling Target	Recycling Tonnage deficit	Annual Fine value
2017/18	58 %	-	-
2018/19	58 %	-	-
2019/20	64%	6,970	£1.394m
2020/21	64 %	6,970	£1.394m
2021/22	64%	6,970	£1.394m
2022/23	64%	6,970	£1.394m
2023/24	64%	6,970	£1.394m
2024/25	70 %	17,424	£3.485m
		Total	£10.45m

It is unlikely that the decision of the UK Referendum to leave the European Union (Brexit) will have an impact on the regulations listed above. Waste is a devolved power and Welsh Government have already set recycling and waste targets over and above the requirements for European Union (EU) Member States.

Since the publication of the previous strategy in 2015, there have been no major changes to regulations. That said, the delivery of the new Environment Act (Wales) 2016 will have an influence on an updated strategy when the new Recycling and Environment Regulations are published, though they are not expected until 2019/20.

Revised Waste Framework Directive (rWFD)

The key EU legislation implemented for waste is Directive 2008/98/EC, or the Waste Framework Directive (European Commission, 2012). This legislation outlines high-level principles and approaches to the management of waste, which are to be implemented by the EU's Member States. The Directive introduces the waste hierarchy, which identifies the best and preferred method of waste management practices among EU Member States, whilst setting targets for the reuse and recycling of waste.

The Waste (England and Wales) (Amendment) Regulations 2012

The requirement for EU Member States to establish national waste management plans resulted in The Waste (England and Wales) Regulations 2011 being produced to transpose their interpretation of the key requirements within the rWFD. These were amended in 2012, forming The Waste (England and Wales) (Amendment) Regulations 2012.

Towards Zero Waste Strategy

The Welsh Government's Towards Zero Waste (TZW) Strategy is the overarching waste strategy for Wales and describes a framework for resource efficiency and waste management between now and 2050. The strategy outlines the actions that need to be taken if Wales is to reach its ambition of becoming a high recycling nation by 2025, and a zero waste nation by 2050.

TZW outlines challenging targets that all Local Authorities must achieve which not only focus on achieving high levels of recycling, but also exceed the EU landfill diversion rates. The strategy also outlines preferred methods of collection and treatment of waste and recycling, and seeks to stem the growth of waste.



Municipal Sector Plan - Part 1 "Collections Blueprint"

The Collections Blueprint describes the Welsh Government's recommended service profile for the collection of household waste. It is anticipated that the recommended service will result in high rates of high quality recycling, significant long term cost savings and improved sustainable development outcomes.

The key emphasis throughout the document is to achieve "closed loop" recycling, in which waste is collected, recycled and used to make new products; however, this requires high quality material. A comparison of Cardiff's service and the Collections Blueprint is provided as **Appendix C.** Failure to conform to the requirement of the Collections Blueprint could result in the reduction/removal of funding from the Environment Sustainable Development Grant (ESDG) – during 2017/18, this was worth £6.6 million to the Council.

3.4 Well-being of Future Generations (Wales) Act 2015

The Act ensures that all public bodies consider the long term impacts of policy on future generations when making decisions, particularly by having due regard to the Sustainable Development Principle. The Sustainable Development Principle is characterised by the following Five Ways of Working:

1. Integration

E.g. Integration of waste collection and cleansing teams, as the Council seeks to increasingly work across organisational and departmental boundaries.

2. Collaboration

E.g. Collaboration with the British Heart Foundation in developing Reuse Centres and the development of "Love Where you Live" community litter picks with local residents. In addition, established contract partnerships with neighbouring authorities.

3. Prevention

E.g. Minimising general waste, minimising waste sent to landfill and increasing recycling. Support public services that deliver clean streets and prevent environmental crime.

4. Involvement

E.g. Consultation on the proposed strategy and work with resident groups and partners to help keep Cardiff tidy.

5. Long Term

E.g. Consideration of future waste trends, review of population and household growth figures and a review of Cardiff's recycling potential in order to achieve and exceed recycling targets.

In complying with the Act, the strategy can demonstrably point to how the Sustainable Development Principle and the Five Ways of Working have shaped its development. The strategy has also been subject to a Statutory Screening Assessment, attached as **Appendix D.**

4. Cardiff Recycling and Performance Potential

A waste flow review has confirmed that achieving recycling targets of over 70% is feasible, but will not be achieved without a series of changes to the current operating model, market environment and recycling behaviours. Achieving a 70% + recycling rate would therefore require:

- More education and awareness;
- Cultural and habit changes;
- New external markets becoming viable and stable;
- Stronger enforcement of recycling;
- Balancing the commercial income generated through commercial recycling to risk.

If certain barriers were removed, behaviours sufficiently changed and the market conditions were right, there are a number of areas where the Council could increase the amount it recycles.

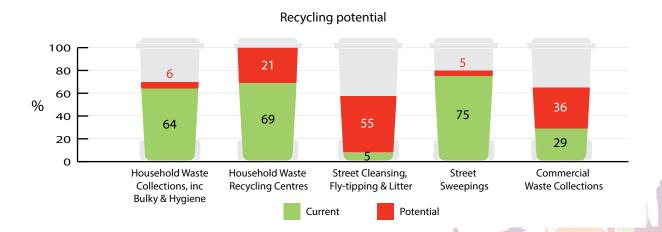
Whilst it is difficult to accurately predict people's behaviours against a background of rapid population growth, the review has determined that there is sufficient recyclate still available in the residual streams to achieve 70% or above recycling within the city. Based on the current tonnages achieved and the composition analysis of what is available, the summary on the following page outlines how 70% can be achieved. Further details can be found in **Appendix A6.**

4.1 Potential for Increasing Recycling

Based on our analysis of waste and recycling we believe that there is potential to increase recycling in a number of areas. These include:

- Household Waste: Household kerbside collections, bulky, hygiene & bring sites
- Household Waste Recycling Centres
- Street Cleansing, Fly-tipping & Litter
- Street Sweepings
- Commercial Waste Collections
- Secondary recycling (i.e. the material/product is reused in some other way without reprocessing)

The potential increase is summarised below:



Area	Recycling and Performance - Potential Improvements	Tonnes of Waste Collected 2016/17	Potential Additional Tonnages for Recycling
Household Waste: Household kerbside collections, bulky, hygiene & bring sites	 A further 6,600 tonnes could be recovered by increasing performance from 64% to 70%. Almost 1,000 tonnes could be achieved from recycling hygiene waste. An additional 500 tonnes could be achieved from textiles. More people could be supported to recycle more items Further reuse and sorting of bulky items. Performance improvement will be primarily driven by education and influencing habits of residents to recycle correctly and as much as possible. 	106, 801t	+6,600t
Household Waste: Recycling Centres	Ensuring residents recycle as much as possible at the HRWCs. Pursuing new market opportunities for hygiene and PVC windows could yield additional tonnages for recycling.	38, 383t	+7,700t +1,000t
Street cleansing, litter and fly-tipping	Litter, cleansing and fly-tipping contribute a smaller proportion of the whole waste stream, but even small changes could yield an additional half a percent in overall recycling performance.	3,155t	+1,500t
Street Sweepings	Reducing the contamination as the sweepings are collected.	5,587t	+280t
Commercial Waste Collections	Based on the compositional analysis there is a large proportion of recycling available in the commercial waste streams. Of the current level of Commercial Waste collected, approximately 30% is recycled. If this was increased to 58%, a further 5,800 tonnes could be recycled. However, balancing this with market growth and income will mean a slower timeline to improve recycling in this area. Targeting new single stream collections and skips services. Embracing Environment Act Regulations to promote and support landfill bans and separate recycling collections. Working with Welsh Government on deposit schemes and reuse.	21, 007t	+5,800t
Secondary recycling	There are secondary opportunities to remove more recycling from residual streams. By sorting through residual skips and other residual streams such as fly-tipping, further tonnage can be recovered for recycling.	-	+ 3,000t

Completing Issues Identified in the 2015-18 Strategy

Following the review of the 2015-18 Strategy, five key areas of focus have been identified that require immediate action, in order to complete the delivery of the 2015-18 Strategy and support the delivery of the updated Strategy for 2018-21.

Piloting a separate glass waste collection service

In order to reduce operational processing and maintenance costs the Council will pilot a fortnightly collection of glass waste in a separate container for recycling purposes.

The weekly green bag collection service will remain for all other materials, but the glass must be placed in a separate container. This will mean high quality glass can be provided for recycling, so reducing the risk of losing a glass-recycling outlet for the Council. The changes will be self-financing; the current cost of recycling the glass will be replaced with an income.

This will fund the additional collection costs of providing this service. On completing the pilot, residents will be consulted and the feedback will inform the further development of the Recycling and Waste Management Strategy. The information regarding the background and the pilot for a separate glass collection is attached **Appendix A1**.

Expand the Wheeled Bin Service

The benefits of the provision and use of wheeled bins, where appropriate, are well established when compared with bag collections. They reduce street litter and pest attacks. Wheeled bins also provide safe storage and movement of waste for employees and residents.

A further 3,000 households (approx.) are deemed suitable for wheeled bins, under the current established criteria. Local consultation will be undertaken with ward members to agree the full extent of the expansion programme. These changes will be delivered within existing resources and further detail is attached as **Appendix A2**.



Minimisation, Education, Reuse and Changes to Household Waste Recycling Centres

The Council will continue its commitment to promoting waste minimisation through education alongside reuse partnerships. Clear education messages and activities will further support change to enable residents to reuse and recycle more in the correct way. A reuse partnership is now well established with British Heart Foundation, and further growth of niche reuse such as medical aids and tools will be provided. The Council is committed to utilising its assets to support the growth of reuse partnerships.

A key area identifed for improvement is within the HWRCs. Whilst the Council offers over 30 different recycling options for residents, a significant proportion of waste is still not sorted appropriately, if 80% recycling could be achieved, almost 7,700 tonnes could be added to recycling performance. A number of users are simply bagging all types of waste and disposing of it in the general waste skip. The Council will therefore introduce an 'education station' at the HWRCs to support residents bringing in bagged mixed-waste.

This will assist in reaffirming the messages being conveyed to residents about how to recycle effectively and help them to prepare their waste appropriately before visiting the HWRCs to enable as much recycling as possible. Full proposals to meet and exceed the 80% recycling targets set for HWRCs, the reuse plans, and community engagement strategy are attached as **Appendix A3**.

Develop new recycling infrastructure

There is a clear need to consider Cardiff's future waste infrastructure requirements in view of the city's growth. The Local Development Plan (LDP) sets out the areas of major growth within the city and whilst the current HWRC infrastructure will absorb the north-east growth, long term demand must be considered in the growth areas of the city. A new domestic and commercial HWRC will be required to accommodate further growth areas of the City, to futureproof maximum re-use and recycling opportunities for non-kerbside collected waste. A business case will be required providing a suitable location assessment and to there will be a 2-3 year lead times on delivering planning, permiting and construction for such a site, once appropriate land has been acquired.

In the same way, the Council needs to deliver an outline business case for future materials recycling facilities. The existing Materials Recycling Facility at Lamby Way will meet the medium term needs of the Council, but not the long term due to asset depreciation and future growth volumes. Again, due to the costs, land and development timelines involved in such a new project, work is required now. Equally, for such a large venture, economies of scale are vital.

The Council wishes to explore regional working, following on from the successes of Prosiect Gwyrdd for residual waste and the Cardiff Organic Waste Treatment contracted partnerships. Both studies will review technical surveys and feasibility studies, which can then inform the next revision of the LDP. The Council's future infrastructure will consider changing packaging demands and consumer habits towards paper, plastics and potential deposit return schemes. Further detail, with a summary of requirements, is attached as **Appendix A4**.

Explore opportunities relating to Options to Improve Efficiency and Customer Experience

To deliver improvements to meet customer needs, operational efficiencies and exploring ways of working that improve value for money are always needed for continual improvement. This section sets out various options that can be explored to determine if further efficiencies can be delivered. These include considering collecting on Bank Holidays or a different collection window in the day to reduce the number of 'catch-up weeks or avoid parking and traffic issues can both reduce the frequency of missed services. Other efficiencies that could be brought forward are to review green waste compost collections services during winter months to a more demand led service may also provide a better customer experience. All are to be explored in more detail. A case study in relation to alternative working patterns, and a high level option appraisal for some options for compost collection improvements for customers and efficiency, are attached in **Appendix A5**.

All changes proposed in the updated Recycling and Waste Management Strategy will be based on robust financial modelling and strong business cases. New markets and existing outlets also need to be stable and yield good quality recycling, whilst the Council will continue to support targeted education and a zero tolerance approach to poor waste ownership.

6. Increasing the Recycling Rate: Actions for 2018-21

The Council will build on the waste minimisation, reuse and recycling approach set out in the Recycling Waste Management Strategy 2015-18.

Education

It is important to acknowledge the role of the public in raising levels of high quality reuse, recycling and composting and in helping to maintain the quality of their local streetscene. The Council can undertake detailed waste flow modelling, analyse collection data, research best practice and initiate improvements to infrastructure and recycling and waste schemes, but none of that practice is worthwhile without the full support and participation of the public.

As strategic changes are implemented, full communication plans will be drafted with the support of the Council's communication team and community leaders. A range of methods will be employed to communicate with all customers, both internal and external. These will embrace all available media formats, and recognise the social and demographic variations across Cardiff

• We will provide targeted educational messages specific to the areas, using all data available to identify the message required.

In addition, the Council will consider preferred communication formats for these specific groups, seeking advice from neighbourhood management and community groups.

The Council is also committed to the Equal Opportunities Policy, and will continue to offer material in formats such as large print, Braille and audio. Planned operational changes would be subject to Equality Impact Assessments.

- We will make full use of communication material that is available from partner organisations, including fly-tipping publicity material from Natural Resources Wales.
- We will draw on best practice communication activities and case studies, as well as utilising existing research undertaken by partner organisations into behavioural change, demographics and preferred communication methods.

Community based activities such as the 'Love Where You Live' and 'Really Rubbish' campaigns must continue to play an important role in raising awareness and volunteer support directly in communities.

• We will build on the "Love Where You Live" and "Really Rubbish" campaign ethos to promote community ownership of issues relating to litter, waste and recycling, raising awareness and sense of social responsibility.

Targeted Stakeholder Engagement & Communication

Stakeholder engagement and communication is essential to increase recycling rates across the city. The Council has some challenges, with students comprising 10.8 % of Cardiff's total population. This is a transient community, meaning that there is a need to invest in education and awareness raising on an annual basis.

• We will continue to work in partnership with universities, students unions and the third sector to support students with street scene, reuse and recycling improvements.

Ethnic minorities also account for 15.5% of Cardiff's population, significantly higher than the Welsh average. Again, this requires information in specific languages and tailored support to ensure inclusivity and that key messages are received by all the city's residents. All key recycling and waste information is currently translated into 15 community languages.

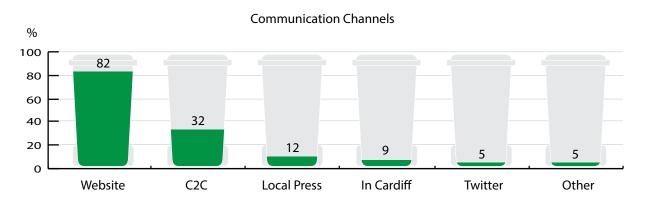
• We will work with community leaders and forums to ensure our communications support our Black, Asian and Minority Ethnic Communities to reuse and recycle more.

Targeted campaigns, taking into account the needs of these individual communities, are developed with advice from relevant stakeholders.

The Council will also make full use of all area-by-area data available to us to develop area-specific recycling plans with differing objectives. The education focus over the next three years will be within poor to mid-performing recycling areas. For example, a monitoring and improvement exercise completed in 2015 identified that the biggest positive gains could be achieved in Fairwater/ Trowbridge.

• We will use intelligent data to deliver targeted campaigns in areas that are likely to see the best incremental change in recycling performance

It is not always possible to deliver a leaflet to every door in the city, which is why targeted improvement is essential. There is also growing evidence that many households do not respond well to 'cold' leaflets being delivered through the door. The Council will need to ensure that, as it moves forward with its digital agenda, new technology supports communication wherever possible. Recent Ask Cardiff surveys have also helped inform how and where people go to find their recycling and waste information: (summary below). This will again help us use more cost effective communication methods which residents also prefer to use.



In addition, the Council can now analyse on a ward-by-ward and street-by-street basis where residents are finding information about recycling and waste collection dates. We can again further tailor communication methods, based on our residents' preferred engagement methods.

Partnership working

A core principle remains a strong focus on partnership working. In addition to opportunities for shared regional infrastructure, continued collaboration regarding recycling markets and the production of goods from materials will continue to yield benefits through the economies of scale that partnerships bring.

• We will explore community and charity partnerships, alongside local authority partnerships, to form the cornerstone of a strong longer-term recycling strategy and circular economy in this area.

New Markets for Recycled Waste

When any potential new markets open up for recycling materials, the Council will explore the viability of offering expanded services to residents and businesses.

• We will explore new markets as they become viable, such as hygiene waste, more hard plastics and polystyrene over the next 3 years.

Single Use Plastics

The Council recognises the damage that waste plastics cause to the environment, and that single use plastics create unnecessary waste with negative impacts on our communities and environment. Approximately 400 million tonnes of plastic are produced globally each year of which 40% are intended to be single use. Over 8 million tonnes of this plastic enter the world's oceans each year with most originating from the land. A reduction in the use of plastics and the recycling of those plastics that are recyclable, such as those collected from households in the city through the green bag scheme, can help protect our environment and support sustainable agendas.

- We will bring forward a proposal for significantly reducing single use plastics such as plastic cups and plastic cutlery by the Council and within our supply chains by October 2018.
- We will work with partners to promote awareness of the environmental damage caused by single use plastics.
- We will continue to work with Welsh Water on the provision of drinking water refill stations.
- We will continue to promote the environmental benefits of the appropriate disposal and collection of recyclable plastics for recycling.

Alternative fuel mediums

Capital Ambition supports the move towards more sustainable fuel sources. Waste services are already exploring alternative fuel mediums such as electric vehicles and hydrogen or compressed natural gas fuels for the Council's Heavy Goods Vehicle (HGV) fleet.

• We will explore alternative fuel mediums - such as electric vehicles and hydrogen fuels for the HGV fleet - in order to contribute towards the Council's carbon reduction and clean air commitments, as well as the long-term sustainability of the fleet.

Enforcement

Capital Ambition makes clear that the Council will operate a zero tolerance policy for the litter-throwers and fly-tippers who demonstrate a complete lack of respect for their neighbours and communities. This will mean increasing enforcement activities and fines.

- We will adopt a "zero tolerance" enforcement approach towards environmental crime, for those in the community who do not take responsibility for their own waste. Enforcement will only be an option in cases where legislation, and political direction, is available to support it.
- We will update and revise environment crime policies, based around the fly-tipping, public protection and littering.

Household Waste: Household kerbside collections, bulky, hygiene & bring sites

Kerbside collection policy

Towards the end of this strategy for 2018-21, the Council will retest the current approaches to ensure that they are providing the best value for money and sustainable outcomes, in line with the Welsh Government's preferred Collections Blueprint.

• We will ensure the Council's TEEP (Technically, Environmental and Economically Practicable) position will be re-tested against the Recycling and Environment Regulations to ensure maximum cost effective recycling.

Domestic collections, including bulky and hygiene collections

Household participation in recycling schemes and increases in the amounts of domestic waste presented by residents for recycling will continue to be critical to achieving higher level recycling targets. Citizen engagement and communications will be key in reaching the targets of 70 % or higher. As the technology develops, there is scope in future to consider motion sensors in bins. This can positively assist in a number of ways. This could accurately determine how much waste the Council is collecting, the number of properties per street presenting a particular type of waste for collection, along with providing detailed insight into whether a bin has been collected (but reported as missed).

• We will, as technology emerges, maintain a watching brief on market place opportunities and bring forward a business plan at the appropriate time.

As the city continues to grow, collection day rebalancing will be required. As new developments are built, the collection rounds (amount of properties serviced per vehicle) need to be rebalanced and this can mean having to change the collection days for wards and/or properties. "Re-zoning" the collection days is typically required every five years.

• We will explore the need for re-zoning the collection days, and recommend action by 2022.

In terms of bulky waste collections, the Council's reuse partnership with British Heart Foundation allows scope to re-use items collected within the bulky waste service.

Bring Sites

The use of bring sites by the public has declined over the years. In the right location, they still have a place in the community.

We will explore the benefits of new bring sites in areas where demand has been identified, with a
focus on glass collection and new build areas.

Household Waste: Recycling Centres

Deposit Return Schemes

The Council will work with Welsh Government and key partners to explore the concept of reestablishing deposit return schemes for packaging.

• We will work with industry and Welsh Government to contribute to the development of schemes that will yield reuse and high quality recycling.

Street cleansing, litter and fly-tipping

The Council continue to explore recycling opportunities and consider new community engagement initiatives to increase waste ownership. The contents of on-street/ parks and local litter bins and litter collected from the streets contains up to 70% recyclable materials. While street recycling bins have been provided in high footfall city centre areas it has proved to be a significant challenge to encourage residents and visitors to use the bins correctly. Recent research has shown that bins have to be demonstrably different and very well labelled with positive 'nudge' messages to help everyone to use them.

- We will work with Welsh Government on their national behaviour change projects to overcome communication barriers and deliver local campaigns, in our high footfall districts and parks, for recycling litter to be put into new recycling litter bins
- We will explore the use of "nudge theory" to help influence people's habits, which includes such elements as litterbin design and placement.
- We will support and facilitate recycling from community litter picks to assist in growing community pride and ownership of open spaces.
- Increase City wise support for Love Where You Live voluntary groups in this approach and continue improve discarded litter recycling

Street Sweepings

• We will work on improved street cleansing activities to assist in removing litter from the collected sweepings. This will reduce the qualities of non-target material that has to be removed from the recycling process.



Commercial Waste Collections

Commercial services

Commercial waste services have grown over recent years and is expanding into new markets; however, this can carry risks to improved recycling performance.

- We will undertake targeted recycling campaigns focusing on small to medium-sized businesses. These specific campaigns will be evaluated, with case studies produced to encourage other businesses to re—use and recycle as much as possible.
- We will expand the growing skips service to provide targeted material options. By providing single stream skips, this will encourage more recycling at source by business customers.

The Council's Commercial Services team already offers numerous separate stream collection services to businesses. These services will be expanded in line with the developing Recycling and Environment Wales Regulations (Environment (Wales) Act 2016 – Part 4). Card, glass, wood, rubble and food will be collected separately to support the regulations and landfill bans. Other materials for collections will also be considered.

• We will work with Welsh Government to comply with regulations and support business to comply with regulations that come into effect over the lifetime of this strategy. This activity will support increased reuse, recycling and the provision of high quality closed-loop recycling.

Secondary recycling

Waste Transfer and Secondary Sorting

The waste transfer station at Lamby Way will continue to focus on sorting all residual waste deposited there in order to extract any recycling or reuse value.

• We will use secondary sorting to extract any recyclables that have been disposed of incorrectly to achieve higher targets for recycling through waste transfer. However, over time, we will seek to recycle materials that have been sorted up-front.

Disposal & Landfill Aftercare

Minimising waste to disposal remains a key priority as well as a statutory requirement, and will be achieved by ensuring increased levels of high quality reuse, recycling, and recovery. The Council is committed to reducing waste to disposal or treatment, through increased quantity and quality of reuse & recycling. This can be achieved by improving infrastructure, public accessibility and behaviour with a view to achieving national targets and avoiding financial penalties (for exceeding maximum disposal and/or treatment targets).

The landfill site at Lamby Way closed in 2017 and the Council commenced a 60-year aftercare plan for the site. Currently, the site is being considered for the best community provision which includes a nature and wildlife reserve, solar energy farm and an eco-food park.

• We will observe our statutory requirements to protect and care for the landfill site at Lamby Way and explore end of use options for the site.

Delivery Arrangements

The Council's five-year policy programme, Capital Ambition, commits to the delivery of a 'Total Street' approach to keeping the city's streets and public spaces clean and well maintained. Frontline council services such as cleansing, highways, waste and enforcement will also be aligned and there will be a strengthening of responsibility to neighbourhoods through a stronger focus on partnerships and cross-directorate working. To support this approach, the Capital Ambition Delivery Programme includes the establishment of a Streetscene programme, which will oversee the implementation of the Recycling and Waste Management Strategy 2018-21.

All of the actions and activities required to deliver this strategy will be managed and tracked through the Streetscene Programme Board.

7. Risks & Challenges

The Recycling and Waste Management Strategy 2018-21 is required to mitigate significant risks that the Council faces if it fails to deliver the required step changes:

Finance:

- The Sustainable Waste Management Grant funding may be at risk for schemes that do not adopt to the Welsh Government's 'Collections Blueprint' methodology.
- Obtaining high quality recycling markets will increase the income to the Council and secures the best market prices. However, money needs to be invested to achieve this.
- The Council's budget deficit is striving for further income generating opportunities, including high profile events, increased emphasis on fines for incorrect presentation of waste and the growth of the commercial waste team. The growth of commercial waste will see waste generation grow by 2,000t per year (with associated costs for processing/collection).
- Secondary recycling (post sort) will be required to meet future recycling targets. There is currently no identified budget for this, so the Council is relying on waste reserves.

Failure to reach targets:

- If we do not meet statutory targets, the fines could potentially equate to more than £10m by 2025.
- Economy recovery may result in waste production increasing 'throwaway society'.
- Many Local Authorities in Wales do not provide commercial waste services; consequently, Cardiff has a disproportionate position when compared to other Councils' recycling performance.
- Moving this tonnage from our Municipal Solid Waste figures would greatly improve our recycling performance by +4 %.

Increased demand on services:

- Cardiff is one of the fastest growing cities in the UK. The LDP will deliver 41,415 new dwellings.
- Cardiff's population has risen over 3,500 each year, with official projections indicating continued growth.
- Increasing numbers of high profile events in the city results in additional waste being produced. Management of the collection and processing of the waste results in additional costs, along with increased waste production at a risk to our recycling targets.

Public participation:

- Without support from the public, recycling performance will reduce.
- The incorrect presentation of waste puts additional pressures on our cleansing, and waste education/enforcement team.
- The public perceive a reduction of Council services, including recycling and waste collections.
- The public perception of Council Tax contributions is that it funds a significant element of recycling and waste services, whereas it is 2 %.

Risk of Change:

- Recycling markets, and how they change on a global scale, need to be considered. For example, in 2015/16 there was no market to accept glass for a two-month period.
- Further legislative demands.
- Significant resource and communication support required to change people's behaviour, and encourage buy-in to new schemes/policies.
- Continued political and internal buy-in to change is essential for changes to be effective across the city.



RECYCLING WASTE MANAGEMENT STRATEGY CARDIFF COUNCIL - UPDATED STRATEGY 2018-21 WORKING FOR CARDIFF, WORKING TOGETHER.

