



# Recycling Service Options Appraisal





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## **Responsibilities for Waste Collection**

Selby District Council (The Council) is a Waste Collection Authority (WCA) and under the Environmental Protection Act 1990 has a duty to collect household waste from residential properties. North Yorkshire County Council (NYCC) is a Waste Disposal Authority (WDA) and under the same act has a duty to provide disposal facilities for waste collected by a WCA.

## **Introduction / background**

The Council introduced the domestic wheeled bin service in 1988/89 and for the first time, un-containerised waste was no longer generally collected. The move to a municipal wheeled bin service more than doubled the capacity at each property to 240 litres of refuse per week. Some of the benefits highlighted in the information leaflet delivered to all properties at the time were *'Larger capacity (2 ½ times normal bin size) allows extra refuse during Bank Holiday periods'* and *'Additional capacity now enables disposal of garden waste and most other items of waste thus avoiding visits to Civic Amenity Sites'*.

The Council continued to provide refuse collections in this way until 1999 when the service was outsourced to Onyx as part of a 10 year agreement to provide environmental services (waste collection and street cleansing). Grounds maintenance services were undertaken by Fountains as part of a separate outsourcing agreement.

Since October 2009, collections have been carried out by Amey Plc as part of an integrated environmental services contract covering waste collection, street cleansing and grounds maintenance.

## **Changes to Fleet and Properties Numbers since 1999/2000**

Following the introduction of wheeled bins in 1988/89 no changes were made to the service until the first recycling collections were introduced in around 2000. Fortnightly recycling and green waste collections were introduced to properties over a number of years and full coverage of kerbside recycling was achieved by 2005 with full coverage of green waste collections achieved by 2008. The last significant service change was the move from weekly to fortnightly refuse collections and the introduction of kerbside plastic collections in 2009.

As services have developed and property numbers have increased, there have been some considerable changes to the collection fleets as shown in the tables below.

Residual (Landfill) Waste

<b>Year</b>	<b>Collection Frequency</b>	<b>No of Properties Serviced</b>	<b>No / Type of Vehicles</b>
1999/2000	Weekly	32,350	6 x RCV 2 x narrow track RCV
2003/2004	Weekly	32,186	7 x RCV 2 x narrow track RVC 1 x caged vehicle (remote properties)
2009/2010	Fortnightly	34,743	5 x RCV 1 x narrow track RCV 1 x caged vehicle (remote properties)
2017/2018	Fortnightly	37,810	6 x RCV 1 x narrow track RCV 1 x caged vehicle (remote properties)

Dry Recycling

<b>Year</b>	<b>Materials</b>	<b>Collection Frequency</b>	<b>No of Properties Serviced</b>	<b>No / Type of Vehicles</b>
1999/2000	Paper/card bundle	Monthly	7,700	1 x 'small vehicle'
2003/2004	Paper / card, glass	Fortnightly	29,000	4 x kerbside recycling vehicles
2009/2010	Paper / card, glass / cans, mixed plastic	Fortnightly	34,743	4 x kerbside collection vehicles (with 2 spare) 1 x caged vehicle (remote properties)
2017/2018	Paper / card, glass / cans, mixed plastic	Fortnightly	37,810	7 x kerbside collection vehicles ( with 1 spare) 1 x caged vehicle (remote properties)

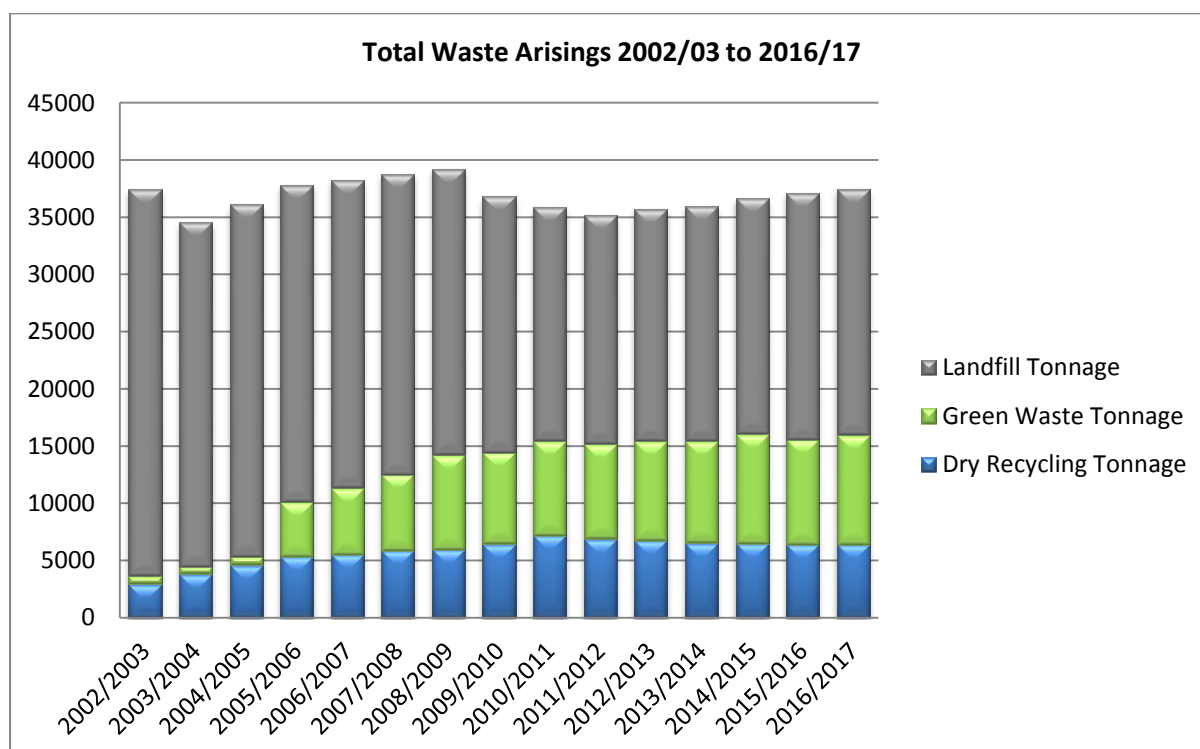
## Green Waste

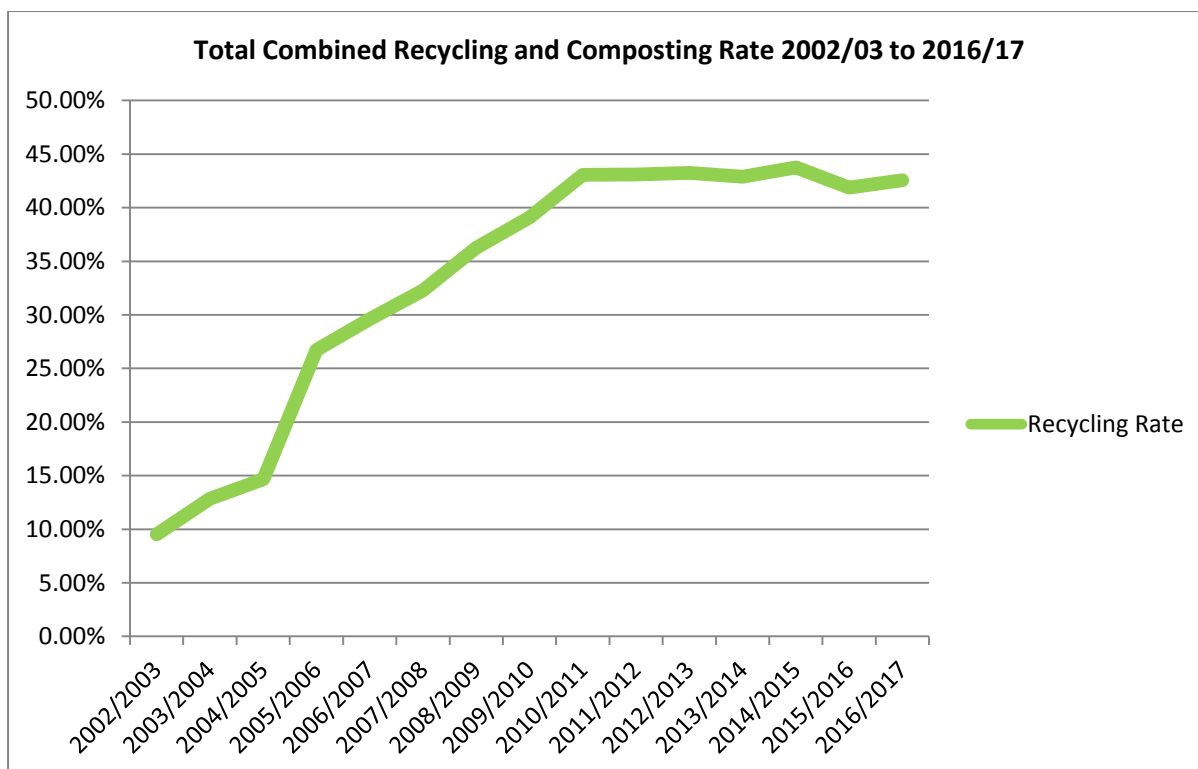
Year	Collection Frequency	No of Properties Served	No / Type of Vehicles
1999/2000	NA	N/A	N/A
2003/2004	Fortnightly	2,200	1 x RCV (operating a Saturday collection)
2009/2010	Fortnightly	30,375	3 x RCV (with 1 spare for peak)
2017/2018	Fortnightly	32,003	3 x RCV (with 1 spare for peak)

The current service (excluding green waste collections) provides more capacity for residual waste than for recycling which does not promote waste reduction or diversion, with the collection of 240 litres of residual waste and 165 litres of recycling per fortnight.

## Waste Arisings and Recycling Rates

The tables below show the Council's total waste arisings over the last 15 years and the corresponding recycling rates. Key dates to note are the introduction of kerbside glass collections in 2002/03, the roll out of green waste collections across most of the district in 2005/06 and the move to alternate weekly refuse collections along with the introduction of kerbside plastic collections in 2009/10.





The range of services provided by each LA are dictated by local disposal facilities and this in turn dictates what materials residents are able to recycle either at home or at recycling centres.

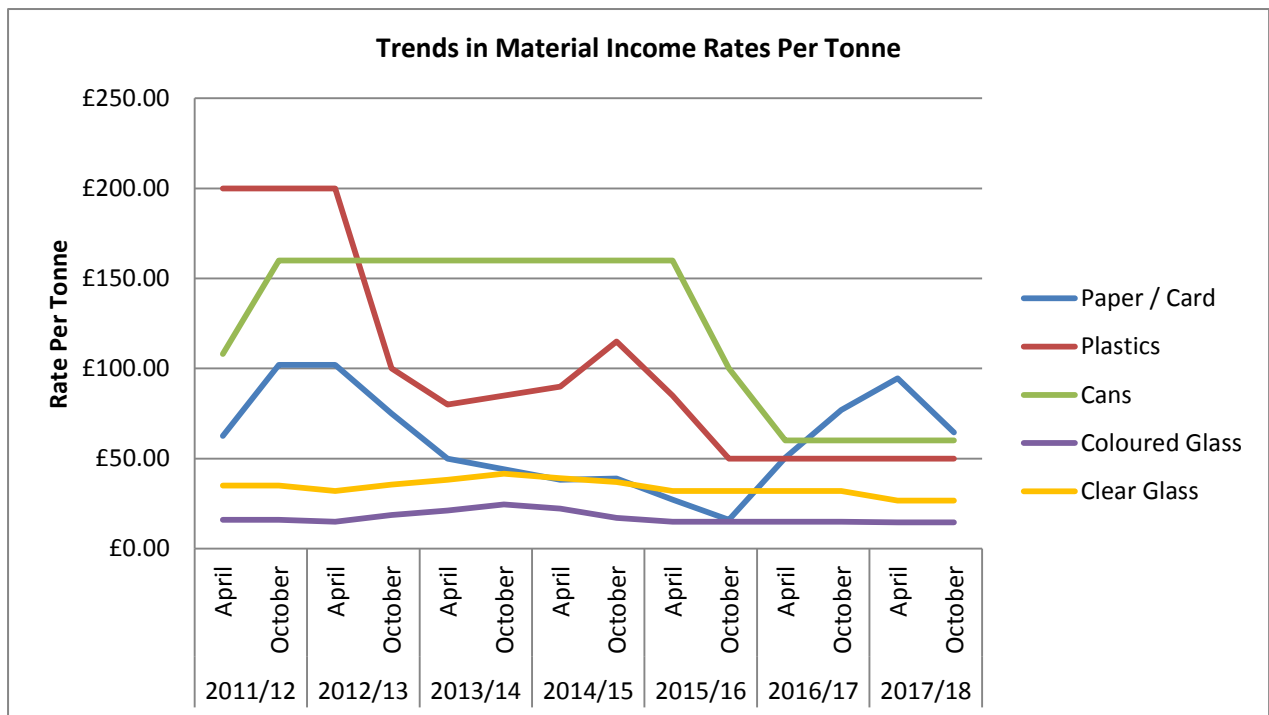
National and global factors also contribute directly to recycling rates. The decline in printed media over the last few years for example has contributed to a decrease in the tonnage of paper being collected and recycled. Paper tonnages in the Selby District have dropped from a high of 3,500 tonnes in 2010/11 to 2,777 tonnes in 2017/18. Manufacturers continue to work hard to reduce packaging whilst maintaining the integrity of their products; the weight of many wine bottles has reduced in recent years<sup>1</sup>. The current high profile campaign to reduce single use plastics is likely to have an impact on tonnages over the next few years, although in March 2018 the Government announced plans to introduce a deposit return scheme following public consultation later this year.

### Material Income Levels

Councils are operating in a global market when it comes to the sale of recyclates, regardless of whether material is reprocessed in this country or overseas. In January 2018 China introduced restrictions on the importation of some plastics and mixed papers. The full impact of this is yet to be felt but it's likely that demand for UK reprocessors will increase which could in turn drive down income rates.

The chart below shows the rates per tonne that the Council has received since April 2011.

<sup>1</sup> <http://www.wrap.org.uk/sites/files/wrap/GlassRight%20Wine%20lightweighing%20-%20web%20version.pdf>



This clearly demonstrates how the volatility of world markets on material prices has reduced income significantly over time. With the current emphasis nationally and internationally on single use plastics, this trend is likely to continue downwards.

### **Regional / National Context**

The EU Waste Framework Directive requires member states to take appropriate measures to encourage firstly, the prevention or reduction of waste production and its harmfulness and secondly the recovery of waste by means of recycling, re-use or reclamation or any other process with a view to extracting secondary raw materials, or the use of waste as a source of energy. It states that the UK must recycle at least 50% of its household waste by 2020. Whilst considerable progress has been made in recent years, a Defra report published in November 2014 showed that nationally, recycling rates have begun to stall with an overall increase of just 0.1% between 2012/13 to 2013/14. In the same period, the Council's recycling rate actually dropped slightly from 43.26% to 42.94%.

In December 2018 the Government launched its Waste Strategy<sup>2</sup>. Although subject to consultation, the strategy sets out the Governments ambitions relating to a number of areas including extended producer responsibility, deposit return schemes, consistency of household collection schemes and recyclability of plastic packaging.

<sup>2</sup>[https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment\\_data/file/765914/resources-waste-strategy-dec-2018.pdf](https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/765914/resources-waste-strategy-dec-2018.pdf)

The Council is part of the York and North Yorkshire Waste Partnership, formed in 1998 to manage municipal waste across the county. The aspirations of the Partnership are set out in the Joint Municipal Waste Management Strategy 2006-2020 and key targets within it are to:

- reduce waste arisings
- recycle or compost 45% of household waste by 2013
- recycle or compost 50% of household waste by 2020 (which aligns with the national target)

Whilst the 2013 rate was achieved with a combined recycling and composting rate across the partnership of 47% in 2012/13, we still have a way to go to achieve the 2020 target.

### The North Yorkshire Picture

Currently all North Yorkshire Council's operate alternate weekly collections with refuse collected one week and dry recycling collected the following week. Apart from City of York and Ryedale who use 180 litre bins, they all use 240 litre refuse bins as standard. All of the other North Yorkshire Council's operate a chargeable green waste service.

Whilst NYCC, as the WDA, are responsible for providing disposal facilities in this area, as they do not provide a disposal facility for dry recycling, each district has developed its own independent dry recycling service.

Craven, Hambleton and Scarborough currently all operate a co-mingled recycling service while the other authorities use a combination of kerbside boxes and reusable bags.

<b>LA</b>	<b>2016/17 Recycling Rate</b>	<b>Recycling Containers</b>
City of York	42.50%	3 x 55 litre boxes
Craven	42.60%	1 x 240 litre bin or 80 litre clear bag
Hambleton	51.80%	1 x 240 litre bin and 1 x 55 litre box for glass
Harrogate	38.90%	2 x 55 litre box and 2 x 40 litre bag
Richmondshire	41.30%	1 x 55 litre box, 1 x 45 litre box and 1 x 45 litre bag
Ryedale	46.40%	1 x 55 litre box, 1 x 40 litre box and 1 x 55 litre bag
Scarborough	39.90%	1 x 240 litre bin
Selby	42.60%	3 x 55 litre boxes

The range in services provided is due to many factors including the geographical make-up of each area (urban versus rural) and the disposal facilities and reprocessors that are available locally. Scarborough BC for example has access to a Materials Recycling Facility (MRF) within their borough which has allowed them to collect co-mingled recycling for a number



of years. When recycling collections were first introduced in this area paper and card was taken direct to a reprocessor in central Selby and glass was taken to a reprocessor in Knottingley which meant that source separated collections were more appropriate at that time.

### Allerton Park

In March 2018 NYCC's new waste disposal facility opened at Allerton Park near Harrogate. The site will process all residual waste collected by WCAs in North Yorkshire. The mechanical treatment plant initially removes any remaining metal, paper, card, glass and plastics for recycling before an anaerobic digestion plant treats the organic waste part and produces a biogas which generates renewable electricity. Finally, an energy from waste plant burns the waste which remains after separation of the recyclables and treatment of organic waste, producing steam to feed an electricity generating turbine that produces enough electricity to supply about 40,000 homes.

To enable the facility to operate at maximum efficiency a specific mix of material is required. To ensure this is achieved NYCC have requested that WCA's in North Yorkshire do not introduce separate food waste collections.

### Current Service

The current waste service has been in place since October 2009. When alternate weekly collections were initially introduced the Council saw an increase in recycling tonnages, although this has now plateaued.

As well as national and global influences on recycling rates there are a number of local influences that affect services.

### Customer Satisfaction Levels in the Selby District

During October and November 2013 Ipsos Mori conducted a customer satisfaction survey on behalf of the Council. 4,000 questionnaires were sent out and we had a response rate of 25%. The questionnaire covered a range of areas including service quality, containment and collection frequencies.

Overall the response was very positive but satisfaction with the type and size of container used for kerbside recycling was significantly lower than for the other service areas, and was below the average of all LA's who took part (10 in total).

The table below shows the percentage of respondents that were satisfied with the service. The corresponding figure in brackets relates to the survey average. The key shows whether the Council was ranked above the average, average or below the average.

	Refuse	Green Waste	Recycling
Frequency of Collection	80.8% (78.0%)	85.3% (82.8%)	81.7% (82.1%)
Type of Container	86.6% (85.7%)	88.6% (87.4%)	63.3% (78.1%)
Size of Container	85.0% (83.5%)	85.1% (84.6%)	62.5% (76.6%)

Key	Above Average	Average	Below Average
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In addition to this we have anecdotal evidence to suggest that when recycling boxes are full, residents are likely to dispose of additional recyclate in their refuse bin rather than presenting extra waste. If residents were to be provided with a larger container/s it is likely that this would lead to an increase in the tonnage of material collected for recycling.

Whilst we do provide lids for the kerbside boxes, over the years many have been lost or become damaged and so many boxes are presented without. This can cause problems on windy days particularly with the lighter materials (paper and plastic).

The size of individual item that we are currently able to collect is also limited by the current collection system. Large plastic containers can jam the rollers at the top of the collection vehicle which in turn can cause delays with the collection rounds as the blockage is removed. We cannot currently collect large cardboard boxes that don't fit into the collection troughs on the side of the vehicles. Rear loading RCV's would remove both of these issues.

The Council has received a number of emails from residents in recent years about the current service, a sample of which are shown below.

*Mrs X – 'I would like Selby Council to consider implementing one single use bin for recycling please. I have seen this in practise in Scarborough and Watford and think it's a better system for the environment and your customers. I have had to re-order recycle boxes on several occasions as they go missing or are damaged beyond use. I also find the box sizes are not sufficient for the amount of recycling my house generates and as I work 6 Days per week I'm unable to recycle separately.'*

*Ms X – 'I would be grateful if you could consider recycling wheelie bins instead of the multiple boxes we have at the moment. The rubbish, especially plastic waste which blows around on collection days is ending up in our countryside and endangering our wildlife. The current bins are also really heavy and leak all over your clothes when you pick them up after it's been raining. Surely wheelie bins will also be quicker to pick up by the waste disposal teams and therefore more cost effective in the long run?'*

*Mr X – 'I would like to understand why SDC has as yet not adopted the same recycling collection culture as the majority of your neighbouring districts. It is simply not acceptable to expect residents to put recycling waste in boxes that are unfit for purpose. By this I mean netting that can't be secured around the rim or lids with catches that break easily. Given the current interest in the amounts of plastic waste and the detrimental effect on wildlife I think this is a change that should be at the top of your agenda.'*

### Communal Properties

Over the last 12 months 573 new build properties have been added to the collection rounds. There has also been an increase in the number of flats and apartments that are being built which require larger communal refuse and recycling bins that are shared between residents. A negative aspect of the use of communal bins is that recycling is often contaminated either with a mix of different recyclable materials or with non-recyclable materials. Over the past 12 months there have been 131 communal recycling bins that have been classed as contaminated and which has resulted in the contents of these bins were sent to landfill rather than being recycled.

### Collection Service Efficiency

The table below shows the average number of properties currently serviced each day and the associated fleet.

	<b>Week 1</b>	<b>Week 2</b>	<b>Fleet</b>
<b>Refuse</b>	754.34	625.43	5.7 vehicles
<b>Rural Round</b>	101.00	92.00	0.8 vehicles
<b>Kerbside</b>	558.48	572.34	7 vehicles
<b>Green</b>	1335.20	1255.93	3 vehicles <sup>3</sup>

The current refuse collection fleet collects from approximately 18% more properties per vehicle per day than the kerbside collection fleet. This is because it is quicker and more efficient to empty a wheeled bin than the manually sort and empty multiple kerbside boxes.

The recent increase in residential development has seen the service put under increasing pressure and it is clear from the table above that collections carried out by RCV's are considerably more efficient than those carried out by kerbside collection vehicles. This is further supported by the fact that kerbside collection vehicles all currently tip at Burn and refuse collection vehicles all travel out of the district to tip at Harewood Whin near York and yet the refuse vehicles are still more efficient.

In addition to this, having a uniform fleet (all RCV's instead of RCV's and kerbside collection vehicles) allows for greater flexibility and service efficiency.

The use of refuse collection vehicle has some significant operational advantages over kerbside sort vehicles. Chief amongst these is the service flexibility offered by an RCV; in short an RCV can be used to collect refuse, recycling or green waste whereas a kerbside can only be used for collecting segregated recycling. An operational fleet typically includes one or more 'spare' vehicles to ensure continuity of service in the event of a vehicle breakdown

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<sup>3</sup> A fourth green waste vehicle is deployed during the peak summer months

or downtime for servicing and maintenance. If RCV's are used for collecting both refuse and recycling it is likely that a smaller number of spare vehicles will be need, rather than a mix of both spare RCV's and spare kerbsiders. In the event of multiple breakdowns or rare extreme events such as fleet vandalism or depot fires, the availability of RCV's from municipal hire companies is far higher than that of kerbsiders.

The capital costs for the two types of vehicles can vary depending on the precise specification. Any kerbside vehicle collecting plastic containers is likely to require a Material Volume Reduction (MVR) system to compact the material and increase carrying capacity. A standard specification RCV will cost approximately £150,000 and a kerbsider with MVR will be a very similar price.

Generic vehicle type	Capital cost (£) <sup>4</sup>	Fuel efficiency <sup>5</sup> (mpg)	Annual planned maintenance
26t RCV	£150,000	3-4	£11,000
22t kerbsider with MVR	£150,000	7-8	£9,000

Single stream co-mingled collections can be made using a single compartment vehicle or in one compartment of a split body vehicle if the recyclable material is co-collected with refuse. There are fewer constraints due to the capacity of the individual compartments for recyclables. Even where MVR units are fitted to kerbsiders the volume of plastic is often the determining factor in forcing a vehicle to tip its load. The multiple compartments also take longer to tip as the vehicle typically moves between tipping bays to eject each material separately. A single compartment RCV ejects waste in a single process.

#### Health and Safety Considerations

Amey's records do not contain sufficient data to definitively state that operatives are at higher risk of injury from kerbside box collections versus wheeled bin collections although musculoskeletal disorders account for around one third of all reported injuries in the waste industry. The majority of these are associated with collection activities and are either sudden or cumulative injuries<sup>6</sup>.

In 2006 the HSE published a report into the 'Manual handling in kerbside collection and sorting of recyclables'<sup>7</sup>. One of the recommendations in the report was '*Previous research suggests that the use of wheelie bins reduces the risk of manual handling injury compared to handling non-wheeled containers. Therefore, where possible it would be more appropriate to use wheeled bins for the collection of recyclables.*' The report contains a number of other

<sup>4</sup> Approximate values only. Capital cost dependant on precise specification, number of kerbside compartments etc.

<sup>5</sup> Fuel efficiency dependant on rural / urban mix, driver behaviour, maintenance etc.

<sup>6</sup> <http://www.hse.gov.uk/waste/msd.htm>

<sup>7</sup> [http://www.hse.gov.uk/research/hsl\\_pdf/2006/hsl0625.pdf](http://www.hse.gov.uk/research/hsl_pdf/2006/hsl0625.pdf)

recommendations around reducing the risk from kerbside collections including reducing box size, ensuring boxes are carried and emptied correctly and reducing the distance operatives are required to carry boxes. All Amey staff have regular manual handling training and this is checked and monitored as part of our annual health and safety inspection programme.

There are still risks associated with wheeled bin collections (e.g. moving bins around obstacles, uneven surfaces and overfilled bins).

#### Contract Extension / Fleet Life

In April 2017 the contract extension period was granted which continues the agreement for a further seven years until March 2024. As part of the extension negotiations a break clause was agreed after three years (March 2020) which allows the agreement to be terminated by either party serving notice at least six months prior to this date. This break clause also allowed the extension of the life of the fleet from seven to ten years and the Council is now in a position whereby it needs to review vehicle requirements from March 2020 onward. This vehicle review also provides an opportunity for the Council to review the whole waste and recycling service which will form part of the business case for a replacement fleet.

#### Variables for Service Change

There are three variables that control any waste collection service; where the material will go, what containers you will use and how you will collect it. As referenced above, the contract extension in 2017 included a break clause after three years to review the recycling collection service and collection fleet. In terms of the hierarchy of the review, disposal points dictate containment which in turn dictates collection fleet / vehicle type.

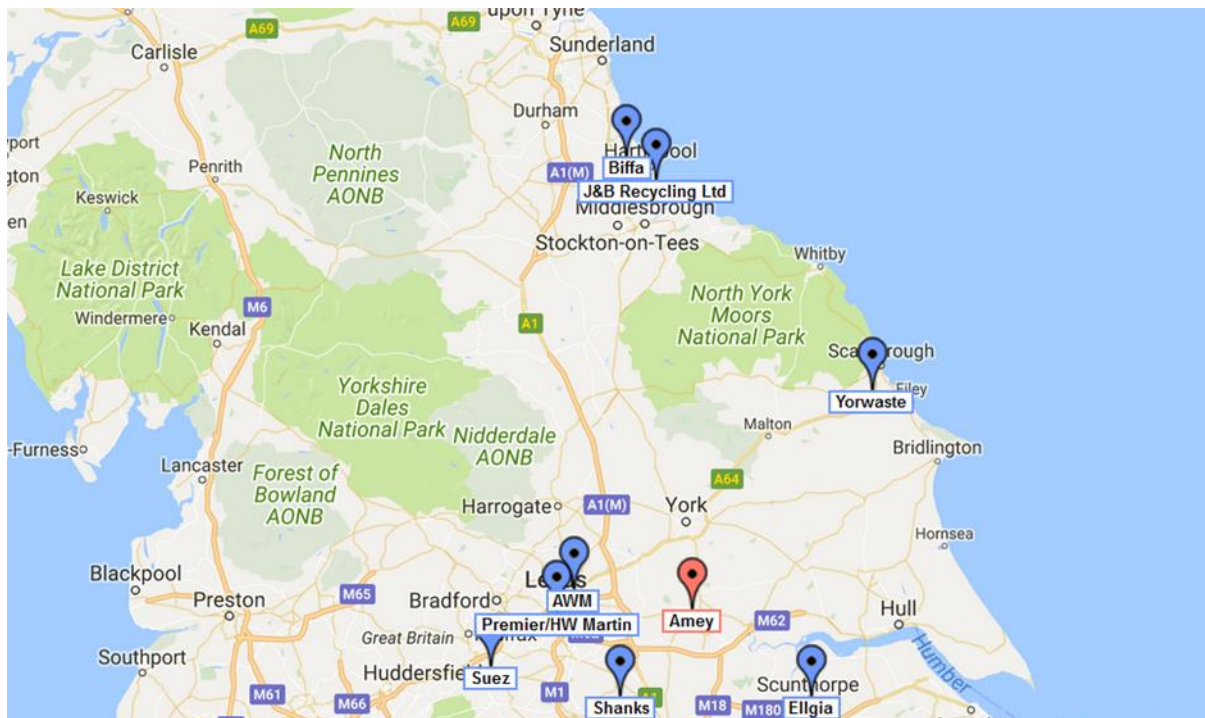
#### Disposal Arrangements

Amey PLC currently retain ownership of all dry recyclates under the Councils contract. Their national buying power and aggregation of tonnage across multiple contracts means that they can access different markets and secure the best possible income rates. Amey Plc can more easily source alternative disposal arrangements.

Amey Plc have undertaken a desktop review of the facilities accepting recyclates collected under the Councils contract. The table below show a summary of facilities within a 50 mile radius of the Councils depot and whether they can accept glass. Facilities at Hartlepool are also included although they are approximately 80 miles from the depot.

Company	Town	Postcode	Type	Facility
Amey	Selby	YO8 8BD	Depot	
AWM	Leeds	LS10 1SD	MRF	MRF Including glass
Biffa	Hartlepool	TS25 2BE	MRF	MRF Including glass
Ellgia	Scunthorpe	DN15 0DH	MRF	MRF No Glass
J&B Recycling Ltd	Hartlepool	TS25 1NS	MRF	MRF Including glass
Premier/HW Martin	Leeds	LS11 5TD	MRF	MRF Including glass
Shanks	Wakefield	WF9 3TH	MRF	MRF Including glass
Suez	Huddersfield	HD1 6NT	MRF	MRF Including glass
Yorwaste	Scarborough	YO12 4QA	MRF	MRF Including glass

MRF Locations for the processing of co-mingled materials.



The Councils recyclates are currently bulked at Burn prior to being transported the various reprocessors. The current annual cost is approximately £120k

Containment

The current service operates with the collection of 3 x 55 litre kerbside boxes on a fortnightly basis giving a total capacity of 165 litres per fortnight compared with 240 litres of capacity for residual waste.

As shown above, customer satisfaction with the current service is low compared to satisfaction with wheeled bin services and there are a number of issues associated with kerbside box collection including storage, weight of the boxes and the impact on manual lifting for residents and collection crews, resistance of the boxes to strong winds, and the

reliance on residents to correctly sort material in to the right box. Wheeled bins are easier to store, remove the need for manual lifting, are more weather proof and allow residents to put all materials into the same container.

### **Statutory Services**

Whilst WCA's and WDA's have certain powers to establish their own waste collection services they are also subject to government legislation which sets out what services must be provided. The table below sets out the services that the Council currently provides highlighting which are mandatory, which are discretionary and which elements can be determined by SDC.

<b>Collection Service</b>	<b>Mandatory or Discretionary Service?</b>	<b>Container/s</b>	<b>Frequency of Collection</b>	<b>Can a Charge Be Levied?</b>
Residual waste	Mandatory	WCA decision	WCA decision	No
Dry recyclates	Mandatory – minimum two materials*	WCA decision	WCA decision	No
Green waste	Discretionary	WCA decision	WCA decision	Collection only
Bulky waste	Discretionary	N/A	WCA decision	Collection only
Clinical waste	Mandatory where requested	Determined by waste type	WCA decision in agreement with customer	Collection only
Commercial waste	Mandatory where requested	Determined by amount / type of waste	Customer decision	Collection and disposal

\* The Council currently collects five dry recyclates – paper, cardboard, glass, cans and plastics

The only mandatory services that the Council must currently provide to all residents are residual waste collections and the collection of a minimum of two materials for recycling, although the Council can determine how and when it provides collections.

### **Standardisation of Collection Systems**

In 2015/16 Central Government and the Waste Resources Action Plan (WRAP) called for greater consistency in the waste collection services provided by LA's across England. WRAP carried out an extensive piece of research with 49 individual authorities to evaluate local business cases for the adoption of one of three proposed standardised collection systems. The results of this research were published in 2017 in the Framework for Greater Consistency in Household Recycling in England<sup>8</sup>

<sup>8</sup> [http://static.wrap.org.uk/consistency/Read\\_more\\_about\\_the\\_framework.pdf](http://static.wrap.org.uk/consistency/Read_more_about_the_framework.pdf)



The voluntary framework proposed three collection systems shown below.

<b>Capacity Recommended</b>	<b>A - Multi Stream (Kerbside Box) with Separate Food</b>	<b>B - Two Stream with Separate Food</b>	<b>C - Co-mingled with Separate Food</b>
Maximum equivalent of 120 litres weekly	Residual waste from bags or wheeled bin	Residual waste from bags or wheeled bin	Residual waste from bags or wheeled bin
Minimum equivalent of 120 litres collected weekly	1 x box for plastics, metals and cartons* 1 x box for glass and card* 1 x box for paper	1 x wheeled bin for plastics, metals, cartons and glass 1 x box or bag for paper and card	1 x wheeled bin for plastics, metals, cartons, glass, paper and card**
Not stated	Food waste collection	Food waste collection	Food waste collection

\* All materials to be sorted into separate compartments on the collection vehicles

\*\* Advice from reprocessors is to collect glass and paper separately to maintain material quality

Key benefits of the three systems were seen to be an increase in the quantity and quality of materials recycled, increased householder engagement and satisfaction, and legal compliance.

The Council currently meets the recommendations for residual waste collection but provides the equivalent of just 82.5 litres per week of capacity for recycling versus the recommended 120 litres per week.

As discussed above, the Council is currently unable to offer a separate food waste collection as this material is needed to optimise the efficiency of the Allerton Park waste disposal site.

### **The Waste Framework Directive**

January 2015 saw the introduction of the European Waste Framework Directive 2008/98/EC which states the need for separate collections of paper (including cardboard), glass, cans and plastic where ‘technically, environmentally and economically practicable [TEEP] and appropriate to meet the necessary quality standards for the relevant recycling sectors’. The aim of the directive is to ensure the collection of quality recyclates, primarily where a change of collection methodology is to be implemented. The Council will need to take this legislation into consideration if it wished to make and changes to its current services.



## **National Performance**

### **Top Performing LA's**

The top 10 LA recyclers in 2016/17 all achieved a recycling rate of over 61% with East Riding of Yorkshire Council topping the league table with 65.40%. All of the top 10 operate an alternate weekly waste collection service with a 180 or 140 litre residual waste bin and either fully or part co-mingled recycling collections.

<b>LA</b>	<b>2016/17 Recycling Rate</b>	<b>Residual Waste Container</b>	<b>Recycling Container/s and Materials Collected</b>
East Riding of Yorkshire (ERYC)	65.40%	180 litre bin	140 or 240 litre bin - glass, cans, plastics, paper and card
Rochford DC	63.90%	180 litre bin	240 litre bin - glass, cans, plastics, paper and card
South Oxfordshire DC	63.80%	180 litre bin	240 litre bin - glass, cans, plastics, paper and card
West Oxfordshire DC	63.40%	180 litre bin	240 litre bin - cans, plastics, paper and card, 1 x 55 litre box - glass, 1 x 55 litre box - small electricals
Vale of White Horse DC	62.50%	180 litre bin	240 litre bin - glass, cans, plastics, paper and card
Surrey Heath BC	62.30%	180 litre bin	240 litre bin - glass, cans, plastics, paper, card and cartons
Three Rivers	61.90%	180 litre bin	240 litre bin - glass, cans, plastics, paper, card and cartons
South Northamptonshire DC	61.40%	180 litre bin	240 litre bin - glass, cans, plastics, paper, card and cartons
Trafford MBC	61.30%	140 litre bin	240 litre bin - glass, cans and plastic bottles, 240 litre bin - paper, cardboard and cartons (4 weekly collections)
Stratford on Avon DC	61.30%	180 litre bin	240 litre bin - glass, cans, plastics, paper, card and cartons

All of these LA's also provide a food waste collection, either fortnightly combined with green waste (ERYC and Rochford DC) and or via a separate weekly collection, and a number also offer a range of additional collections including textiles, small electricals and batteries.

As stated above NYCC have requested that WCA's do not introduce a separate food waste collection as Allerton Park has been designed to deal with this type of material. In addition to this the Councils current contracts for the collection of green waste would not allow for the collection of food waste as this requires specialist treatment via anaerobic digestion; the current contracts are for windrow (open air) processing. The Council pays a gate fee per

tonne to green waste reprocessors. Combined green and food waste collections are subject to a higher gate fee and as treatment plants are likely to be out of the district additional vehicles would be needed.

In order to determine the potential increase in recycling rate by moving from the current system to a wheeled bin system research was undertaken via APSE to identify other LA's who have made this change. Auditable information was acquired from Guildford Borough Council and Stroud District Council.

#### Guildford Borough Council

Moved from kerbside sort to co-mingled collections in 2013. This had a significant positive impact on recycling rates, participation and resident satisfaction.

2011/12 recycling rate – 30.86%

2016/17 recycling rate – 59.7%

#### **2011/12**

Recycling Tonnage – 10,792.78

Residual Waste Tonnage – 21,906.23

#### **2016/17**

Recycling Tonnage – 14,790.39

Residual Waste Tonnage – 22,173.42

Guildford also provides a separate food waste collection.

#### Stroud District Council

In 2012, Stroud moved from a fortnightly kerbside collection of paper, mixed glass, mixed cans and plastic bottles to a fortnightly semi comingled collection of paper, Tetra pak and card (including all card board irrespective of size and nature) using a 55 litre box and mixed containers including mixed glass, mixed cans including aerosols, foil and all rigid plastics ie bottle, tubs, yogurt pots etc using a 240L wheeled bin.

The Council were at a 24.5 % recycling rate. The move to a semi comingled system increased the authority's recycling rate to 30.5% overnight.

2011/12 recycling rate – 24.6%

2016/17 recycling rate – 45.5%

## Options Appraisal

### Option 1 – Cease collection of kerbside recycling

Pro's	Con's
<ul style="list-style-type: none"> <li>• Financial savings – including collection costs, storage and container purchase</li> <li>• Reduction in CO2 emissions from reduced collection fleet</li> <li>• Reduction in complaints about litter from wind-blown recycling</li> <li>• Financial savings for NYCC in relation to recycling credit payments</li> </ul>	<ul style="list-style-type: none"> <li>• Non-compliance with statutory requirement to collect minimum 2 materials for recycling</li> <li>• Non-compliance with EU Waste Directive in relation to waste minimisation and recycling and Government Waste Strategy 2018</li> <li>• Non-compliance with York and North Yorkshire Waste Partnership Strategy</li> <li>• Increase in waste to landfill</li> <li>• Increased waste disposal costs for WDA (NYCC)</li> <li>• Reduction in recycling rate</li> <li>• Loss of income from sale of recyclates and recycling credits</li> <li>• Possible Legal challenge from environmental groups</li> <li>• Contract variation would not save full cost of recycling due to overhead and profit</li> <li>• Staff redundancies</li> <li>• Conflicts with SDC Corporate priorities</li> <li>• Reputational damage to Council including reduced customer satisfaction</li> <li>• Additional cost of communications in relation to service changes</li> <li>• Cost of removal and disposal of redundant containers</li> <li>• Negative impact on commercial waste service and reduction in income</li> </ul>

### Option 2 – Amend service to collection of two materials

Pro's	Con's
<ul style="list-style-type: none"> <li>• Potential financial savings</li> <li>• Possible reduction in CO2 emissions from reduced collection fleet</li> </ul>	<ul style="list-style-type: none"> <li>• Non-compliance with EU Waste Directive in relation to waste minimisation and recycling and</li> </ul>

<ul style="list-style-type: none"> <li>• Meet statutory legislation obligation to collect minimum 2 materials</li> <li>• Financial savings for NYCC in relation to recycling credit payments</li> </ul>	<p>Government Waste Strategy 2018</p> <ul style="list-style-type: none"> <li>• Non-compliance with York and North Yorkshire Waste Partnership Strategy</li> <li>• Increase in waste to landfill</li> <li>• Increased waste disposal costs for WDA (NYCC)</li> <li>• Reduction in recycling rate</li> <li>• Loss of income from sale of recyclates and recycling credits</li> <li>• Requirement to vary contract with unlikely savings</li> <li>• Cost of reconfiguration of collection vehicles from 5 compartments to 2</li> <li>• Possible legal challenge from environmental groups</li> <li>• Conflicts with SDC Corporate priorities</li> <li>• Reputational damage to Council including reduced customer satisfaction</li> <li>• Potential cost of removal and disposal of redundant containers</li> <li>• Reduced recycling capacity</li> <li>• Additional cost of communications in relation to service changes</li> <li>• Negative impact on commercial waste service and reduction in income</li> </ul>
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### Option 3 – Maintain current service

Pro's	Con's
<ul style="list-style-type: none"> <li>• Meet statutory legislation obligation to collect minimum 2 materials</li> <li>• Compliance with EU Waste Directive in relation to waste minimisation and recycling</li> <li>• Compliance with York and North Yorkshire Waste Partnership Strategy</li> <li>• Supports SDC Corporate priorities</li> <li>• Maintains current service</li> <li>• No additional communications required</li> </ul>	<ul style="list-style-type: none"> <li>• Current low customer satisfaction levels with containers</li> <li>• Does not address customers complaints relating to containment and wind-blown material</li> <li>• Maintains imbalance between capacity of recycling and landfill waste containers (165 litres versus 240 litres respectively)</li> <li>• Extra recycling disposed of in bin</li> <li>• Does not align with highest</li> </ul>

<ul style="list-style-type: none"> <li>• Supports the maintenance of current recycling performance</li> <li>• No capital cost to replace containers</li> <li>• Budget neutral</li> </ul>	<p>performing LA's</p> <ul style="list-style-type: none"> <li>• Unlikely to meet future legislation resulting from the Government's Waste Strategy 2018</li> <li>• Does not maximise fleet efficiency and flexibility</li> <li>• Cost to SDC of replacing bespoke vehicles in 2020 for remainder of contract (4 years) with no residual value</li> <li>• Does not address plateauing recycling rates</li> <li>• Missed opportunity to reconfigure the service through contract extension</li> <li>• Missed opportunity to make contract savings</li> <li>• Does not address inability to provide co-mingled recycling collections for commercial customers as many private contractors can</li> </ul>
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#### Option 4 – Introduce fully co-mingled recycling service

Pro's	Con's
<ul style="list-style-type: none"> <li>• Meet statutory legislation obligation to collect minimum 2 materials</li> <li>• Compliance with EU Waste Directive in relation to waste minimisation and recycling</li> <li>• Likely to support future legislation resulting from the Government's Waste Strategy 2018</li> <li>• Compliance with York and North Yorkshire Waste Partnership Strategy</li> <li>• Supports SDC Corporate priorities</li> <li>• Address customer dissatisfaction with current containment and wind-blown material</li> <li>• Increase in recycling performance</li> <li>• Reduction in waste for disposal and associated savings for WDA (nett of recycling credit payments)</li> <li>• Increase in recycling credit income</li> <li>• Addresses imbalance between capacity of recycling and landfill</li> </ul>	<ul style="list-style-type: none"> <li>• Capital cost to purchase 40,000 wheeled bins and collection fleet</li> <li>• Storage of one additional wheeled bin</li> <li>• Gate fee for processing of comingled material at MRF</li> <li>• Cost of transporting material to MRF</li> <li>• Reduced income</li> <li>• Potential reduction in quality of material collected</li> <li>• Potential staff redundancies</li> <li>• Collection round changes</li> <li>• Additional cost of communications in relation to service changes</li> </ul>

<p>waste containers (165 litres versus 240 litres respectively)</p> <ul style="list-style-type: none"> <li>• Extra recycling no longer disposed of in bin</li> <li>• Aligns with highest performing LA's</li> <li>• Maximises fleet efficiency and flexibility</li> <li>• Ability to provide wheeled bin collections for approx. 400 rural properties currently on a sack collection</li> <li>• Opportunity to reconfigure the service through contract extension</li> <li>• Flexibility of service to deal with increased property growth</li> <li>• Opportunity to make contract savings</li> <li>• Improved reputation</li> <li>• Customer convenience (listening to customer feedback)</li> <li>• Supports WRAP's voluntary standardisation of collection systems framework</li> <li>• Amey's ability to contract with MRF</li> <li>• Opportunity to increase commercial waste and recycling customer base</li> <li>• Reduction in contaminated recycling bins at communal properties and bring sites due to mixing of recyclates in existing bins</li> <li>• Reduction in cost of replacement containers</li> <li>• Maintains existing residual waste collection frequency</li> </ul>	
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**Option 4a – Twin stream collection service**

Pro's	Con's
<ul style="list-style-type: none"> <li>• Meet statutory legislation obligation to collect minimum 2 materials</li> <li>• Compliance with EU Waste Directive in relation to waste minimisation and recycling</li> <li>• Likely to support future legislation resulting from the Government's Waste Strategy 2018</li> </ul>	<ul style="list-style-type: none"> <li>• Capital cost to purchase 80,000 wheeled bins and collection fleet</li> <li>• Higher capital and maintenance costs for split body collection vehicles than standard RCV's</li> <li>• Lack of standardisation of collection fleet</li> </ul>

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| <ul style="list-style-type: none"> <li>• Compliance with York and North Yorkshire Waste Partnership Strategy</li> <li>• Supports SDC Corporate priorities</li> <li>• Address customer dissatisfaction with current containment and wind-blown material</li> <li>• Increase in recycling performance</li> <li>• Increase in recycling credit income</li> <li>• Reduction in waste for disposal and associated savings for WDA (nett of recycling credit payments)</li> <li>• Maintains income from sale of goods for paper/card</li> <li>• Potential reduction in MRF gate fee for glass, cans and plastic</li> <li>• Addresses imbalance between capacity of recycling and landfill waste containers (165 litres versus 240 litres respectively)</li> <li>• Extra recycling no longer disposed of in bin</li> <li>• Opportunity to reconfigure the service through contract extension</li> <li>• Flexibility of service to deal with increased property growth</li> <li>• Opportunity to make contract savings</li> <li>• Improved reputation</li> <li>• Customer convenience (listening to customer feedback)</li> <li>• Amey's ability to contract with MRF</li> <li>• Reduction in contaminated recycling bins at communal properties and bring sites due to mixing of recyclates in existing bins</li> <li>• Supports WRAP's voluntary standardisation of collection systems framework</li> <li>• Reduction in cost of replacement containers</li> <li>• Maintains existing residual waste collection frequency</li> </ul> | <ul style="list-style-type: none"> <li>• Storage of two additional 180 litre wheeled bins (Current rural round (400 properties) is unable to empty wheeled bins</li> <li>• Gate fee for processing of comingled material at MRF</li> <li>• Cost of transporting material to MRF</li> <li>• Reduced income</li> <li>• Potential staff redundancies</li> <li>• Collection round changes</li> <li>• Additional cost of communications in relation to service changes</li> <li>• Potential impact on frequency of some commercial collections</li> <li>• Negative feedback in relation to storage of two additional 180 litre wheeled bins</li> </ul> |
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### Option 5 – Three weekly collection service

Pro's	Con's
<ul style="list-style-type: none"> <li>• Meet statutory legislation obligation to collect minimum 2 materials</li> <li>• Compliance with EU Waste Directive in relation to waste minimisation and recycling and Government Waste Strategy 2018</li> <li>• Compliance with York and North Yorkshire Waste Partnership Strategy</li> <li>• Supports SDC Corporate priorities</li> <li>• Address customer dissatisfaction with current containment and wind-blown material</li> <li>• Increase in recycling performance</li> <li>• Increase in recycling credit income</li> <li>• Reduction in waste for disposal and associated savings for WDA (nett of recycling credit payments)</li> <li>• Maintains income from sale of goods for paper/card</li> <li>• Potential reduction in MRF gate fee for glass, cans and plastic</li> <li>• Addresses imbalance between capacity of recycling and landfill waste containers (165 litres versus 240 litres respectively)</li> <li>• Extra recycling no longer disposed of in bin</li> <li>• Ability to provide wheeled bin collections for approx. 400 rural properties currently on a sack collection</li> <li>• Maximises fleet efficiency and flexibility</li> <li>• Opportunity to reconfigure the service through contract extension</li> <li>• Flexibility of service to deal with increased property growth</li> <li>• Reduction in residual capacity forces recycling</li> <li>• Opportunity to make contract savings</li> <li>• Improved reputation</li> <li>• Customer convenience (listening to customer feedback)</li> </ul>	<ul style="list-style-type: none"> <li>• Capital cost to purchase 80,000 wheeled bins and collection fleet</li> <li>• Storage of two additional 240 litre wheeled bins</li> <li>• Gate fee for processing of comingled material at MRF</li> <li>• Cost of transporting material to MRF</li> <li>• Reduced income</li> <li>• Potential staff redundancies</li> <li>• Collection round changes</li> <li>• Additional cost of communications in relation to service changes</li> <li>• Policy change on collection frequency</li> <li>• Potential impact on frequency of some commercial collections</li> <li>• Negative feedback from residents re a reduction in frequency of residual waste collection</li> <li>• Negative feedback in relation to storage of two additional 240 litre wheeled bins</li> </ul>



<ul style="list-style-type: none"> <li>• Amey’s ability to contract with MRF</li> <li>• Opportunity to increase commercial waste and recycling customer base</li> <li>• Reduction in contaminated recycling bins at communal properties and bring sites due to mixing of recyclates in existing bins</li> <li>• Supports WRAP’s voluntary standardisation of collection systems framework</li> <li>• Reduction in cost of replacement containers</li> </ul>	
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**Option 6 – Hybrid Waste Collection Model**

<b>Pro’s</b>	<b>Con’s</b>
<ul style="list-style-type: none"> <li>• Meet statutory legislation obligation to collect minimum 2 materials</li> <li>• Compliance with EU Waste Directive in relation to waste minimisation and recycling</li> <li>• Likely to support future legislation resulting from the Government’s Waste Strategy 2018</li> <li>• Compliance with York and North Yorkshire Waste Partnership Strategy</li> <li>• Supports SDC Corporate priorities</li> <li>• Address customer dissatisfaction with current containment and wind-blown material</li> <li>• Increase in recycling performance</li> <li>• Increase in recycling credit income</li> <li>• Reduction in waste for disposal and associated savings for WDA (nett of recycling credit payments)</li> <li>• Maintains income from sale of goods for paper/card</li> <li>• Potential reduction in MRF gate fee for glass, cans and plastic</li> <li>• Addresses imbalance between capacity of recycling and landfill waste containers (165 litres versus 240 litres respectively)</li> <li>• Extra recycling no longer disposed of in bin</li> </ul>	<ul style="list-style-type: none"> <li>• Capital cost to purchase 80,000 wheeled bins and collection fleet</li> <li>• Storage of two additional 240 litre wheeled bins</li> <li>• Gate fee for processing of comingled material at MRF</li> <li>• Cost of transporting material to MRF</li> <li>• Reduced income</li> <li>• Potential staff redundancies</li> <li>• Collection round changes</li> <li>• Additional cost of communications in relation to service changes</li> <li>• Potential impact on frequency of some commercial collections</li> <li>• Negative feedback in relation to storage of two additional 240 litre wheeled bins</li> </ul>

<ul style="list-style-type: none"> <li>• Ability to provide wheeled bin collections for approx. 400 rural properties currently on a sack collection</li> <li>• Maximises fleet efficiency and flexibility</li> <li>• Opportunity to reconfigure the service through contract extension</li> <li>• Flexibility of service to deal with increased property growth</li> <li>• Opportunity to make contract savings</li> <li>• Improved reputation</li> <li>• Customer convenience (listening to customer feedback)</li> <li>• Amey's ability to contract with MRF</li> <li>• Opportunity to increase commercial waste and recycling customer base</li> <li>• Reduction in contaminated recycling bins at communal properties and bring sites due to mixing of recyclates in existing bins</li> <li>• Supports WRAP's voluntary standardisation of collection systems framework</li> <li>• Reduction in cost of replacement containers</li> <li>• Maintains existing residual waste collection frequency</li> </ul>	
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**Summary of Operational Collection Frequencies**

The following table shows a summary of the above 7 options in terms of collections over an 8 week period.

	WEEK 1	WEEK 2	WEEK 3	WEEK 4	WEEK 5	WEEK 6	WEEK 7	WEEK 8		
Option 1 - Cease Recycling Collection		No collection		No collection		No collection		No collection		Refuse
Option 2 - Amend to Collection of 2 Recyclates		 		 		 		 		Co-mingled recycling bin
Option 3 - Maintain Current Service		  		  		  		  		Paper/card recycling bin
Option 4 - Fully Co-Mingled Service										Glass / can / plastic recycling bin
Option 4a - Twin Stream Service		 		 		 		 	  	Kerbside box collections
Option 5 - Three Weekly Collections										
Option 6 - Hybrid Collection Model										

### **Commercial Waste**

The Council introduced a commercial recycling service in July 2005. This was rolled out to 80 businesses initially and they received a collection of paper and card from their property. Over the next two and a half years the number of recycling customers trebled. Due to the success of the scheme and as a result of customer feedback the scheme was expanded to include glass and can collections in May 2007. Bins were provided for each type of material, collected on a frequency suitable for the business.

The Council currently has 925 commercial waste contracts and 373 of those currently have some form of recycling collection as part of that contract.

In May 2013 a programme of proactive work commenced involving the Council contacting businesses to determine how they were disposing of their waste. Since 2013 the Council has contacted 781 businesses and gained 114 new contracts, as a result of this work.

April 17 to date: 73 businesses lost; 10 leaving to go to another supplier (13%)

April 16 to March 17: 91 businesses lost; 17 leaving to go to another supplier (18%)