

Royal Borough of Greenwich Waste Strategy 2016-2025

April 2016

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Term	Definition
Climate Change Adaptation	Action that can be taken to prevent or minimise the damage caused by climate change.
Climate Change Mitigation	Actions that can be taken to reduce or prevent emissions of greenhouse gases.
Climate Change Resilience	The capacity of an individual, community, or institution to respond to climate change while continuing to function at an acceptable level.
Demographic	Detail on the structure of a population.
Material Recovery Facility (MRF)	A facility where recyclable materials are sorted into their individual materials using a mixture of manual and mechanical methods
Legislative Duty	A legal obligation that requires mandatory conduct or performance
Recycling and Reuse Centre	The facility in Thamesmead where residents can deposit household waste for reuse, recycling and disposal.
Waste Hierarchy	A hierarchy that establishes the most preferred to least preferred options with regards to sustainable waste management.
Waste Transfer Station	A facility where waste is unloaded from collection vehicles and briefly held while it is reloaded onto larger long-distance transport vehicles for movement to further treatment or disposal facilities.
WEEE	Waste Electronic and Electrical Equipment

Section I: Foreword

Over the next decade the Royal Borough will undergo dramatic changes with regeneration bringing new households, businesses, transport links and green spaces. As your Council we see this as an opportunity to modernise the services that we provide to our residents and to ensure that they remain economic, efficient and environmentally friendly.

As a society we must become more aware of our impact on both the local and global environment. It is important that we see the waste we produce as a resource and not as rubbish. As a resource we can use it to manufacture the products we need, produce soil to grow our food and convert it into energy to light our homes and power our businesses.

This strategy explains why we collect, manage and treat the waste produced in Royal Greenwich in the way that we do and highlights the challenges we face. It then identifies the opportunities that are available to us as local residents to further develop a Royal Borough that is a cleaner, more sustainable and a less wasteful place to live.

Cllr. Jackie Smith

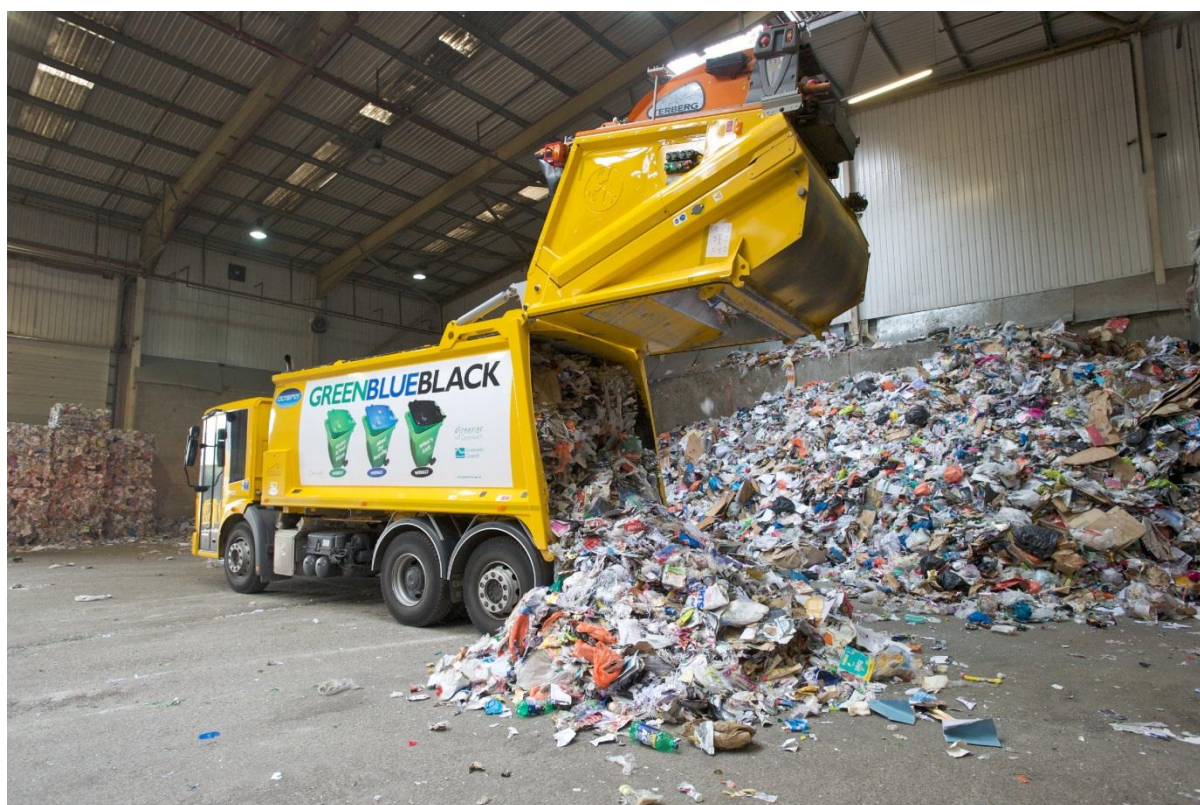
Cabinet Member for Community Services



Section 2: Vision

This Strategy aims to clearly outline the current practices on the collection and treatment of municipal waste within the Royal Borough. In addition, it discusses some of the potential future trends in changes to population and housing in Royal Greenwich and how this will impact the current practices.

This document will guide all future municipal waste policy up to the year 2025 within the Royal Borough, helping Royal Greenwich move towards a more sustainable society.



Section 3: Introduction

3.1 Purpose of the Strategy

This Strategy has been developed to clearly outline the current practices, the key pieces of legislation, the opinions of both residents and businesses, and highlight future drivers for change in Royal Greenwich to enable the Royal Borough to move towards a more sustainable approach to municipal waste management.

3.2 Included Sections

This Strategy will address the following topics:

- It will provide a brief description of the geographic and demographic characteristics of Royal Greenwich;
- It will highlight the key pieces of legislation that affect the way that Royal Greenwich must manage its municipal waste;
- It will describe the actions currently taken in the management of municipal waste, and the reasons why these actions are taken;
- It will summarise responses from residents, businesses and internal departments about the current and potential future direction that Royal Greenwich should take in managing municipal waste;
- Finally, it will briefly set out the future aims of the Royal Borough to enable it to move forward into a more sustainable and resource-efficient future.

3.3 Scope of the Strategy

All municipal waste types produced within the Royal Borough are considered within the bounds of this strategy. The source of where waste is generated will have an influence on how the Royal Borough is involved in its management.

The majority of the municipal waste that the Royal Borough collects and disposes of is produced by households, but a significant quantity is also produced by businesses and from other local authority departments such as Street Cleansing, Asset Management and Parks & Open Spaces

3.3 Consultation

Before this strategy was put together an extensive consultation exercise was carried out that looked to gauge the opinions of residents, staff and businesses that use the Royal Borough's businesses waste collection service.

This was carried out in 3 separate forms:

- Face to Face meetings with frontline Street Services staff.
- Face to Face meetings with resident groups from across the Borough
- Online survey of residents and businesses.

The outcomes of the consultation guided and informed the creation of this document.

Section 4: Background to Royal Greenwich

4.1 Population and Housing Structure in Royal Greenwich

Royal Greenwich is a local authority situated in South East of London, covering an area of 47.35 km². In 2011 it had a population of 254,500 with 31% of the population not born in the UK, and 47.7% identifying themselves as having a Black and Minority Ethnic (BME) background acting to produce a vibrant, multi-cultural community.

In March 2014 there were 107,000 domestic properties in Royal Greenwich, of which 54% were houses or bungalows, 38% were purpose-built flats and 8% were flats in converted or shared houses. The Royal Borough has the largest stretch of river of any London local authority, with 8 miles of river-fronted land. This area in particular has had significant regeneration in the past decade, mostly in the form of flats.

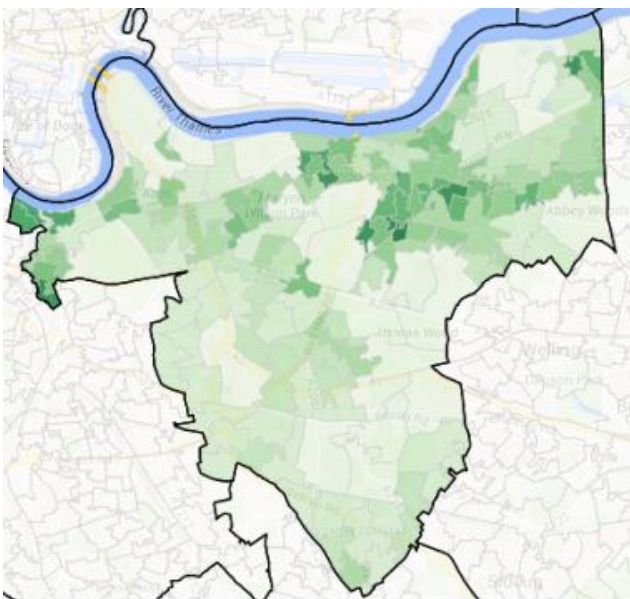


Figure 1 Population Density of Royal Greenwich in 2012

As Figure 1 shows, the population density of Royal Greenwich varies quite dramatically across the borough. The lowest population densities are found in the Shooters Hill and Eltham areas of the borough where there are large amounts of suburban housing. The lowest population density recorded in Royal Greenwich in 2012 was 12 people per hectare. The areas of Deptford, Greenwich, Woolwich and Plumstead are the most densely populated, with up to 229 people per hectare recorded in 2012 as a result of the vast majority of high density flats being found in these areas.

The above highlights the mix in housing type and diversity of residents seen across Royal Greenwich. It is also important to highlight that the regeneration of large areas of Greenwich Peninsula, Charlton and Woolwich will see greater numbers of flats being built and the population density rise further in the future.

4.2 Future Trends

Like all London authorities, Greenwich is expecting to see its population continue to rise over the next decade. It is projected that in the Royal Borough in the next 10 years approximately 24,000 new households will be built. This rise in population will have a significant impact on the amount of waste produced in Royal Greenwich. It is currently estimated that the average person in the Royal Borough generates roughly 400kg of waste per year. This would mean that an extra 25,000 tonnes of household waste would be generated in Royal Greenwich by 2025 if current waste generation levels remain the same.

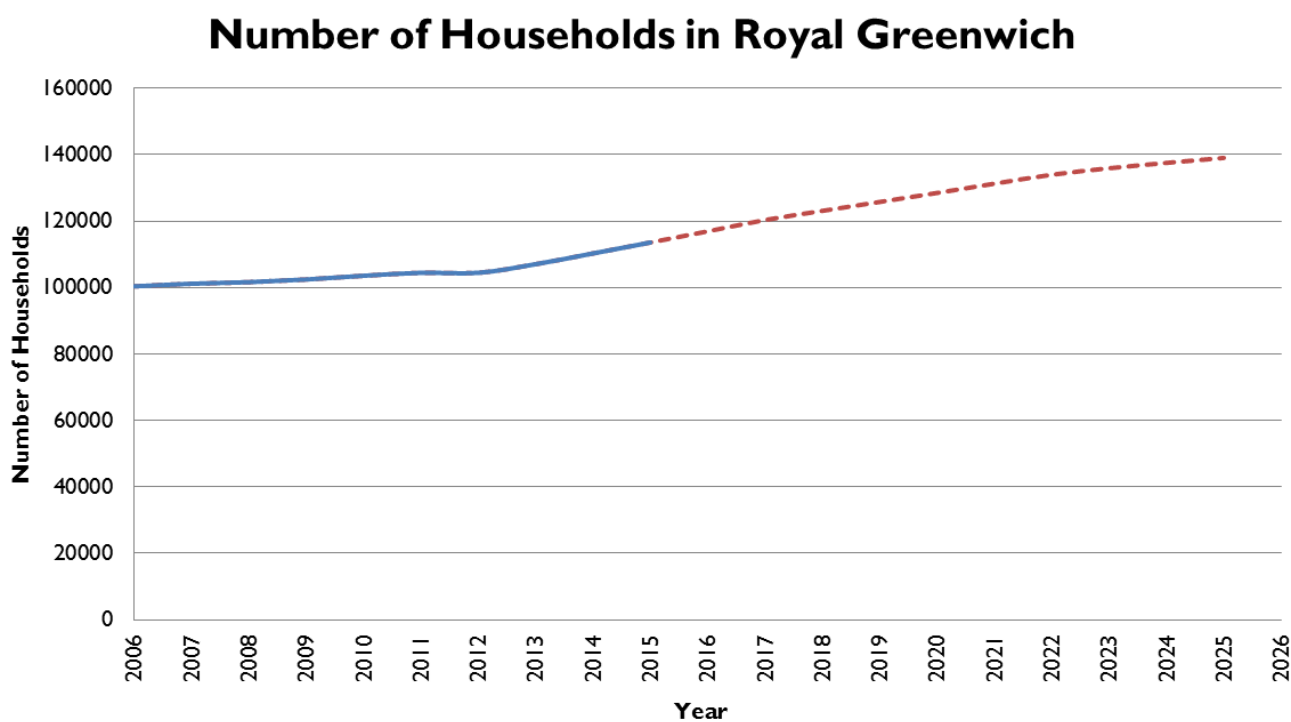


Figure 2 Household Trends in Royal Greenwich

4.3 Royal Borough Strategies

The Royal Borough has a key aim to improve the quality of life for its residents. To help achieve this aim the Royal Borough has established two overarching strategies, namely promoting economic growth and tackling poverty.

The Royal Borough's Economic Growth strategy has the following key themes:

- Pursuing opportunities to support regeneration, growth and employment;
- Supporting the development of major transport infrastructure, in particular the river crossings;
- Maximising the role of the River Thames in economic development and tourism;
- Securing inward investment for business growth;
- Increasing housing supply to meet growing demand;
- Identifying options for increasing school places (including developing new school sites) and raising standards of post-16 education.

The Royal Borough's Anti-Poverty strategy seeks to ensure that all residents, but particularly those living in or in danger of falling into poverty, have the opportunity to benefit from its Growth strategy. In particular the strategy includes the following priority actions:

- Examining ways of supporting small and medium sized businesses to help them expand local employment opportunities;

- Pursuing options for joining up funding streams for skills and training, and to develop a local workforce equipped and ready for work;
- Providing job and apprenticeship opportunities within the Council for young people and those affected by the welfare reforms;
- Pursuing a range of options for increasing the supply of affordable housing within the borough;
- Establishing partnerships with the energy supply industry to tackle fuel poverty.

All Royal Greenwich strategies, including this one, must link in, where possible, with these two key strategies.

In addition the Royal Borough has produced other strategies that are specifically relevant to this strategy.

4.3.1 Climate Change Strategy

The 2011 Climate Change Strategy outlined the Royal Borough's approach to dealing with the effects of climate change. It discussed both current and future adaptation and mitigation actions that would be needed to allow Royal Greenwich to increase its resilience to climate change. The Strategy includes a number of points that have an impact on the management of waste in Royal Greenwich.

The strategic objective in mitigating the impacts of waste management in Royal Greenwich is "To minimise the detrimental impact of waste on climate change by decreasing both CO₂ and methane emissions resulting from

waste arising, collection, processing and disposal.” The individual objectives that need to be reached in order to allow the achievement of this larger objective are:

- Seeking to limit and reduce waste arisings;
- Maximising recycling, composting and reuse, and minimising the disposal of waste, particularly to harmful landfill;
- Ensuring collection and disposal arrangements are “transport-efficient”, so reducing CO₂ emissions from transport;
- Ensuring waste processing arrangements yield outputs that can be used in the manufacture of new goods (i.e. as a substitute for the use of raw materials) or can be used to generate energy (i.e. as a substitute for the use of fossil fuels).

The strategic objective for waste management in adapting to climate change impacts in the Climate Change Strategy is “To ensure adaptation measures are in place so waste management facilities and operations are not disrupted by the impacts of climate change”. The individual objectives of this larger strategic objective are:

- To continue to manage how waste is collected to reduce the impacts that extreme weather such as warmer temperatures and heavy precipitation may have on waste collection;

- To continue to meet all requirements and measures as outlined by Royal Greenwich’s waste site licences;
- Monitor the needs of staff and provide, where appropriate, personal protective equipment to enable them to continue to operate safely if extreme weather changes were to occur;
- Continue to have contingency sites in place to deal with individual waste streams if the normal facility is placed out of action due to unforeseen circumstances such as extreme weather conditions.

In addition to these objectives which are specific to waste management in Royal Greenwich there are also other objectives that directly or indirectly impact Street Services in Royal Greenwich. One such target is set as the desire for all Council vehicles to be the European Emission standard of EURO 5 by 2020.

4.3.2 Equality Objectives 2012-2016

The Royal Borough is firmly committed to tackling discrimination and promoting equality of opportunity and good community relations. In 2012 the Royal Borough set out 11 Equality Objectives that will run until 2016, they are:

- Improve the accessibility of services so that they are delivered appropriately and sensitively.
- Provide information about services in accessible formats and languages.

- Improve the diversity of the workforce to make it more representative of the local community;
- Treat our staff equitably in all areas of employment including career development, pay and training;
- Tackle harassment and bullying in the workplace;
- Improve our understanding of the needs of different communities in the borough through effective community profiling, consultation, liaison and involvement;
- Improve participation in local democracy and representation on public and voluntary bodies;
- Improve community relations and promote diversity through events, publicity and other initiatives;
- Improve opportunities for disabled people so that they are able to enjoy a good quality of life;
- Tackle all forms of hate crime and harassment and promote safety and security;
- Ensure that all sections of the community have opportunities to benefit from the regeneration of the borough.

These 11 objectives will be built into the current and future municipal waste management operational plans.



Section 5: Legislation

This section outlines the current key pieces of legislation or policy that impact the collection, treatment and disposal of waste in Royal Greenwich. There are four levels at which policy affecting Royal Greenwich is set, firstly at the European Union level, then the National level, followed by the London level and finally at borough level.

5.1 European Waste Policy and Legislation

The European Union (EU) is a major source of environmental law and guidance, especially in the management of waste.

Two key pieces of European legislation with regards to this strategy are the Landfill Directive and the revised Waste Framework Directive.

The Landfill Directive aims to minimise, or prevent, the negative environmental and human health effects caused by landfilling of wastes. It set targets to EU nations requiring the amount of biodegradable waste sent to landfill to be reduced. The UK has met the first two targets for 2010 and 2015 and has only the 2020 target remaining. Royal Greenwich will continue to make efforts to lower the amount of waste it sends to landfill to aid the UK in meeting its 2020 target.

The Waste Framework Directive became European law in 2008 and can be seen as the main piece of waste law in Europe. The directive outlined the desire for a 'European recycling society' and highlighted that waste should be seen as a useful resource.

It included the publication of 'The Waste Hierarchy' which shows the order in which actions should be taken to managing waste. It identifies that prevention of waste can be seen as the best option from an environmental perspective, with disposal as the worst.

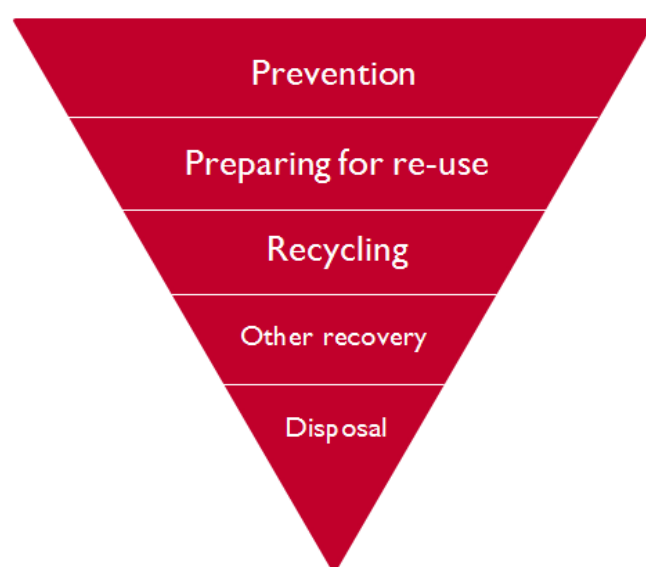


Figure 3 The Waste Hierarchy

Regulation 12 of the revised Waste Framework Directive requires the UK, and therefore all UK local authorities, to apply the waste hierarchy to each type of waste material collected. There must be efforts in place to attempt to move different waste streams up the hierarchy. As a UK local authority, Royal Greenwich applies the waste hierarchy to all collected waste and makes efforts to move collected waste up the hierarchy where possible.

The second notable duty of the revised Waste Framework Directive is Regulation 13. This states that all waste collectors must collect the dry recyclables of paper, plastic, glass and

metal by a completely separate collection method. Unless they can provide evidence to show that separate collection would not be necessary to improve the quality or quantity of recycling currently occurring, or not technically, economically or environmentally practicable.

Royal Greenwich carried out its own internal investigation into the potential of operating a completely separate or partially separate collection scheme in 2014. The investigation found that Royal Greenwich should continue to collect dry recyclables via a mixed (co-mingled) collection. The Royal Borough will repeat the investigation on a regular basis, or if there is any major change to service, make sure that the Royal Borough remains fully compliant with this regulation.

5.2 National and London Waste Policy and Legislation

The majority of waste law in the UK has been introduced to meet the needs of European law such as the Landfill and revised Waste Framework directives. The Greater London Authority produces all of London's specific waste policy, the majority of which is detailed in both the London plan and the Mayor's Business and Municipal waste strategies.

5.3 Relevant Legislative Targets

Many of the pieces of legislation contain specific targets that either directly or indirectly affect Royal Greenwich, the key targets are:

- To reduce the amount of household waste produced in 2008/09 from 970kg

to 790kg per household by 2031 (London target);

- 50% recycling of municipal waste by 2020 (EU, England and London target)
- Sending no waste direct to landfill by 2025 (London target)

These targets are not for Royal Greenwich to meet as an authority but must be met at the London and national level. Therefore, Royal Greenwich will make efforts to play its part in reducing the amount of household waste generated by residents, to increasing the levels of recycling and reducing the amount of waste that is sent directly to landfill.

Table 1 shows Greenwich's waste apportionment share as stated by the London Plan in 2015. The borough will look to meet these amounts through partnership with the neighbouring London Boroughs of Southwark, Lewisham, Bromley, Bexley (known as the South East London Technical Group) and the City of London.

Table 1 Waste Apportionment Figures 2016-2026

Year	Apportioned of London waste to be managed by the Royal Borough of Greenwich (tonnes per annum)		
	Household	Commercial and Industrial	Total
2016	92,000	138,000	229,000
2021	109,000	156,000	265,000
2026	134,000	184,000	318,000

Section 6: Current Practices

This section describes how the Royal Borough currently collects, manages and treats municipal waste.

As a Unitary Authority the Royal Borough is responsible for both the collection and disposal of municipal waste generated by households and businesses within Royal Greenwich. The Royal Borough meets its collection responsibilities through its in-house workforce and vehicle fleet. For disposal of waste the Royal Borough has several long-term contracts with companies who treat or dispose of waste on its behalf.

Street Services is the Royal Borough department in charge of the collection, transportation and treatment of household and certain businesses' waste produced within its boundary. It is also responsible for street cleansing activities in the Borough, including the collection of waste from litter bins.

Street Services also holds all Enviro-crime officers whose duty it is to ensure that businesses do not abuse the household waste collection service. They also maintain a presence to deter occurrences of littering in public areas, and investigate flytips.

The department is based at the Birchmere Centre, Eastern Way, Thamesmead. The Centre offers a range of functions required for the effective operation of the service.

All Royal Greenwich departments make efforts to correctly manage any waste they produce ensuring that the maximum separation of waste occurs and suitable disposal routes are used.

6.1 Household Waste Collection

Royal Greenwich currently provides households with wheeled containers that they can deposit their waste in. In cases where properties do not have space to store wheeled containers they are provided with recycling sacks to enable them to recycle as well.

Currently a weekly collection is operated of the 3 household waste streams:

Food & garden waste – Collected in “green-lidded” wheeled containers, green communal containers or cornstarch sacks. This service is provided to blocks of flats where local conditions allow. All new developments of flats are provided with these bins.

Mixed dry recycling – Collected in “blue-lidded” wheeled containers, blue communal containers or clear sacks. These are made available to all properties, and collect paper, card, mixed plastics, metal cans and glass via a mixed collection (co-mingled).

Residual or general, non-recyclable waste – Collected in “black-lidded” wheeled containers, or black or silver communal containers or black sacks. One of these collection methods is made available to all properties.

The Royal Borough also provides four additional collection services for households. The first is a Bulky Waste collection service where residents are able to arrange an appointment for the collection of large items of household waste, such as furniture. This is a paid-for service to cover the cost of collection. The Royal Borough works in partnership with

the furniture reuse and homelessness charity Emmaus to reuse and refurbish suitable items of bulky waste and white goods.

Additionally, a Clinical Waste collection service is offered to households that produce clinical waste which requires separate collection and disposal on public health grounds.

The third additional service is a free collection of textiles (used clothes or rags) which is collected from outside the residents home on a set day. The collection can be arranged by the resident telephoning the Royal Borough's contact centre. The textiles are then taken to be recycled into industrial rags.

Finally the Royal Borough recently introduced a new small Waste Electrical and Electronic Equipment (WEEE) collection from households. This includes items such as irons, kettles, telephones etc. The collection can be arranged by the resident phoning the contact centre, they will then be given a set day when they can leave their small WEEE item out for collection. These items are then taken to a specialist facility where they are broken down and recycled. In all communal blocks within the Borough, where suitable, small WEEE containers will be installed and collected from periodically.

6.2 Business Waste Collection

The Royal Borough operates a kerbside business waste collection services that is available, at a cost, for most businesses located within Royal Greenwich. The service consists of two collections, a recycling collection and a general waste collection. The waste is collected

in either pre-paid plastic sacks or hired containers. The recycling collection collects the same materials as the household dry recyclable collection (plastic, paper, cardboard, metal and glass). Currently, all food & garden waste generated by businesses is collected in the 'general waste' collection as this service is not offered to businesses.

The service operates 7 days of the week and 365 days of the year allowing businesses to receive a reliable and consistent service. The Royal Borough incentivises businesses to recycle by offering a lower price for the collection of recycling in comparison to general waste. The business waste service is growing in popularity with over 1,300 businesses in the borough now using the service.

6.3 Waste Management Infrastructure

The main piece of waste management infrastructure in Royal Greenwich is the composite waste management facility in Nathan Way, Thamesmead, located next to the Birchmere Centre. It is owned by Royal Greenwich but managed by a long term partner, Veolia Environmental Services Ltd. The site contains three key individual components discussed below.

6.3.1 Waste Transfer Station

The Waste Transfer Station accepts and stores mixed wastes and recyclables from both Royal Greenwich and third parties. Any third parties that use the site must pay a set charge depending on the amount and type of waste

they are delivering to the site. The waste is stored here until it is moved onward for further treatment or disposal. All waste that enters the Waste Transfer Station is weighed and placed into a specific bay reflecting its waste type. Waste operatives also attempt to extract recyclable waste contained within non-recyclable waste in an attempt to move waste up the waste hierarchy. The site is licenced to handle a large variety of waste types including asbestos and florescent tubes.

6.3.2 Reuse & Recycling Centre

The Reuse & Recycling Centre is the only civic amenity site available to residents. Here, residents can deposit waste that is too large or not suitable for collection offered to them at the kerbside, as well as all wastes that are collected at the kerbside. The Reuse & Recycling Centre accepts a wide range of materials including electrical goods, garden waste, wood, scrap metal, mineral and vegetable oils, car batteries, etc. Each of these waste types have a separate container enabling safe containment, whilst increasing the ability of the waste to be reused or recycled.

6.3.3 Materials Recovery Facility (MRF)

The MRF accepts the mixed (co-mingled) dry recyclable waste (mixed paper, card, glass, plastic and metal). This mixed material is sorted through various mechanical and manual operations to separate the waste out into their individual materials. The materials are then baled and sent to individual reprocessors to be recycled.

6.3.4 Bring Sites

Currently there are 4 bring sites located in Royal Greenwich where a range of materials such as metal, cardboard, paper, mixed plastics, glass, textiles, shoes, small electrical items and household batteries can be collected to be reused or recycled. The need for this service has diminished in recent years due to the increase of both kerbside collections of WEEE and textile waste, and the introduction of containers for these waste types in all large new developments.



6.4 Waste Treatment and Disposal

This section will briefly describe how waste is treated or disposed of for each of the three main collected waste streams (Food & garden waste, recycling and residual waste).

6.4.1 Treatment of Food & Garden Waste

All food & garden waste is deposited by refuse vehicles at the waste transfer station in Nathan Way before being moved by a larger lorry for treatment. Currently, it is sent to two In-Vessel Composting facilities both of which are operated by Veolia. Here the waste is broken down under controlled conditions to produce compost for agriculture and land regeneration. The small amount of garden waste collected at the Recycling & Reuse Centre that does not contain food is taken to an Open Windrow composting facility that produces compost for agriculture and land regeneration. The current disposal routes for food and organic waste are contracted until 2027.

6.4.2 Treatment of Recycling

After being separated down into the individual waste streams within the MRF, the material is moved to a wide range of specialist facilities that either recycle or further sort the waste.

6.4.3 Treatment of Residual Waste

Residual waste is unable to be recycled or composted meaning that it must be treated for disposal. Currently, the majority of Royal

Greenwich's residual waste is sent to South East London Combined Heat & Power (SELCHP), an Energy from Waste plant in Deptford. Here, the waste is burned in a controlled environment at high temperatures to produce both electricity for the National Grid and heat for surrounding homes.

The emissions produced from the SELCHP are stringently monitored by the Environment Agency to ensure that they operate within the legally safe limits. The non-hazardous ash produced from the process is sent for further treatment and recycled into an aggregate for construction. Metals are removed from the ash and recycled.

The Royal Borough has a 30 year contract to send waste to SELCHP that will expire in 2024. Several years before this point a tender processes will have to be carried out and new disposal contract secured.

Any waste that is not suitable for incineration is sent to Pitsea Landfill, Essex. The landfill is carefully designed to limit its environmental impact. The majority of methane produced from the breakdown of waste is collected and burned to generate electricity for the National Grid.

6.4.4 Treatment of Hazardous Waste

Currently the majority of Greenwich's Hazardous waste is treated by the City of London. This waste is sent to a relevant facility so that it can be safely treated and disposed of. Residents can arrange for a household collection of certain types of hazardous waste. The details

of this service are outlined on the Royal Borough's website.

6.5 Waste Generation

Table 2 shows the total amount of waste collected in 2014/15 and the specific amounts of Food and Garden Waste, Dry Recyclable Waste, Residual waste and Other waste collected by the Royal Borough over the course of the year.

Table 2 Tonnes of Waste Collected 14/15

Waste Collected	Amount collected in 14/15 (Tonnes)
Food and Garden Waste	15,701
Dry Recyclable Waste	21,009
Residual Waste	69,944
Other Waste (Textiles, bulky items etc.)	605
Total Waste Collected	107,259

Section 7: Consultation

The consultation looked to gauge the opinions of all current frontline staff, businesses and residents on the collection management and disposal of municipal waste generated within the Royal Borough.

Street Services frontline staff shared their opinions on the service they were delivering via group meetings which were built into their PRAD (personal review and development) sessions.

Businesses shared their opinions via a specifically designed online survey that was emailed out to all businesses operating within the Borough.

Residents had the opportunity to share their opinions via two methods. The first was through the numerous 'face to face' meetings with Resident Associations that occurred across the Borough, and the second was via a second specifically designed online survey.

The results from this consultation provided valuable feedback on how the waste collection service is currently perceived by users and service providers, what residents and businesses feel are the key areas on which the Royal Borough should focus on in the future

7.1 Residents Opinions

7.1.1 How are we performing now?

Overall residents indicated that they were happy with the service, with 92.9% of residents indicating that they were either 'very satisfied' or 'satisfied' with the service they received (shown in figure 4).

Additionally residents also indicated that they see the service as a key service with 99.2% of residents indicating that they see the service as 'A top priority' or 'reasonably high priority' (shown in figure 5). And the majority (91.3%) of residents also indicated that they felt that the service was 'very easy to use' or 'easy to use'.

These responses have indicated that overall residents are happy with the service they receive and perceive waste to be a key service that is easy to use.

This view was also raised by residents in the 'face to face' meetings, with residents in every group mentioning that they specifically like the fact that the borough collect dry recyclables via a co-mingled collection and that there is a weekly collection of all 3 main waste streams.

How Easy to Use is The Service You Receive

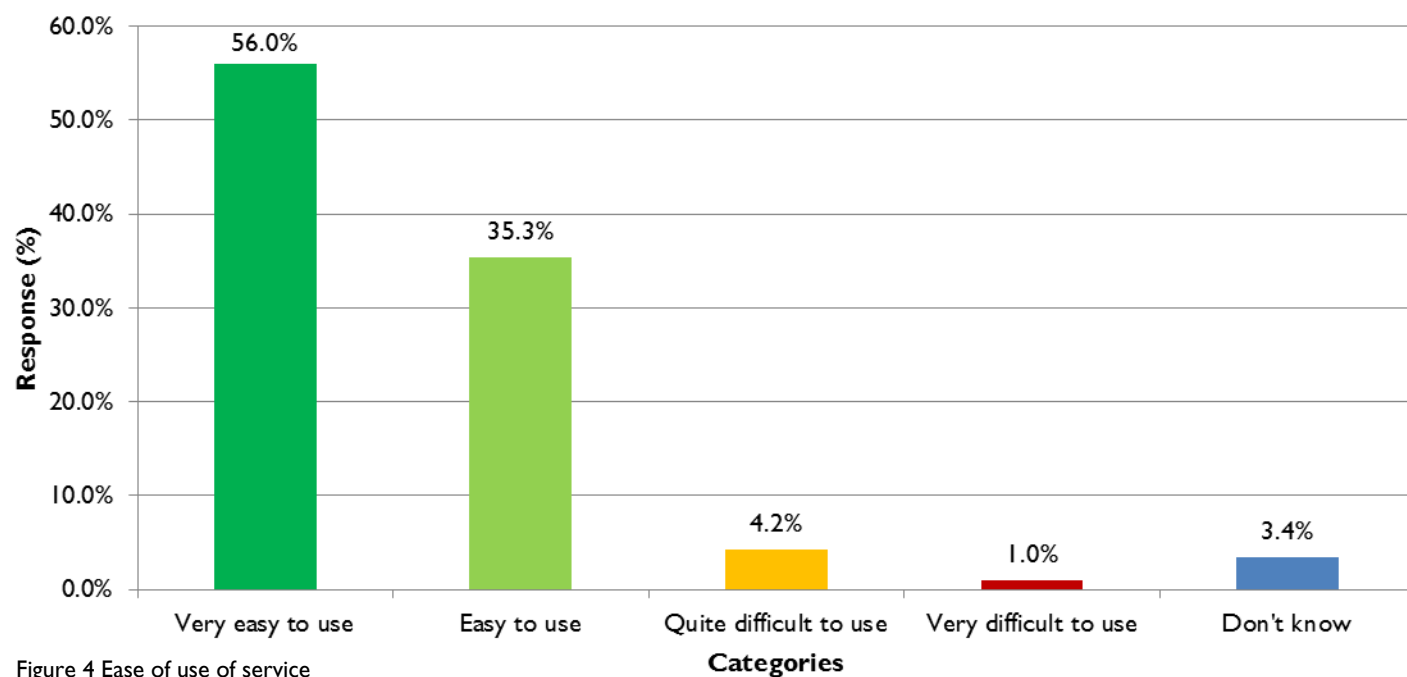


Figure 4 Ease of use of service

Level of Satisfaction in the Service

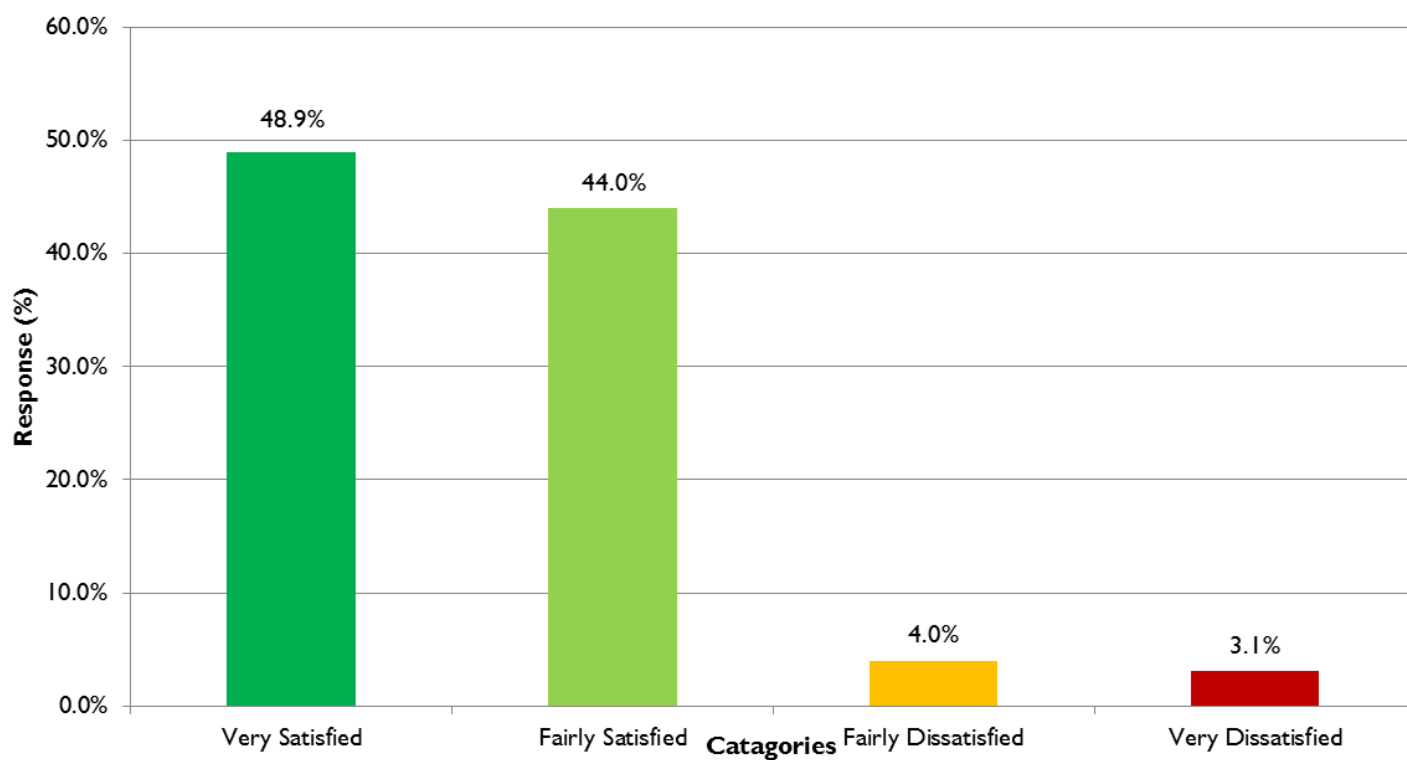


Figure 5 Level of Satisfaction in the Service

7.1.2 Key Priorities and Key Priorities Drivers

This section of the consultation looked to gauge opinions on what residents feel should be the key priorities of the Royal Borough should with regards to the collection, management and treatment of waste over the next 9 years (results shown in figure 6).

Residents, through the online consultation, indicated that the three key priorities should be:

- Increasing the proportion of recycled waste (23.7% of responses)
- Making sure all waste is cleared (17.8% of responses)

- Providing a consistent service (16.7% of responses)

7.1.3 Awareness of Services Offered

The consultation looked to assess the overall awareness of the range of services offered by the Royal Borough. The results indicated that many of the Borough's established services, such as the bulky waste collection, or the delivery of cornstarch were services that residents were aware of.

However this was not the case for all services offered by the Royal Borough, with the majority of residents unaware of both the free small WEEE and free textile waste collection.

What Should be the Key Priorities of Waste Services

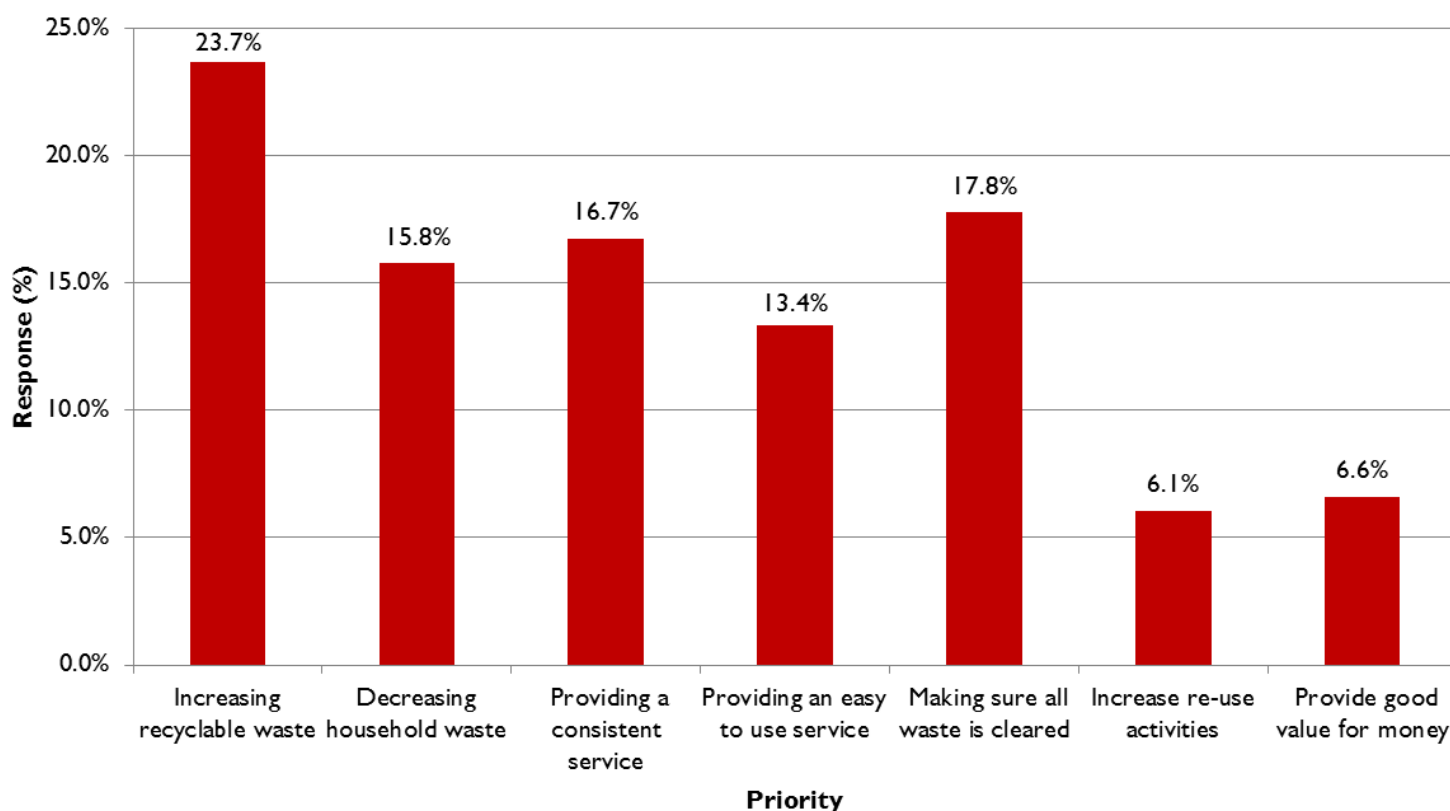


Figure 6 Resident's Key Priorities for Waste Services

7.1.4 Use of the Reuse and Recycling Centre

The Reuse and Recycling Centre can be seen as the main piece of waste infrastructure for residents in the Borough. The consultation looked to understand firstly how many times roughly a resident would visit the site over a year, and then what the main barrier would be to them visiting the site.

There was a spread of results regarding how frequently they used the Reuse and Recycling Centre. The most common answer (with 34.5% of responses) was that the resident never visited the site, and the second most common was that the resident visited the site

twice a year (30.9%).

The most common barrier highlighted as a reason why residents would not be able to use the reuse and recycling centre was that the site is 'hard to access without a car', with 30.9% of residents surveyed selecting this option. 20.7% of residents responded by selecting that 'they do not have any waste that needs to go to the site' and 10.7% of residents stated their greatest barrier to them using the site is the fact that it is too far away. Additionally 36.4% of residents responded stating that there was no barrier to them using the Reuse and Recycling Centre.

Barrier to Using the Reuse and Recycling Centre

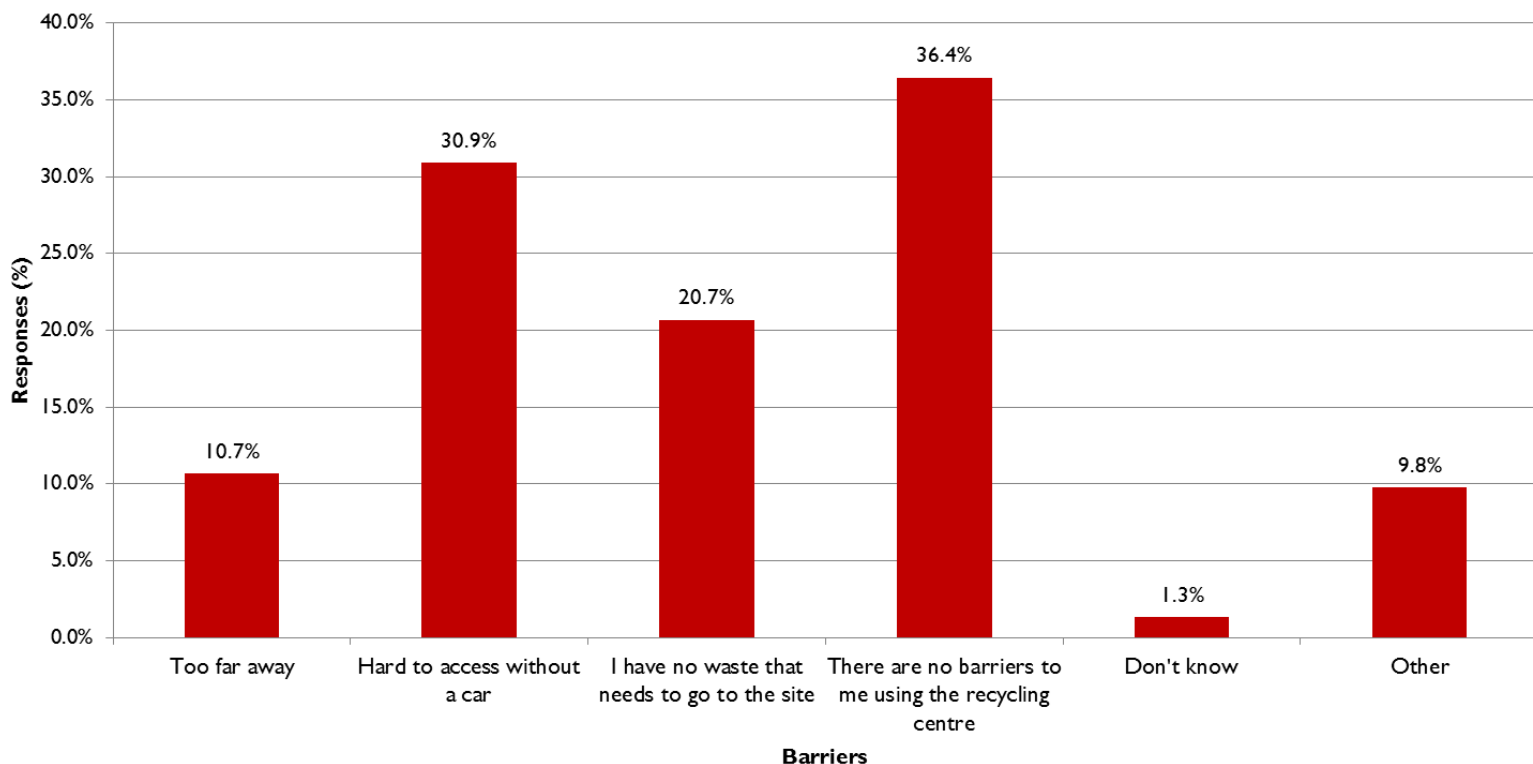


Figure 7 Resident's Barriers to Using the Reuse and Recycling Centres

7.1.5 How Best to Contact Residents

Residents were also given the opportunity to indicate how they would best like to be contacted in future regarding issues around waste management in Greenwich. Residents indicated that their most preferable method of communication would be via leaflets or direct mail (27.4% of responses). In addition Local Newspapers (21.2%), the Royal Borough website (18.7%) and E-mail alerts (17%) also scored a high response rate.

Further analysis found that residents who selected social media tended to be in the younger age groups of '18-25' and '26-35', and that there were no residents from the older age groups of '66-75' and '75 and older' that selected social media as a media type they would like to receive communications through. Highlighting that the suitability of media types is dependent on the audience it is aimed at.

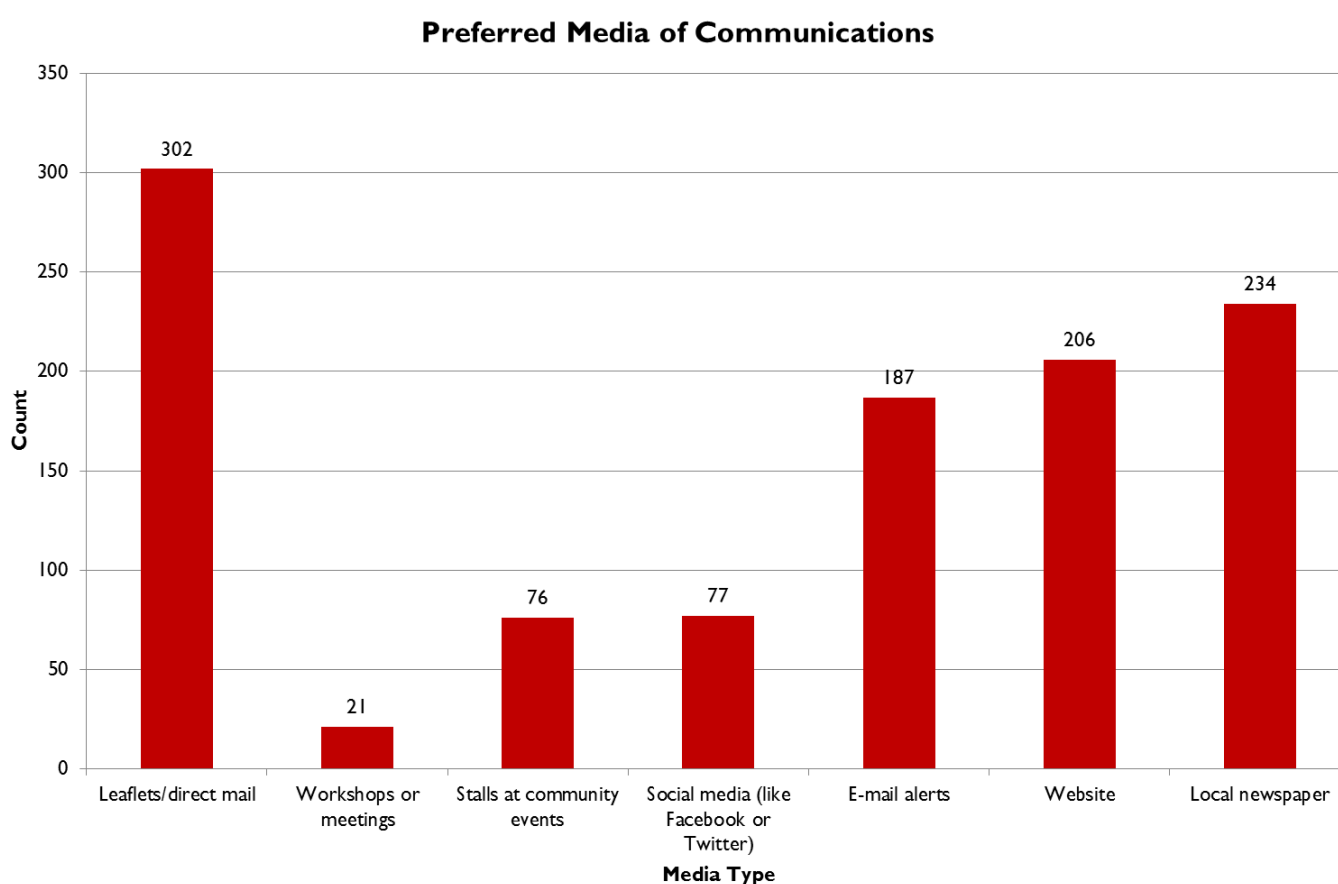


Figure 8 Residents Preferred Forms of Media Communications

7.2 Opinions of Businesses

Businesses provided responses via a specially designed online survey that focused on issues that would be more relevant for a businesses operating within the Borough.

7.2.1 What Do Businesses Look For In a Private Waste Contractor?

The most common answer given by the businesses surveyed (with 25.9% of responses) was that they look for a waste contractor that can provide a 'consistent service'. The second most common (with 20.4%) was that they look for a waste contractor that looks to 'treat all waste in the most environmentally friendly way'.

7.2.2 Separation of Dry Recyclables

The majority of Businesses surveyed (57.9%) indicated that they feel that the benefit of the reduced cost of disposing of dry recyclables is enough of a benefit to justify the requirement of separation of dry recyclables from residual waste.

The majority of businesses (52.9%) also indicated that they currently do separate out their dry recyclables from their residual waste. 29.4% of businesses who responded indicated that they do not currently separate out dry recyclables from their general (residual) waste.

Do You Feel It Is Worth Separating Out Your Waste to Gain the Reduced Collection and Disposal Cost

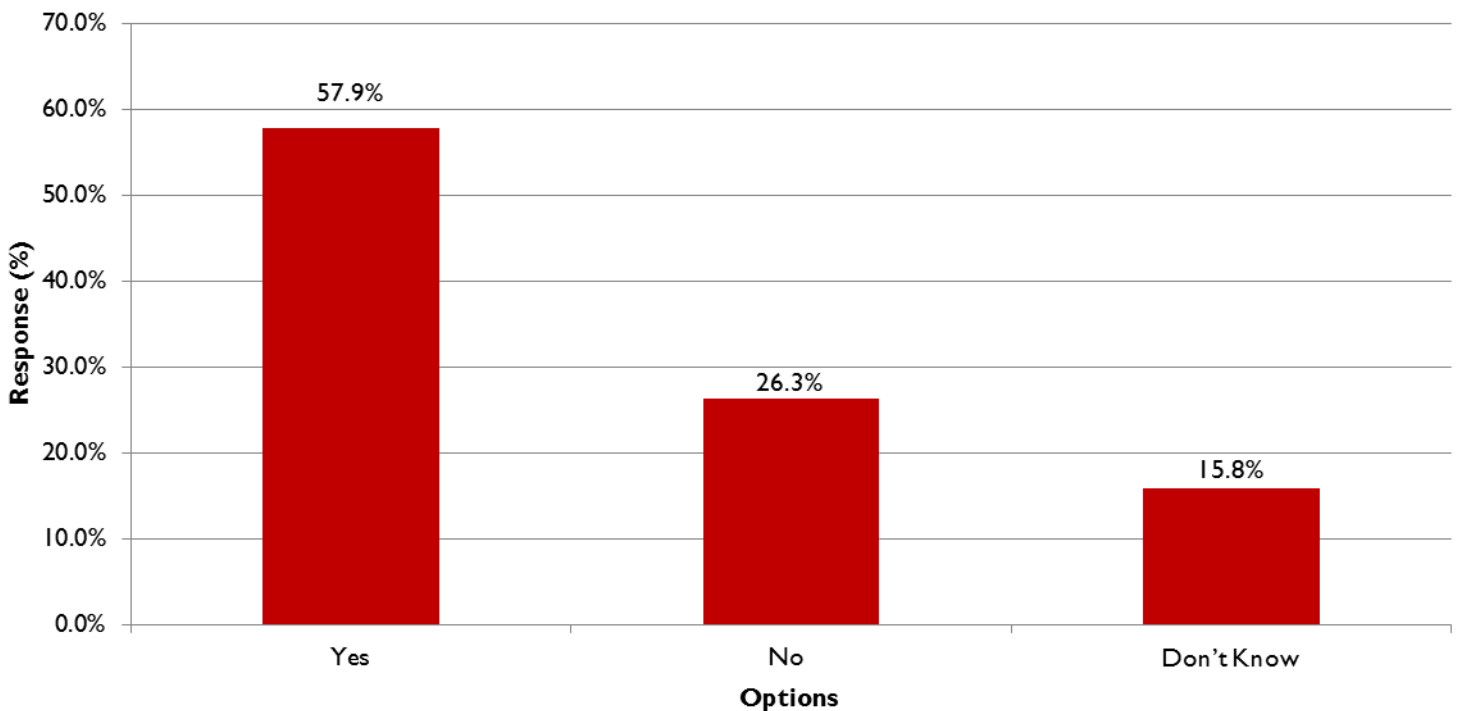


Figure 9 Residents Opinions on Financial Benefits of Waste Separation

7.3 Frontline Staff Responses

In addition to gaining opinions around our performance from our service users (residents and businesses) there was a desire to understand our performance and the perception of our performance from the individuals who deliver the service.

7.3.1 Dealing with Service Users

The frontline staff indicated that they have a mixture of conversations with service users (residents and businesses). Indicating that over a third of the time (37.5% of the time) the conversations had with service users are a

negative one. Frontline staff were also asked what changes they would like to implement to help them engage with residents in a positive manner. They indicated that their dealings with service users could be improved by both having a wide range of leaflets that were specific to certain issues and having clear policies that members of the public could be directed to. Additionally it was also indicated that having information on the cost savings that could be derived from more effective separation of waste at source would also be useful in engaging with residents.

From the Crews Perspective How are Conversations with Service Users

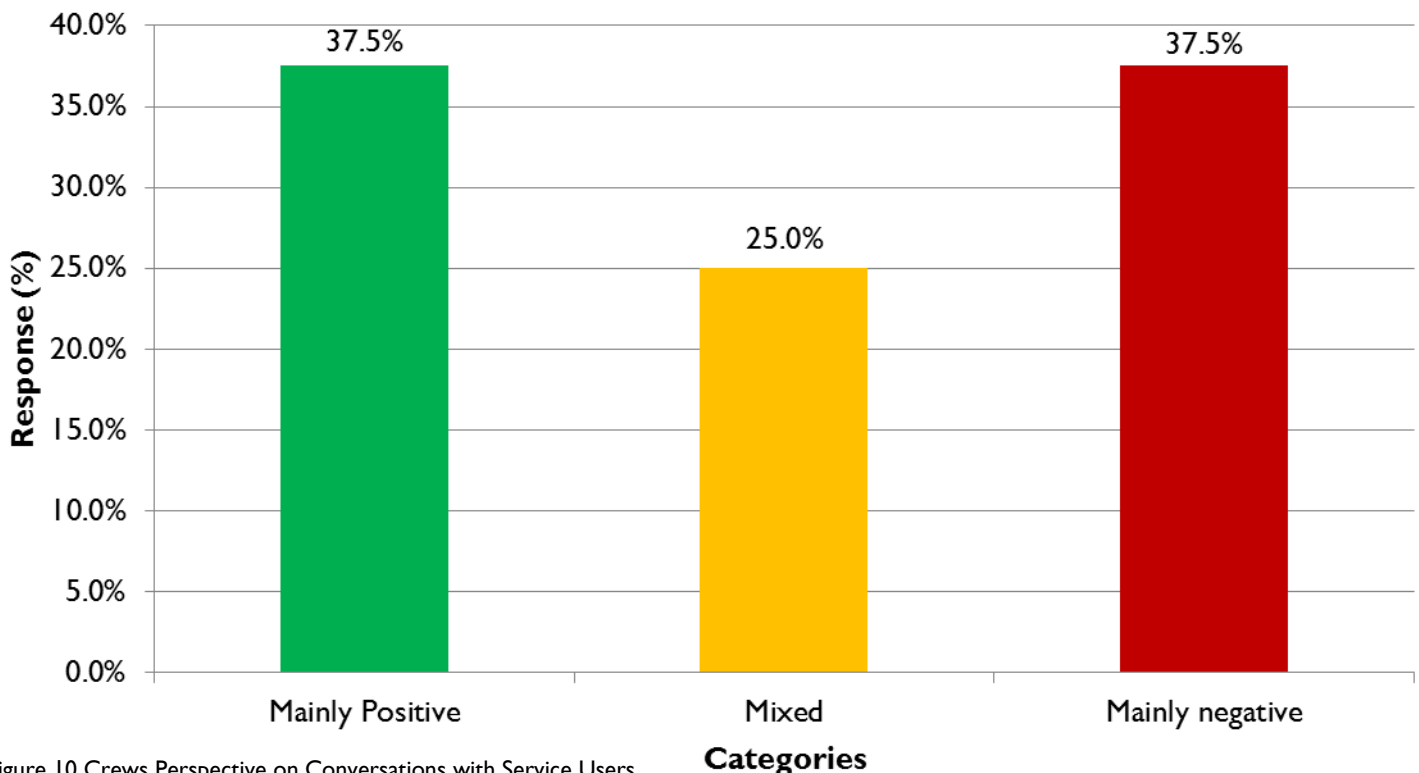


Figure 10 Crews Perspective on Conversations with Service Users

What Would Help Crews Engage with Residents

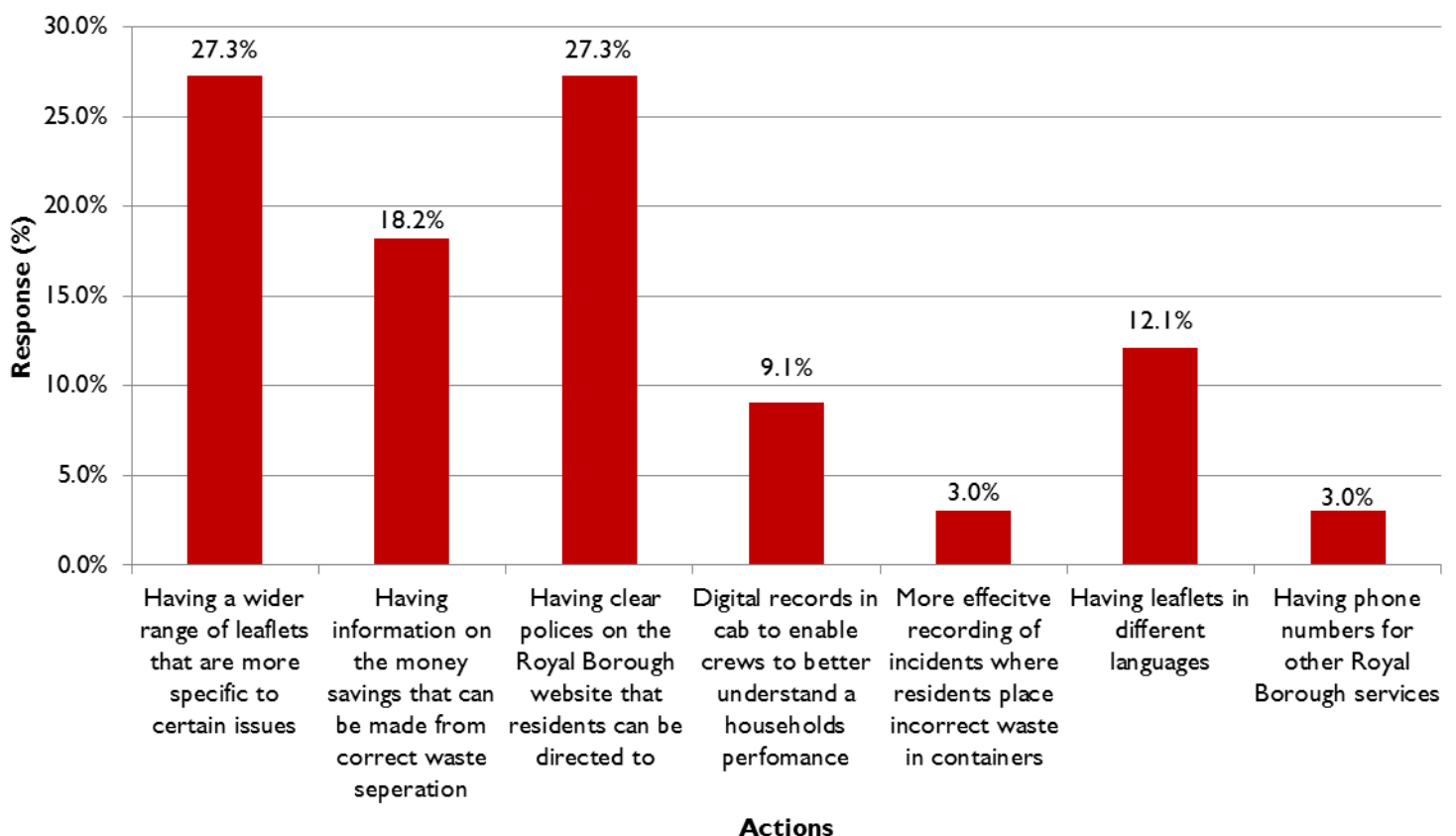


Figure 11 Collection Staff Opinions on What Will Help Them to Engage With Residents

7.3.2 Priorities of the Service

Figure 12 shows that currently the frontline Street Services staff feel that resident satisfaction is the main priority with 83.3% of groups selecting this option. 12.5% of groups indicated that they felt that 'clearing all waste' was the main priority of the service. And 4.5% felt the priority was to increase the recycling rate seen in the borough currently.

What is the Priority of Waste Services - Crew Opinion

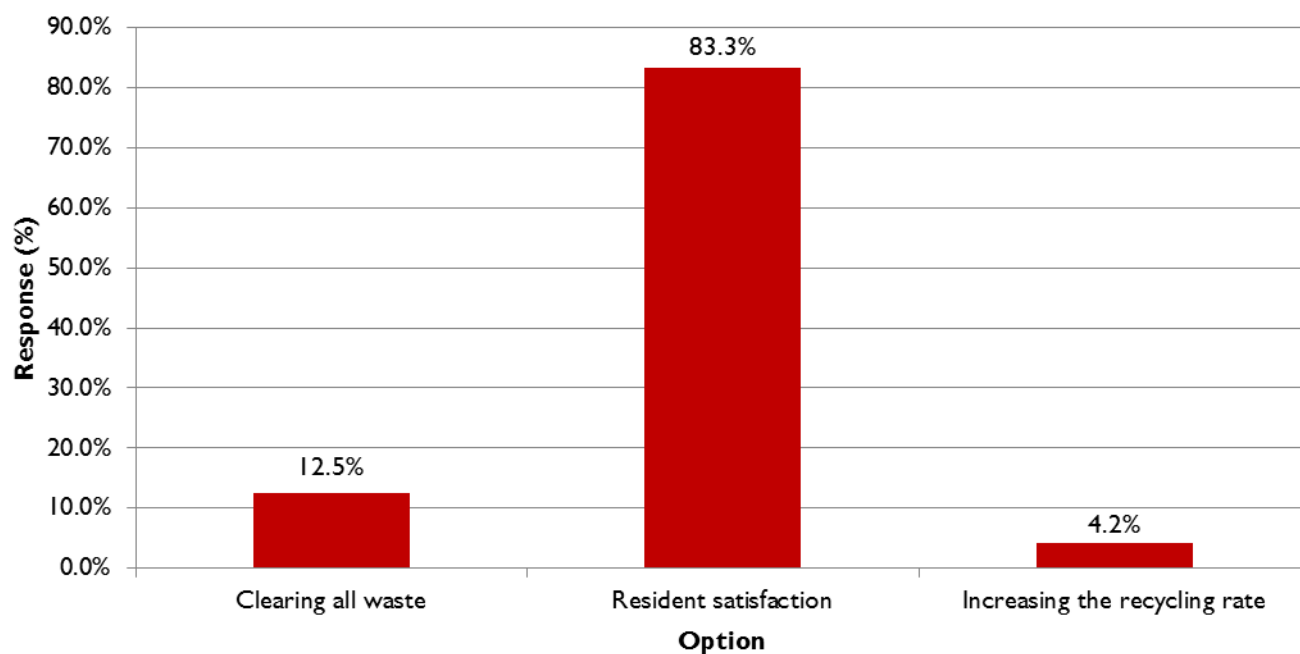


Figure 12 Collection Staff Opinions on Resident Satisfaction



8. Planning for Waste

In order to operate a consistent and reliable waste management service, the Royal Borough must ensure that the necessary infrastructure is in place to manage the waste collected. Sufficient spatial areas must be reserved for this purpose to maintain satisfactory waste infrastructure and allow the Royal Borough to sustainably collect, manage and treat the waste it produces.

8.1 Meeting Planning Policy Requirements

The Mayor of London believes that making better use of waste can be exploited to London's benefit and has a major role to play in tackling climate change. Historically, waste generated in London has been transported outside of the capital and has transferred the resulting problems to its geographical neighbours. The Mayor has policies to increase waste processing capacity in the capital and to manage the equivalent of 100 per cent of London's waste within London by 2031, which the Royal Borough fully supports. In order to meet its responsibilities, the South East London Boroughs (Bexley, Bromley, Greenwich, Lewisham and Southwark) and the City of London have formed a joint waste planning group and have agreed to work together to meet the requirements set out by the Mayor. The group is also developing appropriate waste policies within Borough Core Strategies and safeguarding sites to manage non-municipal controlled waste arising within the different borough boundaries.

8.2 Addressing Population Growth

The population of Royal Greenwich is expected to increase over the period that this strategy covers. The major growth areas will be in the Greenwich Peninsula, Charlton Riverside and Woolwich.

The projected growth in households and the resulting waste generated will increase the pressure on existing waste infrastructure.

As the population of the borough continues to grow there is a need for the infrastructure that supports this population to grow with it. The Royal Borough must continue to develop and improve waste infrastructure across the borough to ensure that there is sufficient capacity to service residents in the future.

The Reuse and Recycling Centre in the East of borough has been identified as nearing its operational capacity and not being well placed to cater for the increase in residents in the West of the borough.

The increasing density in the borough and in London more generally, is likely to increase congestion in the borough. This will reduce the efficiency of the collection operations in their current format.

8.3. Likely Future Infrastructure Developments

As covered within this document the majority of new development in Royal Greenwich will occur in the Greenwich Peninsula and Charlton Riverside areas. There

will be an expected increase of approximately 24,000 households in this area over the course of this strategy.

The Royal Borough will investigate the potential of developing a second Reuse and Recycling Centre in the West of the borough, and the introduction of innovative waste collection infrastructure, such as a vacuum waste collection system.

The Royal Borough of Greenwich recognises that numerous older developments in the borough have a design that does not assist it in collection the maximum amount of good quality recycling. The Royal Borough will continue to work with developers and review planning applications to ensure that the design of new developments allows for efficient and safe collection of waste, whilst being conducive to high levels of recycling.

In addition, the Royal Borough will look to maximise the use of technology to increase the efficiency of waste collection operations.

The Royal Borough will continue to plan for the future by:-

- Securing long term waste treatment routes that cater for anticipated growth;
- Where necessary and possible, increasing the capacity at existing waste sites; and
- Where needed, develop and build additional waste infrastructure.

Section 9: Future Aims

9.1 Address the decreasing recycling rate

One of the greatest challenges that faces the Borough over the next 10 years is addressing the decreasing recycling rate. Residents through the consultation carried out in this document have highlighted that increasing the recycling rate should be the key priority of the Royal Borough of Greenwich when it comes to managing waste.

There are a number of smaller goals which all must be achieved if we are as a Borough to achieve the main aim of addressing the decreasing recycling rate:

1. Reducing the overall level of waste produced from each household.
2. Reducing the proportion of general waste produced from each household and increase the proportion of both dry recyclables and food and garden waste collected.

9.2 Why?

It is important to question why the Borough needs to address the decreasing recycling rate, and what would be gained if it did so?

9.2.1 Environmental Benefits

Increasing the Boroughs recycling rate will:

- Conserve resources
 - By recycling used products we reduce the need to extract resources from the planet to

produce new products in their place.

- Save energy
 - Using recycled materials in the manufacturing processes of new products significantly reduces the energy needed to produce the new product, helping to reduce the effects of climate change.
- Reduces damage to the environment
 - By recycling more of our waste there will be a reduction in environmentally harmful practices such as mining and quarrying.

Recycling more of our waste is one of the most effective and easy ways the Borough can reduce the impact we have on the global environment.

9.2.2 Economic Benefits

There are well explained environmental benefits that can be achieved through increasing the recycling rate across the borough. But in addition there are also large economic benefits that can also be achieved which are less obvious.

Over the next few years Royal Borough will continue to become more efficient in how it allocates its financial resources. The cost of both collecting and disposing of the waste produced across the Borough costs the borough over £7.5 million a year.

The Royal Borough, like all other local authorities in the UK, pays a pre-agreed price to dispose of a set amount (usually a tonne) of a specific waste type. The cost of disposing of a

tonne varies depending on the treatment option it is sent to. For example the cost of disposing of one tonne of general waste via incineration is over 30% higher than treating a tonne of food and garden waste via in-vessel composting and 100% higher than treating a tonne of dry recyclable waste sent for recycling. Figure 13 illustrates the cost difference that the Council pays to dispose of each of its waste types.

If all residents in the Borough were able to correctly separate out the waste they generated so no dry recyclable or food or garden waste was placed in the general waste bin, or better still reduced the total amount of waste they produced there would be dramatic savings to the Council which could reach millions of pounds.

Cost To Dispose Of One Tonne Of Waste Via Different Treatment Routes

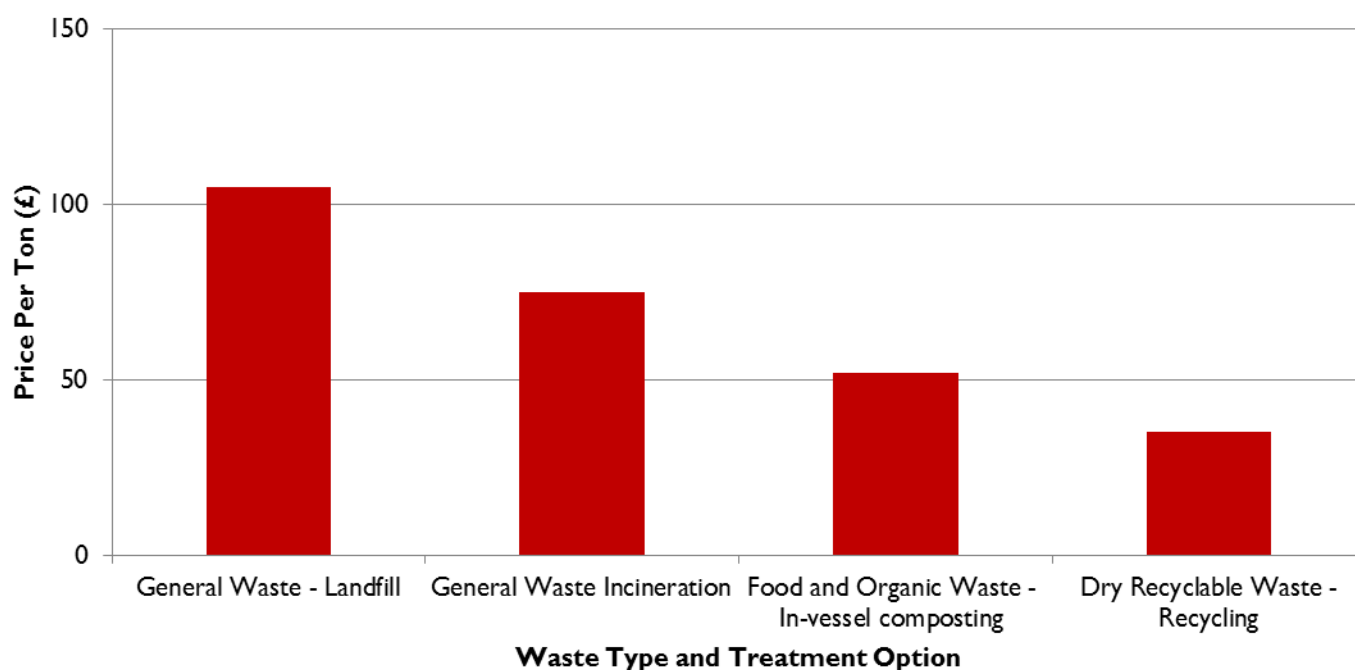


Figure 13 Varying Costs of Disposing of One Tonne of Waste

The real cost that the Royal Borough pays to dispose or treat each tonne of waste produced should remain constant over the course of this document. However the Royal Borough must take into account that by 2024 when the current disposal contracts are renewed the price the Borough pays to treat the waste it produces is likely to be significantly higher, especially in the case of general waste.

The changes over the last 10 years in the cost of landfilling residual (general waste) are a good example of how the price of disposal can vary dramatically over a short period of time. In 2005/06 the cost to dispose of one tonne of waste via landfill was £38, by 2015/16 this cost

had risen to £102.60, a 270% increase.

In 2014/15 the Royal Borough of Greenwich collected 52,688 tonnes of residual (general) waste. If all of this waste was landfilled at the cost of £38 per tonne (2005/06 price) it would cost just over £2 million. However if this exact same amount of waste were to be landfilled at £102.60 per tonne (2015/16 price) it would cost £5.4 million.

Therefore over the course of 10 years the Royal Borough would have had to have paid an additional £3.4 million pounds to continue to achieve the same aim of disposing of the same amount of waste in the same way.

Cost of Landfilling 1 Tonne of General Waste

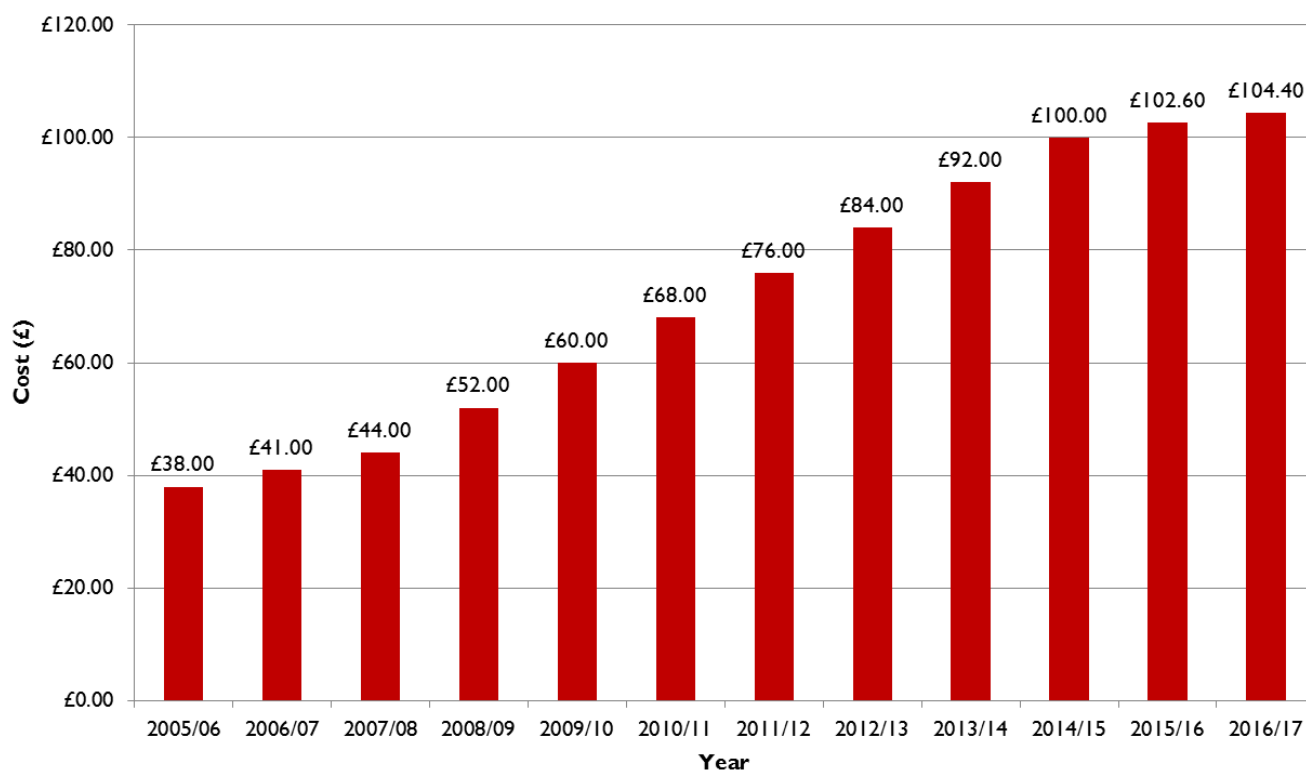


Figure 14 Cost of Landfilling 1 Tonne of General Waste

It is likely that by 2024 the price the Royal Borough has to pay to dispose of its residual (general) waste will be substantially higher than it pays currently, this is unfortunately unavoidable. One of the ways in which the Borough can protect itself against this price rise is to reduce the overall amount of general waste it disposes and the most effective way of doing this will be to correctly separate out all of the waste we produce so that the maximum proportion of dry recyclable and food and garden can be collected and treated via the cheaper and more environmentally friendly options. This challenge will be made harder as the majority of new developments in the Borough are flats. It has been seen nationally that on average flats separate two thirds less of the amount of recycling that a house would separate.

9.2.3 How?

The Borough now must begin to think about how we can bring about this change.

9.2.4 Services offered to residents

The Royal Borough will continue to improve and increase the range of services offered to residents to allow residents to more effectively and easily separate out their waste to enable greater recycling and reuse of waste to occur.

Examples of this include the new small WEEE collection from households, and the introduction of space in bin stores for furniture to enable reuse to occur.

9.2.5 Re-focus communications

As highlighted by the responses to the consultation many residents in the Borough are unaware of some of the service available to them, this includes the free textile collection and the Small WEEE collection.

We will look to improve our communications with residents to both spread the word around new services but also to feedback on the Boroughs performance.

The Royal Borough will continue to use the preferred methods of communication such as leaflets, local newspapers and the website but will also look to increase the use of social media and e-alerts as a way of communicating with residents to increase the range of individuals that can be spoken to.

9.2.6 Embrace Technology and Data

Over the course of this strategy the Royal Borough will look to implement innovative technology that can act to increase the efficiency and performance of the service offered to residents. This will include setting up web-based channels of communications to allow residents to interact with the service 24 hours a day, 7 days a week.

In addition the Borough will look to utilise the data collected by its operations to gain greater understanding of the performance of the Borough. This information can then be used to allow a more targeted communication with residents, focusing on services that residents may be unaware of, or are utilising incorrectly.

Where possible the Borough will explore the potential of using innovative collection methods such as vacuum collection, and will look to trial technologies and maximise partnerships, such as the projects currently being undertaken in conjunction with Digital Greenwich.