



Contract Mid Term Review

Date: 17th November 2020

Version 1

Due for Review: November 2020

Contents

| | |
|---|-----------|
| PFI Contract - Background and objectives | 2 |
| Nottinghamshire PFI Waste Contract | 2 |
| Policy context | 3 |
| Revised Project Plan (RPP) following Rufford ERF planning failure | 4 |
| Deed of Variation (DoV) | 5 |
| Contract Compost Facility Planning Failure | 5 |
| Current Contract Performance | 5 |
| Part A - Composting Services | 7 |
| PFI Model vs actual wasteflows | 7 |
| Infrastructure | 7 |
| Delivery points | 7 |
| Veolia Oxtou | 7 |
| Performance | 8 |
| Part B - Residual Waste Management and Treatment/Disposal Services | 11 |
| PFI Model vs actual wasteflows - Residual Waste | 11 |
| Infrastructure | 11 |
| Performance | 12 |
| Opportunities for improvement | 12 |
| Part C - Household Waste Recycling Centre Services | 14 |
| PFI Model vs actual wasteflows - HWRC Service | 14 |
| Infrastructure | 14 |
| Range of materials accepted at Nottinghamshire HWRCs | 15 |
| Recycling performance | 16 |
| HWRC User Satisfaction | 16 |
| Paint Reuse Scheme | 17 |
| Opportunities for improvement | 17 |
| Reuse | 17 |
| Meet and Greet | 18 |
| Part D - Recyclable Waste and Street Cleansing Services | 20 |
| Part D – Recyclable Waste and Street Cleansing | 20 |
| PFI Model vs actual wasteflows | 20 |
| Infrastructure | 20 |
| Contamination issues | 21 |
| Issues | 21 |
| Opportunities for improvement | 22 |
| Mechanical street sweepings | 23 |
| New Resources and Waste Strategy Opportunities | 24 |
| New Resources and Waste Strategy Opportunities | 24 |

1. PFI Contract - Background and objectives

Nottinghamshire PFI Waste Contract

The initial project aimed to address the full range of wastes that the Council, in its capacity as a Waste Disposal Authority, had responsibility for with the exception of difficult wastes (e.g. asbestos, clinical/hazardous wastes, abandoned vehicles) to achieve an enhanced and longer term recycling and recovery performance to achieve and to exceed the targets defined by Central Government at the time.

The objectives of the Nottinghamshire Waste Management PFI Contract were to:

- Focus on positive action to protect and improve the environment.
- Have regard to Best Value and affordability.
- Reduce the proportion of waste going to landfill.
- Conserve energy and raw materials.
- Support waste minimisation, re-use and recycling initiatives.
- Secure the optimum return on any assets used.
- Ensure that waste is treated or disposed of using one of the nearest facilities and providing the most appropriate methods and technologies.
- Meet the Government's performance standards for waste management.
- Be sufficiently flexible to allow for future changes in waste legislation and practice.
- Use and promote the principles of the waste hierarchy.

The project aimed to achieve:-

- To assist the Council to increase recycling incrementally throughout the life of the Contract to reach Nottinghamshire's aspirational recycling target of 52% by 2020 / 21.
- Ensure waste and recycling management would meet and exceed where appropriate the requirements of the Landfill Directive to incrementally reduce biodegradable waste to landfill to 35% of 1995 levels by 2020.
- Increase recycling at the Household Waste Recycling Centres (HWRCs) from 57% in 2005/06 to 60% by 2020.
- Endeavour to minimise the distance travelled by Waste Collection Authority waste and recycling collection vehicles to no more than 5 miles and / or a 15 minute drive-time from their boundaries.
- Factor in the continued use of the Eastcote Energy from Waste (EfW) facility in Nottingham for waste from the South Nottinghamshire Borough / District Councils (Gedling, Broxtowe and Rushcliffe).
- Ensure that the Contract was self-monitoring and measured by 10 Key Performance Indicators (KPIs).
- Provide a robust, proven and deliverable solution tailor-made for Nottinghamshire and suitable to claim PFI credits.

Policy context

Local waste management activities in Nottinghamshire have been underpinned by the following strategic EU and National Policy documents.

The National Waste Management Strategy - 'Waste Strategy 2000' supported the need for the development of more sustainable waste management processes and set specific targets for recycling, recovery and diversion from landfill.

The key national targets within 'Waste Strategy 2000' were:-

- To recover value from 40% of municipal waste with at least 25% of household waste recycled or composted by 2005
- To recover value from 45% of municipal waste with at least 30% of household waste recycled or composted by 2010

The Best Practicable Environmental Option (BPEO) encompassed the waste hierarchy and the proximity principle to ensure that waste was minimised or treated in an appropriate way and, wherever possible, as close to source as practicable.

The EU Landfill Directive defined the diversion targets for the biodegradable fraction of MSW from landfill disposal.

- By 2010 to reduce biodegradable municipal waste (BMW) landfilled to 75% of that produced in 1995
- By 2013 to reduce BMW landfilled to 50% of that produced in 1995
- By 2020 to reduce BMW landfilled to 35% of that produced in 1995

The Landfill Allowance Trading Scheme or LATS was introduced in 2005. The scheme was introduced to help reduce the amount of biodegradable municipal waste sent to landfill. DEFRA set specific year on year biodegradable municipal waste (BMW) landfill allocation for Nottinghamshire:-

- Reduce the amount of BMW going to landfill to 181,603 tonnes from 226,938 baseline (2001/2) by 2010
- Reduce the amount of BMW going to landfill to 120,960 tonnes from 226,938 baseline (2001/2) by 2013
- Reduce the amount of BMW going to landfill to 84,640 tonnes from 226,938 baseline (2001/2) by 2020

The Council would have been able to trade allowances which were anticipated to provide a revenue, however, trading of allowances never commenced.

When the PFI Contract was tendered Nottinghamshire was heavily dependent on landfill for non-recyclable waste generated in the County. There was a pre-existing arrangement for the three southern boroughs (Broxtowe, Gedling and Rushcliffe) whose waste was being treated at the Eastcroft EfW facility in Nottingham City, this arrangement continues with only waste arising during Eastcroft shutdown being handled through the PFI Contract. The Contract was designed to reduce the amount of municipal waste being sent to landfill, in order to achieve this the Contract

performance mechanisms are designed to incentivise Veolia to maximise the diversion of waste away from landfill. During the period from Contract commencement to 2013 a fiscal measure Landfill Tax had been introduced and was subject to an escalator. This fiscal measure was successful in reducing the amount of waste being sent to landfill and on 31st March 2013 LATS ceased trading.

Statutory Recycling Targets

The Government's strategy paper Waste Strategy 2000, imposed statutory recycling targets on local authorities, this policy driver encouraged high performance from local authorities, however, in 2015 centrally imposed recycling targets were removed to allow councils to act on their own local priorities, while at the same time improving recycling rates, this change in policy deleteriously affected recycling performance.

Resources and Waste Strategy - recycling

The Government's most recent waste strategy was published in December 2018 sets out how the Government plans to preserve England's stock of material resources by minimising waste, promoting resource efficiency and moving towards a circular economy. At the same time this strategy aims to minimise the damage caused to the natural environment by reducing and managing waste safely and carefully, and by tackling waste crime. It combines actions that will be taken now with firm commitments for the coming years and gives a clear longer-term policy direction in line with the 25 year Environment plan. This is the blueprint for eliminating avoidable plastic waste over the lifetime of the 25 year plan, doubling resource productivity and eliminating avoidable waste of all kinds by 2050.

Revised Project Plan (RPP) following Rufford ERF planning failure

Nottinghamshire County Council's Waste Planning Authority (WPA) approved Veolia's application for a 180,000 tonne per annum capacity Energy Recovery Facility (ERF) at Rufford Colliery near Rainworth on 9th January 2009. The 13 Mega Watt (MW) facility was intended to generate enough energy to power 15,000 homes and was due to be operational by 2011.

Following the approval of the planning application by Nottinghamshire County Council the project was called in for a public inquiry by the Secretary of State for Communities.

The public inquiry by the Planning Inspectorate was due to take place for three weeks in October 2009 but was adjourned just two days after it started when it emerged the site could be made a Special Protection Area (SPA) for woodlarks and nightjars. The inquiry was reconvened in April 2010 and again in September 2010. The Planning Inspectorate issued a decision from the Secretary of State on 26th May 2011 which confirmed that planning would not be granted.

This led the Council to trigger the contractual Revised Project Plan (RPP) process which required Veolia to present an alternative solution for the management of residual waste. RPP provided a solution to divert residual waste away from disposal to landfill by providing 60,000 tonnes capacity at Veolia's Sheffield ERF for residual waste generated primarily in the northern districts of the County. The negotiations also delivered an estimated £2.3m per annum reduction in the cost of the PFI project to the Council. RPP was agreed and formally signed on 24th February 2015.

Deed of Variation (DoV)

Mansfield and Ashfield District Councils were originally modelled to deliver their residual waste directly into Rufford ERF, however during RPP no sustainable or economically attractive treatment solution could be secured and it was agreed that this waste would be subject to a separate market test which the Authority would conduct at their own cost and risk, however, Veolia had an opportunity to provide a solution at any time prior to the market test.

Veolia was able to source a long term outlet for this waste and made a proposal to the Council in 2016.

Veolia's proposal was to construct and operate a 75,000 tonnes permitted capacity waste transfer station at Welshcroft Close, Kirkby in Ashfield, Nottinghamshire on a 1.6ha site which would provide up to 65,000 tonnes per annum of residual waste treatment for the districts of Ashfield and Mansfield.

During the first three years of operation the process incorporated a shredding, baling and wrapping process to produce a Refuse Derived Fuel (RDF) which was exported for energy recovery. From year four the waste continues to be shredded, however it is now transferred to Ferrybridge MultiFuel II near Leeds for energy recovery.

The DoV was signed on 30th November 2016.

Contract Compost Facility Planning Failure

The proposed location for the Contract Compost Facility, an open-windrow facility, was at Inkersall Grange Farm, Bilsthorpe in central Nottinghamshire. A planning application was submitted for a 35,000 tonnes per annum capacity facility utilising a traditional open-windrow process to manage the garden waste inputs. Nottinghamshire County Council's WPA rejected the application in December 2009 following objections from a local food processing facility. Veolia subsequently appealed this decision during 2010. The original decision of December 2009 was upheld in February 2011.

Following this decision the Authority requested that Veolia identify a suitable site for an In Vessel Compost operation. The Alternative Site Assessment identified two suitable sites which were considered to be deliverable from a planning perspective, however the Authority decided not to progress the project until RPP was resolved.

Green compostable wasteflows have not reached the original modelled tonnages, therefore provision through existing third party facilities has been appropriate.

Current Contract Performance

Veolia's performance in delivering the service is measured by 10 Contract KPIs detailed in the table below.

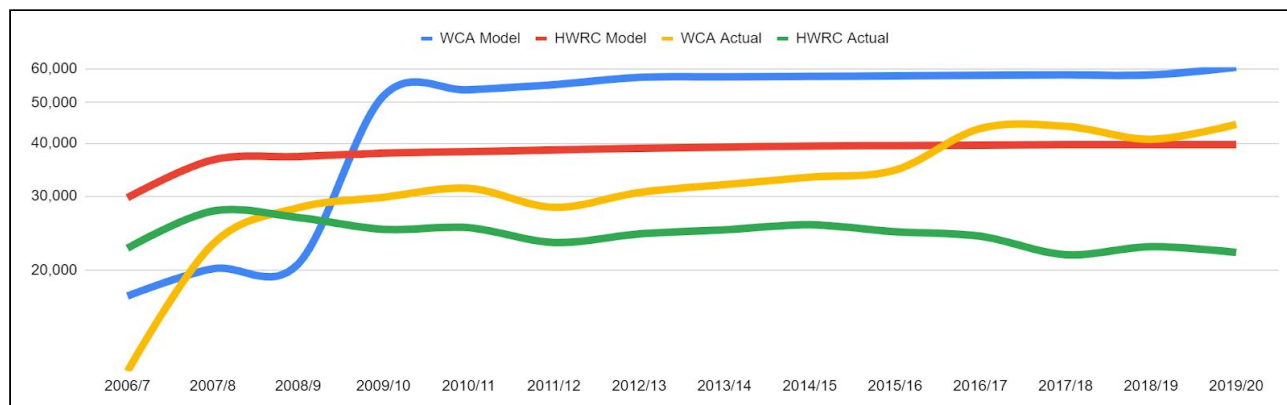
| Monthly KPIs | | |
|--------------|--|---|
| 1 | WCA Vehicle turnaround time at Delivery Points | This KPI monitors deliveries by the WCAs into Veolia's facilities at Freeth Street and Giltbrook, Newark, Worksop Transfer Stations, Welshcroft RDF and the Contract MRF |
| 2 | Delivery Point Capacity at Veolia Facilities | This KPI measures the available capacity for vehicles delivering Contract Waste to Veolia facilities |
| 3 | Accuracy, completeness and timeliness of reporting | This KPI measures the submission of monthly reports to the Authority which are to be submitted within 28 days of the end of each payment period |
| 10 | Interface Plan | Interface Plan which describes how Veolia will manage the flow of residual waste on a month by month basis. The plan is updated monthly. |
| Annual KPIs | | |
| 4 | HWRC Service User Satisfaction | This KPI measures user satisfaction at Recycling Centres undertaken by an independent market research company. The survey takes place during March each year. |
| 5 | Performance Standards for Recycling and Composting (t) | This KPI measures the recycling performance for each of the four elements of the Contract; Composting of garden waste; WCA collected mixed recyclables; Recycling Centres and WCA Mechanical Street Sweepings |
| 6 | Performance Standards for BMW Landfill Diversion | This KPI measures the amount of Biodegradable Municipal Waste (BMW) diverted from landfill disposal |
| 7 | Greenhouse Gas Emissions | This KPI measures the carbon dioxide equivalent of emissions from Contract facilities, Contract plant and vehicles and compost, landfill and recycling activities |
| 8 | Operational and Environmental Performance | This KPI measures a range of aspects related to Veolia's management of operational activities |
| 9 | Sustainability Performance | Specific objectives are agreed on an annual basis in support of Authority activities to promote waste minimisation, recycling, community sector integration, public awareness and education. |

Veolia has achieved the performance standards every year since Contract commencement, and has given significant overperformance to the Authority in respect of service delivery.

In addition new infrastructure has been provided, ownership will transfer to the Authority at the end of the current PFI contract in March 2033; a Contract MRF, 2 modern transfer stations, a RDF facility and a refurbished HWRC network.

2. Part A - Composting Services

PFI Model vs actual wasteflows



The chart above illustrates the difference between Waste Collection Authority (WCA) and HWRC modelled tonnages and actual tonnages received since Contract commencement. Nottinghamshire's WCAs did not roll out kerbside green waste collections as anticipated when the Contract tender was released. All seven WCAs now offer a chargeable kerbside collection service, although coverage is not to all properties.

Infrastructure

Delivery points

Compostable green waste has been handled since the PFI Contract commenced by local subcontracted composting facilities, the main delivery points utilised are listed below:-

- Veolia Oxton
- Sherwood Farms, Holme Pierrepont
- Freeland Horticulture, Doncaster
- Park Farm Group, South Anston (No longer operating)

All the delivery points hold permits to operate which are regulated by the Environment Agency, they also hold accreditation to the PAS 100 compost quality standard. All compostable green waste is treated by open air windrow composting and the majority of the compost is used on local farmland to improve soil quality.

Veolia Oxton

In 2014 Veolia acquired the Simpro Ltd business from TEG, the site had been established in 2002 and had been accepting the majority of compostable waste from the PFI Contract. Once in Veolia's ownership the site was redeveloped, it reopened in May 2018 with a new access road and weighbridges, an extended permitted composting treatment area and the installation of an aerated composting pad to improve the composting process at the site. In addition a successful application was made to Nottinghamshire's WPA to increase the capacity of the site from 55,000 tonnes to 75,000 tonnes per annum.

Performance

In the most recent contract year (2019-20) 66,000 tonnes of green compostable waste from Nottinghamshire has been processed into compost. Composting ensures that green waste is diverted from landfill disposal and processed into a compost material which is beneficially used within local agriculture preventing the need to use natural resources and minimise the use of man-made fertilisers.

Opportunities for improvement

Expansion of Kerbside Collections

All seven districts and boroughs operate a chargeable kerbside collection service for residents.

| WCA | Cost for 1 bin | Cost for additional bins | Collection period |
|----------------------|----------------|--------------------------|----------------------------|
| Ashfield DC | £28 | £14 | March - December |
| Bassetlaw DC | £32 | £32 | March - November |
| Broxtowe BC | £34 | £18 | All year |
| Gedling BC | £36 | £18 | All year |
| Mansfield DC | £30 | £15.50 | March - December |
| Newark & Sherwood DC | £35 | £35 | All year |
| Rushcliffe BC | £40 | £25 | Mid January - Mid December |

The kerbside collection services do not offer comprehensive coverage to all residents of the County, however, this is supplemented by the free at point of disposal service provided at the County's 12 HWRC sites.

The Government's resources and waste strategy¹ stated that "Garden waste sent to landfill can generate greenhouse gas emissions akin to those from food waste. We will consult on the provision of free garden waste collections for households with gardens and seek views on the impacts and costs for local authorities so these can be taken into account in assessment of new burdens. Garden waste can be treated by open windrow composting, which avoids landfill and is cheaper for local authorities than landfill disposal. Compost can also be used to generate additional revenue".

Consideration might be given to funding free green waste collections across the County to increase the amount of compostable garden waste diverted from the non-recyclable waste collections. Veolia has capacity to accept additional compostable green waste at the transfer station network and move it to other Veolia composting sites.

¹ Our waste, our resources: A strategy for England, December 2018

Collection of Compostable Green Waste and Food Waste

Kerbside collection costs for collecting compostable green waste and food waste together tends to reduce collection costs, however, this waste stream is not suitable for open windrow composting due to the Animal By-Products Regulations, therefore a new infrastructure of anaerobic digestion (AD) and/or In-Vessel Composting (IVC) facilities would be required to handle this type of waste. Veolia would be interested in submitting a proposal to the Authority for a Contract AD or IVC facility.

Anaerobic digestion is the process by which organic matter such as animal or food waste is broken down to produce biogas and biofertiliser. This process happens in the absence of oxygen in a sealed, oxygen-free tank called an anaerobic digester.

In vessel composting can be used to treat food and garden waste mixtures. These systems ensure that composting takes place in an enclosed environment, with accurate temperature control and monitoring.

Food Waste

The Government's most recent strategy document, Our Waste, Our Resources: A Strategy for England, makes a commitment subject to consultation that legislation is to be in place by 2023 to ensure that every householder and business will have a weekly separate food waste collection.

There are no separate kerbside food waste collections across Nottinghamshire at the present time. Introducing this service would require the seven districts and boroughs to provide additional collection infrastructure to capture this food waste separately.

It is suggested that separately collected food waste is best treated by Anaerobic Digestion (AD), whilst there are numerous farm AD plants, Veolia does not currently have a requirement to provide a Contract AD facility, however, if the Council were interested in pursuing food waste collections Veolia would be willing to present a proposal.

The Government estimates *'that extending separate food waste collections to more households should increase recycling and composting rates by about 5 percentage point over current levels, and will divert waste from incineration or landfill'*

Love Food Hate Waste

Love Food Hate Waste is a campaign, launched by the Waste & Resources Action Programme (WRAP) in 2007, with the aim of reducing the amount of food waste in the United Kingdom. This is supported by the waste hierarchy which identifies that it is preferable to avoid producing the waste in the first place.

²"Food is something that unites. It's something that is lovingly grown and nurtured for months before it arrives in our shops. It's a social activity, a comfort, an essential, and a luxury.

And yet in UK households we waste 6.5 million tonnes of it every year, 4.5 million of which is edible. We're not talking egg shells or chicken bones... We mean the last few bites from your plate that you couldn't quite manage, or your bread crusts, or potato peelings – all stuff which could have been transformed into something delicious.

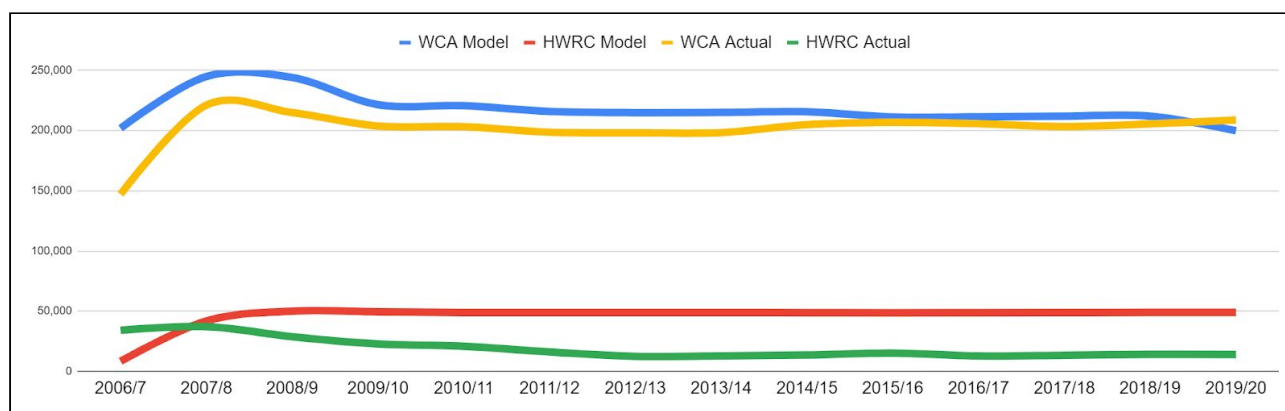
² www.lovefoodhatewaste.com

Those 4.5 million tonnes are enough to fill 38 million wheelie bins, or 90 Royal Albert Halls. It's a lot, but we have the power to change this".

Veolia Nottinghamshire in partnership with Nottinghamshire County Council has been fully supportive of the aims of the Love Food Hate Waste campaign, running events and promoting recipes for leftovers and home composting. Supporting this initiative is at the top of the waste hierarchy, prevention is the best way to reduce the impact of this waste stream and continues to be an excellent method of implementing waste reduction with Nottinghamshire residents.

3. Part B - Residual Waste Management and Treatment/Disposal Services

PFI Model vs actual wasteflows - Residual Waste



The chart above illustrates both WCA and HWRC residual waste arisings. WCA waste arisings have been close to the modelled tonnages, however, HWRC residual waste arisings are significantly lower than modelled tonnages. Veolia’s HWRC recycling performance has been a significant contributor to driving non-recyclable waste arisings downwards.

Infrastructure

The decision by the Secretary of State to refuse planning permission for the Rufford ERF enabled the contractual mechanism for Veolia to submit a revised project plan (RPP). Following lengthy negotiations with Nottinghamshire County Council Veolia’s proposal to include 60,000 tonnes per annum of residual waste treatment through Veolia’s existing ERF in Sheffield was approved.

Two new Contract Transfer Stations (TS) at Newark and Worksop were constructed for commencement of operations in June 2015, both TS hold a permit to operate issued by the Environment Agency for up to 75,000 tonnes of waste per annum. Residual waste from Newark and Sherwood District Council is transferred through Newark TS: residual waste from Bassetlaw District Council is transferred through Worksop TS to Veolia Sheffield where it is treated and the energy is recovered. The transfer stations also accept dry recyclable and bulky waste deliveries from both Waste Collection Authorities. Both facilities are reverting assets.

This arrangement is provided through a long term Contract with Veolia Sheffield to divert up to 60,000 tonnes per annum until the end of the PFI Contract in 2033 with the opportunity to extend the contractual arrangement for a further period of five years.

Veolia opened Freeth Street transfer station located in the Lady Bay Bridge area of Nottingham City as its Head Office, it is configured to act as the base for the management, administration and finance staff. It also serves as an operational depot for the Veolia haulage fleet which services the HWRC sites. The transfer station was refurbished in 2009 and from that date accepted residual waste from Gedling Borough Council and Rushcliffe Borough Council when the Eastcroft EfW

facility is offline due to unplanned or planned summer maintenance outages. Residual waste from Broxtowe Borough Council is delivered to Veolia's Derby Transfer Station in Eastcroft outages. During outage periods residual waste is generally sent to landfill for disposal, in the contract year April 2019 to March 2020 only 3% of WCA collected residual wastes were sent to landfill.

During the RPP negotiations no solution could be found for the remaining residual waste from Ashfield and Mansfield District Council's which had been modelled to be treated at the Rufford ERF.

In 2016, Veolia made a proposal to construct and operate a 75,000 tonne permitted capacity waste transfer station at Welshcroft Close, Kirkby in Ashfield on a 1.6ha site. The Council was agreeable to this proposal, and in February 2016 the Contractual arrangements were concluded with a Deed of Variation to incorporate this facility into the PFI Contract. Veolia committed to provide treatment for up to 65,000 tonnes of non recyclable waste from Ashfield and Mansfield Districts through a long term Contract with SSE at Ferrybridge Multifuel II which continues until the end of the PFI Contract in 2033. Welshcroft Close Transfer Station commenced operations in April 2017 and is the Contract Delivery Point for Ashfield and Mansfield District Councils to deliver their non-recyclable waste.

Performance

At Contract commencement residual waste excluding the inputs to Eastcroft Energy from Waste (EfW) was being disposed of at landfill. There were step changes in 2015 when Sheffield ERF came on line and in 2017 when Welshcroft Close Transfer Station commenced operations. Reliance on landfill is now only for non-recyclable wastes not suitable for thermal treatment and waste generated during treatment facility outages.

The current arrangements in the PFI contract provide the Council with 125,000 tonnes of landfill diversion through Veolia Sheffield's ERF and Ferrybridge MultiFuel II. The Council also has an existing long term contract with FCC Eastcroft EfW facility in Nottingham City which provides a further 60,000 tonnes of landfill diversion. In the last contract year April 2019 to March 2020 of the 222,000 tonnes of residual waste just under 8,000 tonnes was disposed of to landfill.

However it should be noted that the majority of wastes sent to landfill such as bulky waste collected by the WCAs is generally not suitable for energy recovery, without pre-treatment. This pre-treatment tends to be shredding of this waste to make it suitable for energy recovery. This could be an option to be explored to reduce the amount of this waste that currently goes to landfill.

Opportunities for improvement

Small Trader Services

Micro or small businesses make up 97% of Nottinghamshire businesses, many of these businesses do not generate significant amounts of waste to require a commercial trade waste collection. Commercial transfer station services which allow disposal of small amounts of waste often have minimum charge structures in place making this disposal route unattractive. Veolia has proposed a trial to accept small traders at the Contract Transfer Station in Newark. The trial has been paused due to Covid-19 but is anticipated to commence in 2021.

Aspiration to zero waste to landfill

Nottinghamshire currently sends 5% of municipal wastes to landfill across all service areas, it should be recognised that there are some waste streams that do not currently have a sustainable and economically viable alternative treatment method.

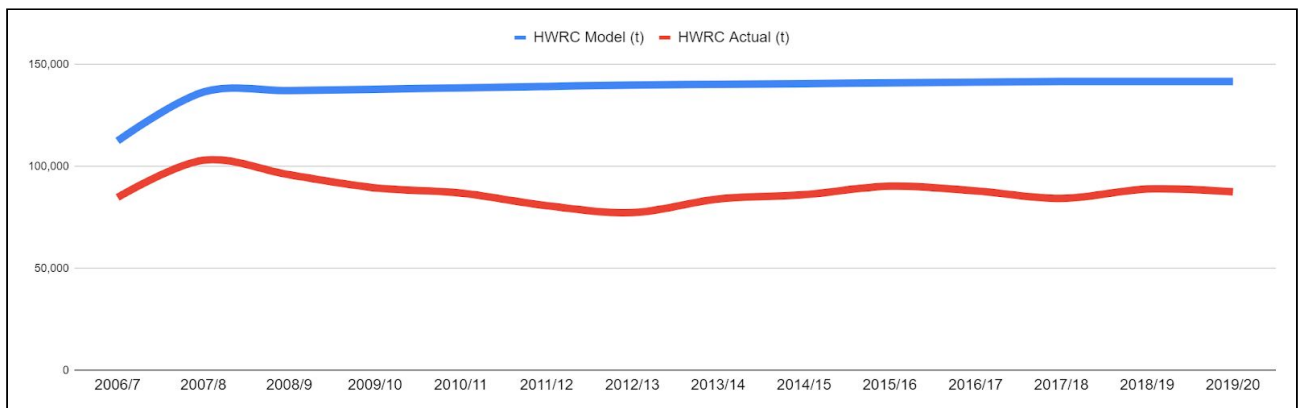
Zero waste should be considered a concept, it is part of the circular economy to eliminate waste from business activities upstream with its suppliers and downstream with its customers.

Veolia is committed to a future where end of life resources are transferred into products that enrich our lives, power homes and businesses. A future where production and consumption go hand in hand – and nothing goes to waste. Initiatives Veolia has developed include,

- Flat Screen recycling (flat screen TVs and monitors) at Veolia Bridgnorth
- Coffee Cup Recycling through dedicated separate commercial collections
- Profibre a paper pulp manufactured from contaminated paper
- Progrow a peat free compost
- Mechanical Street Sweepings Processing Plant at Veolia Ling Hall
- Plastic HDPE Bottle food grade processing plant at Veolia Dagenham
- Veolia partnership with Knauf Insulation, processing glass into a high performance energy saving insulation solution at a facility in St. Helens
- Veolia provides Combined Heat and Power (CHP) solutions for business and the public sector, approximately 600 sites currently benefit from Veolia managed CHP plants

4. Part C - Household Waste Recycling Centre Services

PFI Model vs actual wasteflows - HWRC Service



The chart above shows that HWRC tonnages have never reached the modelled tonnages since Contract commencement.

Infrastructure

In Nottinghamshire Veolia currently manages 12 HWRC sites on behalf of the Council, these sites are open all year round only closing on Christmas Day, Boxing Day and New Years Day. Operating hours are :

| | |
|---------------------|---------------|
| January & February | 08:00 - 16:00 |
| March | 08:00 - 18:00 |
| April to September | 08:00 - 20:00 |
| October | 08:00 - 18:00 |
| November & December | 08:00 - 16:00 |

During the last Contract Year, April 2019 to March 2020, 87,519 tonnes of waste was handled through the sites, of which 80.23% was recycled.

At contract commencement there were 17 sites, this increased to 18 when Fiskerton was incorporated. From the start of the Contract Veolia established it's management culture with the aim of raising standards across the HWRC network. A refurbishment and standardisation programme was devised, the programme also included the delivery of three new sites at Bilsthorpe, Worksop, and Newark. Annual reviews of HWRC provision lead to the closure of Sutton, Daneshill, Stapleford, Gedling, Cotham, Langar and Fiskerton. Fiskerton was a site that was not part of the initial PFI project but was incorporated in the early years of the contract.

| HWRC Provision | | Refurbishment | New Site Opened | Site Closed |
|------------------------------|-------------|---------------|-----------------|-------------|
| Ashfield District | Kirkby | 2009 | | |
| | Sutton | 2008 | | Aug-2010 |
| | Hucknall | 2008 | | |
| Bassetlaw District | Daneshill | | | Apr-2009 |
| | Retford | 2011 | | |
| | Worksop | | Dec-2007 | |
| Broxtowe Borough | Giltbrook | 2009 | | |
| | Beeston | 2009 | | |
| | Stapleford | 2008 | | Aug-2010 |
| Gedling Borough | Calverton | 2008 | | |
| | Gedling | | | Aug-2010 |
| Mansfield District | Mansfield | 2008 | | |
| | Warsop | 2011 | | |
| Newark and Sherwood District | Bilsthorpe | | Aug-2006 | |
| | Cotham | 2007 | | Nov-2010 |
| | Fiskerton* | 2008 | | Mar-2014 |
| | Newark | | Nov-2010 | |
| Rushcliffe Borough | Langar | 2008 | | Mar-2015 |
| | W.Bridgford | 2009 | | |

* Fiskerton HWRC was not a facility provided by the PFI Contract

Range of materials accepted at Nottinghamshire HWRCs

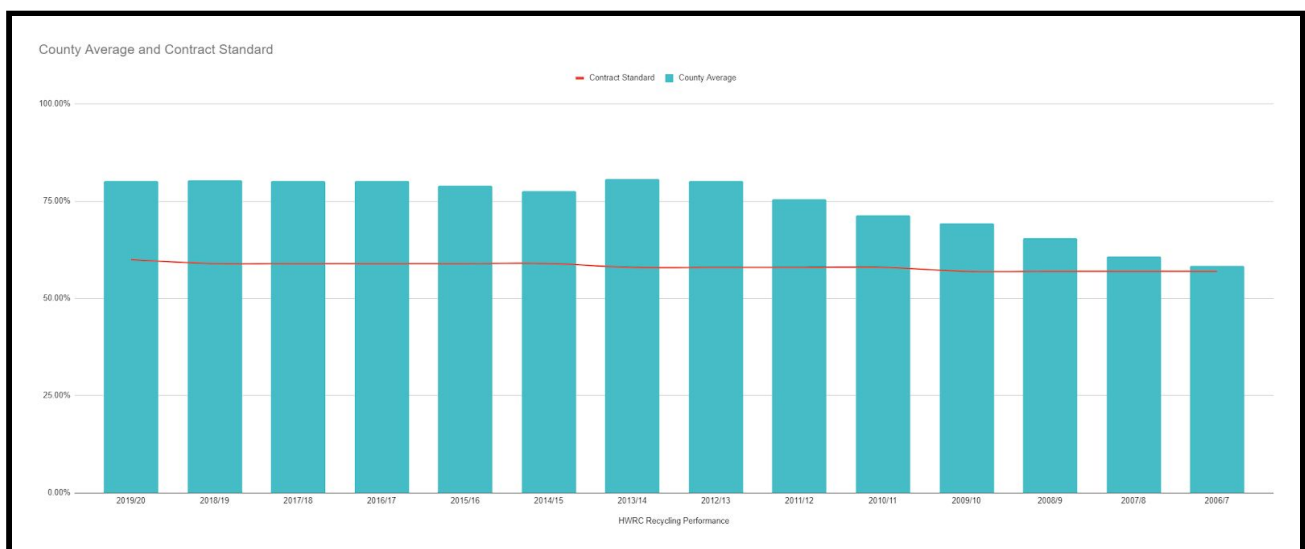
All Nottinghamshire HWRC sites accept a wide range of materials for recycling as shown in the list below:-

- Batteries - household & lead acid
- Carpet
- Compostable garden waste
- CRTs
- Ferrous metal including cans
- Fluorescent tubes
- Fridges and freezers
- Glass
- Inert waste
- Non-recyclable waste
- Oil – vegetable and mineral

- Paint - at Beeston, Calverton, Newark and Warsop for re-use
- Paper and card
- Plastic bottles
- Plasterboard
- Textiles
- WEEE
- Wood and Chipboard

Recycling performance

The performance of the Recycling Centres in Nottinghamshire has increased significantly over the period of the PFI Contract. At contract commencement the Recycling Centres were performing at 58.49%, this has increased under Veolia’s management to 80.23% in the Contract Year ending March 2020.



Veolia continues to research the opportunities for sustainable solutions to increase recycling performance at the sites.

HWRC User Satisfaction

User satisfaction at the Nottinghamshire Recycling Centres is undertaken every year by an independent market research company. A minimum of 100 service users at each site are asked to comment on all aspects of the service, including helpfulness of the site staff and whether assistance was offered, the range of materials recycled, the layout and signage on site including the ease of access to containers, and their satisfaction with opening hours. Veolia has consistently performed with a high level of customer satisfaction as shown in the table below.

The HWRC user survey is also one of the 10 Contract KPIs which form part of the performance mechanism in the Contract.

| HWRC User Satisfaction Survey | | | |
|-------------------------------|---|-----------------|-------|
| RC Survey Date | Very Satisfied | Quite Satisfied | Total |
| Jan-06 | 71% | 21% | 92% |
| Feb-07 | | | 93% |
| Feb-08 | | | 95% |
| Mar-10 | 81% | 17% | 98% |
| Dec-10 | 74% | 24% | 98% |
| Mar-12 | 80% | 18% | 98% |
| Mar-13 | 81% | 17% | 98% |
| Mar-14 | 81% | 17% | 98% |
| Mar-15 | 77% | 21% | 98% |
| Mar-16 | Survey postponed due to Council policy change to require all Nottinghamshire residents to register to use HWRCs | | |
| Mar-17 | 77% | 21% | 98% |
| Mar-18 | 16% | 82% | 98% |
| Mar-19 | 17% | 81% | 98% |
| Mar-20 | 13% | 85% | 98% |
| Off site survey | | | |
| Jul-12 | 56% | 37% | 93% |

Paint Reuse Scheme

Nottinghamshire County Council and Veolia operate the Nottinghamshire Community RePaint Scheme. Community RePaint schemes aim to collect reusable, leftover paint and re-distribute it to individuals, families, communities and charities in need, improving the wellbeing of people and the appearance of places across the UK.

Charities and community groups from Nottinghamshire, Nottingham City and surrounding counties can collect unwanted household paint for reuse free of charge from four of the HWRC sites in Nottinghamshire; Beeston, Calverton, Newark or Warsop. Paint reuse is very popular and diverts suitable unused paint away from costly disposal whilst benefiting the community, investment to expand the scheme could be considered as an improvement opportunity.

Opportunities for improvement

- Reuse

The current Recycling Centre Service is operated by small local businesses who are subcontracted to Veolia to provide the Service. The Contract permits the subcontractor to acquire a range of items suitable for reuse which they may take title to and sell but not from the HWRC sites. This activity subsidises the cost of the Service to the County Council as well as promoting reuse.

Re-use systems can have positive impacts beyond the tonnages diverted for re-use, by generating income from the sale of items, enhancing site-user awareness of waste minimisation, re-use and recycling, significantly increasing site recycling performance, and reducing disposal costs for the local authority. The current contractual mechanism does not support a formal re-use system through the HWRC network but this could be considered as an opportunity for improvement.

- Meet and Greet

Nottinghamshire Recycling Centres do not currently offer a meet and greet service, It should be noted that the current Recycling Centre Service is operated by small local businesses who are subcontracted to Veolia to provide the Service. Their operating model provides a high level of operative visibility allowing them to direct customers and capture recyclable materials, this is demonstrated by the high recycling performance of the recycling centres in Nottinghamshire. Consideration could be given to the implementation of a meet and greet service to evaluate the impact on recycling rates and customer satisfaction.

- Rubble

The Government has committed to ensuring that the charging arrangements in the Controlled Waste Regulations are clear, especially in relation to waste arising from small scale DIY construction projects carried out by ordinary householders with no specialist skills which should not be subject to charges. Should there be a review of HWRC services which changes this interpretation, consideration might be given to introducing a charging mechanism for this waste stream. Since the Council introduced the vehicle permit scheme amounts of rubble received at the HWRC sites has increased, before the permit system was in place DIY rubble was restricted to 1 car boot on each visit, permitting has allowed larger vehicles to bring significant quantities of rubble to sites. There is an opportunity for the Council to consider managing this waste either by restrictions on taking it to recycling centres or by introducing a chargeable service similar to those in neighbouring authorities.

- Carpet Recycling

Innovation by the recycling industry is developing new end markets for processing carpets. One of interest at the current time is a product which can be used in equine businesses. This is an embryonic business, however, sustainability is possible and therefore consideration may be given to introducing a separate recycling waste stream for carpets at Nottinghamshire Recycling Centres.

- Mattress Recycling

Mattress recycling presents another new business opportunity, however, mattress recyclers have rigorous input specifications which require clean and dry mattresses. Recycling Centre mattresses tend not to meet this input specification, in addition the transport of mattresses; a “high volume low weight commodity” is expensive which makes the opportunity less attractive. The market for recycling mattresses is still in its infancy, however, it is a potential option to be explored to increase recycling rates and divert this type of waste away from disposal to landfill.

- Trade Waste HWRC

There is currently limited provision in the County for small traders to recycle and dispose of wastes generated as a result of their business activities. There is an opportunity for the Council to consider a change to the current Contract to facilitate a chargeable service for small traders based at strategically located trade waste HWRC or through the utilisation of the current HWRC or transfer station network.

- Wood and Chipboard

Renewable energy consumption has been increasing steadily over the last decade and for the first time reached more than 10% of the UK’s total energy consumption in 2017³. Wood pellets are increasingly being utilised in biomass plants. Contractually wood and chipboard are required to be

³ Office for National Statistics

recycled in the PFI Contract, however, there may be an opportunity to consider a business case for the recovery of wood and chipboard as an alternative to recycling within the Contract

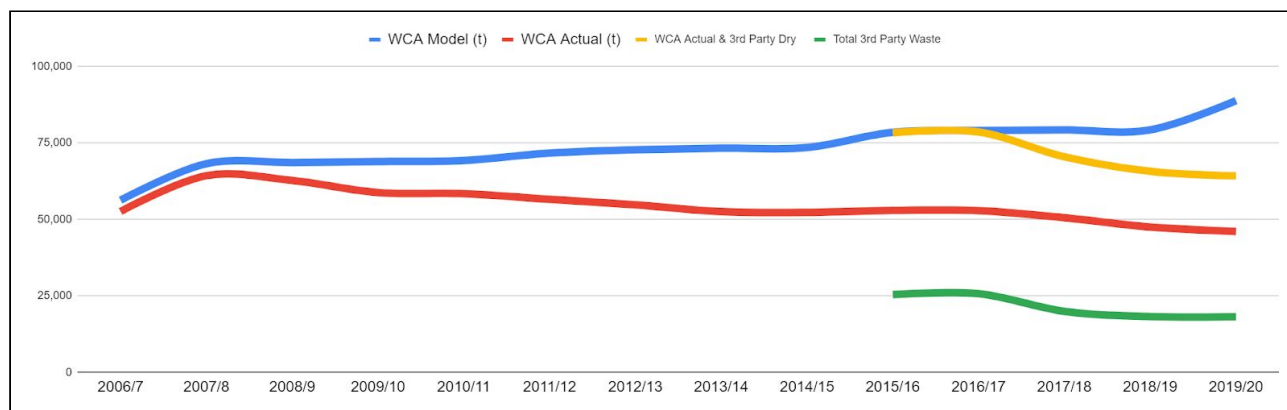
- Provision of new sites

A number of the Nottinghamshire HWRCs are located on small sites which do not lend themselves to modern split level design with good road access for users. There is an opportunity to review the provision in relation to population density and transition from sites that were 'tips' to new modern recycling centres.

5. Part D - Recyclable Waste and Street Cleansing Services

Part D – Recyclable Waste and Street Cleansing

PFI Model vs actual wasteflows



Infrastructure

The construction of a £14m, 85,000 tonne per annum Contract Materials Recovery Facility (MRF) in Mansfield was completed in 2008; commissioning waste was received during late 2008 and the facility commenced full operations on 2nd January 2009. It was officially opened in Spring 2009. The Contract MRF receives dry recyclables directly delivered by Ashfield and Mansfield District Councils and the other districts and boroughs via Veolia's transfer station network at Freeth Street, Giltbrook, Newark and Worksop providing a proximate delivery point for all the WCAs.

During the negotiations at RPP, Veolia made a commercial offer to the Authority to purchase spare processing capacity at the Contract MRF. The chart above shows the impact this agreement has made to the tonnages processed at the facility.

Range of materials accepted

The Contract input specification of dry recyclables collected in Nottinghamshire has remained constant since Contract commencement. All WCAs collect the same materials with the same collection methodology. These materials have been selected because they have long term sustainable markets for recycling.

The input specification is as follows:-

- Paper
- Cardboard
- Plastic Bottles
- Yoghurt Pots and Margarine tubs
- Steel and aluminium food and drink cans

- Aerosols

Performance

During the last Contract Year (April 2019 - March 2020) 46,000 tonnes of dry recyclables were delivered by the WCAs to the Contract MRF. All target material received and sorted at the Contract MRF is sent for recycling.

Contamination issues

The Contract MRF input specification tolerance is a contamination level of up to 5% by weight of contaminated material. As the contamination increases the sorting process becomes less efficient. The facility was designed with a 95% processing efficiency.



Issues

- **Quality / Contamination**

Performance over the Contract has significantly worsened from contract commencement to current from a rate of 5% in 2009 to 12.7% at the end of the last Contract Year. There is a contractual obligation on the Council to ensure that recyclables are delivered to the Contract MRF and meet this specification, Veolia may reject loads that exceed the input specification. In the Contract year April 2019 to March 2020 394 loads were rejected comprising 2,200 tonnes which was then sent for disposal.

- **Recyclable markets, Quality/China**

Recyclables are traded on a global marketplace. China was until recently the centre of the global recycling trade, however, in 2018 it severely restricted inputs of recycled material due to issues surrounding poor quality. The Environmental Permitting Regulations 2014 placed a responsibility on all MRFs handling more than 1,000 tonnes of waste per annum to adhere to a sampling regime for inputs to the facility and outputs of sorted materials, these regulations also place a regulatory burden on the MRFs. At Mansfield this has resulted in Veolia having to increase staffing levels to ensure that the output quality is high and can meet end markets for the sorted materials. Quality standards continue to increase, presenting a significant challenge when inputs to Mansfield are running at 15% contaminated.

The failure of Nottinghamshire's WCAs to deliver the quality required by the PFI contract has impacted significantly on the ability of the plant to sort the dry recyclable materials collected at the kerbside, there is both a financial impact and a regulatory impact to Veolia

and the County Council. This is a key area that needs addressing to ensure the Council complies with the contractual contamination, or alternative levels of contractually allowed input contamination are considered.

- **Statutory recycling targets**

Statutory recycling targets are no longer in place which has meant that during austerity many Local Authorities have not invested in education and collection infrastructure. The Contract MRF was built with an education room designed with the sole purpose of reaching as wide an audience as possible to educate residents on how to recycle effectively. The education room has been used extensively by schools, community groups and many societies and clubs who all find the subject fascinating.

- **WCAs - risk profile for contaminated dry recyclable collections**

The PFI Contract has no mechanism to penalise the WCAs when they deliver dry recyclables that do not meet the input specification at the Contract MRF. All the burden of additional costs to dispose of contaminated recyclables is met by Nottinghamshire County Council in its role as Waste Disposal Authority. An opportunity exists to revisit the risk mechanism with the WCAs.

Opportunities for improvement

- **Input specification**

Since the inception of the design of the Contract MRF, materials in the recycling waste stream have changed. Packaging waste, particularly plastic has become ubiquitous. There are many different grades of plastic, some hard to recycle material like black plastic should be solved or scrapped. There are too many material types designed without consideration for what happens after their purpose is served. Functional yet sustainable packaging will reduce contamination later in the recycling chain. Veolia has been lobbying the Government to consider standardising the polymers in films and pots, tubs and trays so the recycling industry can collect and recycle the material time and time again, without worries about obscure elements contaminating the process. Expanding the input specification to include pots, tubs and trays (PTTs) is possible, however, not all the material currently has recyclable markets, therefore the cost of disposal of some polymers would need to be included should this be an option the Council would like to consider.

The Government's Resources and Waste Strategy has proposed that recycling rates and quality could be increased by ensuring that a consistent set of dry recyclable materials are collected from all households and businesses. The outcome of this consultation may present an opportunity for the Council to consider changes to the input specification at the Contract MRF.

- **Education**

Education is key to ensuring that residents are aware of how and why recycling is important. Learning about recycling can allow everyone to play a part in helping the environment to ensure that less waste goes to waste and more materials are made into something new. Following the withdrawal of statutory recycling targets investment in education by local authorities has significantly decreased, an opportunity is there for the Council to consider increasing both educational support and enforcement where residents continue to contaminate their recycling collections. Recycling benefits both the

environment and provides a financial benefit to the Council, in general recycling is more financially attractive than disposal options.

- **Container MRF**

A container MRF separates, glass, cans and plastic containers. Glass is a major contaminant in fibre (paper and cardboard) recycling and new MRFs are designed with glass and paper sorting entirely separate. There is an opportunity to introduce this to Nottinghamshire, it would require a new facility with additional sorting machinery to separate the container mix together with the construction of a separate facility to sort fibre. An investment in separate container and fibre MRFs would significantly improve quality outputs and future proof the infrastructure in Nottinghamshire.

- **Collection methodology**

In order to satisfy a container MRF in Nottinghamshire there would be a requirement for the WCAs to collect at the kerbside with a revised methodology. The most cost effective way to do this would be to utilise the existing fleet of vehicles, but collect as follows:-

| | |
|--------|---|
| Week 1 | Containers (glass, PTTs, food and drink cans) |
| Week 2 | Non-recyclable waste |
| Week 3 | Fibre (paper and cardboard) |
| Week 4 | Non-recyclable waste |

In addition there would be a requirement for investment in additional containers at the kerbside to capture the containers and fibre separately.

Glass is currently not included in the PFI Contract, at present the WCAs manage their own collections either by kerbside collections or at bring bank sites. A change to include glass would be a Contractual change and would be subject to negotiation between Veolia, Nottinghamshire County Council and the 7 WCAs, however, it would present an opportunity to offer a consistent range of materials for recycling across the whole County.

Mechanical street sweepings

Veolia developed a washing treatment process for road sweepings at its landfill site at Ling Hall, Rugby, to produce landfill restoration materials and recycled aggregates. The initiative was designed to divert street sweepings from landfill and utilise the outputs from the treatment plant for restoration on the landfill site. Processed outputs from the facility include aggregate and sand which reduces the need to purchase virgin aggregates. Roadsweepings from Nottinghamshire are received at the Contract Transfer Stations and transferred to the plant at Ling Hall, approximately 97% of the inputs are recycled.

6. New Resources and Waste Strategy Opportunities

New Resources and Waste Strategy Opportunities

The Government's new strategy "Our waste, our resources", was published in December 2018, a consultation period was opened in February 2019, on which all Nottinghamshire Local Authorities submitted responses. In July 2019 the Government published its responses to the consultation. A further update in March 2020 advised that the strategy would be progressed through the Environment Bill and that secondary legislation would be required to implement the strategy. Perhaps the most significant concern for Nottinghamshire is how the strategy changes will be funded.

- **Food waste**

Government has identified that it plans to reduce greenhouse gas emissions from landfill by ensuring that every householder and appropriate businesses have a weekly separate food waste collection

Subject to consultation, the Government plans to legislate to ensure that food waste collections are in place from 2023. The consultation will also explore whether households with gardens should have access to free garden waste collections. New duties will be assessed to account for new burdens, and funded appropriately.

UK households produce around 7 million tonnes of food waste each year, of which 5 million tonnes is categorised as still edible, with 2 million tonnes being inedible, requiring treatment through the waste system. Edible food that would otherwise be wasted should be made available to be redistributed and only recycled when it is no longer fit to be redistributed or fed to animals.

- **New recyclables**

The Government's response to the consultation exercise in July 2019 advised that there had been strong support for greater consistency in recycling collection and that, the Government proposed to seek to amend legislation to require all English local authorities to collect at least the following dry materials from 2023:

- glass bottles and containers – including drinks bottles, condiment bottles, jars
- paper and card – including newspaper, cardboard packaging, writing paper
- plastic bottles – including clear drinks containers, HDPE (milk containers), detergent, shampoo and cleaning products
- plastic pots tubs and trays
- steel and aluminium tins and cans

There was no direction on the methodology for collecting these waste streams.

- **Kerbside sort**

Chapter 3 of the resources and waste strategy for England considers how it could improve recycling rates by ensuring a consistent set of dry recyclable materials could be collected from all households and businesses.

For households subject to consultation the Government will legislate to allow it to specify a core set of materials to be collected by all local authorities and waste operators. Timings for introduction will be subject to discussions at spending review. The Government will consult on which materials should comprise this core set, and which collection systems would be most effective at preserving material quality. The consultation will be carried out in parallel with the consultation on reforms to the existing packaging waste regulations.

- **Deposit Return Scheme (DRS)**

A DRS works by charging customers a deposit up-front when a drink is bought in a single-use container. Customers are charged a deposit up-front when they buy a drink in a single-use container. This can be redeemed when the empty container is returned. In comparable international schemes consumers can either return containers through a reverse vending machine or manually to a retailer/outlet to redeem the deposit value.

The UK Government has indicated that it will introduce a DRS in England for single-use drinks containers, subject to consultation. The consultation will look at how the scheme might sit alongside other measures to boost recycling and how it would operate – including administration and governance arrangements, and the setting of deposit levels. Along with proposed reforms to packaging waste producer responsibility regulations, these proposals will ensure that more recycled materials are used, and packaging is reprocessed and recycled more often. The Government's preference is to adopt a UK-wide approach to DRS if it is introduced.

- **FOC green waste collections**

Garden waste sent to landfill can generate greenhouse gas emissions akin to those from food waste. Government plans to consult on the provision of free garden waste collections for households with gardens and seek views on the impacts and costs for local authorities so these can be taken into account in assessment of new burdens. Garden waste can be treated by open windrow composting, which avoids landfill and is cheaper for local authorities than landfill disposal. Compost can also be used to generate additional revenue.

New legislation is required to deliver the strategic changes in the waste and resources strategy. The Environment Bill has not yet been transposed into UK law, it was being considered by a Public Bill Committee but due to current circumstances the sittings for the Committee have been suspended until further notice. The Committee is now scheduled to report by Tuesday 1st December 2020.