



# Sheffield's **WASTE MANAGEMENT** Strategy

(2009-2020)



**Sheffield** *where everyone matters*



CUSTOMER SERVICE EXCELLENCE





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# 1 Waste Strategy Introduction



Reusable bags being promoted at Crystal Peaks Shopping Centre

## 1.1 Vision and Objectives

1.1.1 This strategy is about how we manage waste produced in Sheffield. We estimate this could be as much as 900,000 tonnes a year with 230,000 tonnes from households and the rest from businesses in the City.

1.1.2 Our long term aim is for zero waste to landfill and that we recover value from all the waste we produce. By recovering value we mean getting some other use from waste through recycling or processing our waste to get energy from it. We have one vision and three objectives in managing our waste, with 27 actions within this strategy to help us achieve this.

1.1.3 Our vision is to:

***Reduce the environmental impact of Sheffield's waste and to exceed the expectations of our customers***

1.1.4 ***We have set three objectives which capture the 27 actions in this strategy:***

- **Reduce Sheffield's waste**
- **Help Sheffield residents and businesses to recycle**
- **Minimise Sheffield's waste that goes to landfill**

1.1.5 ***Our measures of success for each objective are to:***

- Reduce household waste by 2% per year from 2009 to 2014.
- Increase the amount of waste recycled each year and to increase the number of people who are satisfied with recycling services.
- To reduce the proportion of Sheffield's waste that is sent to landfill to less than 10% by 2020.

1.1.6 The 27 actions within the strategy cover waste from households and businesses in Sheffield together with how the Council will lead by example. A diagram summarising our actions and to which objective they contribute is on page 6.

1.1.7 One of the biggest factors in the success of our new waste strategy will be to secure the support of our customers. It is only through the people in the City that we will be able to reduce the waste we produce and increase how much waste we recycle. Whilst the Council and its Partners can invest in facilities and services it is only by customers using these that we can really make a difference. A key driver through this strategy is to enthuse our diverse range of customers to achieving our objectives; inspiring the next generation of consumers to reduce waste, increase recycling and minimise the amount of waste we send to landfill.



## 1.2 Why Have a New Strategy?

- 1.2.1 Local people have told us that they want to recycle more; 92% of those who took part in the consultation on new recycling services for Sheffield wanted an increase in recycling with 64% wanting more kerbside collection schemes. This strategy sets out what we will be doing to meet this demand. As a council we want to give residents and businesses the opportunity to reduce their impact on the environment by reducing and reusing waste as well as recycling waste.
- 1.2.2 If waste is not recycled, it is not simply a case of sending it to a landfill site – landfill is our last option for dealing with waste. Our Energy Recovery Facility not only diverts as much waste from landfill as possible but also provides low carbon energy to buildings in the city centre through the district heating network as well as generating low carbon energy for the National Grid.
- 1.2.3 There are, however, significant challenges we face in managing the City's waste. Sheffield's population is expected to increase over the lifetime of this strategy by 42,900 people, which will have a potential impact on the volume of waste. The management of business waste generated in the City is currently determined by market forces. This strategy sets out what we as a council can do to help and support businesses to choose to reduce, reuse and recycle their waste.

- 1.2.4 We have consulted extensively in producing this strategy. A questionnaire was delivered to 200,000 households and made available in libraries, housing offices, First Point offices and also online. This consultation provided the opportunity for influencing the new services to households and businesses. Area Panels and Tenants and Residents Associations were also given the opportunity to feed in their views. We received 7,590 responses which were then analysed by an independent consultancy firm. This feedback was used to help develop a draft waste strategy.
- 1.2.5 A second consultation exercise was undertaken to ensure the objectives and actions in the draft waste strategy reflected what Sheffield's residents, business and stakeholders wanted and expected in a new strategy. The feedback from this consultation was captured and where possible reflected back in to the production of this strategy.
- 1.2.6 This strategy links into some of our other strategies. It will help us deliver on the commitments to increase recycling and to reduce our carbon footprint in 'A City of Opportunity'; our Corporate Plan for 2008-11. It will also contribute towards the city-wide Carbon Reduction Strategy and the Sheffield First Agreement targets to reduce carbon emissions and to increase reuse, recycling or composting of waste. It also links into the relevant regional and national strategies for waste.
- 1.2.7 Underpinning everything we do as a council are our guiding principles which we set out in our Corporate Plan 2008-11: 'A City of Opportunity'. The waste strategy reflects these principles through ensuring:
- all our communities have a **fair deal** with quality **value for money** waste services meeting their local needs.
  - services are flexible to recognise **individual customer** needs and that customers have **voice and control** to influence decisions we take in an **open, honest and transparent manner**.
  - our actions help all communities in Sheffield from residents to businesses and other partners of the Council to achieve **environmental sustainability** in managing waste.
  - The actions set out within this waste strategy will be implemented in a way that minimises adverse pollution and environmental impacts, and realises economic, energy and health benefits where appropriate.
- 1.2.8 Our Corporate Plan recognises climate change as one of the biggest challenges we face. The changing weather patterns will have an impact on the types and volumes of waste we produce. As yet it is too early to fully evaluate this but we expect milder, wetter winters to bring more green waste but these could be off-set by hotter, drier summers reducing green waste during the period. We expect to evaluate our seasonal data further when we review our strategy.
- 1.2.9 We will be reviewing this strategy every five years to keep it up-to-date with local and national developments, including population and business growth. This strategy also fulfils all the relevant national and European requirements.
- 1.2.10 This strategy has two distinct sections: the first section is about our objectives and the actions we have set to deliver these. Sections 5, 6 and 7 are the supporting background information about Sheffield, our current position and trends in population and waste that will and have influenced the direction of the actions we have set for the strategy.

Reduce the environmental impact of Sheffield's waste and to exceed the expectation of our customers			
Reduce Sheffield's Waste	Help Sheffield's Residents and Businesses to Recycle More	Minimise Sheffield's Waste that goes to Landfill	
We will implement a Waste Reduction Plan to support achieving greater reuse and a reduction in the amount of household waste produced in Sheffield by 2% year on year from 2009- 2014 (based on total waste in 2008/09). We will work with local communities, the voluntary sector and community enterprise groups to achieve this action.	By December 2010 households in Sheffield will have a new kerbside recycling service collecting more materials from the kerbside for recycling.	By working with Veolia we will prioritise the handling of household waste from Sheffield through the Energy Recovery Facility.	
Through our local Buy it Naked campaign we will encourage supermarkets to reduce packaging and provide facilities for recycling this so our residents don't have to take it home. We will lobby Government to take steps to reduce packaging to help our residents produce less waste. We will evaluate this through achieving our waste reduction target in Action 1.	By November 2010 households in Sheffield will have access to the same garden waste collection service; as and when they need to use it.	By working with Veolia we will seek a joined up approach to sharing waste treatment facilities, including our Energy Recovery Facility, to maximise the carbon saving for municipal waste.	
Through our partners and the Eco-Schools programme we will work with young people of all ages to provide information about waste services, explain how customer choice makes an impact and encourage debate about how we treat waste. We can measure our impact through the Every Child Matters Consultation.	We will increase satisfaction with doorstep recycling to 60% by March 2011, and will increase this to 70% by 2015, whilst maintaining our high satisfaction with refuse collection.	We will work with Veolia and the community sector to support schemes to divert waste from landfill through recycling and reuse.	
We will provide targeted information to different communities through each of the Community Assemblies to provide tailored information about waste services for residents in those areas.	We will develop our network of recycling sites at supermarkets, local community centres and other communal areas with easy access for customers.	We will use Site Waste Management Plans to ensure waste from development sites in the City is well managed and be proactive in trying to divert this waste from landfill.	
We will aim to buy products that produce minimal waste, can be easily recycled and are made from recycled materials.	Sheffield City Council is committed to increasing our recycling rate every year and working towards achieving 45% recycling by 2015.	We will work with other local authorities and partners to ensure we manage the availability of landfill across the region up to 2020.	
We will reduce our waste and the numbers of bins we need at council buildings and offices where we work by 20% by 2012/13.	Following the implementation of Actions 10 & 11 we will evaluate opportunities to recycle other materials based on the carbon saving this would add compared to Energy Recovery and the financial cost of doing this.	Sheffield City Council will provide facilities and support to reduce the need for items such as batteries and small electrical items to be disposed of through the household waste collection service.	
During 2009/10 we will work with business in the City to understand the types of waste produced by them and try to quantify this. We will review this every two years.	We will work with Veolia to ensure we have the most efficient collections of household waste including lower carbon emission vehicles.	<div> <div></div> <div><b>Actions influencing household waste</b></div> <div></div> <div><b>Actions influencing municipal and council waste</b></div> <div></div> <div><b>Actions influencing businesses and the provision of facilities for waste treatment</b></div> </div>	
By December 2010, once we have established data on the types and volumes of business waste produced in Sheffield we will have a framework for achieving the 3 Objectives of this strategy for business waste in the City.	By 2013 Sheffield will send its incinerator bottom ash to a purpose built processing facility within Sheffield for reuse, instead of it being sent to landfill.		
We will ensure that all businesses that access First Point for Business receive advice on waste minimisation and we will work through other forums such as Business Environment Centre, Sheffield Chamber of Commerce and Federation of Small Businesses to deliver proactive support.	We will ensure that all Council buildings and offices where we work from will have the opportunity to recycle at least paper and card by the end of 2009 and will aim to increase our recycling by 2% each year until 2014.		
	We will explore the option of a commercial dedicated recycling site to make it easier for businesses in the City to recycle by 2013.		
	We will explore the option of procuring recycling collections for businesses in Sheffield and work with commercial waste service providers to deliver these by 2013.		
	We will work with other local authorities in the region to plan for waste treatment facilities to reduce the use of landfill.		



**Plastic bag amnesty at Fargate. Sheffield residents saying no to single use carrier bags**

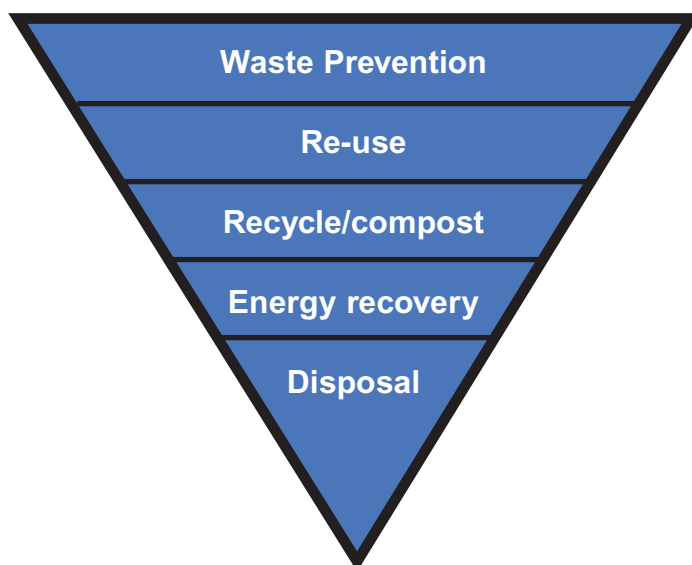
## 2 OBJECTIVE 1 - Reducing Sheffield's Waste



*Sheffield's paper and card being sorted at a Material Recovery Facility*

## 2.1 Managing how much waste we produce is the top priority. If we can reduce waste we save resources and cost; this is the best environmental option too.

- 2.1.1 The diagram below, Figure 2.1, is known as the waste hierarchy, which is the guiding principle to how waste should be managed, and is recognised at a national and European level. How it works is that the higher up this hierarchy our waste is treated the greater the environmental benefits and cost savings are. Waste prevention – or minimisation as it is also called, means reducing how much waste we produce, is the first principle. This includes reducing the amount of unnecessary packaging on goods or using rechargeable batteries in place of standard one-use batteries. Landfill is the worst environmental option as we lose the most resources through this method by not capturing value from the waste materials, and it also has the worst carbon impact.

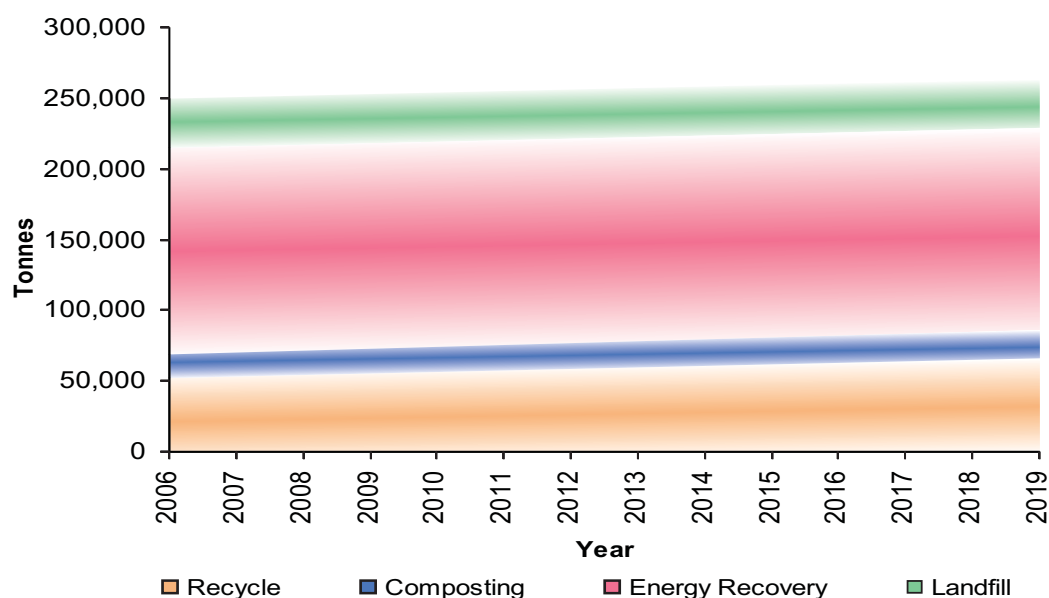


**Figure 2.1: Waste Hierarchy**

- 2.1.2 This section details practical policies for Sheffield to influence reducing the amount of waste produced in the City. Section 5 explains our current treatment of waste and how waste in Sheffield is currently managed in line with the waste hierarchy.

## 2.2 Future Waste Growth

- 2.2.1 Since the last waste strategy produced in 2003 the trends for how much waste we produce have changed. Prior to 2005 we were seeing an annual increase in the amount of waste produced but this has been reversed and waste arisings are falling. The cause of this is not fully known, but may be the result of a combination of different actions, including; increased public awareness of waste issues from national and local campaigns, and other programmes such as the work of WRAP (a government funded waste body) with supermarkets to reduce the amount of packaging on goods and schemes to reduce the weight of packaging materials.
- 2.2.2 Forecasts for waste across the Yorkshire and Humber region published by Regional Government Office show by 2015 Sheffield will be producing 256,000 tonnes of household waste, an increase of 9% on the current level. By 2020 this will be up to 263,500 tonnes, a further increase of 3%. If we do nothing to change our current performance levels Figure 2.2 shows the treatment of this waste.



**Fig 2.2: Government Office Past & Projected Municipal Waste Arisings in Sheffield for 2006 - 2020**

- 2.2.3 This level of growth in waste would be a big cost, both environmentally and financially. We want to set ourselves a challenging target to not only stop waste growth but actively reduce the amount of household waste we produce. We will also work to evaluate the total carbon saving of this, measured in tonnes of carbon saved.

***ACTION 1: We will implement a Waste Reduction Plan to support achieving greater reuse and a reduction in the amount of household waste produced in Sheffield by 2% year on year from 2009- 2014 (based on total waste in 2008/09). We will work with local communities, the voluntary sector and community enterprise groups to achieve this action.***

- 2.2.4 Our plan will include practical schemes such as home composting, real nappies and reusable bags where we can demonstrate investment in reusable alternatives will realise a resource and financial saving over time. There may be costs associated with providing reusable solutions compared to single-use but these will be off-set against the cost of treating the single-use items as waste. We will continue to support and invest in these schemes and others that are able to show a clear potential to minimise the amount of waste produced within Sheffield.
- 2.2.5 We recognise that local small scale schemes can help contribute to achieving this action. Through our work with Sheffield Real Nappy Network we have real experience of harnessing the enthusiasm of a few individuals for the benefit of new parents across the City. We know there are groups in the City actively reusing electrical goods and furniture. We will work to support these schemes and seek opportunities to strengthen their role. Our reduction plan will include how we will try to develop opportunities for reuse which is further explained in Action 24.
- 2.2.6 Waste through the City's five Household Waste Recycling Centres has risen over the past three years, particularly rubble and building renovation materials. A permit scheme for householders wishing to use trade vehicles and trailers to bring waste to the Household Waste Recycling Centres will be introduced in 2009/10 to ensure the sites are used for household waste and not waste from commercial activity.



**A Sheffield resident recycling garden waste at a Household Waste Recycling Centre**

- 2.2.7 Factors such as the state of the economy, variations in weather conditions both seasonal and national and general consumer behaviour all affect the amount of waste produced in any given year. Recognising these limitations, we will have a clear plan to help households reduce their waste.

***ACTION 2: Through our local Buy it Naked campaign we will encourage supermarkets to reduce packaging and provide facilities for recycling this so our residents don't have to take it home. We will lobby Government to take steps to reduce packaging to help our residents produce less waste. We will evaluate this though achieving our waste reduction target in Action 1.***

- 2.2.8 The Government estimates around 18% of waste in household bins is packaging material. Reducing this will help us all to produce less waste, saving natural resources and money.
- 2.2.9 Schemes in Europe require supermarkets and other major retailers to provide facilities for customers to leave packaging for recycling as they pack their goods to take them home. We want to work with supermarkets in Sheffield to achieve this.
- 2.2.10 We will ask our customers to identify products from supermarkets which they think have too much packaging. With this information we will challenge supermarkets to reduce the amount of packaging they use.
- 2.2.11 The Buy it Naked Campaign and our commitment to support waste minimisation campaigns is detailed within our waste reduction plan as a supporting document to this strategy.
- 2.2.12 The region's local authorities, including Sheffield, are working together to establish a Yorkshire & Humber Waste Prevention Programme (YHWPP), to tackle 5 waste prevention streams between 2009 and 2011. These are: food waste; home & community composting; business waste (understanding ways to recycle more); choose to reuse (furniture & electrical goods) and smart shopping (reduce and avoid packaged materials). We will lead the smart shopping scheme which will be known as "Buy it Naked" Sheffield and share the success and experience of this with other Local Authorities and vice versa as other Local Authorities lead the other schemes.



**Cardboard, sorted and baled, awaiting delivery to a recycling plant**

- 2.2.13 The analysis of what's in our bin in Section 5 shows how all of the campaigns above could be beneficial to Sheffield, as an average of around 40% of the contents of our black bins by weight is garden and kitchen waste, and reducing this would have a significant carbon and financial saving. Reuse of bulky items and electrical goods is identified in Section 6 as a way Sheffield can further increase diversion from landfill. For Smart Shopping, DEFRA states 18% of household waste by weight is packaging, which is around 42,000 tonnes for Sheffield.
- 2.2.14 Through the YHWPP stronger relationships can be developed between local authorities, the voluntary sector and community groups, private business and regional partners such as WRAP and Resource Efficiency Yorkshire (REY). The Core Cities group, as discussed in Section 5, is another opportunity to have a greater influence than if we were working alone.

***ACTION 3: Through our partners and the Eco-Schools programme we will work with young people of all ages to provide information about waste services, explain how customer choice makes an impact and encourage debate about how we treat waste. We can measure our impact through the Every Child Matters Consultation.***

- 2.2.15 Through the Eco-Schools programme, which encourages students in the management of all environmental issues, including waste, and through the dedicated waste awareness officer at Veolia we will deliver educational sessions to young people about waste minimisation.
- 2.2.16 These sessions will include explaining how different materials or goods have a different level of environmental impact. We will also explain how young people can avoid making waste through their own lifestyle choices, such as a reusable bags rather than plastic carrier bags.
- 2.2.17 From the survey of young people we conduct every year, the Every Child Matters consultation, we have a good understanding of the levels of support for recycling by young people from year 2 at school (age 5) through to the post-16 age group. We can track the success of eco-schools and our education sessions through this survey and ensure we target our information and delivery to groups which are currently less involved as we have a full breakdown of ages and ethnic groups.

***ACTION 4: We will provide targeted information to different communities through each of the Community Assemblies to provide tailored information about waste services for residents in those areas.***

- 2.2.18 The Council has introduced seven Community Assemblies to give our residents greater choice over services and issues that directly affect them and to increase the number of people who feel they can influence decisions in their locality and the number of people satisfied with their local area as a place to live.
- 2.2.19 Working with Veolia, we will ensure each of the Community Assembly areas has a Link Officer to support queries and options for waste services and develop local information. We will also be linking with the community sector as a great opportunity for growth in this area of work.

- 2.2.20 Through our consultation process for the new waste strategy just over half of respondents agreed that the City Council should be able to provide different recycling services in different parts of the City, if this saves money and resources. We will work with Community Assemblies to evaluate what the options for this could be and how these could be resourced.

***ACTION 5: We will aim to buy products that produce minimal waste, can be easily recycled and are made from recycled materials.***

- 2.2.21 We will contribute to reviewing procurement by the Council and its partners to ensure we buy sustainable products, ensuring the life cycle of goods is considered. For example disposable goods may have a cheaper unit price but the value of managing the item as a waste should be recognised as part of the procurement process.
- 2.2.22 We will seek to close the loop and buy products with recycled content and material that can be easily recycled.

***ACTION 6: We will reduce our waste and the number of bins we need at council buildings and offices where we work by 20% by 2012/13.***

- 2.2.23 Through our activities as a major service provider in the City and as a large employer we generate a significant amount of waste. We therefore recognise that we should lead by example and we will implement waste minimisation policies across our functions and buildings.
- 2.2.24 During 2009 we will introduce a new centrally organised waste collection service from all our buildings enabling us to better monitor and evaluate the waste we produce across all our sites and functions.
- 2.2.25 With the new central administration of waste provision across the City Council we will be able to manage a reduction in the amount of capacity provided for general waste, through benchmarking similar buildings and functions. We will use existing resources to raise awareness amongst our staff about the financial and environmental benefits of waste minimisation.
- 2.2.26 Following this reduction in the capacity of bins, it will be possible to evaluate the cost benefit of a pay-by-weight collection service for council buildings and offices where we work. By only paying for the waste the Council throws away a pay-by-weight service will allow us to further monitor and control the amount of waste created across our functions and buildings. By paying for the material actually collected rather than a scheduled collection service we should see a financial saving and will have real data about the waste we produce and how it changes. This action is unrelated to household waste collections or to businesses which operate within the City

***ACTION 7: During 2009/10 we will work with businesses in the City to understand the types of waste produced by them and to try and quantify this. We will review this every two years.***

- 2.2.25 As discussed in Sections 5 and 6 we have identified we don't know enough about the amount and different types of waste that businesses in Sheffield produce. To be able to ensure we treat business waste at the upper levels of the waste hierarchy we need to have a picture of the volumes and types of waste businesses produce.

***ACTION 8: By December 2010, once we have established data on the types and volumes of business waste produced in Sheffield we will have a framework for achieving the 3 Objectives of this strategy for business waste in the City.***

- 2.2.26 With more information about the amount and different types of waste produced by businesses in Sheffield through Action 7, we can develop practical support to reduce waste produced by businesses in Sheffield, help Sheffield's businesses recycle more and reduce the amount of waste Sheffield's businesses send to landfill for disposal. The framework will incorporate Actions 19 and 20.

***ACTION 9: We will ensure that all businesses that access First Point for Business receive advice on waste minimisation and we will work through other forums such as Business Environment Centre, Sheffield Chamber of Commerce and Federation of Small Businesses to deliver proactive support.***

- 2.2.27 Recently there has been a reduction in the amount of government funding provided to organisations such as Envirowise and the Waste and Resources Action Programme (WRAP) which provide support and assistance to businesses seeking to reduce waste and increase recycling. Recognising the limited support available for Sheffield businesses in relation to sustainable waste management we will look to provide information through alternative methods.
- 2.2.28 To ensure that the right information and support is provided to businesses, a questionnaire was designed and distributed to key businesses within the City. The results showed that the majority of businesses felt that the City Council could do more to support them in managing their waste, in particular providing information on waste minimisation. All the businesses that took part recognised the fact that waste reduction and recycling was an important issue and an area which could lead to financial savings.
- 2.2.29 First Point for Business provides a one-stop shop for all regulatory requirements and business support. Through Business Sector Specialists, support will be provided to business on how they could be managing their waste and what opportunities are available for moving their waste management practices up the Waste Hierarchy and explore the benefits of waste minimisation such as financial savings and a reduced carbon footprint.
- 2.2.30 Sheffield has established an Eco-Business programme to provide environmental consultancy to businesses to look at all aspects of environmental performance including waste management. Through this programme and other established groups such as the Chamber of Commerce that interact with and represent businesses in the City we can provide information about practical waste minimisation.

# 3 OBJECTIVE 2 -

Helping Sheffield's Residents  
and Businesses Increase Recycling



### **3.1 Recycling is about processing materials to use them again and saves new materials being mined, quarried and produced.**

- 3.1.1 We are committed to improving our recycling performance, and increasing recycling is a key priority in our corporate plan 'A City of Opportunity 2008-2011'. This commitment has developed from feedback from our customers in The Place Survey 2008 with satisfaction with doorstep recycling at just 37%.
- 3.1.2 Through the consultation during November 2008 - January 2009 to inform the development of this Waste Strategy we provided our customers with choices for new recycling services, the financial impact of these and asked which they would support being delivered. In total, 92% of our respondents supported an increase in recycling services in Sheffield.
- 3.1.3 It is known that the amount of carbon saving and environmental impact from recycling differs greatly depending on the material being recycled. This is because different amounts of resources are used to make different materials in the first place. At a national level in the Waste Strategy for England 2007, the Government identified seven materials that should be prioritised for diversion from landfill and where practical, recycled for maximum carbon saving. The seven materials are: textiles, plastics, paper/card, glass, wood, aluminium and food and garden waste.
- 3.1.4 There are some practical hurdles to overcome to increase recycling, including being able to collect separate materials from waste collection and the demand for these materials to be recycled into new products. It is accepted therefore that sometimes alternative forms of recovery may be more suited to the local infrastructure for managing waste.

***ACTION 10: By December 2010 households in Sheffield will have a new kerbside recycling service collecting more materials from the kerbside for recycling.***

- 3.1.5 We asked our customers how they wanted us to invest more in recycling. We presented options from separating as many materials as possible at home and collecting them at the kerbside to increasing recycling facilities in local communities. 64% of customers responding to our consultation said they would like more kerbside collections. At a rate of 2 to 1 against the other options our customers chose collecting some more, but not all possible materials from the kerbside for recycling. This was the medium cost option costing between approximately £10 and £20 per household per year.
- 3.1.6 The Council recognises that a one size fits all policy will not be sufficient in giving everyone the opportunity to recycle. Sheffield has a large number of households where it not practicable to offer a kerbside recycling service, therefore it will look to implement a new recycling service for these households on an individual basis to ensure that service meets the households needs.
- 3.1.7 A key measure of success for this will be increasing the amount of material we collect for recycling which is measured by National Performance Indicator 192: 'Household waste reused, recycled and composted'; all Local Authorities publish this performance. We would also expect to see a decrease in the amount of residual household waste we produce per household. Residual means what is left after we take out materials for reuse, recycling and composting. We report our performance as do all Local Authorities through National Indicator 191: 'Residual household waste per household', which is the amount of black bin general waste collected, which includes waste which is processed at the Energy Recovery Facility.

***ACTION 11: By November 2010 households in Sheffield will have access to the same garden waste collection service; as and when they need to use it.***

- 3.1.8 The City Council set up a seven year trial garden waste collection service for 45,000 households using a green 240 litre bin in the south east of the City in 2003. This trial service is separate to the full contract with Veolia. It is fair to say there has been mixed use of the green bins with some bins not being regularly used. However we have seen an increase in the total amount of waste we collect in the south east of the City whilst the rest of the City has not. The seven year contract ends in 2010 and the Council will then use this budget to fund a sack collection service where householders can opt into the collection service provided.

***ACTION 12: We will increase satisfaction with doorstep recycling to 60% by March 2011, and will increase this to 70% by 2015, whilst maintaining our high satisfaction with refuse collection.***

- 3.1.9 We are committed to providing quality waste and recycling collection services that meet the high expectations of our customers. With the introduction of the new recycling services during 2010 we want to take the opportunity to review the whole service and capacity provided to households for managing waste. This review will begin in 2011. We will measure satisfaction through 'The Place' survey which is a national survey undertaken by all Local Authorities every two years.



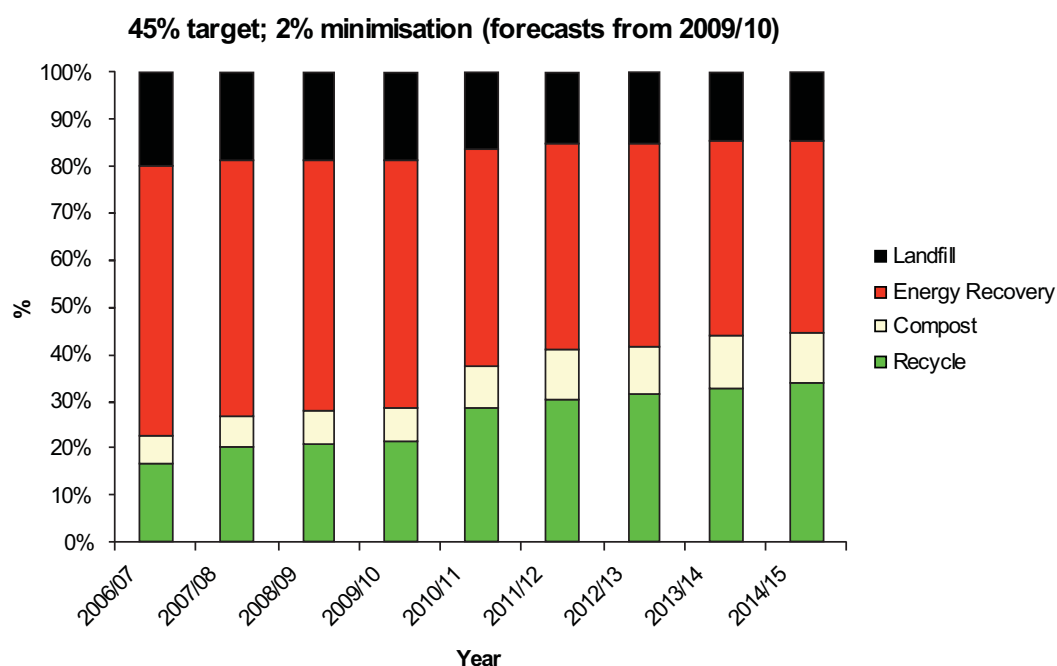
- 3.1.10 Waste capacity currently provided to households in the City is discussed in detail in Section 5 of this strategy. The addition of a new kerbside recycling service will divert more waste from the black bin. This is because recyclable items that were once placed in the black bin will be placed into the new container. When asked about this in our recent consultation, 70% of customers agreed or agreed strongly that the new recycling service would help reduce the amount of waste in their black bin.

***ACTION 13: We will develop our network of recycling sites at supermarkets, local community centres and other communal areas with easy access for customers.***

- 3.1.11 From current trends and population data we estimate the number of single occupier households is set to increase by 40% by 2020. The capacity available to householders for waste must be managed to reduce the risk of significant rises in the amount of waste being produced and the costs associated with this. We do however recognise that households vary across the City and we already provide smaller bins on request, while providing additional capacity for bigger households.
- 3.1.12 With the introduction of a new kerbside recycling scheme it is anticipated that demand on the City's bring sites will reduce. However, these will still play a key role in helping Sheffield's residents recycle by providing convenient and local facilities through which items can be recycled. Therefore by ensuring that these offer a good range of services Sheffield can further encourage its residents to recycle their waste.

***ACTION 14: Sheffield City Council is committed to increasing our recycling rate every year and working towards achieving 45% recycling by 2015.***

- 3.1.13 Through our investment in reducing waste and more recycling services the graph above shows our forecast for how much waste we will produce and where we will send it up to the year 2014/15. Each year we want to be able to take the opportunity to enjoy success in increasing our recycling performance. We know this can only be achieved through the support of our customers, householders in Sheffield, using the services we provide for recycling and segregating their waste. We recognise the importance of providing good services for this as set out in Action 12.
- 3.1.14 Through publicly celebrating our annual recycling performance we can say thank you to residents for recycling and encourage others to be part of this success.



**Figure 3.1-Arising and Treatment of Sheffield's Waste to 2020.**

***ACTION 15: Following the implementation of Actions 10 & 11 we will evaluate opportunities to recycle other materials based on the carbon saving this would add compared to Energy Recovery and the financial cost of doing this.***

- 3.1.15 We will measure our carbon impact of waste treatment annually to ensure our services continue to deliver increased carbon savings. Working towards a recycling rate of 45% by 2015 leaves Sheffield well placed to reach the national target of 50% by 2020.
- 3.1.16 With the implementation of Actions 10 and 11 increasing the amount of materials we collect for recycling, we need to ensure that we properly evaluate the benefit of adding any more recycling of household waste. We will do this through evaluating the carbon saving compared to treatment through the Energy Recovery Facility.

***ACTION 16: We will work with Veolia to ensure we have the most efficient collections of household waste including lower carbon emission vehicles.***

- 3.1.17 The number of vehicles we use to collect waste from households will increase as we collect more materials separately for recycling. By ensuring that the most effective route is taken by the collection vehicles, the carbon footprint of waste collection can be reduced. Software programmes are available to assist with this and we will work with Veolia to evaluate the possible benefit of this to Sheffield.
- 3.1.18 There are a number of emerging technologies being explored for vehicle fuelling as alternatives to diesel. We will work with Veolia to evaluate these for waste collection activities and will support the use of low carbon emission vehicles to improve air quality.



**Bob the Builder promoting recycling at a bring site in Darnall**

***ACTION 17: By 2013 Sheffield will send its incinerator bottom ash to a purpose built processing facility within Sheffield for reuse, instead of it being sent to landfill.***

- 3.1.19 Incinerator Bottom Ash (IBA) is the residue of what's left after waste has been burnt. Typically around 25% of the weight of the waste that is treated through the Energy Recovery Facility is left as IBA after the process. In 2008/09 this was around 40,000 tonnes which was sent to Sheffield's Parkwood Landfill and used largely to make roads for waste vehicles to drive on to tip waste.
- 3.1.20 The ash also has considerable potential for use in road construction as a lightweight aggregate, although it needs to be processed before it can be used for this. The recycling of IBA saves significant amounts of carbon because it will take out any metals left in the ash and recycle this, which will save the mining of ore that would have been used to create new metals.
- 3.1.21 As the IBA is a result of already treating the waste through the Energy Recovery Facility we cannot count this material as recycled. We do know from the WRATE assessment, see Section 5, that recycling IBA will provide the biggest carbon saving compared to recycling of any other materials.

***ACTION 18: We will ensure that all Council buildings and offices where we work from will have the opportunity to recycle at least paper and card by the end of 2009 and will aim to increase our recycling by 2% each year until 2014.***

- 3.1.22 We are committed to reducing the environmental impacts of our own activities. Waste management is an important part of this for Council operated offices and other facilities. A paper and card service has already been established and we need to get all of our buildings using this service.

***ACTION 19: We will explore the option of a commercial dedicated recycling site to make it easier for businesses in the City to recycle by 2013.***

- 3.1.23 We are keen to stimulate and support businesses in diverting their waste from landfill and increasing recycling. We recognise this needs to be easy for businesses to do. A commercial site run solely for businesses to take waste to, for recycling, may help achieve this. We will work with the waste sector to investigate the costs and benefits of providing such a site and work with planners to identify where a site could be located.

***ACTION 20: We will explore the option of procuring recycling collections for businesses in Sheffield and work with commercial waste service providers to deliver these by 2013.***

- 3.1.24 We will work with waste management companies to understand the types of waste produced by businesses in Sheffield and the opportunities to develop new services this presents. We will investigate the practicalities of procuring recycling collection services on behalf of businesses in Sheffield.

***ACTION 21: We will work with other local authorities in the region to plan for waste treatment facilities to reduce the use of landfill.***

- 3.1.25 Sheffield, as the only City in South Yorkshire, with the largest number of residents of the South Yorkshire local authorities and the main economic hub of the sub region is keen to stimulate the use of new technologies for treating waste with a particular interest in providing low carbon fuel.
- 3.1.26 We will work to encourage investment in such technologies as Anaerobic Digestion and foresee that our work in Action 7 to determine the types and volumes of waste produced by businesses in the City will support this development. The role of technologies such as Anaerobic Digestion is recognised in our Carbon Reduction Strategy.
- 3.1.27 To ensure that any new strategy meets the needs of its stakeholders the City Council held an event in February 2009. The event allowed key stakeholders to discuss the objectives of the draft waste strategy and explore how these could be delivered to households and businesses in Sheffield.
- 3.1.28 There was wide support for increasing recycling services to households in Sheffield to move waste up the waste hierarchy.
- 3.1.29 To deliver the new recycling service for households in Sheffield, Action 10, within our ambitious timescales we will have to transport the collected recyclable materials to facilities outside Sheffield for processing as no facility currently exists in Sheffield to handle this volume of mixed material. Given our investment in landfill diversion through the Energy Recovery Facility, we will review the

provision of facilities for handling mixed recycling with other local authorities to deliver value for money. We are keen to support social enterprise in helping us deliver these new facilities in Sheffield, given the added value they provide to supporting employment opportunities and training to the local economy.

- 3.1.30 For the business and commercial sector it was agreed more support needs to be provided to stimulate the movement of waste from this source up the waste hierarchy and that we can play an active role in helping achieve this. It was recognised that working with other Local Authorities to develop waste treatment facilities would be beneficial. Sheffield City Council will develop links with other South Yorkshire and neighbouring authorities at a regional level to share strategies for managing waste and prioritise supporting the development of waste facilities which will recycle and recover waste. The combination of the new household recycling service and recycling from the commercial sector may make investment in a mixed processing facility viable in Sheffield within the timescale of this strategy.



**Black bins being emptied in Sheffield**



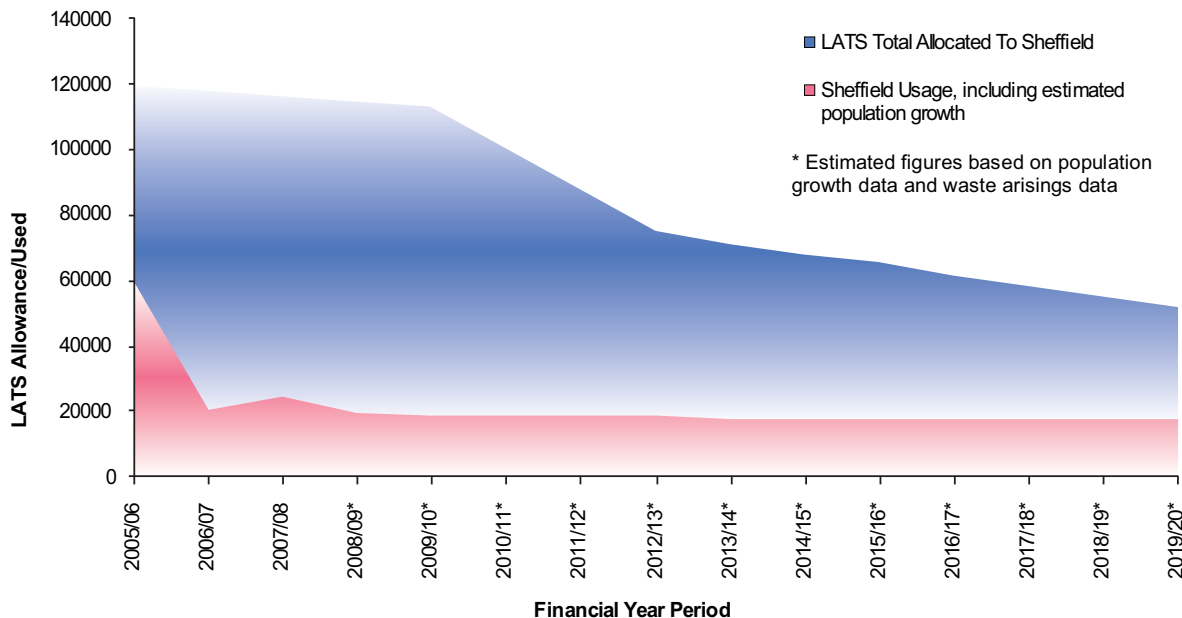
# 4 OBJECTIVE 3 -

## Minimising Sheffield's Waste Sent to Landfill



# 4.1 Landfill disposal is the final option within the waste hierarchy as it recovers the least value from our waste.

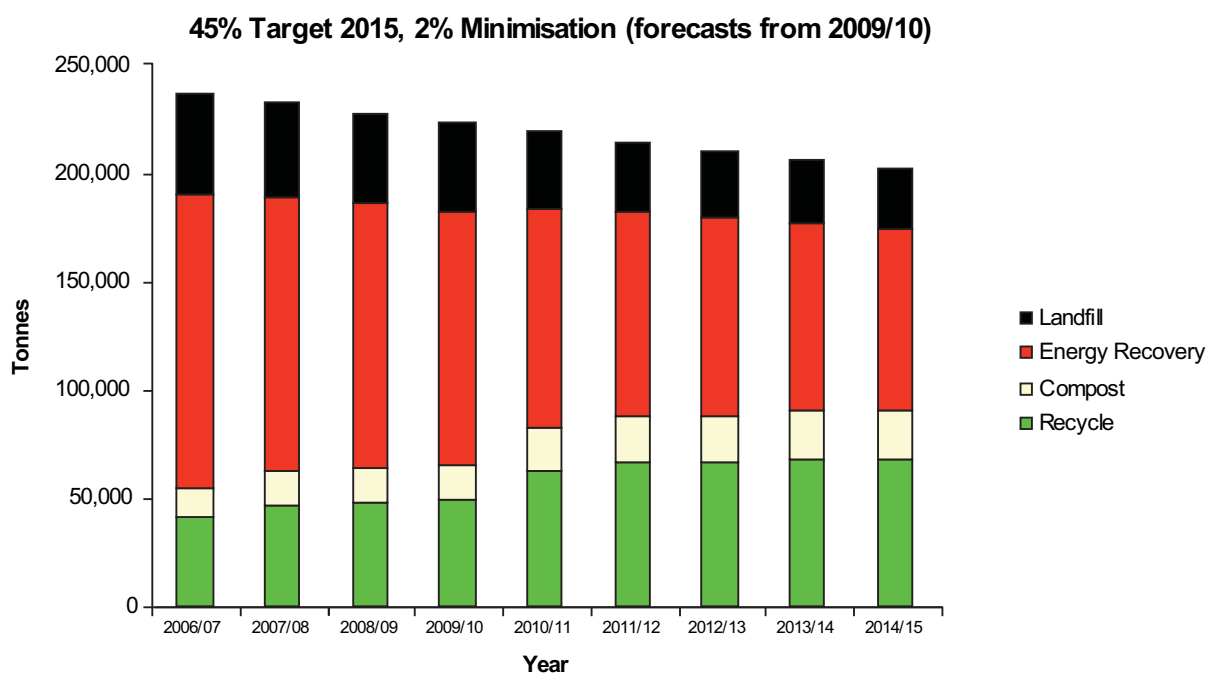
4.1.1 As explained briefly in Section 5 and at length in Section 7 we must reduce the amount of biodegradable waste we send to landfill. The Government has given each Local Authority an allowance for landfill to ensure we can meet our national target. Figure 4.1 shows the Landfill Allowance Trading Scheme (LATS) targets for Sheffield from 2005/6 when they were introduced up to 2020 which is the final target year set by Europe. Because of investment in increasing recycling and energy recovery we forecast that we will continue to landfill much less waste than our allowance, even though our population will grow, this is good performance.



**Figure 4.1: Sheffield's Recent & Expected LATS Usage Plotted Against Our Actual Allowances to 2020**

- 4.1.2 In Sheffield we have a very successful track record in reducing the amount of waste we send for landfill disposal. Whilst steadily increasing our recycling rate from less than 5% in 2001 to 28% in 2008, the amount of waste to landfill in this time has reduced from around 50% to less than 14%. Our investment in a new Energy Recovery Facility has been a great success of which we are proud.
- 4.1.3 By continuing to increase the amount of waste we recycle as set out in Action 10 we will be reducing the amount of household waste sent to the Energy Recovery Facility, and have the opportunity to use this spare capacity to secure the movement of more waste up the waste hierarchy away from landfill disposal.

***ACTION 22: By working with Veolia we will prioritise the handling of household waste from Sheffield through the Energy Recovery Facility.***



**Figure 4.2: Tonnes of household waste produced in Sheffield and forecasted from 2009/10 to 20014/15**

- 4.1.4 The data in figure 4.2 shows how, with increasing the amount of waste we recycle we will have less black bin household waste for treatment at the Energy Recovery Facility. We are forecasting that even though our population in Sheffield will grow during the lifetime of this strategy (as discussed in Section 6) we will continue to reduce waste at a rate of 2% year on year. Combined with our increase in recycling this means there will be more capacity at the Energy Recovery Facility to treat other waste.
- 4.1.5 Through operating efficiently we can reduce the amount of time needed for maintenance, divert the most waste from landfill, and maximise how much carbon we save. Reducing the number of times we have to close the plant saves the use of gas to support the District Heating network.
- 4.1.6 Waste from business can be made up of many different materials depending on the business that has produced it and therefore the value of the waste when it is burnt can vary enormously. Burning material with less value is a less efficient use of the plant.

- 4.1.7 By moving waste from business up the waste hierarchy through stimulating more recycling opportunities for this waste as explained by Actions 19 and 20 there will be less demand for the Energy Recovery Facility for this waste and therefore more municipal waste can be processed at the facility

***ACTION 23: By working with Veolia we will seek a joined up approach to sharing waste treatment facilities, including our Energy Recovery Facility, to maximise the carbon saving for municipal waste.***

- 4.1.8 The current Planning Permission for the Energy Recovery Facility allows 10% of the 225,000 tonnes capacity of the facility to be imported from the neighbouring authorities of Rotherham and North East Derbyshire.
- 4.1.9 This current planning permission allows waste to be transported from a distance of 15.1 miles away (as the crow flies) from the Energy Recovery Facility. Other local authorities are producing municipal waste closer still to the Energy Recovery Facility, and taking some of this other municipal waste to the Energy Recovery Facility would further reduce the environmental impacts of transporting this waste for treatment.
- 4.1.10 With the decrease in household waste forecast for treatment at the Energy Recovery Facility as shown in figure 4.2 and allowing for 20,000 tonnes of municipal waste, around 8% of household arisings for Sheffield, the current 10% allowance for imported waste could be doubled without compromising the priority of Sheffield municipal waste through the facility.



***One of the vehicles used to empty recycling bins displaying the winning design in a recycling competition***

- 4.1.11 Meeting the requirements of the Landfill Directive as explained in 4.1.1 and Section 7 is one of the key priorities for all local authorities as reducing the biodegradable content of waste to landfill has significant carbon savings. Increasing the allowance of municipal waste from other local authorities to the Energy Recovery Facility in Sheffield will contribute to achieving a reduction in biodegradable waste to landfill and the UK meeting the requirements of the Landfill Directive.

***ACTION 24: We will work with Veolia and the community sector to support schemes to divert waste from landfill through recycling and reuse.***

- 4.1.12 The majority of waste sent to landfill in Sheffield is bulky material which isn't suitable for processing at the Energy Recovery Facility, and is collected through the Household Waste Recycling Centres and the bulky waste collection service. It includes items like old furniture, homeware and some electrical goods. Often these are items which could be refurnished, repaired or reused to make new. Some community sector groups already work in Sheffield to do this when people donate materials directly and we want to work with these and Veolia to make this happen more and also look at if these groups could use the materials we collect.

***ACTION 25: We will use Site Waste Management Plans to ensure waste from development sites in the City is well managed and be proactive in trying to divert this waste from landfill.***

- 4.1.13 We have ambitious plans to regenerate parts of the City and recognise the need for ongoing development to ensure the City has a vibrant economy. Construction creates significant amounts of waste, some of which could be recycled on site with the right planning of work, to prevent new resources being used and preventing the impact of transporting this heavy material and processing it or sending it to landfill elsewhere.

- 4.1.14 Through ensuring developments have site waste management plans we can be proactive in our approach to preventing this waste being sent to landfill.

***ACTION 26: We will work with other local authorities and partners to ensure we manage the availability of landfill across the region up to 2020.***

- 4.1.15 With the driver of national targets and each Local Authority agreeing local priorities for managing waste the amount of waste being sent to landfill across the region will be decreasing.

- 4.1.16 The neighbouring Authorities of Barnsley, Doncaster and Rotherham (BDR) Metropolitan Boroughs have joined together to look to develop new waste management facilities by 2015, to move the management of their waste up the Waste Hierarchy and remove their dependence on landfill as their prime means of waste disposal.

**Danny Piermattei MBE and members from Action for Stannington receiving a national recycling award.**



- 4.1.17 At a regional level the Yorkshire and Humber Assembly has a role in planning how much capacity there is across the area for managing waste, through the production of a 'Regional Spatial Strategy'. Produced in 2006, this showed there will be enough capacity for municipal waste along with commercial and industrial waste streams in the in the sub-region until 2021.

***ACTION 27: Sheffield City Council will provide facilities and support to reduce the need for items such as batteries and small electrical items to be disposed of through the household waste collection service.***

- 4.1.18 Sheffield Council recognises that some types of waste, such as batteries and small electrical items, are disposed of through the household waste collection service.
- 4.1.19 A range of legislation currently exists and new legislation will place more responsibility on individuals and organisations to dispose of hazardous waste safely and securely. Sheffield City Council will work with its partners to ensure that residents have the opportunity to dispose of hazardous waste correctly.
- 4.1.20 Sheffield City Council will also offer support to business and waste producers to help them meet these legislative requirements.

# 5 Sheffield Waste Services:

Where We Are Now



*Black bins being emptied in Sheffield*

## 5.1 Providing Our Waste Services

- 5.1.1 The City Council has a contract with Veolia Environmental Services to provide all household waste services in the City until 2036. This includes waste collection, recycling collections, recycling facilities in the community such as at supermarkets, five Household Waste Recycling Centres for recycling and disposal of bulky items of household waste, waste treatment for general waste including the Energy Recovery Facility, and all aspects of customer service support; including a dedicated call centre, education and waste and recycling awareness officers and marketing and communications material, such as leaflets and publicity.
- 5.1.2 We provide a weekly collection of general waste from all households in Sheffield. Most households have a 240 litre **black bin** for their general household waste, though we do provide bigger bins for household with lots of people and we collect general waste in black sacks from a small number of households. Flats have big bins to share based on the number of households in the block. We collect around 150,000 tonnes a year of general household waste from this weekly collection.
- 5.1.3 In 2004 we introduced a 140 litre **blue bin** for paper and card recycling. This is collected once every four weeks and again, we provide bigger, shared bins for flats. We collect around 20,000 tonnes of paper and card a year for recycling through this service.
- 5.1.4 The capacity for waste provided to the average household in Sheffield every 4 weeks is shown in Figure 5.1.
- 5.1.5 In the south east of the City approximately 45,000 households (around 20% of total households in the City) have a 240 litre **green bin** for garden waste which is a scheduled collection every two weeks (with the exception of December, January and February when collections are once per month). During the fortnightly collections this gives households on the green bin service a weekly capacity of 395 litres as shown in Figure 5.2. This provides 70% more capacity than the average household, as shown in Figure 5.1, below.



Figure 5.1 Bin Capacities for Sheffield Households

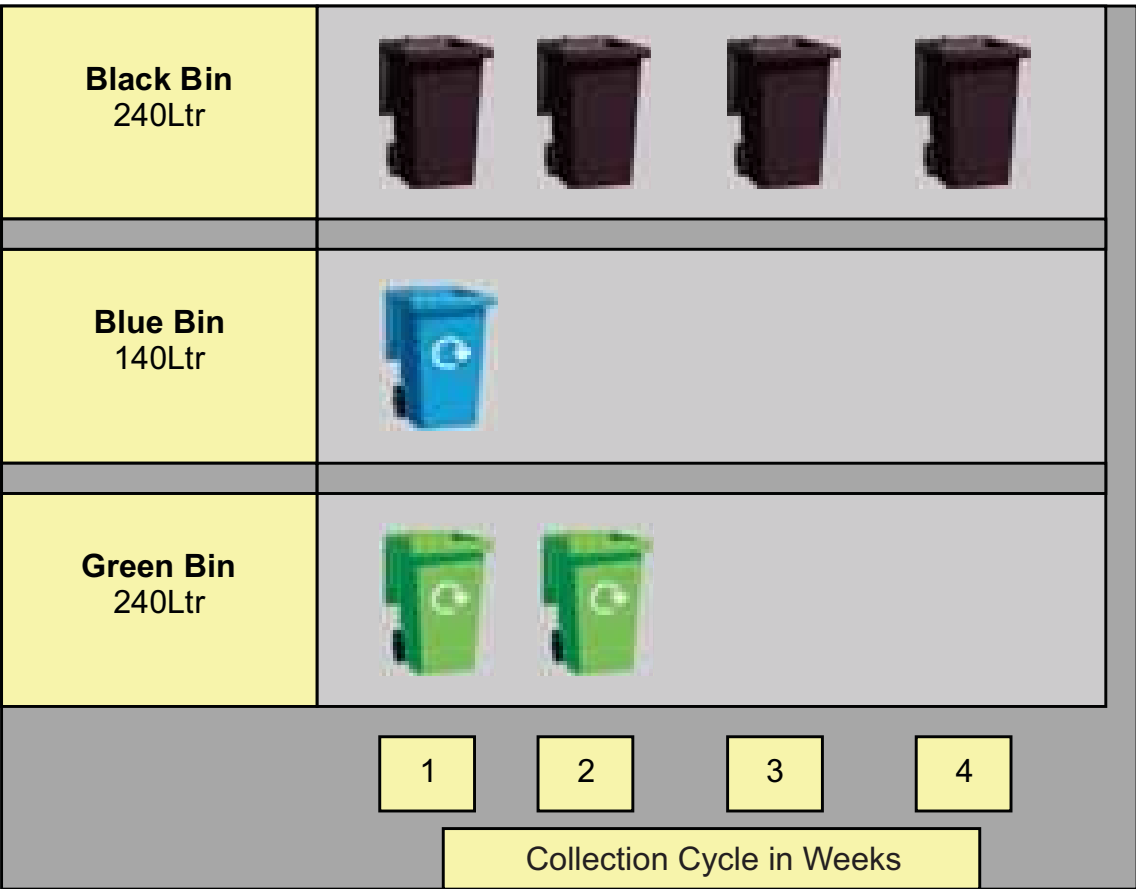


Figure 5.2 Bin Capacities for Sheffield Households, including Garden Waste Collection

5.1.6 In addition to kerbside services we also provide five **Household Waste Recycling Centres (HWRCs)**. These sites are provided for householders in Sheffield and are licensed to receive household waste only. The sites were refurbished in 2005 to provide more space and skips to separate different

types of waste for recycling including electrical equipment, green waste, cardboard, wood and lots of other materials. We now recycle around 70% of the waste brought to these sites. Waste which cannot be recycled is sent to landfill from these sites because it often includes materials which do not burn through the Energy Recovery Facility.

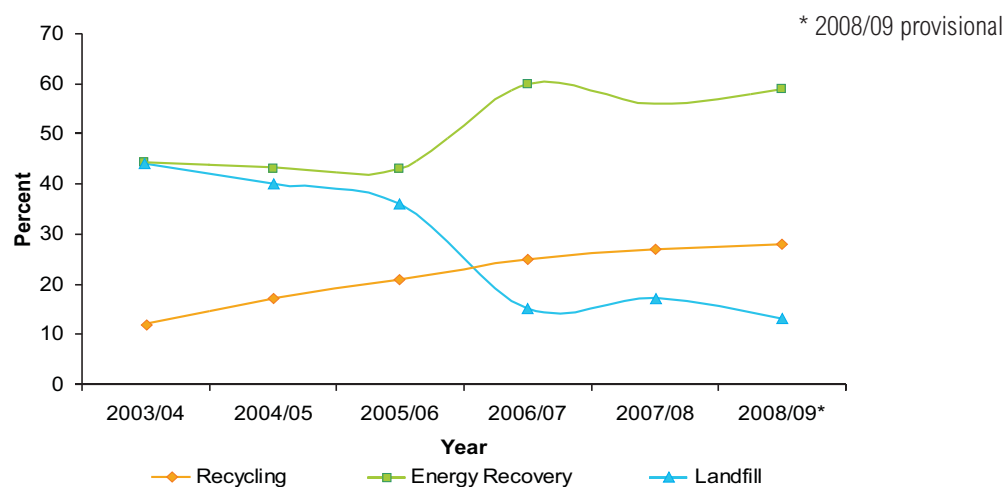
- 5.1.7 The five HWRCs are spread across the City. The south west area of the City does not have a HWRC and we undertook a feasibility study in 2005 to try and address this. The study showed there were no viable sites in the vicinity as most land is designated for residential use and carries a high market value. We will continue to review this area for any opportunity to consider a site for a new HWRC.
- 5.1.8 **Bring sites or recycling sites** are recycling banks for different materials, usually cans, glass and paper, and also textiles and plastics, commonly in supermarket car parks and other places convenient for householders to take their recycling to. We have over 200 sites located across the City, and in 2008/09 we collected just under 9,000 tonnes of materials for recycling.
- 5.1.9 We have a number of schemes in Sheffield to try and help householders **reduce** the waste in their bins. There is a real nappy scheme that offers a small grant to help with the cost of buying reusable nappies rather than disposable ones. We also have a scheme to buy reduced-price home compost bins for garden and food waste to be composted into a soil improver. During 2008/09 we've also had over 80 volunteers using a Green Cone which digests cooked food including meat and fish.

## 5.2 Treating Our Waste

- 5.2.1 Since our last waste strategy which was agreed in 2003, we have significantly increased the amount of waste we recycle and the amount we divert from landfill through investment in a new Energy Recovery Facility and a Material Recycling Facility. The Figure 5.3 shows these trends.
- 5.2.2 **Energy Recovery Facility:** the new incinerator at Bernard Road began processing waste in 2005 and became fully operational in 2006. It has Planning Permission to accept 225,000 tonnes of waste a year, with an allowance of 10% (total) of this capacity to be imported from the neighbouring authorities of Rotherham and North East Derbyshire.
- 5.2.3 We call this plant an Energy Recovery Facility because it fuels our District Heating Network that provides heat to over 140 city centre buildings, saving an estimated 20,000 tonnes of carbon compared to gas fired heating of these buildings. It also generates electricity which is then supplied to the National Grid. Through burning waste we are recovering energy from materials and using this energy to provide heat and power.
- 5.2.4 The **Material Recycling Facility** separates different grades of paper and card which is collected through the household blue bins. Paper is then sent to a paper mill and cardboard is sent to a board mill for recycling. The collection service is very efficient and over 98% of the material placed in the blue bin is recycled into new products such as newspapers, magazines, cardboard and packaging.

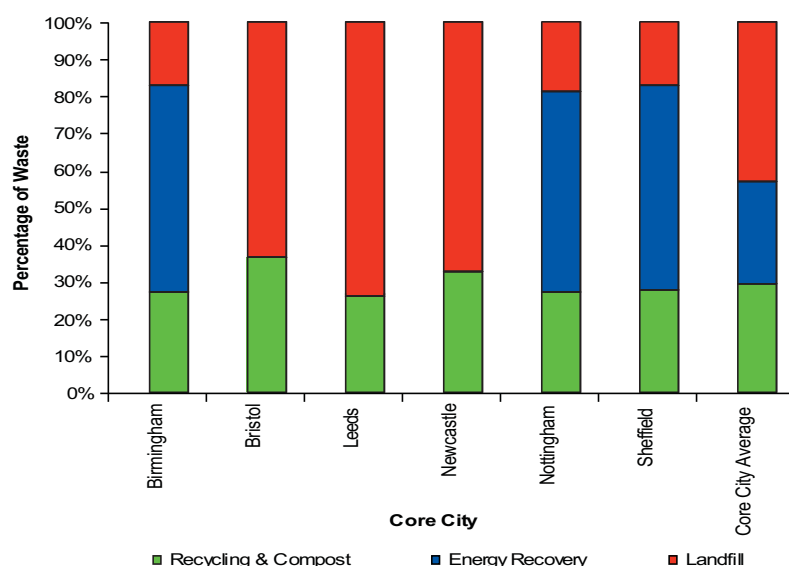
## 5.3 Our Performance and How This Compares With Others

- 5.3.1 In 2008/09 Sheffield households produced 235,000 tonnes of municipal solid waste (MSW). Figure 5.3 shows the proportion of this waste that was sent for recycling, recovery and landfill. We are one of the top performing authorities in England for landfill diversion, sending less than 14% of our waste to landfill for disposal. We want to continue to improve this performance and send less waste to landfill as well as increasing how much waste we recycle.



**Figure 5.3: Our Performance Since 2003**

- 5.3.2 Figure 5.4 shows that Sheffield's recycling and composting rate is very similar to the other Core Cities in England, whilst our waste being delivered to landfill is well below the Core City average of 56%. We use Core Cities to compare our performance as we all have similar communities and populations.



**Figure 5.4: Sheffield Performance and Core Cities Average Performance, 2007-2008**

NB. Manchester and Liverpool results are not included as they are part of Joint Waste Disposal Authorities which have a different arrangement for waste disposal.

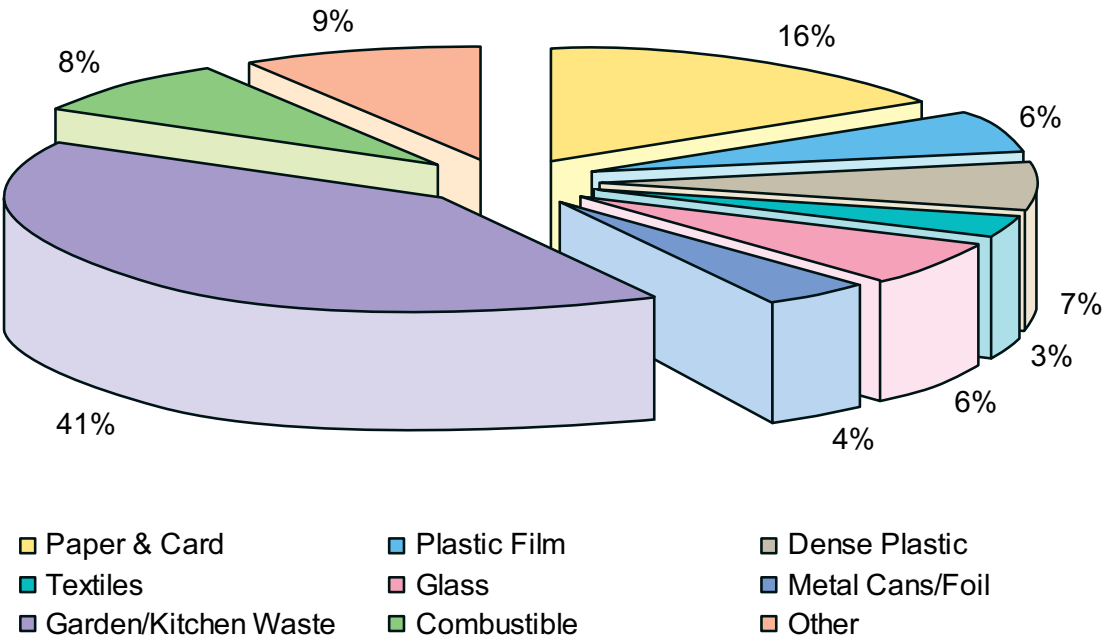


**Veolia's Waste Awareness Officer with children from Woodthorpe Primary School designing reusable bags**

## 5.4 What's in our Waste?

- 5.4.1 It is important for us to understand how much of different types of material are in the black bins so we can plan for new services such as recycling collections. Every year in Sheffield we undertake a couple of waste analysis exercises to do this. The waste from black bins is tipped out and we split it into different material types and weigh these, as shown in Figure 5.5. The waste is then taken to the Energy Recovery Facility as usual, and there aren't any issues about identity fraud or data protection from doing this work.
- 5.4.2 Types of waste produced are different for every household, for example households with young children often have disposable nappies. The types of waste produced also change during the year; the spring and summer months have more garden waste and around Christmas we usually see an increase in food waste and packaging materials.

5.4.3 It is a priority for us to reduce the amount of biodegradable waste sent to landfill for disposal in England. This is because biodegradable material rots in landfill and produces a gas called methane which is twenty times more damaging to the environment for global warming than carbon dioxide is. The European Union has set targets for each Member State to reduce biodegradable waste sent to landfill because of this impact; see Section 7 for more on this. In Figure 5.5 textiles, garden and kitchen waste and paper and card are all biodegradable, and whilst we have a blue bin for the collection of paper and card, garden and kitchen waste and textiles in the black bin are sent to the Energy Recovery Facility and therefore diverted from landfill. There are other options in the City for these types of waste including home compost bins for garden material, and bring banks, charity shops and charity collections for textiles.



**Figure 5.5: Sheffield Average Household Black Bin Composition 2007**

## 5.5 Impact of Waste on Carbon Emissions

- 5.5.1

At a local level carbon reduction is one of the Performance Indicators in the Local Area Agreement. Our strategy for reducing carbon; “Delivering a Low Carbon Sheffield” sets a target of a 30% reduction by 2020 based on 2005 figures. This waste strategy is an important opportunity for us to reduce our carbon impact through moving waste treatment up the waste hierarchy (see Section 2.1). It is also a priority under the Environmental Excellence Strategy which sets out our plan to manage wider environmental issues.
- 5.5.2

In 2007, Sheffield City Council carried out a lifecycle analysis of how we manage household waste. We used a tool called WRATE (Waste and Resources Assessment Tool for the Environment) which was developed by the Environment Agency and DEFRA to measure the carbon impact associated with different options for collecting and treating household waste.



- 5.5.3 The findings of the WRATE analysis showed the carbon impact of household waste management activities carried out in Sheffield in 2007 was -58,300 tonnes of CO<sub>2</sub> equivalents. This minus figure means the way in which household waste is managed in Sheffield creates a carbon saving. This is because of the environmental resources being saved through our recycling of materials, meaning new materials are not being made. Additionally, through our use of waste as a fuel in the Energy Recovery Facility to produce heat and power, further natural resources are saved as another fuel such as gas or coal is not being used.
- 5.5.4 Different materials have different environmental impacts and studies including WRATE have shown that focusing on certain materials for landfill diversion through energy recovery or recycling will show a greater carbon saving than others.

## **5.6 Commercial and Industrial Waste**

- 5.6.1 The amount of commercial and industrial waste produced in Sheffield is currently something of an unknown area. Nationally it is estimated that around two thirds of all waste produced is commercial and industrial waste. Using this information and the limited data available on commercial and industrial waste production within Sheffield it is possible to assume that within Sheffield there are around 460,000 tonnes of waste produced each year. This includes waste types such as those from the retail sector, construction and demolition waste, catering waste and waste from heavy industry.
- 5.6.2 Local authorities have not been expected to monitor waste from businesses or provide facilities to manage this waste and therefore little data is available across the UK. However, the **Waste Strategy for England** as published by the Government in 2007 placed a renewed emphasis for Local Authorities to work with the business sector to ensure this waste too is diverted from landfill.
- 5.6.3 One of the key actions within this strategy is to begin to scope the types of waste produced by businesses in Sheffield and how this is currently treated, our action for this is detailed in Section 2.

# 6 Sheffield Population & Households: Looking Ahead



## 6.1 People and Population Trends

- 6.1.1 The physical make up of an area and the people living in the City directly impacts waste services. On a practical level we need to consider our housing stock and availability of space for storing waste; the layout of roads and residential areas for collection vehicles. And we need to be able to plan for population changes to ensure we deliver value for money and efficient waste services to everyone in Sheffield.
- 6.1.2 Sheffield has a population of around 534,500 people living within 233,000 households<sup>1</sup>. This includes a proportion of elderly people and an ethnic minority population of about 15.5% <sup>2</sup>(ONS, 2007) which is similar to the national average (England average 16% - <sup>2</sup>ONS, 2007). The ethnic minority population comprises a wide range of ethnic groups including Pakistanis, Indians, West Indians, Bangladeshis, Chinese, Yemenis and Somalis. Sheffield has also seen a recent influx of migrant workers coming from Eastern Europe.

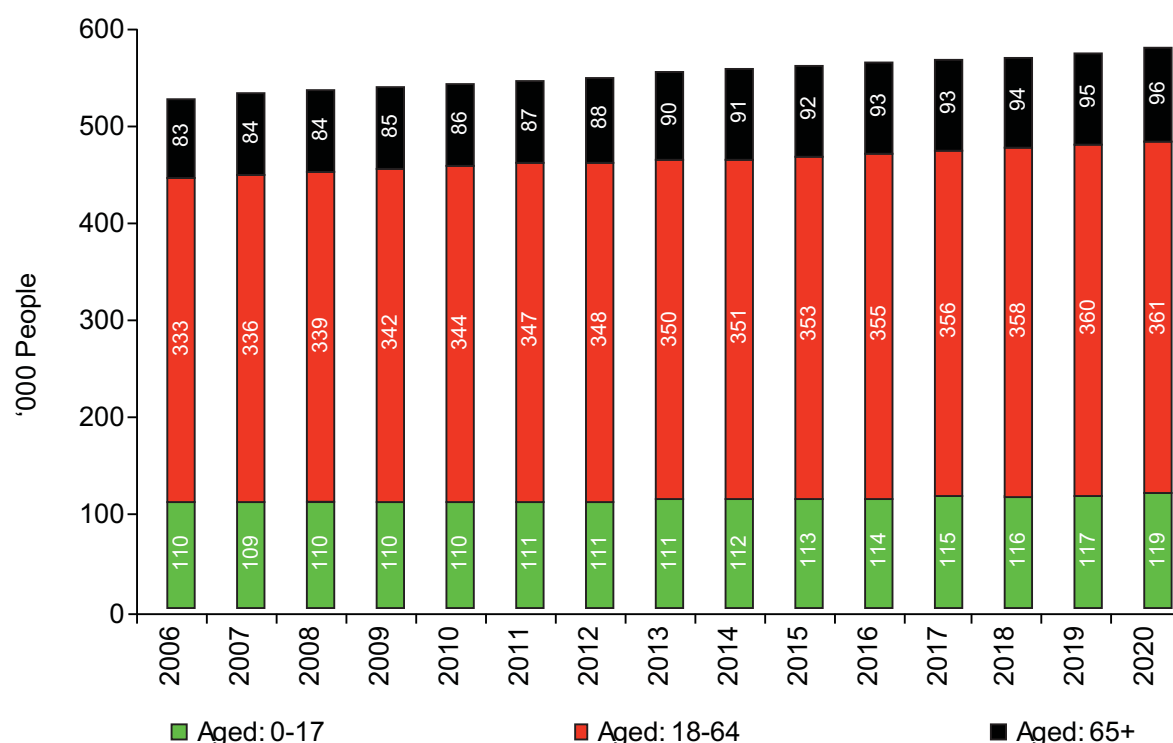


Figure 6.1 Sheffield's Projected Population Growth to 2020

- 6.1.3 Since 2001 the population of Sheffield has increased. By mid-2007 Sheffield's population had increased to 530,300 people, representing an increase of over 17,000 people since 2001<sup>2</sup>. The population is expected to continue growing and to have reached 575,400 by 2020<sup>3</sup>.
- 6.1.4 There are two universities located within Sheffield; The University of Sheffield and Sheffield Hallam University. Between them, it is estimated that Sheffield is home to around 55,400 students<sup>4</sup>. Sheffield also has a higher than average retention level for graduates with a large number of students staying in Sheffield after their studies to take up employment opportunities meaning Sheffield has a large population of people in their early to mid 20s.
- 6.1.5 The increase in Sheffield's population will be coupled with an increase in the number of over 65s as indicated in Figure 6.1. We will need to make adaptations to our services to ensure those with reduced mobility through age can access our services.

## 6.2 Households

- 6.2.1 Figure 6.2 shows the spread of population across Sheffield's wards. Three of these wards forecast significant population increases; Central, Darnall and Arbourthorne. It is fair to assume that the Central Ward growth is due to an increase of flats in the City Centre and most commonly these will be single occupiers or young professional couples. However, for Darnall and Arbourthorne the increase in housing will be families with young children and particularly in Darnall these will be larger families, of 5 or more people per household.
- 6.2.2 It is expected that by 2021 Sheffield will have around 265,000 households<sup>5</sup>. Given that Sheffield's population is projected to grow by 9% over the same time<sup>3</sup> the overall result will be more households with fewer people in them. This impact on our waste services will be more properties requiring services and more bins to collect each week.
- 6.2.3 Sheffield's large student population has been traditionally based around the west of the City Centre, comprising of housing converted for multiple occupation. In the last few years however, new purpose-built student accommodation has started to be built in the City Centre itself reducing the demand for the existing traditional student housing, which may over time revert to family housing. The purpose-built accommodation is mostly flats and some have very limited space for waste capacity and providing additional capacity to segregate waste for recycling will be challenging.

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<sup>1</sup> Sheffield City Council 2008

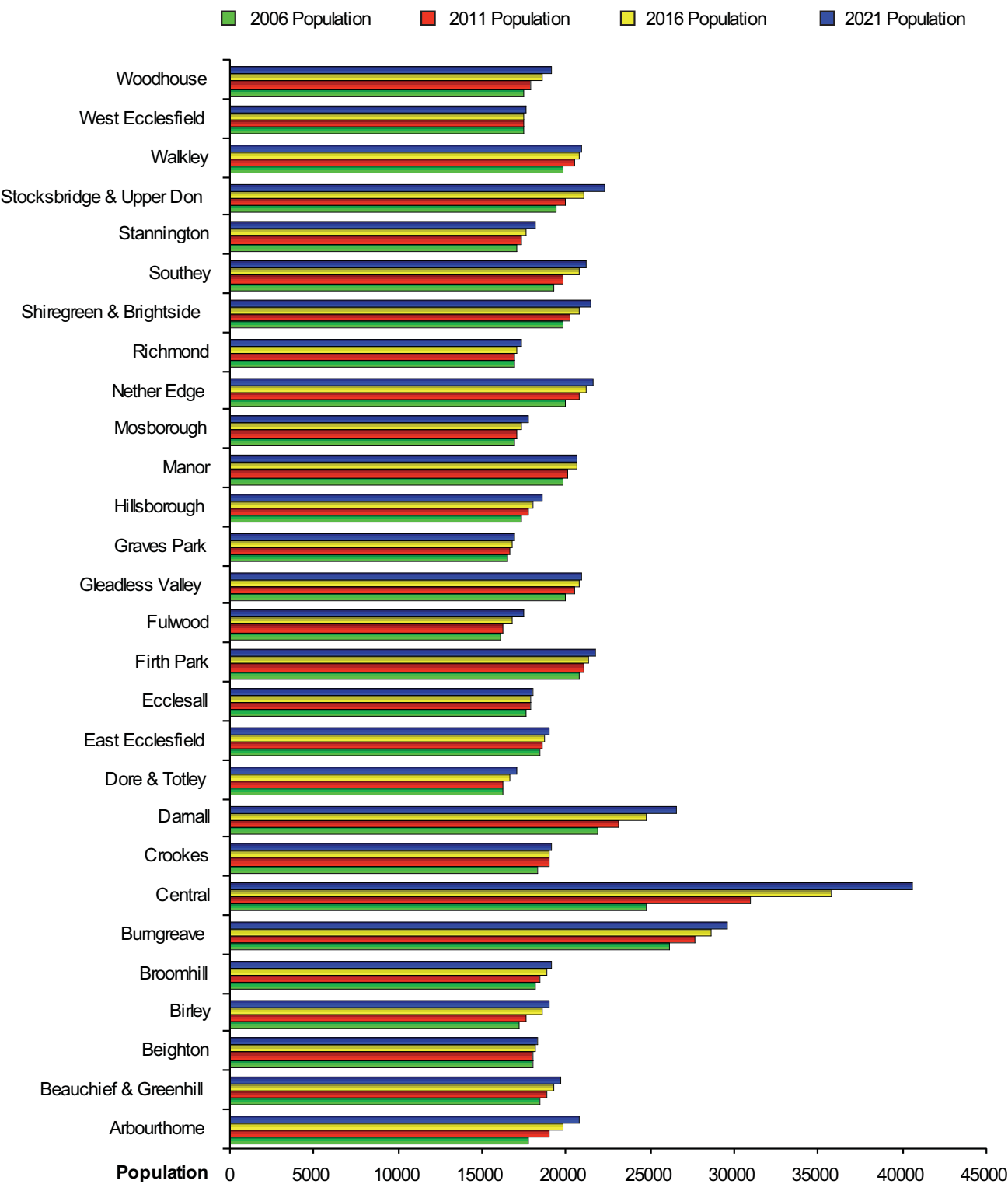
<sup>2</sup> Office for National Statistics, mid year estimate 2007

<sup>3</sup> Office for National Statistics, 2006 projections

<sup>4</sup> Higher Education Statistics Agency 2006

<sup>5</sup> The Department of Communities and Local Government 2009

Figure 6.2: Electoral Ward Spread of Sheffield's Population



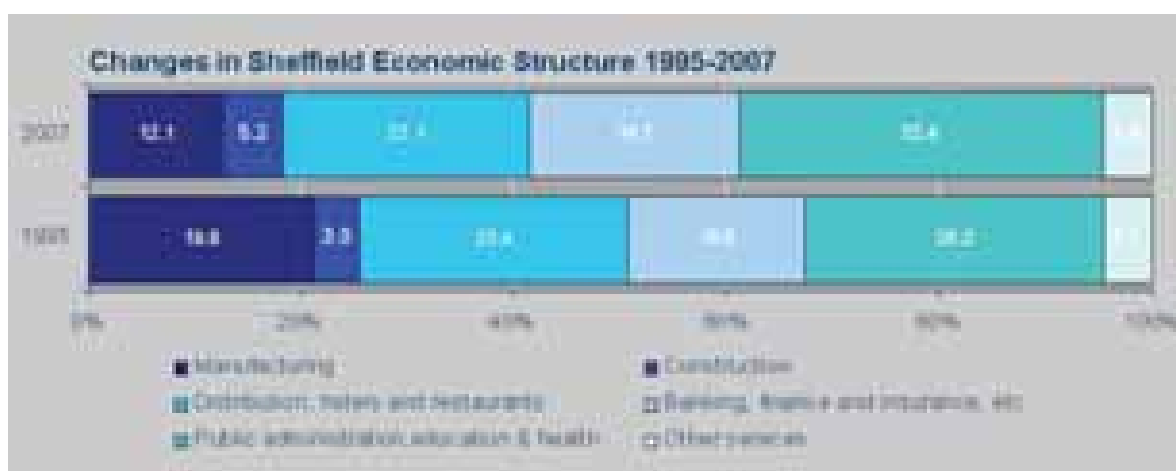
## 6.3 Business Demographics

- 6.3.1 Sheffield now has approximately 18,000 businesses. The number of businesses in the City has increased by around 13.5% over the last ten years, expanding at an average rate of approximately 220 businesses per year.
- 6.3.2 Growth has been fastest in businesses with 1-10 employees, which increased by 18%. However our overall growth rate is not sufficient to reach the levels of enterprise in other Core Cities and our Economic Masterplan identifies this as a key priority for the economy.
- 6.3.3 The majority (99%) of Sheffield businesses are Small or Medium Enterprises with 200 employees or fewer . However the 1% of large businesses, account for 37% of employment, as shown in Figure 6.3 below.

	1-10 employees	11-49 employees	50-199 employees	200 or more employees	Total
No of businesses	13,800	2,400	650	150	17,000
% of total	81%	14%	4%	1%	100
No of jobs	40,700	55,300	61,100	91,200	248,300
% of total	16%	22%	25%	37%	100

**Figure 6.3: Table of Employee Numbers and Percentage of Businesses in Sheffield**

- 6.3.4 The composition of the economy has also changed. The graph below, Figure 6.4 shows that manufacturing employment has fallen significantly and business and financial services and public sector employment have expanded. This trend in the structure of our economy is expected to continue over the long term.



**Figure 6.4: Graph Showing Changes in Sectors of Sheffield Businesses**

- 6.3.5 The current recessionary period may well impact on the number of new businesses and the failure of existing businesses over the medium term, which could affect any growth trajectory. Over the long term we anticipate business growth to at least continue along the above growth rate, with some accelerated growth following the economic recovery as local economic strategies to increase entrepreneurship take effect.
- 6.3.6 These changes in our economy will have significant implications for how we manage waste as different sectors of the economy produce different types of waste that need to be treated in different ways. For example we anticipate an increase in the amount of office waste that the City will produce.



**Veolia's Waste Awareness Officer opening a model recycling village with Ashdell Preparatory, Birkdale Junior and Sheffield High School in Broomhill.**

# 7 Sheffield -

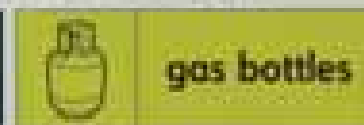
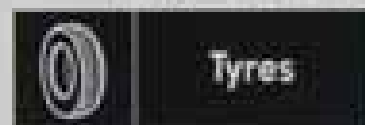
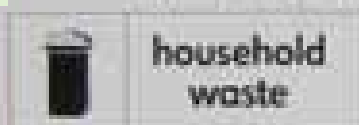
## Drivers & Legislation

 At this site you can recycle

	textiles		mixed paper & card		electrical		used engine oil
	plastics		garden waste		household batteries		car batteries
	glass bottles & jars		chipboard		fridges & freezers		
	metals		wood & timber		fluorescent tubes		
	food & drink cans		soil & rubble		low energy bulbs		

✓ We also accept

✗ We don't accept



**No trade/commercial waste**

Site management have the right to refuse waste materials that are not contained within the site licence

**Douglas Road Household Waste Recycling Centre**

A Household Waste Recycling Centre public information sign

## 7.1 Key Drivers for a New Strategy

7.1.1 There are a number of key local, regional and national drivers to Sheffield producing a new waste strategy as shown in the tables below:

Strategy	Objective	Target
<b>LOCAL</b>		
SDF – planning for waste <sup>1</sup>	Safeguarding existing Waste Facilities in the city while encouraging greater provision for Recycling and Composting facilities	<ol style="list-style-type: none"> <li>1. 80% of municipal waste managed through recycling/composting or energy recovery by 2015</li> <li>2. At least 5.5 million tonnes of waste managed at facilities at the Energy from Waste plant and Parkwood Landfill Site by 2021</li> <li>3. Six household waste recycling centres to be operating by 2018</li> </ol>
Corporate Plan	To increase the number of people who are satisfied with recycling	Baseline to be established in 2009 to allow target setting. (Q8c/d on Place Survey - “How satisfied are you with the services provided or supported by Sheffield City Council on doorstep recycling/local tips & household waste recycling centres?”)
Local Area Agreement		<p>To reduce the carbon dioxide emissions in Sheffield from 7.0 tonnes per head of the population in 2006/07 to 6.3 tonnes per head of the population in 2010/11 – a 10% reduction.</p> <p>To increase the amount of waste recycled or composted in Sheffield from 27.3% in 2007/08 (63,708 tonnes) to 30% in 2010/11 (approx 70,000 tonnes).</p>
<b>Regional</b>		
Regional Spatial Strategy	<p>Ensure adequate waste management facilities in the region</p> <ul style="list-style-type: none"> <li>- Moving the management of all waste streams up the waste hierarchy</li> <li>- Managing waste at the nearest appropriate location by seeking agreement with neighboring authorities where needed</li> </ul>	<p>Recycling and composting of at least 40% by 2010, 45% by 2015 and 50% by 2020.</p> <p>Recovery of 53% by 2010, 67% by 2015 and 75% by 2020.</p>
BDR PDP – Barnsley, Doncaster, Rotherham – Joint Strategy Waste Development Plan	Joint procurement for waste treatment facilities	

<sup>1</sup> denotes statutory performance requirement

## 7.2 Relevant Legislation and Associated Targets

7.2.1 There are a range of legislative acts, some as a result of European legislation that relate to and place requirements on Local Authorities in relation to their performance on waste recovery and disposal. Some of these acts place specific targets on Sheffield City Council as a waste collection authority and the following table explains the key pieces of legislation and any relevant targets that this then imposes on Sheffield.

Legislation	Legislation Level	Key Details	Relevant Targets
Environmental Protection Act (1990)	National	Designates Sheffield City Council as a Waste Collection Authority placing a duty on us to collect household waste and commercial waste if requested (although a charge can be made for commercial waste). The Act also allows SCC to set requirements for the waste to be placed for collection in receptacles of any kind and nature that can be reasonably justified.	N/A
Waste Framework Directive (2008/98/EC)	European	Provides overarching guidance on the effective management of waste. Under this legislation the UK must develop national strategies to encourage the prevention of and reuse of waste as well as providing a suitable infrastructure for recovery and disposal of waste.	Yet to be fully transposed into UK legislation but can be expected to include: <ul style="list-style-type: none"> <li>- Moving treatment of waste up the waste hierarchy</li> <li>- Achieve a recycle rate of 50% of waste by 2020</li> </ul>
Waste Strategy for England 2007	National	This legislation comes out of the European Waste Framework Directive which places a requirement on Local Authorities to produce their own waste strategies to reflect the National Strategy and show how they will meet the targets passed down from the National Strategy.	Achieve a recycling rate of: <ul style="list-style-type: none"> <li>- 40% by 2010</li> <li>- 45% by 2015</li> <li>- 50% by 2020</li> </ul> Residual waste reduction from 2000 levels: <ul style="list-style-type: none"> <li>- 29% by 2010</li> <li>- 35% by 2015</li> <li>- 45% by 2020</li> </ul>
The Directive on the Landfill of Wastes (99/31/EC)	European	This is a major driver in the change in the management of municipal waste in the UK. The directive requires a significant reduction in the amount of biodegradable municipal waste (BMW) sent to landfill. In addition bans are in place for tyres, liquids and wastes with specific properties such as flammable or corrosive items.	UK targets for the reduction of BMW are: <ul style="list-style-type: none"> <li>- 25% reduction on 1995 levels by 2009/10</li> <li>- 50% reduction on 1995 levels by 2012/13</li> <li>- 65% reduction on 1995 levels by 2019/20</li> </ul>

Legislation	Legislation Level	Key Details	Relevant Targets
The Waste and Emissions Trading (WET) Act 2003	National	<p>The Waste and Emissions Trading (WET) Act 2003 is the measure that the government is using to meet the demands of the European Landfill Directive. Under the targets of the Landfill Directive, the WET Act will see progressively tighter restrictions on the amount of Biodegradable Municipal Waste (BMW), food, paper and garden waste that local waste disposal authorities can landfill. The key measure of the WET Act is the Landfill Allowances Trading Scheme (LATS).</p> <p>LATS allowances have been created for all local authorities who are responsible for the disposal of waste. This gives them yearly limits on how much BMW waste they can send to landfill each year. This allowance helps ensure that alternative treatment systems are created to reduce the amount of waste sent to landfill. These LATS allowances are awarded yearly to each local authority and the number of LATS awarded decreases annually. Authorities can at certain times sell excess LATS to other authorities. Each of the LATS awarded to a local authority is worth 1 tonne of BMW sent to landfill.</p>	<p>Sheffield's LATS allowances are for the following target years:</p> <ul style="list-style-type: none"> <li>- 2009/10 113,709 tonnes BMW</li> <li>- 20012/13 75,738 tonnes BMW</li> <li>- 2019/20 52,997 tonnes BMW</li> </ul>
Household Waste Recycling Act 2003	National	<p>This Act relates to the provision of collection, composting and recycling of household waste. The main part of this being the legislative requirement for local authorities to collect two streams of recyclable material from the kerbside. Guidance from Defra in 2005 stated that collection of paper and card were only regarded as one collection, but that collection of green garden waste did count as a second collection.</p>	<p>Sheffield is required to have in place kerbside recycling services for two recyclable materials by 2010.</p>

7.2.2 There are also a variety of other legislative acts that have an impact on waste disposal within the UK. Some of these include producer responsibility legislation that puts the responsibility and resulting costs for disposing of waste on the producers. This includes the Producer Responsibility Obligations (Packaging Waste) Regulations 2007, the Waste Electronic and Electrical Equipment Regulations (WEEE), End of Life Vehicles and the Batteries Directive (2006/66/EC). All of these Acts impact on waste disposal but other than requiring SCC to adhere to and use the resulting schemes there is little impact from these acts on SCC as a local authority.

7.2.3 Sheffield is well placed to meet all current legislative requirements through the actions of this strategy.

## 8 Sheffield Waste Strategy Strategic Environmental Assessment



*On-street recycling bins in Sheffield*

- 8.1 As part of this waste strategy we have had a Strategic Environmental Assessment (SEA) carried out by an independent consultant. This SEA took into account various potential impacts that the new waste strategy could have on waste management activities within the City and region. It also looked at the impacts that these waste management activities could have on; biodiversity, the landscape, cultural heritage, greenhouse gas emissions, air quality standards, transport and water resources.
- 8.2 The SEA also sets out a range of criteria that have been taken from the Sheffield Development Framework Sustainability Appraisal, and the objectives of the waste strategy are tested against these. This ensures that the waste strategy is then considered against a wide range of questions to ensure that not only does it deliver in terms of waste management but that it also takes into account the best interests of the City and region as a whole.
- 8.3 The findings of the Assessment state that:
- “Sheffield’s Waste Strategy is a major step towards the more sustainable management of waste in the City. By aiming to reduce the amount of waste produced and landfilled, increase recycling, composting and the recovery of value from waste, and supporting the proximity principle and self sufficiency, the actions contained within the strategy perform well against the SEA objectives.”
- 8.4 The SEA recommended that a number of amendments be made to the draft Waste Strategy prior to becoming fully adopted and these have been appropriately incorporated in to this Strategy.
- 8.4.1 **Recommendation:** The inclusion of a general action to confirm the strategy is implemented in a way that minimises pollution and environmental impact on designated sites.
- Action:** Additional paragraph included in to 1.2.7 of the strategy.
- 8.4.2 **Recommendation:** The inclusion of a general action to address the economic, energy and health impacts of the strategy.
- Action:** Additional paragraph included in to 1.2.7 of the strategy.
- 8.4.3 **Recommendation:** Actions 13,17,19 and possibly 24 and 26 should be amended to set out how these actions will help to provide a quality built environment.

**Action:** The decision on what new recycling services are to be provided as part of the strategy has not yet been made. It is therefore not possible to determine what impact implementation will have on the built environment. However consideration will be given when implementing the actions within the strategy to ensure that any adverse pollution and environmental impacts are minimised. Where new facilities are introduced, site selection and planning permission requirements will ensure there is no significant adverse effect to the built environment, and important wildlife and historical sites.

8.4.4 **Recommendation:** Actions 19 and 20 are amended to include greater certainties regarding the impacts of their actions.

8.4.5 **Action:** These actions relate to the development of a dedicated commercial waste recycling site, and the introduction of a business recycling collection service which will be led by commercial investment which has yet to be identified.



8.5 The impact of the new strategy will be monitored every five years using a range of indicators identified in the Environmental Report to ensure the actions carried out as part of the strategy do not result in any significant adverse effects to the environment, economy, and health. Appropriate remedial action will be taken where required.

8.6 The SEA Technical Summary is available as a supporting document to this strategy.



# 9 Equality Impact Assessment



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- 9.1 An Equality Impact Assessment is a way of systematically assessing the effects that a proposed policy, project or Local Authority function, is likely to have on its residents. It ensures that projects, functions, policies, procedures, procurements, or strategies are not introduced without first assessing their impact on the communities we serve.
  - 9.2 As a Council we also have a legal duty to carry out an assessment of our policies, projects and functions in terms of race equality under the Race Relations (Amendment) Act 2000 and to assess the impact on disabled people under the Disability Discrimination (Amendment) Act 2005 and on women and men under the Equality Act 2006. We also have a legal duty to make our impact assessments available to the public upon request.
  - 9.3 An Equality Impact Assessment was undertaken for the Waste Strategy and is available as a supporting document to this strategy.





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