City of BRADFORD METROPOLITAN DISTRICT COUNCIL

Report of the Strategic Director (Place) to the meeting of Regeneration & Environment and Overview and Scrutiny Committee to be held on Tuesday, 21st December 2021

O

Subject: Waste Services Performance and Contract review

Summary statement:

This report provides a description of the service provision and all Waste related activities during 2020 and 2021, and those planned for 2022, to improve the management of waste to more sustainable levels in line with the Waste Strategy (Municipal Waste Minimisation and Management Strategy 2015).

The report also provides performance details for the years 2019/20 and 2020/21

Jason Longhurst
Place Strategic Director

Report Contact: Richard Galthen
Principal Office, Waste Services
Phone: (01274) 434779
E-mail: susan.spink@bradford.gov.uk

Portfolio:

Cllr Sarah Ferriby

Overview & Scrutiny Area:

Regeneration & Environment

1. SUMMARY

This report provides details of the current management of waste by providing a description of Waste Services operations, and an update on the work projects undertaken in 2020 to 2021, and those planned for 2022, to manage waste to more sustainable levels (e.g. minimise residual waste and increase recycling) in line with the Waste Strategy (Municipal Waste Minimisation and Management Strategy 2015) and the impending 2023 Government Waste Strategy implementations.

The report also provides relevant performance data for the years 2019/20 and 2020/21.

2. BACKGROUND

The Council has statutory responsibilities for the following waste streams which are currently managed by Waste Services:

- Kerbside Collections of dry mixed recycling (DMR) from residents;
- Kerbside Collections of residual household waste from residents;
- Bulky Waste collections upon request from residents (paid for service);
- Clinical Waste collections upon request from residents (not under district healthcare);
- Provision of Household Waste Recycling Centres (HWRCs) across the district;
- Closed Landfill site monitoring;

In addition to the above, Waste Services also provide the following discretionary services which can be requested:

- Kerbside Collection of Garden Waste (paid for service);
- Trade Waste Services to commercial businesses (paid for service)
- Clinical Waste collections to commercial businesses (paid for service)
- Waste Electrical and Electronic Equipment (WEEE) collections to residents (paid for service)
- Chemical Advisory Service for residents

All the above services are provided by in-house operations (described below), which are supported by several external contracts with the private sector for treatment of recyclates, residual waste and disposal services

2.1 CURRENT SERVICES (2021)

2.1.1 Kerbside Collections

In 2017, the collection service moved from a weekly collection of residual waste and a fortnightly collection of DMR requiring a total of 41 collection rounds, to an Alternate Weekly Collection regime (AWC) where residual waste is collected on one week, and DMR the next, requiring only 34 rounds. Between 2017 and 2021, the number of rounds required has increased to 37 including rural collections.

Most collections are made via thirty-five 26 tonne Refuse Collection Vehicles (RCVs) with two 14 tonne vehicles and one 5 tonne vehicle being used for areas which are inaccessible to the larger RCVs.

Going forward property growth and the impact it has on the Service will be an on-going consideration as part of the budget setting process. On average, a new round is required per 5,000 to 6,000 properties. This figures varies between rounds due to distance, property types etc.

The typical receptacle at each property for residual waste and DMR is a standard 240L wheeled bin. This can be increased at cost to the resident for larger households to a 360L bin for residual waste, however we are finding these bins become too heavy to be easily moved and may cause injury so it is possible that they will be phased out with additional smaller bins provided instead.

Communal properties tend to have larger 1100L wheeled containers that are shared between the properties and in most cases are purchased by the Management Companies/Landlords under their responsibility for waste bin provision to residents. There is no defined ratio of communal bins per communal property but nationally, 1 x 1100L bin per 5 properties if multi-occupied seems to be the norm. This reduces to 1 per 8 properties for sole occupants. We advise of the relevant quantities required and monitor this moving forward.

Approx. 110,000 tonnes of residual waste and 42,000 tonnes of DMR are collected from kerbside each year. Equating to around 600kg and 230kg per household respectively. This varies massively between different sized households and locations meaning that rounds are constantly being monitored to ensure they are efficient.

Approx. minimum of 88 RCV loads per day are required to facilitate the collection of material from kerbside.

2.1.2 Kerbside Recycling

As part of the move to AWC, there was an increase in the types of DMR collected at the kerbside, all the dry recycling is simply deposited by the householder into the grey coloured recycling bin. This makes our system one of the simplest systems in the country for the householder to use. However, we then need to sort the DMR into separate commodities to comply with Waste Regulations.

The types of DMR able to be recycled does change over time due to market conditions, demand and ability of processors but the basic definition is a core mix of glass, cans, plastic, paper and card. We do suffer with up to 45% contamination within DMR consisting of food, liquids, oils, nappies etc. This contamination tends to be hidden at the bottom of bins and in plain view sometimes and one bin can potentially contaminate a part or full load in an RCV.

2.1.3 Garden Waste Collections

This is a non-statutory paid for service which commenced in June 2016, and has proved very popular, with over 34,000 customers signing up for the service in 2017, over 35,000 in 2018, over 37,000 in 2019 and over 40,000 in 2020 and 2021.

Currently we collect using four 26 tonne RCVs on a 12 x 4 weekly collection cycle, with no collections from early December to early January. The present annual charge for this service is £42 paid for up front with an early-bird discount of £5.

The garden waste is then sent for processing in to a PAS100 quality compost by a Contractor.

2.1.4 Bulky Waste Collections

This service is provided to domestic residents via a request system, for which an up-front charge is levied. The scale of charges relates to the number of items requiring removal, and a collection date is now provided at the point of service request. Collections are provided by a single team working Tuesday to Friday, with demand for the service remaining fairly consistent at approximately 10,000 requests producing around 1,100 tonnes annually.

Charges range from £15 to £35 for 5 to 25 items. These items are essentially furniture-type products that are too large to be placed in a bin and that residents are unable to transport to a HWRC.

The service is for residents only and should not be used by commercial companies or Landlords.

The costs of service provision are directly linked to increases in vehicle, fuel, staff and waste disposal and therefore need to be reflected in the annual review of charges.

2.1.5 Clinical Waste Collections

The Council has a duty to collect certain clinical and offensive waste free of charge from residents who are treating themselves at home. A suitably trained driver and specialised collection vehicle are used to facilitate this.

Where are resident is under district care, it is the responsibility of the care provider to dispose of any associated clinical waste.

In addition to providing a clinical waste and offensive waste collection under section 22(3) of the Control of Pollution Act 1974 or section 89, 92(9), 92C(3) or 93 of the Act which is to be treated as household waste or commercial waste in accordance with entries 1 to 6, the service generates income by providing this service to other 3rd parties where we are not required under statutory provision to provide this.

This includes agreed collections at cost from Dentists, Doctors, Clinics, Pharmacies, Tattooists and similar with income used to cover costs of the service provision. Approx. 20 tonnes of Clinical waste are collected each year.

2.1.6 Chemical Advisory Service

The Chemical Advisory Service runs via a contracted specialist company providing HWRC's with a chemical listing, packing, collection and disposal service for small quantities of unwanted household chemicals, such as:

- Chemicals;
- Pharmaceuticals;
- Herbicides;
- Poisons;
- Chemical reagents;
- Unidentified powders and liquids

Until 2021, the service also offered commercial collections at cost within the District. Due to

unforeseen circumstances arising during the Covid pandemic, we had to cease offering this discretional service. There are no current plans to reintroduce this as there a multiple private sector companies already doing so and the regulations, costs and responsibility in doing so are beyond our remit for residential provision.

2.1.7 Household Waste Recycling Centres (HWRCs)

The Council currently provides household waste and recycling services to the district's residents at eight locations across the district, accepting waste, some of which is not normally collected from households by the refuse collection service. These sites are staffed and open 362 days per year, providing a wide range of containers to encourage recycling. A van permit scheme was introduced in 2006 to combat abuse of such sites by traders. In 2013 a residents' only permit scheme was introduced to control cross border activity.

In March 2017 every household in the district was issued with a permit as part of the annual council tax papers sent to all 225,000 households. This now makes HWRC permits universally available to all our residents, encourages responsible management of domestic wastes and promotes greater recycling. This initiative was also important in supporting the move to AWC in 2017.

Materials accepted at HWRCs include; residual waste, paper, cardboard, metal, glass, green waste, wood, plastics, shoes, textiles, books, oil (both engine oil and vegetable oil), paints, carpets, mattresses, push bikes (which go to a reuse scheme) soil, bricks and rubble, polystyrene, batteries, light bulbs, florescent tubes, electrical equipment and unwanted household chemicals.

Our two Transfer Loading Stations (TLS) with prior notice, also accept Trade waste and other chargeable materials such as windows, tyres, plasterboard etc. for a cost to cover the operation of haulage, documentation and disposal. Specialist waste such as bonded asbestos, clinical and offensive can also be deposited by residents.

It is anticipated other DIY and construction type material such as soil, rubble and ceramics will have to have charges applied as above in order to cover the increasing costs of disposal and reduce the level of trade-type materials entering the sites. This is already standard practice across bordering LAs which may lead to non-Bradford residents attempting to use the HWRCs.

These sites also provide a local outlet for some precinct sweepers to reduce their travel time to tip.

On average, around 45,000 tonnes of material is deposited at the HWRCs per year. This consists of 17,000 tonnes of general waste and 28,000 tonnes of other materials as described above.

Throughout the Covid19 pandemic, we had to introduce new measures at HWRC to limit the amount of residents on site at one time. This included segregated parking bays for depositing materials and additional staff to carry out permit checks and provided general assistance.

Resident visits have been measured since April 2020 with data provided below. These figures have seen peaks of 4,500 per day at times across the sites. Midland Rd, Dowley

Gap and Dealburn Rd are the most visited sites but as displayed, all sites are seeing high levels of activity per day.

Month	Dealburn Road	Midland Road	Bowling Back Lane	Royd Ings Keighley	Golden Butts	Dowley Gap	Ford Hill	Sugden End	Total
Total visits from April 2021	261,133	303,045	210,034	213,524	211,812	274,159	179,050	171,364	1,824,121
Visits per annum to Nov 2021	168,325	194,177	146,600	139,938	136,562	181,916	129,016	126,061	1,222,595
Average visits per day	472	547	379	386	388	512	346	343	3,373

2.1.8 New to Me Shop

In December 2018 a 'New to me' Shop was opened at Bowling Back Lane HWRC on a trial basis; the shop proved so popular that it is now a permanent re-use facility.

The shop offers a collection of goods left at all our recycling centres which are still considered to be useful. Staff at all recycling centres in the district look out for items in good condition which have been left by customers.

All items collected are taken to the New to Me shop at Bowling Back Lane where people can take away any useful item for £1 per item. The majority of goods on offer include small items of furniture, kitchen utensils, crockery, pans, toys, books or other re-usable goods. Because of the possible danger, items such as children's car seats, prams, pushchairs, bikes, helmets or electrical goods are not included.

The New to Me Shop is open from 10am to 4pm, Wednesday to Friday. The shop has been a great success and is extremely popular with residents; the shop takes an average of £800 per week.

2.1.9 Transfer Loading Stations (TLS)

The service has two Transfer Loading Stations, one at Bradford, Bowling Back Lane and one at Keighley, Royd Ings Avenue. The TLS is where the waste collected is tipped off and weighed. The two loading stations receive approximately 230,000 tonnes of waste and per year ranging from domestic, bulky, DMR, green, wood, sweepings and glass waste products.

The tonnage described above is transferred to various processing and/or disposal sites by a mixture of internal fleet and contracted haulage. Approx. 40 truck-loads per day are required to facilitate the movement.

The other waste products glass, wood and sweepings are removed from our transfer stations by third party companies.

2.1.10 Nodes

2016 saw the first two Recycling Collection Nodes piloted in Bradford City Centre for residents living in multi occupancy accommodation, this was initially due to the number of large old office building being converted to apartments and not enough provision being made for the residents by the developers. There are now four Nodes within the City Centre placed strategically for residents and pedestrians to recycle, glass, cans, plastic bottles, paper and cardboard. They are located in Little Germany, outside Britannia House, Manor Row and Forster Square. Further nodes are being considered for the City Centre.

The Nodes are collected fortnightly by RCVs. There have been some instances of contamination of non-recyclable material on occasions but it has not been a major problem. Consideration is currently underway to site two further nodes at newly refurbished Multi Occupancy buildings in Keighley.

One issue with having on-street nodes is that some residents, businesses and by-passers see it as a central waste collection site and leave waste at the side of the nodes. This also happens with on-street waste bins (both trade and domestic)

2.1.11 Trade Waste Collections

The Council operates a Trade Waste collection service to local businesses which currently has approximately 3,200 customers, collecting around 19,500 tonnes per annum of waste plus around 1,000 tonnes of DMR via 5 collection rounds using a range of receptacles from small blue coloured sacks, to wheeled bins of various sizes.

Trade Waste operates separately to domestic collections with a dedicated team of staff involved. The following processes are in place or are being implemented to ensure costs of service provision are covered.

1. Full automation of the administration procedures.
2. Restructure of collection rounds.
3. Including a recycling offer as part of the overall Trade Waste Service offer.
4. The introduction of a weight based charging system

The back-office processes have been fully automated following the procurement of a new Trade Waste database which has eliminated paper processes. This new system allows the production and management of invoicing which also alerts the service to stop collection if a payment has not been made, thus ensuring that the Service does not incur any future bad debt. Historically bad debt was a major issue for the service.

The new Trade Waste database will allow customers to self-serve via a portal which also alerts customers when payments are due to avoid collections being ceased.

In addition to the above improvements, a Commercial manager has been recruited to the service to oversee the running of the operation. A new commercial agreement, new vehicle signage, redesigned website and a more business centred focus has been adopted to increase revenue through expanding the customer base.

This service is intended to offer local business an alternative to multiple private sector

companies that operate within Bradford. It is entirely discretional and any income is re-invested within the service. The annual operational costs involved are circa £3m which is forecast to be covered this financial year. Each year costs must be reviewed and adjusted accordingly to ensure the service does not make a loss.

As part of the Trade Waste Service some “all in one recycling” is being offered to schools that have a Trade contract in place. Further recycling options are being considered but this will require a review of the charging policy which will constantly be reviewed.

2.1.12 Waste electronic and Electrical Equipment (WEEE)

Waste Services are working with Wiser Recycling Ltd to ensure correct collection, recycling, processing and disposal of WEEE takes place at our HWRCs in line with current GDPR regulations and the WEEE Directive. Residents can deposit the items below securely at HWRCs or use our website to directly arrange kerbside collection of larger WEEE items by the Contractor.

- Mobile telephones
- Electronic tablets
- Laptop, desk top computers
- Hard Drives
- Internet connected devices TV’s and TV Boxes
- Games machines (Nintendo, X Box, PlayStation)
- White goods
- Large domest8ic appliances
- Small domestic appliances

Wiser Recycling Ltd provide suitable locked receptacles where residents can dispose of the above items at the sites. They also have a fully licensed and permitted site to store, process and recycle equipment as well as multiple other contracts to ensure compliance with the contract and all other WEEE regulations. Residents are advised to remove and delete all personal data and personal accounts before disposing of the item(s); this statement has been agreed with Legal.

2.1.13 Closed Landfill Sites

The Council currently manages five closed landfill sites at; Dean House Farm, Manywells, Odsal, Sugden End and Wilson Road. Closed landfill sites are governed by the Environmental Permitting (England and Wales) Regulations 2016.

These sites were previously used for the disposal of domestic and industrial waste generated by households and businesses from across the District. These sites are managed internally with a specialist contractor carrying out infrastructure works as needed.

Following closure of a landfill site it may require gas control measures to be installed. Manywells and Sudgen End both have gas pumped out and burnt by a process known as ‘flaring’.

Flaring takes place in specially built flaring units which break down the main part of the gas (methane) into carbon dioxide and water. Methane is a potent greenhouse gas and burning it in this way greatly reduces its impact on Global Warming.

Bacteria in the buried waste cause it to decompose, producing landfill gas containing

methane (CH4) and carbon dioxide (CO2). This process can last for more than 50 years. Methane has to be carefully disposed of as it is potentially flammable or explosive and is a potent greenhouse gas. It is one of the jobs of the Waste Services to ensure that landfill gas is safely managed.

All of our sites are monitored on a weekly basis and a report is sent to the Environment Agency with the data collected from the sites every three months. This is a statutory requirement.

It should be noted that there are over 100 closed landfill sites within the district. Almost all are commercial sites that have been closed for a long period. Waste Services are only responsible for minimal regulatory work on the six landfill sites that are owned/managed by the Council. There is no budget allocated for large-scale investigation and remediation works with any such works being assessed on an ad-hoc basis. In some cases, budgets for the sites are split between multiple departments including Asset Management, Environmental Health and even Children Services.

In 2020/21, Waste were asked to take on remediation of Sun Lane CLS in Burley-in-Wharfedale due to contamination issues arising more than 20 years since the site had closed. This work is now complete. We have also been asked to investigate and repair similar events at Odsal, Dean House Farm and Wilson Rd more recently which are ongoing projects.

Moving forward, a bespoke monitoring regime will be produced for each site with known/expected works being factored in to reduce the potential risk of contamination taking place.

2.1.14 Waste & DMR Treatment

There are several contracts in place for the treatment of DMR and residual waste. During 2019 to 2021 a number of the contracts with recycling merchants came to an end, and have or are currently been retendered.

In October 2019, the global recycling market went into a swift decline which effectively left most DMR unsuitable for sale. Metals and hard plastics were the only materials to remain at an income level. All other materials incurred a cost to either process or dispose of.

This issue resolved very slowly and the markets pricked up from April 2021 and are now at their highest in a long time if not forever. We do now need to provide cleaner, high quality DMR to end processors than before, with most demanding 95% quality and above.

Multiple changes to internal processing have taken place and/or are planned to ensure we have a fit-for-purpose MRF and infrastructure in place moving forward.

The upcoming announcements from DEFRA are anticipated to incur extra cost for LAs with a view to reducing waste and creating a more circular economy. These include:

- **The Environment Act** - Will give ministers the power to introduce a range of waste reforms such as extended producer responsibility, consistent collections and a deposit return scheme. DEFRA is currently working on consultation responses, which are due out early next year with the aim to help “transition to a more circular economy, incentivising people to recycle more, encouraging businesses to create sustainable

packaging, making household recycling easier and stopping the export of polluting plastic waste to developing countries"

- **Consistent Collections** will directly affect the service we provide by potentially dictating allowance of multi-stream kerbside collections with 3 to 4 receptacles expected. Additional fleet, staff, storage and contracts will be needed with our initial estimates showing c£4.5m needed to facilitate if we have to follow this route. Segregated food waste collection (if mandated) will be the largest and costliest change to the service due to the Environmental Regulations involved.
- **Plastic Packaging Tax** - due to be implemented in April 2022, will provide a clear economic incentive for businesses to use recycled plastic material in plastic packaging and places a £200 per tonne levy on producers or importers of plastic packaging if they do not include 30% recycled content. The plastic tax could encourage manufacturers and retailers to switch to compostable packaging. Councils do not have the infrastructure in place to sort and treat compostable packaging, and there is a risk that compostable packaging will contaminate plastic recycling streams.
- **Extended Producer Responsibility** - will mean that packaging producers will pay the full cost of managing packaging once it becomes waste. This will encourage producers to use less packaging and use more recyclable materials, reducing the amount of hard to recycle packaging placed on the market.
- **Deposit Return Scheme** - Will help to deliver improved quality and quantity of recyclates and change consumer behaviour

A new DMR processing contract will be tendered in the coming months to start April 2022. The main issue with this is that the above changes could have a number of unknown effects on the contract.

We have been procuring market-tracking contracts since August 2019 which have left us in a good position post-market recovery and this seems to be the norm now for most LAs and commercial companies as the risk is shared by both parties.

Around 150,000 tonnes per year of residual waste are usually processed by our contractor. Throughout Covid19, this increased to circa 170,000 tonnes which we believe is directly linked to lock-downs meaning more people at home, using more food, packaging and carrying out DIY projects. Around 300 to 500 tonnes per week additional waste was seen on a regular basis which has only recently started to decline.

The waste treatment contract for the Council's residual waste commenced April 2018. This 12-year contract was awarded to Associated Waste Management. (AWM) At present the contract is working well and performance is reported to this committee within Section 3 of this report - CONTRACTOR'S RESIDUAL WASTE TREATMENT PERFORMANCE.

2.1.15 MRF

2017 saw development of the Materials Reclamation Facility (MRF) located at the existing Bowling Back Lane site, in order to support the move to AWC and the co-mingling of DMR from the kerbside. A mix of mechanical and manual picking separates out various DMR and contamination, to produce mixed glass, cardboard, mixed papers, steel tins/can, alloy tins/cans and mixed plastics.

The levels of DMR contamination resulted in the requirement for a new trommel to take out the contamination at the front end of the MRF. The Council entered into procurement for such. The trommel sits at the front of the MRF to remove the majority of contamination prior

passing through the MRF to be sorted and 'polished' into a higher value/quality mix. It also enables the MRF to operate at a speed capable of handling all of the district's DMR where possible. Throughput needs to be around 15 tonnes per hour which is directly impacted by contamination and blockages from large materials.

Due to the above mentioned quality requirements increasing in 2020, our MRF is not capable of producing the required level on its own. Several trials of new machinery and market intelligence suggested a commercial-grade MRF would be needed. A business case was drawn-up to procure this with estimates of £4.5m investment needed. Unfortunately, market volatility, Covid delays, uncertainty around DEFRA guidelines from 2023 and site utility issues have prevented this project from taking place.

This delay/prevention has allowed us time to re-assess the market and our needs. Several trials of allowing raw (unprocessed) DMR to be sent directly to processors with high-end sortation equipment have proven that in-house manual picking of DMR is not the way forward for us. Without a guaranteed feedstock, a bespoke MRF would not be successful other than for reducing external spend.

We now (subject to business case and PAG approval) plan to replace the entire MRF with an automated 14-meter-long trommel for better removal of contamination and fines which will leave us with a better mix of "end of line" DMR which can then be sent to processors for a final clean and sortation. This will also future-proof us against the DEFRA plan for multi-stream collections if we have to use several kerbside bins/caddies

Contamination of DMR at the kerbside is a major concern and awareness and education campaigns continue alongside enforcement. Recycling Advisors are a crucial role as is the Recycling Champion programme, launched during National Recycling Week (September 2018) to supplement face to face contact in every ward. Levels vary from 9% to 45% across the district with a cost of £1m plus per year being incurred.

2.2 WORK PROJECTS

2.2.1 Municipal Waste Minimisation and Management Strategy (MWMMS)

The Council's Municipal Waste Minimisation and Management Strategy was approved by the Executive in January 2015, and highlighted future waste policy development and the need to manage waste to more sustainable levels, by minimising waste, encouraging re-use and improving recycling at the kerbside and reducing levels of residual waste.

The Council's strategy will be revised when it is known what the implications of the Government's Waste & Resources Strategy released 18 December 2018 will be (e.g. food waste and segregated DMR collections – results now due early2022) and to take into account all the changes which have been introduced in the last six years and to inform on the current and proposed changes to ensure the Council achieves its statutory obligations and targets with the ever changing legislation on Waste.

2.2.2 Alternate Weekly Collection

The introduction of the Bin Policy in 2015 and AWC in 2017 were the biggest changes to the collection service since the introduction of a wheeled bin collection method 20 years ago.

Almost all residents including rural now have the same collection day but on alternate weeks

for both residual and recycling. The same crews and vehicles follow the same rounds each week, just collecting a different bin which means we have a more consistent, efficient and cheaper waste collection service. There are some city centre dwellings that are still to be transferred to AWC due to issues with bin storage and capacity that have prevented AWC to date, however work is ongoing top resolve this in liaison with the relevant Management Companies.

2.2.3 Enforcement

Enforcement of the Bin Policy is carried out in conjunction with proactive engagement and behavioural change activities with residents across the District as outlined below. The crews use In-Cab technology to log any property which does not comply with the Bin Policy or produces contaminated recycling. This information is then used to issue a Section 46 notice to the householders detailing what action they need to take to rectify this and prevent further action being taken. Where a householder continues to present uncontained waste (side waste) an overloaded bin or contaminated recycling the Council reserves the right to take appropriate enforcement action which can lead to a fine being imposed on the householder(s).

The current number of Enforcement notices which have been issued during 20/21 compared to 18/19 are detailed below. Figures indicate the AWC has considerably reduced side waste in Bradford but not in Keighley where it has increased, however stage two action has reduced considerably in both areas. Contamination of recycling bins and subsequent enforcement has increased on both areas.

Bin Policy - Additional Bin / Side Waste		2018/19	2020/21
Bradford Area	Stage 1	6905	2973
	Stage 2	365	83
	Stage 3		
Keighley Area	Stage 1	415	760
	Stage 2	93	12
	Stage 3		

Bin Policy – Recycling contamination		2018/19	2020/21
Bradford Area	Stage 1	6538	7257
	Stage 2	24	78
	Stage 3		
Keighley Area	Stage 1	1380	1450
	Stage 2	10	15
	Stage 3		

2.2.4 Engagement & Behavioural Change

Changing behaviours through education, engagement and enforcement is key, as is

improving and introducing a systematic and consistent approach to communications across the district in respect to waste and waste management. This is achieved through a wide range of formats i.e. leaflets/posters/letters/ stickers/website/press/radio/Council APP/Facebook/Twitter/Stay-Connected and Roadshows held at events and throughout the communities.

A programme of intense and targeted marketing communications work focusses on specific areas which have been highlighted as having high levels of contamination of recycling bins by staff at the MRF.

We have introduced 'Operation Contamination' to combat recycling contamination: our Recycling Advisors accompany the crews and check recycling bins, placing contaminated bin hangers on any bins which contain contamination advising the residents this will not be emptied until the next scheduled collection and only if the contamination has been removed. A record is made of the addresses for enforcement in the future if necessary.

Recycling Advisors then re-visit the area to post through a letter and leaflet explaining that there are issues with contaminated bins and highlighting what can go in each bin (in simple pictorial form). Monitoring then takes place for the next few weeks, combined with door knocking at properties that may not be recycling as much as they can, or are confused about what goes in which bin. Enforcement letters are sent if the householder persistently contaminates their bin or places more than one bin out for emptying.
Results from this initiative have been very encouraging, with both crews and staff at the MRF noticing that recycling bins are not as contaminated and are generally fuller as a result of the campaign.

Information and demonstration bins are also placed in local public buildings, such as community centres and libraries to reinforce recycling messages in the target areas.

2.2.5 Recycling Advisors
The promotion of recycling is a vital part of reducing the amount of residual waste the Bradford District needs to dispose of. We have six Recycling Advisors who work across the District visiting households and advising them of how to manage their waste in line with the Bin Policy. This has proved to be an invaluable way of engaging with residents.

The advisors look at the households needs and advise them on how they can reduce the amount of residual waste they produce by simply recycling. They also advise on what items can be recycled. The recycling advisors also visit residents who have requested a larger 360L residual bin to ensure the household meets the criteria of 7 or more residents in the property.

2.2.6 Recycling Champions
As a further recycling initiative we asked for residents of the District who are interested in becoming volunteer Recycling Champions and willing to provide advice and guidance to other residents on a voluntary basis to help others to recycle more and waste less. We currently have 240 Recycling Champions signed up across the District.

Anyone who is over 18 and is interested in recycling and environmental issues can become a recycling champion – they don't need any specialist knowledge, just be enthusiastic and willing to speak to other people, put large stickers on the side of their bins which say 'Ask me about recycling', be prepared to answer any queries their neighbours may have or get

in touch with the Council on their behalf to find out more. They receive:

- Training
- Bin stickers to put on the side of their recycling wheelie bin
- Annual thank you event
- Stay connected monthly newsletter
- Access to extra information or promotions
- Up-to-date information before anyone else

At the training session the champions are asked to let us know if they are also prepared to:

- Share information with any groups they are involved in e.g. faith organisations, voluntary groups, parish councils
- Give talks to local groups
- Proactively distribute information in their local area
- Assist at local events/road shows
- Give feedback about what is working well or not

2.2.7 Procurement and Contract Management

A summary of recent contracts post-2019:

DMR - As previously mentioned, we are about to tender for the main DMR processing contract to start in April 2022. This will be based on a market tracking gain-share system as is the current agreement. There will be a heavy internal focus on reducing contamination levels to reduce costs.

Garden Waste - Contract was awarded in 2020 to a Biowise Ltd using the Esholt facility to create Pas100 compost. This contract runs to April 2023 with a spend of c£630k per year. Will be looking to link this to Anaerobic Digestion post 2023.

Textiles – A contract was awarded in 2020 with Randisi Textiles, a local processing company which provides a good return for the Council based on market fluctuations.

Steel cans – A contract was awarded in 2020 with Crossley Evans, a local processing company which provides a good return for the Council based on market fluctuations.

Cardboard - A contract was awarded in 2020 with Monoworld Ltd, a local processing company which provides a good return for the Council based on market fluctuations.

Mixed glass – A contract was awarded in 2021 for glass disposal for any mixed glass that is too low quality to be sold for recycling. Northern Trading Cumbria Ltd use the glass for aggregate mix.

2.2.8 Waste Service Infrastructure

This project is improving efficiencies within waste management through better ways of communicating, data collection and improved service delivery both internal and externally including routing systems and back office integration with oracle/arc GIS. This has replaced previous ad hoc systems with supported solutions. The routing of the residual and recycling rounds, rural rounds and garden waste has been completed and we are currently working on the trade waste rounds which will be followed by the bin delivery rounds.

The service determines information via GIS mapping that will support the further development of work organisation by understanding the location of;

1. The mapping and location of collection points across the District
2. Alternative solutions to the collections points
3. Problem collections points
4. Contamination at collection points
5. Rural Garden Waste collection points and the possibility of increased income

2.2.9 General Service Review

Plans to review and amend service policies and procedures in line with current requirements and regulations. Likely to include;

1. Standardisation of allowed waste streams at HWRC/kerbside
2. Introduction of charges of certain non-domestic waste at HWRC – i.e. soil/rubble
3. Increase/decrease of existing charges to reflect market conditions
4. Review of service expectations – i.e. bin sizes, property types etc.
5. Review of collection round structure
6. Review of service depot locations and potential merges

2.2.10 WRAP Service Review

We are in the process of arranging an industry specialist review (DEFRA funded) to benchmark our various service provisions, locally and nationally to ensure we are operating efficiently and following best practice. This will aid with the General Service Review mentioned above and should be complete by April 2022.

2.2.11 Investable Proposition

The Council is taking a whole system approach to transform the waste system in the district and is seeking specialist advice to determine what the new system should look like and how to deliver this in a commercial and sustainable way.

There is a need to move away from thinking about waste as a public sector service and instead look at the Council's operations in the context of the broader waste system and consider the economic and commercial opportunities associated with waste as a resource. The Council are keen to take a more commercial and holistic approach to waste.

By transforming the waste system in the Bradford District and as part of our Clean Growth approach, the Council is aiming to:

- reduce waste and become a zero-waste Council and district by 2038
- ensure no single use plastics across the Council by 2024
- be a test bed for clean growth and the circular economy
- have a Waste Service that is future proofed, cost effective, maximises income generation, and positively contributes to the circular economy
- have the right facilities in the right location
- attract businesses that use waste as a resource to locate in Bradford
- aid existing businesses to reduce waste and be part of the new waste system
- maximise job creation in the waste industry in Bradford
- support neighbouring authorities to improve their waste system through collaboration

The primary output from this commission will be a roadmap detailing how the district can transition to a new waste system that will achieve the transformation aims listed above. The

Council needs the consultant to propose practical solutions to break the Council's waste budget crisis, enable Bradford to become a zero-waste district and maximise opportunities to deliver clean growth in the district. The project and outcomes must inform or deliver a new strategic waste management strategy

This project is currently in its infancy with a draft scope ready for a procurement process to take place.

2.3 SERVICE PERFORMANCE

Local Authority Collected Waste (LACW), formerly known as Municipal Waste, is the total amount of waste that Waste Services handles; this includes waste from domestic collections, Household Waste Recycling Centres (HWRC), street cleaning operations and trade waste collections.

Household Waste (HW) which forms the majority of LACW, is that waste which arises from domestic situations, and includes kerbside collections of residual waste and recyclates, green waste collections, bulky waste collections, and waste and recyclates delivered by residents to HWRCs. It also includes street litter collected from around the district which under Waste Data Flow is classed as household waste.

Table 1 shows the overall results from 2014/15 to 2020/21 for LACW and HW.

Table 1 Waste Arising's

	2014/15	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**
LACW (tonnes)	225,645	233,323	231,453	222,002	227,350	227,570	240,442
HW (tonnes)	197,455	204,418	201,190	191,681	194,900	195,025	212,054

The increase in tonnages from 2017/18 can be directly attributed to the increased level of property growth and population within the District as shown in table 2 below.

Table 2 Bradford Infrastructure

	2014/15	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**
Number of Domestic Properties	213,915	215,369	213,790	215,180	216,700	218,190	219,140
Population	527,600	529,900	532,500	534,800	537,173	537,173	539,776

The reduction in waste arising is shown in a different way in Table 3 below. The continuation of the bin policy and the full year effect of Alternate Weekly Collections (AWC) in 2018/19 should continue to bring about an improvement in these indicators over the next few years however property and population growth will also have an impact. Unfortunately, the NI 191 total doesn't reflect this although this has reduced, the reasons are due to the definition of NI 191 and how it is calculated, and this is explained further in key performance indicators section.

Table 3 Kilos per Property/Person

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Total Kilos of Household Waste per property	923	949	903	852	857	894	968
Kilos of Household Waste per person	374	386	378	358	362	361	393
Kilos of residual Household Waste per Household (**NI 191**)	447	563	569	563	544	530	602

2.4 WASTE SERVICES OPERATIONAL PERFORMANCE

Residual kerbside waste has reduced again in 2019/20 compared to 2017/18 by 6,816 tonnes. Kerbside recycling has increased against by 5,231 tonnes. Garden waste kerbside has fallen by 439 tonnes despite an increase in customers subscribing to the service.

During 2020/21 all tonnages were non-comparable in reality to previous years due to lock-downs, HWRC closures etc. Residual waste increased by 11,203 tonnes, DMR increased by 7,407 tonnes and garden waste by 1,532 tonnes. These figures are still relatively high during 2021/22 but appear to be reducing slowly.

Table 4 Kerbside Collection Performances

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
All tonnes Collected at Kerbside	156,844	161,373	157,292	146,636	145,388	143,612	163,754
Residual tonnes at the kerbside	130,072	132,497	127,437	108,117	104,061	101,301	112,504
Recycled tonnes at the Kerbside							
Paper & Card tonnes	8,960	9,106	9,997				
Glass, Cans & Plastic tonnes	8,332	8,871	10,606	29,536	34,498	34,767	42,174
Garden Waste tonnes	9,480	10,899	8,085	7,983	6,829	7,544	9,076
Number of Properties Collected per	1,935	1,990	1,982	1,727	1,746	1,559	1,598

day per round (average)							
% rate of missed bins		0.135%	0.133%	0.31%	0.24%	0.16%	0.10%

Garden waste tonnages collected at the kerbside have reduced owing to this now being a chargeable service (see also comments in item 6 below).

The bottom line in Table 4 (which was a new addition from 2015/16) is an attempt to measure the quality of the service, whose main aim is to empty bins; therefore, a measure of the level of quality could be regarded as the % of missed bins, i.e. service failure, however it is recognised that not all reported missed bins are confirmed missed bins – with the continued use of In-Cab technology the true figures will be more accurate.

2.5 BULKY WASTE COLLECTIONS

The bulky waste collection service continues to collect between 1,000 – 1,200 tonnes per year. The introduction of a charge for bulk waste collections during September 2013, has not affected the overall tonnages collected.

Table 5 Bulk Collections

	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Bulk Collection Tonnage	1,021	1,167	1108	1,139	1,213	1,039

2.6 HOUSEHOLD WASTE RECYCLING CENTRES (HWRC)

Use of HWRCs remains high as shown in Table 6 post introduction of the resident only permit scheme in 2013.

Dry recycling shows a slight decrease however HWRC continue to show excellent levels of waste diversion before treatment.

Table 6 Household Waste Recycling Centres

	2014/15	**2015/16**	**2016/17**	**2017/18**	**2018/19**	**2019/20**	**2020/21**
Total Waste arising at HWRCs (tonnes)	31,800	35,088	39,246	43,450	47,132	48,467	45,451
Residual waste - sent to landfill/treatment (tonnes)	9,111	10,349	10,691	13,571	16,799	17,047	17,112
Waste Recycled (tonnes)							
Garden Waste (tonnes)	8,169	7,689	8,739	8,256	8,404	8,614	7,306
Dry Recycling (tonnes)	10,883	12,836	15,010	16,184	15,801	15,634	13,756
Soil/Rubble	3,638	4,214	4,806	5,439	6,128	7,171	7,277

(tonnes)							

2.7 KEY PERFORMANCE INDICATORS (KPI)

Table 8 below shows the KPIs for Waste Services.

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Kilos of residual Household Waste per Household (**NI 191**)	447	563	569	563	543		
Total %waste recycled/composted including contribution from waste treatment (**NI 192**)	51.6%	40%	37%	35%	39.8%		
Total tonnes of waste to Landfill (**NI 193**)	43,139	39,510	17,711	10,095	7,789		
Kerbside recycling %	17.1%	18.2%	18.24%	26%	33%		
HWRC recycling %	71.3%	70.5%	72.76%	69%	64%		
Total waste to Energy Recovery %	29.5%	40.5%	52%	60%	58%		
Total waste to landfill %	19.13%	18%	7.7%	4.5%	3.4%		

NI 191 figures for 2016/17 and 2017/2018 seem at odds with the overall position that residual waste is reducing as shown in Table 4. Under waste data flow NI 191 is defined as household waste that is not sent for recycling, reuse or **composting**, in other words residual waste. Unfortunately as reported in the performance report for 2015/16, apart from quarter 1 of 2015/16 amounting to 6,807t of composting, the ability to claim further tonnes of composting has been disallowed by the EA. In 2014/15 we claimed 23,391 tonnes of composting. The net result is that NI 191 has increased because we have not been able to claim any composting as can be seen for the last 3 years compared to previous years.

This situation has also negatively impacted on **NI 192** for the same reasons as described above, added again to a difficult year on the commodity markets, resulting in an NI 192 value of 35% for 2017/18. The recycling performance in 15/16 and 16/17 remained below previous years despite improved recycling tonnes collected at both kerbside and via Household Waste Recycling Centres (HWRC). This was due to previous compostable material extracted from our residual waste being disallowed after the first quarter of 15/16 and for all of 16/17. In addition, the waste contractor chose to focus on creating refuse derived fuel (RDF) instead of recycling low quality recyclates extracted from our waste due to depressed commodity prices. RDF does not count towards recycling performance.

The further 2% reduction in recycling performance in 17/18 was due to contamination levels of recyclates running at 40% and the impact of the “beast from the East” storm in early 2018 which saw three weeks’ worth of recyclates having to be disposed of as residual waste in

order to catch up on whole district collections.
The new residual waste treatment contract will guarantee a 6% contribution to this target due to performance standards built into the contract which when added to our upstream performance at kerbside and HWRC's, is expected to see the indicator exceed 40% at current performance levels.

In addition, alternative working arrangements and planned improvements at the Material Recycling Facility (MRF) should also see improved recycling rates.

NI 193 Waste sent to landfill decreased in 2020/2021 to 4.5%.

The Council's upstream kerbside recycling performance as shown on line 4 has increased significantly.

HWRC recycling and diversion performance continues to remain high at 69% as shown in line 3.

In line 6 waste to energy has risen significantly owing to more waste being placed to waste for energy and thus less tonnes landfilled as noted above.

3. CONTRACTOR'S RESIDUAL WASTE TREATMENT PERFORMANCE

Associated Waste Management Ltd – Bradford Waste Treatment Project - Executive Summary

Associated Waste Management Ltd (AWM) is pleased to submit its report for the City of Bradford Metropolitan District Council's (Council) Waste Treatment and Disposal Project (Project). AWM believes it has been well placed to meet all of the Council's objectives for the Project and alongside the previously detailed Technical and Financial submissions.

The table below reflects the performance by the waste treatment contractor in treating and disposing of the Council's residual waste.

	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20	2020/21
Waste direct to landfill	161	1,477	135	179	261		
Waste to treatment	164,951	167,136	163,762	154,046	155,383	132,245	154,376
Waste recycled or composted via treatment	57,014	24,822	26,075	17,657	18,850	17,200	22,027
Waste to Energy Recovery	66,483	94,506	119,976	126,768	130,620	110,353	128,652

Total waste to Landfill (**NI 193**)	43,139	39,510	17,711	9,621	6,048	2221	2,315

Treatment/Disposal Performance (in tonnes)

Waste direct to landfill
Waste sent direct to landfill decreased in 2020/2021 owing to improved availability of waste treatment facilities operated by the waste treatment contractor compared to last year. Note disposal of residual waste to landfill is always a last resort.

Waste to treatment
This has remained fairly constant during 2020/21 owing to reductions in residual waste tonnages requiring treatment through improved kerbside DMR collections.

Waste recycled/composted
There has been an increase in recycling at 1,193t over the previous year via the waste treatment contract due to more recycling of the residual waste under the new contract with AWM. Whilst the market has seen lower prices in commodities generally we have maintained our production through improvements to quality and reliable off takers through AWM.

Composting options still remain scarce, but we continue to work with new outlets and audit the facilities prior to use accordingly to ensure the process is robust and offers the optimum disposal BAT option for the contract

Waste to energy
This has maintained a steady level since the opening of the EF2 site, and again is welcomed as the waste is used to produce energy for the grid and provide power and jobs for the local Yorkshire community. However further tonnes have been put to waste to energy at the expense of landfill tonnages, resulting in a significant reduction in waste sent to landfill of some 2315t compared to the previous year. This continued reduction in waste sent to landfill is again is to be welcomed.

The % of our waste sent to landfill was 1.5% well within our targets set to AWM under the contract.

Background and EfW update:

AWM contracted with Effinium Multifuel Energy 2 Ltd (EF2) who have built and now operate a 630,000 RDF processing facility (EF2) at Effinium power station in West Yorkshire. EF2 is a joint venture organisation ultimately controlled by SSE plc and Wheelabrator Technologies Inc, two multinational companies with extensive expertise in the fields of waste management and power generation. These same two companies also own Effinium Multifuel Energy Ltd which operates the ‘sister’ plant (EF1) alongside which EDF2 is being built at Effinium. FM1 has been operational since July 2015.

Secondarily,as a long term contingency solution, we are contracted with experts in RDF processing/export in Europe. The contracts with AVR, Andusia and Geminor guarantee access for the full volume of RDF to be produced from Contract Waste to large CHP plants in cities such as Oslo, Amsterdam and Bremen.

As a result of this structure AWM is in a position to offer the Council a solution that treats Contract Waste in an effective, efficient, economic and environmentally sustainable manner which meets and exceeds the Councils output specification and objectives, specifically to:

- Commit to the Council's turnaround targets as set out in the Performance Framework
- Guarantee diversion of Contract Waste from landfill by more than 90% with a forecast performance in excess of 95%
- Guarantee more than 6.0 % recycling rate for the Council from Contract Waste
- Guarantee a recovery rate of more than 95% with all our proposed RDF processing outlets being R1 compliant
- Continue to offer substantial added value with regards to environmental, economic and social benefits, to the district of Bradford and the Yorkshire region

AWM continues to offer a two site waste reception and processing solution both of which are fully controlled by AWM. Details of the sites and the individual technologies proposed are outlined in the table below.

Facilities	**Use**	**Treatment Technology**	**Permitted Tonnage**	**Turnaround Times**
Valley Farm Road MRF, Stourton, Leeds	Primary facility for receipt and processing Contract Waste	Mechanical reclamation & automated separation	450,000 tonnes	20 minutes bulk & 15 mins RCV direct
Gelderd Road, Leeds	Contingent facility for receipt and processing Contract Waste		200,000 tonnes	

Valley Farm Road operates as a 'super MRF' and has the capacity of 450,000 tonnes per annum of mixed waste streams including Municipal Solid Waste. Like all AWM MRF plants the front end technology copes with a high throughput of materials typically running at between 45-55 tonnes per hour.

All processing post receipt of waste into the reception area is checked by a manual handling process to ensure the principal waste acceptance criteria are met. Waste is then loaded into the reception shredder and cut to a fraction size of between 270-300mm.

All waste is then subjected to a screening process to separate 2D and 3D materials and to separate small fine and organic materials from added value materials such as commodities including metals, plastics, paper fibre and inerts.
In order to process and capture materials we use a combination of screening technologies to prepare the waste streams prior to market.

The Valley Farm Road MRF plant recovers the specified materials in our solution by using the plant shown below. The other AWM MRF facilities also have installed equipment very similar to this but utilise the principle methodology of magnetic fields, high and low pressure environments with sieve screening throughout the processes.

Guaranteed (Bid Back) Performance Category	**Guaranteed (Bid Back) Performance Levels (%)**

Guaranteed Contract Waste Landfill Diversion Rate	90.01%

The actual diversion rate was 98.5%

AWM facilities have developed significantly over the past 10 years from simple transfer stations operating a range of recycling equipment to the introduction of bespoke and complex Material Reclamation Facilities treating a range of mixed and single stream waste streams. AWM have permits and manage planning regulations on more than 4 locations across West Yorkshire receiving more than 600,000 tonnes of mixed waste streams including MSW, C & I and C & D. Total direct landfill as a consequence of all treatment plants operated by AWM mean that less than 20,000 tonnes per annum have historically been landfilled from all incoming waste streams.
Today AWM can report that the landfill diversion for MSW and LA waste inputs is over 90% landfill diversion.

AWM have historically reported continuous landfill diversion on behalf of Bradford Council up until 2015 at 76%. Since April 2016 the diversion has increased to over 95% as reported monthly as part of Defra Waste Data Flow.

AWM can boast in 2007 the first installed combination of technology offered and used by BradMet provided in part from Holland, Germany and the UK.
During the past 14 years AWM management have seen huge advances both in technology and also Environmental Permitting, including waste management licences and risk assessments including Health and Safety, Environmental, Odour and nuisance management. The most significant aspects being the H4 Odour management protocols issued for consultation in 2011/12 requiring operators to formulate operate and correctly manage control measures for air pollution and odour migration emanating from more difficult and organic waste streams such as MSW.

Guaranteed (Bid Back) Performance Category	**Guaranteed (Bid Back) Performance Levels (%)**
Guaranteed Recycling Rate	6.01%

The actual performance during 2020/21 was 24.62%

The MRF technology provided by AWM has been designed to recover the following key commodities;

1. Paper and Card
2. Plastic films and Rigid plastic
3. Inerts and glass
4. Ferrous Metals and Non Ferrous Metals
5. Wood

With the exceptions of Metals and Inerts the other commodities are recovered through use of mechanical and manual means. Metal recovery is achieved by way of automated and mechanical systems involving electromagnetic fields and eddy current separators using opposing fields. We have summarised the flow diagram below illustrating the component parts and capture and exit points for recovered materials. This also includes the scrap and

ash recycling carried out from the RDF incineration residues arising from the Effinium sites at Ferrybridge

Guaranteed (Bid Back) Performance Category	Guaranteed (Bid Back) Performance Levels (%)
Guaranteed Contract Waste Recovery Rate	95.01%

The actual recovery rate excluding landfill and recycling / compost was 99.8%

Since 2010 AWM has pioneered the export and preparation of RDF from the treatment of MSW, supplying quality CHP plants throughout Northern Europe. The plants supplied include those operated by local municipalities, state utilities and merchant plant operators.

AWM holds term contracts with several outlet companies / operators and are listed beneath.

Company	Plant	Contracted tonnage	CHP Rating	Term
AVR	Rotterdam	14,000 tpa	R1	2011-2032
Andusia	Amsterdam Bremen	20,000 tpa		2015-2032
	Oslo			
Geminor	TFS's across europe	20,000 tpa		2015-2032

The primary RDF offtake solution is still FM2 facility operated by Effinium who work closely with AWM to ensure the Council has the best local circular solution

FM1 has an industry leading high efficiency of 31% net/thermal efficiency, scoring 86% R1 assessment using first 6 months operational data.

The enfinium Ferrybridge 2 Energy from Waste facility received 630,000 tonnes of Refuse Derived Fuel (RDF), produced from commercial and municipal waste, shredded to less than 300mm and delivered to FM2 by road haulage.
All RDF delivered to FM2 is subject to strict quality controls and an extensive sector leading sampling and testing regime with further spot inspections taking place during unloading.

All delivered RDF is incinerated in two purpose designed water tube boilers with a moving grate floor which progresses the RDF through the boiler heat zones with temperatures exceeding 850°C in a controlled manner to achieve complete combustion with the heat produced being used to raise steam to produce electricity to power the facility and also export to the to the regional distribution network. In 2020/21, Ferrybridge 2 exported 548,000 MWh, enough to power 130,000 homes.

Incinerator bottom ash and recovered ferrous metal are removed from site by road haulier and reprocessed into construction materials and recycled ferrous metal respectively. In 2020/21, 120,000 tonnes of Incinerator Bottom Ash was taken to the adjacent Blue Phoenix Ferrybridge facility for reprocessing and 19,500 tonnes of ferrous and non-ferrous metals were recovered for recycling.

Flue Gas Treatment takes place inside a semi-dry rector positioned downstream of the boiler, where the waste gases pass through powdered lime to reduce acid gases and also

powdered activated carbon which absorbs heavy metals present in the gas stream. they pass through banks of bag filters to remove particulate matter (dust) which is contaminated with Lime and Carbon, known as Air Pollution Control residue (APCr). In 2020/21, 25,000 tonnes of APCr was taken to OCO Technology Ltd in Leeds where it is reprocessed into an aggregate product which can be used in the construction and road building industries.

Flue Gases are emitted from the 100m tall stack after they have been passed through the Flue Gas Treatment area for the reduction of harmful components. Emissions are continuously monitored for compliance with the emission limits specified in the Environmental Permit.

Bottom ash is currently contracted to Ballast Phoenix at their Sheffield site where they extract any residual metal and recycle the aggregates generated by grading the ash. This provides a valuable resource for local projects in the South Yorkshire area.

The AWM staffing figure has grown significantly (530%) since the Company formed in 2000, with the need for a more diverse, adaptable and skilled workforce.

The breakdown of our entire workforce is as follows:

28% administration & management
37% drivers
12% engineering
23% industrial pick-pack

AWM commenced a Corporate Social Responsibility (CSR) programme in 2012 that was designed and developed with sustainability in mind. To address the needs of the Social Value Act our CSR policy was developed to address three main focus areas:

- Community
- Environment
- Economic Growth

One key initiative to benefit the business and local community was a drive for each site to recruit from their local community. Our data shows that with this principle in place, 85 jobs have been created and satisfied by people from Bradford; in turn this created an additional ‘local’ salary growth of £250,000 during 2015 alone.
Not only does this increase local peoples’ work prospects but by recruiting people that live within a short distance to the facility they will be working, the carbon impact of their journey to work will also be minimised.

Once recruited, AWM then use third party training companies to enhance the transferrable skill base of our workforce to meet the needs and demands of the business. In addition to creating main stream career opportunities, AWM have also engaged in the delivery of Apprenticeships within our Engineering division. Providing young people with prospects within vocational roles not only gives us the chance to close skills gaps but also utilise local communities as a source of labour; enhancing local peoples earning & prospect potentials.

AWM is committed to providing a quality service which supports the Council in a variety of key areas, as well as adding value to, and having a positive impact on the local communities

and environment within which it operates. As an example AWM and FMFE2L have proposed two sharing mechanisms to the benefit of the Council as part of our Bid:

- AWM have guaranteed a substantial volume of income from recyclates in the financial model and this is helping to subsidise the guaranteed Waste Treatment Rate being proposed. In addition to this guaranteed subsidy AWM will share upside in excess of the guaranteed levels. The mechanism is detailed in our Financial Schedule 5 (Payment Mechanism) response but in simple terms it offers the Council the opportunity to share in upside generated either as a result of rising commodity prices and/or increased performance by AWM with regards to recyclate capture from Contract Waste.
- The gate fee incurred by AWM for RDF processing at FM2 is already substantially subsidised by guaranteed levels of power income. In addition, FMFE2L have proposed a sharing mechanism which offers the Council the opportunity to benefit from the impact of electricity prices being above specified 'strike' prices in the future. The mechanism is detailed in our Financial Schedule 5 (Payment Mechanism) response. The mechanism is detailed in our Financial Schedule 5 (Payment Mechanism) response.

4. FINANCIAL & RESOURCE APPRAISAL

Volatility of residual waste and recycling tonnages have financial impacts on the service budget which requires constant monitoring and management. The service has no control over market conditions and income can reduce massively with no notice. We can however minimise and/or reduce processing costs and share risk with processors on any returns.

5. RISK MANAGEMENT AND GOVERNANCE ISSUES

This report is for information and discussion only.

6. LEGAL APPRAISAL

There are no legal issues arising from this report however care has been taken to ensure that no commercial sensitivities are divulged.

7. OTHER IMPLICATIONS

None

7.1 EQUALITY & DIVERSITY

N/A

7.2 SUSTAINABILITY IMPLICATIONS

The continued increases in recycles collected and reductions in waste to landfill contribute positively towards national and EU targets.

The RCV fleet will be 100% CAZ compliant by April 2022 once the next batch of 14 RCVs are received. Further plans for Bio-methane, Electric and/or Hydrogen powered fleet being explored.

7.3 GREENHOUSE GAS EMISSIONS IMPACTS

The RCV fleet will be 100% CAZ compliant by April 2022 once the next batch of 14 RCVs are received. Further plans for Bio-methane, Electric and/or Hydrogen powered fleet being explored.

7.4 COMMUNITY SAFETY IMPLICATIONS

N/A

7.5 HUMAN RIGHTS ACT

N/A

7.6 TRADE UNION

Trade Unions are updated monthly on all plans/projects within the service.

7.7 WARD IMPLICATIONS

There are different levels of recycling and bin policy compliance by collection round and hence by each ward. Relevant communication takes place in an attempt to increase recycling participation and reduce waste/fly-tipping.

7.8 AREA COMMITTEE ACTION PLAN IMPLICATIONS (for reports to Area Committees only)

N/A

7.9 IMPLICATIONS FOR CORPORATE PARENTING

N/A

7.10 ISSUES ARISING FROM PRIVACY IMPACT ASSESMENT

N/A

8. NOT FOR PUBLICATION DOCUMENTS

N/A

9. OPTIONS

N/A

10. RECOMMENDATIONS

That Regeneration and Environment Overview & Scrutiny Committee consider the information presented in this report and request a further progress report in twelve months' time.

That a site meeting/plant tour be arranged (Covid restriction dependent) for the Regeneration and Environment Overview & Scrutiny Committee to visit AWM's waste processing plant at Leeds and also the Ferrybridge FM2 waste to energy plant.

11. APPENDICES

N/A

12. BACKGROUND DOCUMENTS

12.1 Current Waste Strategy

Bradford MWMMS 2014.pdf

12.2 Bin Policy

domestic-waste-recycling-policy.pdf