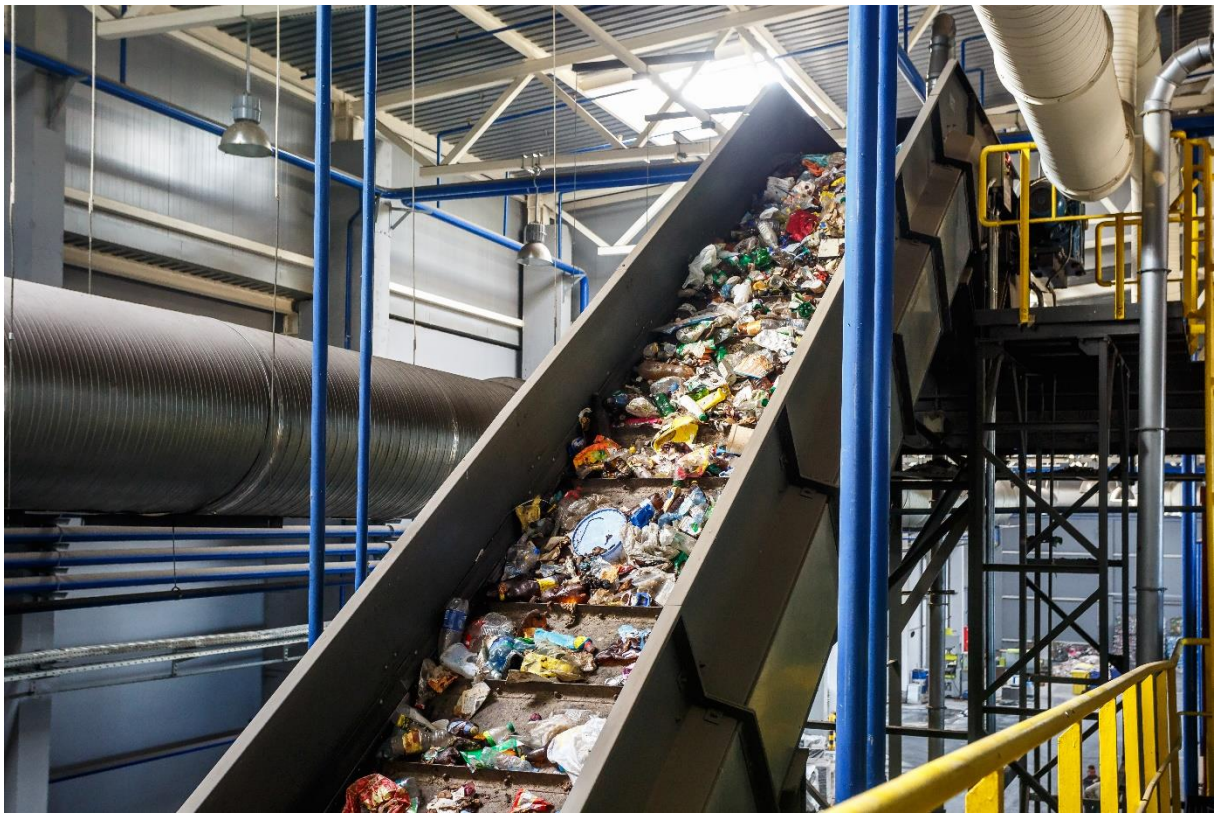
GATE FEES REPORT 2022/23

COMPARING THE COSTS OF ALTERNATIVE WASTE TREATMENT OPTIONS



WRAP's sixteenth Gate Fees Report analyses the gate fees charged for a range of waste treatment, recovery and disposal options as reported by local authorities.

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About WRAP

WRAP is a climate action NGO working around the globe to tackle the causes of the climate crisis and give the planet a sustainable future.

Our core purpose is to help you tackle climate change and protect our planet by changing the way things are produced, consumed, and disposed of.

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1.0 Executive summary

The Gate Fees Report 2022/23 summarises the findings of WRAP's sixteenth annual gate fees survey. The survey covers gate fees charged to Local Authorities (LAs) in the UK for a range of municipal waste recycling, recovery, and disposal options, for the year 2022.

The aim of the Gate Fees Report 2022/23 is to increase price transparency and, by improving the flow of information, improve efficiency in the waste management market. A lack of market information may reduce a local authority's ability to make informed decisions on waste management options.

For the first time select survey responses were shared with Defra in order to help inform modelling for the packaging Extended Producer Responsibility (EPR) scheme. Where explicit permission was granted, responses were shared with Defra. All data from the gate fees survey used in the packaging EPR will undergo additional quality assurance and cross-checking. The data will be used to support modelling for the packaging EPR, alongside other sources of data that are being collected to cover gaps not covered by the gate fees survey.

Methodology

Data gathering for this survey was conducted between November 2022 and January 2023. All local authorities in the UK were targeted including all Unitary Authorities (UAs), Waste Disposal Authorities (WDAs), Waste Collection Authorities (WCAs) and Joint Waste Authorities (JWAs). Also targeted were private sector operators of waste management facilities, and senior managers of large waste management companies operating within the UK market. The waste treatment/disposal routes targeted for gate fees were:

- Materials Recovery Facility (MRF);
- In-Vessel Composting (IVC);
- Anaerobic Digestion (AD);
- Energy from Waste (EfW); and
- Non-hazardous landfill (NHLF).

Responses were received from or on behalf of 266 Local Authorities (LAs), representing 62% of all LAs in the UK. Responses were received from 66% of English WDAs, covering 72% of WCAs and responses were received on or behalf of 82% of local authorities in Northern Ireland. However, responses were received from only 34% of Scottish authorities and 50% of Welsh authorities. The response rate is lower for some treatment/disposal options in some parts of the UK because some of the treatment types are less prevalent in those areas.

The 2022/23 survey has followed a similar approach to previous years in attempting to obtain gate fee and related data for waste management facilities through an annual survey conducted online, with a focus on maximising responses.

This year, efforts were made to provide a clearer distinction between bulking, storage and haulage costs. In line with a change to the survey made last year, net and gross gate fees for Materials Recovery Facilities were also distinguished: where a revenue sharing mechanism is in place, the two can differ greatly when material prices are high and therefore comparing net and gross gate fees against one another may lead to incorrect assumptions on the range of prices and some loss of granularity in the data. Collecting net and gross gate fees separately also allows for comparison against other factors to examine if the use of net or gross gate fees correlates with other behaviours or responses.

The approach taken aimed to further improve the accuracy of the data and the level of insight it provides.

Key findings

Summary gate fee data reported by local authorities for 2022/23 for a range of waste management processes are presented below.

Materials Recovery Facilities (MRFs)

The gate fee results for MRFs are summarised in Table 1 below.

Table 1: Summary of UK MRF gate fees reported by local authorities, 2022 (£/tonne)

Gate fee type	Median (£/t)	Mean (£/t)	Mode[1] (£/t)	Range[2] (£/t)	Response count
Gross	79	75	85.01 to 90	-36 to 133	108
Net	16	10	15.01 to 20	-83 to 106	126

- The results spanned a wide range of values, with significant variations arising from a number of contract/service delivery factors explored more fully within the report.
- The upward trend in MRF gate fees continues. The median gross UK MRF gate fee for contracts sorting two or more materials is £79/tonne (for a range of -£36 to £133/tonne), compared to £60/tonne in 2021/22 and £43/tonne in 2019/20.
- The median gross UK gate fee for contracts commenced since 1st April 2022 (£58/tonne) is lower than the median gate fee for all current contracts across the UK by £21/tonne. However, this insight based on only seven relevant responses for contracts commenced since 1st April 2022 and should be treated with caution.

1 Mode is the gate fee range (in £5 increments) which received the most responses in the survey data.
2 Range lists simply the ranges between the maximum and minimum data points in the survey data collected.

- The median gate fee falls when the income from commodity sales is accounted for in the net gate figures (£16/tonne). This compares to a net gate fee excluding transport of £18/tonne in 2021/22.
- Responding authorities were asked if their gross gate fee had changed in the last 12 months, with 87% saying 'Yes'. 52% said that it had increased by more than 5%, while 20% reported a decrease of more than 5%. 15% suggested a smaller change (i.e. no more than a 5% increase or decrease). Only 13% reported no change.
- Of those providing an explanation for the change, 56% stated inflation increase or price review, 32% said changes to the value of materials collected and 20% cited changes to contract.
- 51% of authorities stated that their input contamination must not exceed 15% of total material input.
- 24% of authorities stated that their MRF provider monitors and enforces excessive contamination more proactively compared to last year.
- 52% of authorities said that their contract includes an element of contractor risk share, where the risks associated with the sale of recycled material, primarily commodity value and material quality, are shared.
- Authorities were asked if they envisaged changing their collection method for dry recyclables at the next available opportunity. Of the 92 that responded, 28% said 'Yes' and 72% said 'No'.
- None of the responding authorities planned to move to a commingled collection. 32% said that they would change to a system described as 'Twin stream system (Stream 1 = paper and cardboard; Stream 2 = glass, metal and plastic containers)', with a further 20% stating that they would move to a system described as 'Material presented in at least three containers at the kerbside'. Amongst the authorities proposing to change their system, 58% said they were currently using a commingled methodology.

In-vessel Composting (IVC)

The gate fee results for IVCs are summarised in Table 2 below.

Table 2: Summary of UK IVC gate fees reported by local authorities, 2022 (£/tonne)

Gate fee type	Median (£/t)	Mean (£/t)	Mode (£/t)	Range (£/t)	Response count
Mixed food & green waste	54	63	40.01 to 45	34 to 112	38
Green waste only	79	67	75.01 to 80	26 to 112	39
Food waste only	65	69	110.01 to 115	22 to 112	27

- 'Mixed food and green waste' and 'Green waste only' were the most common materials reprocessed, with a median figure of £54/tonne for mixed food and green waste and £79/tonne for green waste only. This is very slightly lower than the 2021/22 median figure of £55/tonne for mixed food and green waste but considerably higher than the 2021/22 median figure of £30/tonne for green waste only.

- The 2022/23 median gate fee for food waste only was £65/tonne, slightly higher than the 2021/22 figure (£63/tonne).

- Only four responding LAs have commenced new IVC contracts processing mixed food and garden waste since 1st April 2022 and therefore the gate fees provided should not necessarily be viewed as representative of current contracts. The median gate fee (£65/per tonne) for these authorities is higher than the overall UK median (£54/tonne). Only one responding LA commenced a new contract processing 'Green waste only' since 1st April 2022.

- Authorities were asked whether their gate fee had changed in the last 12 months, with 93% saying 'Yes' and 7% 'No'. 79% of respondents cited inflation as one of the reasons for the change.

- Authorities were asked how their gate fee has changed, with 60% stating that it had 'increased', 7% saying it had 'decreased' and 27% suggesting 'limited change (i.e., no more than a 5% increase or decrease)'. 7% said there had been no change.

Anaerobic Digestion (AD)

The gate fee results for AD facilities are summarised in Table 3 below. There were no responses for LAs using AD to reprocess mixed food and green waste.

Table 3: Summary of UK AD gate fees reported by local authorities, 2022 (£/tonne)

Gate fee type	Median (£/t)	Mean (£/t)	Mode (£/t)	Range (£/t)	Response count
Food waste	13	16	10.01 to 15	-26 to 71	78

- The median UK gate fee for food waste sent to AD was £13/tonne (for a range of -£26 to £71/tonne). This is significantly lower than the median UK gate fee of £30/tonne in 2021/22. Only five responding authorities had commenced new AD contracts for food waste only since 1st April 2022. The median gate fee (-£15/per tonne) for these authorities was lower than the overall UK median (£13/tonne).

- In total, 3 contracting authorities, representing 9 LAs, provided a negative gate fee, signifying that this is not a single authority anomaly but is occurring across multiple authority AD contracts. These contracts also all commenced recently, and it is not clear if these results are anomalous to this year's survey. It is recommended that LAs exercise caution when considering these figures as these values may not be reflective of future costs.

- Authorities were asked whether the AD gate fee had changed in the last 12 months. A total of 27 responded, with 59% answering 'Yes' and 41% 'No'.
- When asked how the gate fee had changed, 15% said it had 'decreased' whilst 15% said there had been 'limited change' (i.e., no more than a 5% increase or decrease). 30% responded to say there had been an 'increase' and 41% stated there had been no change.
- Authorities were asked for the reason(s) for the change (with the option to select more than one response). 55% stated that it was related to an 'inflation increase'. 52% of respondents said that there were 'changes to operating costs' and another 32% selected 'change in value of energy generated'.

Energy from Waste (EfW)

The gate fee results for EfW facilities are summarised in Table 4 below.

Table 4: Summary of UK EfW gate fees reported by local authorities, 2022 (£/tonne)

Gate fee type	Median (£/t)	Mean (£/t)	Mode (£/t)	Range (£/t)	Response count
EfW	103	103	115.01 to 120	45 to 175	46

- The median UK gate fee for waste sent to EfW facilities was £103/tonne (for a range of £45 to £175/tonne). This compares to a UK median gate fee of £95/tonne in the 2021/22 survey report.
- No authority responding to the survey had commenced a new EfW contract since 1st April 2022.
- Authorities were asked whether the gate fee had changed in the last 12 months. A total of 58 authorities responded, with 91% answering 'Yes' and 9% 'No'.
- When asked how the gate fee had changed, 55% suggested it had 'increased' whilst 34% said there had been 'limited change' (i.e., no more than a 5% increase or decrease). 9% stated there had been 'no change' and only 2% of respondents said there had been a 'decrease'.
- Authorities were asked for the reason(s) for the change (with the option to select more than one response). 84% cited 'inflation increases' and 20% stated changes to operating costs. The remaining responses were either 'Increase in value of energy generated' (5%) or 'other' (5%) with these responses covering themes including contract waste inputs or increased costs arising from changes to taxation of red diesel.

Non-hazardous Landfill (NHLF)

The gate fee results for NHLF facilities are summarised in Table 5 below.

Table 5: Summary of UK NHLF gate fees (excluding landfill tax) reported by local authorities, 2022 (£/tonne)

Gate fee type	Median (£/t)	Mean (£/t)	Mode (£/t)	Range (£/t)	Response count
NHLF	28	32	10.01 to 15	11 to 87	36

- The median UK gate fee for waste sent to NHLF facilities was £28/tonne (for a range of £11 to £87/tonne). This is the same as the UK median gate fee of £28/tonne in the 2021/22 survey report.
- These figures exclude landfill tax, currently set at £98.60/tonne for 2022/23 across all nations.
- No respondents had landfill contracts that had commenced since 1st April 2022.
- Authorities were asked whether the gate fee had changed in the last 12 months (excluding any adjustment for inflation). A total of 36 responded, with 56% suggesting there had been an 'increase' of more than 5% whilst 36% said there had been 'limited change' (i.e., no more than a 5% increase or decrease). 6% stated there had been 'no change' and only 3% said there had been a 'decrease'.
- LAs were asked for the reason(s) for the change with 86% citing 'inflation increase/price review', 6% 'referring to 'change to contract', and 3% referencing a 'change to operating costs'. A total of 9% said that this was 'not known'.

Section 7 of the report discusses the key factors influencing the results and key takeaways for Local Authorities in their contracting with operators for gate fees. A brief summary of the section findings is covered below.

Understanding and interpreting the data

The 2022/23 survey has followed a similar approach to previous years in attempting to obtain gate fee and related data for waste management facilities through an annual survey. This year, efforts were made to provide a clearer distinction between bulking, storage and haulage costs. In addition, for MRF facilities, where income from material sales can impact upon the gate fee, respondents were asked to distinguish between the gross gate fee and the net gate fee paid once material income share had been accounted for.

Readers of the Gate Fees Report 2022/23 must exercise caution when drawing conclusions from gate fee data in isolation and without sufficient context. In some cases, response rates were low and may not be representative.

The survey and Interviews helped confirm there are myriad factors that will impact gate fees, particularly for MRFs. These include:

- dry recycling collection methodology;
- materials collected;

- length of contract;
- quality of material delivered;
- inclusion of contractor/LA risk share arrangement regarding the sale of reprocessed material;
- the presence of contamination thresholds (beyond which loads can be rejected or subjected to additional charges);
- wider LA levies/financial mechanisms;
- the ability of LAs to deliver directly to facilities/use of transfer facilities;
- geographic location and proximity to other facilities;
- energy costs and other operating costs;
- capital costs;
- timing of LA contract procurement; and
- availability of competitor capacity.

The purpose of this report is not to statistically determine the impact of any of these factors in isolation. Readers should therefore be aware that the cumulative impact of these factors can exert significant influence over the gate fees charged. This is evidenced, for example, by the fact that the net MRF gate fee range across the UK is £189/tonne (Table 13), despite the services delivered being broadly similar in character.

Relatively high commodity values was referenced as the most common reason for MRF gate fee change over the past 12 months. Increasingly, MRF contracts now include an element of LA risk share concerning the sale of reprocessed material with 94% of contracts now sharing 50% or more of the material value risk with the LA (Figure 10). This has increased from 70% in last year's survey.

Interviews with MRF operators (4.1.11 Waste contractor interviews) revealed an increase in operational costs, and in particular a significant increase in energy prices, and the need to invest in new plants to accommodate new materials. These costs may lead to rising gate fees if material prices decline as a result of market changes or the introduction of a deposit return scheme, which will likely divert more valuable commodities from MRFs.

. Examples of factors that could influence how the gross/net gate fees have been reported include:

- Reporting of contamination/rejected loads, which may exist as separate budget lines and therefore not be incorporated into the true net cost;
- Some WCA gate fees may incorporate a subsidy/levy from their WDA that cannot be disaggregated (e.g. tipping away payments, payment for bulking/haulage);
- Some LAs have an interest in the MRF that they use (and may own it). In such cases, the gate fee may not be representative of the price that would be paid to a commercial operator (as the build/operational costs may be already paid/allocated elsewhere within budgets);
- Some LAs may not be able to disaggregate transport costs as these may form part of one holistic payment mechanism; and

- Some LAs may use more than one MRF. Whilst we have tried to report separate gate fee costs, where appropriate, this has not always been possible.

Key points from the survey for LAs to consider

For LAs considering future contracting, there is no one single influencing factor that the data from the survey points to as a key consideration. There are a range of factors that LAs should consider, prior to going to market to tender future reprocessing/disposal contracts. These are summarised below.

MRF contract considerations

- The majority of respondents stated that their MRF contracts included an element of LA risk share concerning the sale of reprocessed material (52%). In comparison with last year's results, there appear to be fewer contracts where 100% of the risk share rests with the operator. This was 23% in the 2021/22 survey but just 3% this year. Historically, a number of MRF contracts operated on a fixed gate fee basis. LAs should be mindful that prospective contractors may not agree to receive material without such risk share arrangements, or that the exclusion of an LA risk share may impact the gate fee levied due to the contractor pricing in risk.
- 51% of respondents stated a maximum contamination threshold of up to 15%, beyond which loads are rejected or charges imposed. LAs will generally obtain more competitive gate fees as quality improves and the level of contamination in recyclable material reduces.
- Of those LAs that highlighted a potential recycling service change at the next opportunity, none indicated a move towards less segregation of material. This accords broadly with the direction of travel set by the Environment Act 2021 regarding the separate collection of core material streams but also the market price increases for commingled materials.
- LAs in England should consider potential requirements set out in the Defra consistency consultation to incorporate additional materials in kerbside recycling collections and how this could impact existing and future MRF contracts. 43% of LA respondents thought the requirements to collect additional materials would result in a change of gate fee, while 39% didn't know what the impact would be. 47% of respondents also said that their existing MRF contract allows for material streams to be added, while 28% said it did not and 26% were not sure.
- The survey highlights that 46% of MRF contracts expire by the end of 2024 (though some are able to be extended). Operator interviews suggested size (tonnage and contract value) and duration of the contract was not a significant influence on gate fees but might affect their decision whether or not to bid for the contract. Long term contracts are usually preferred, but short-term contracts can be attractive if they fit in with periods where there is capacity in an operator's portfolio of facilities. It is vital that LAs consider their contractual requirements as early as possible, taking into account factors highlighted in the Gate Fees Report 2022/23, in order to secure efficient contracts that will satisfy existing and forthcoming legislative requirements.

- MRF operational costs could be subject to a further increase in the next 12 months. This stems from the impact of changes to red diesel duty, increased costs due to operator overheads, general operating costs and inflation. The value of commodities and their ability to offset these costs will therefore continue to have a significant influence on the overall direction of gate fees in the next 12 months.
- Interviews suggest that future policy changes are also likely to place further pressure on MRF operator costs. The removal of valuable materials due to the introduction of a Deposit Return Scheme (DRS), and the requirement to invest in order to adapt processes to handle additional materials (cartons, metal packaging, and plastic film) will likely result in a change to gross gate fees to help offset costs. Four respondents from the operator survey suggested that the introduction of DRS would affect gate fees, with three saying this would increase gate fees by more than 6%.

Other contract considerations

- IVC: Gate fee trends appear divergent depending on the material input. Gate fees for mixed food and garden waste have reduced (from £55/tonne in 2021/22 to £54/tonne in 2022/23). The requirement for the separate collection of food waste, set out in the Environment Act 2021, may alter the composition of organic material currently collected and LAs should have regard to this.
- AD: Around 46% of respondents' AD contracts are due to expire by the end of 2025 (though some have the option to extend) and, given the anticipated increase in the number of LAs requiring AD capacity for separately collected food waste, LAs are advised to ensure sufficient timescales for market engagement and procurement. If more English LAs start to collect food waste there would be increased pressure on capacity and operator interviews suggested guaranteed tonnages may need to be offered to secure a contract with them.[3] It was suggested that commercial customers will fill any additional capacity that LAs do not secure under contract.
- AD: The impact of increasing inflation and operating costs is less stark with AD than with some other treatment types. Separate food waste collections and the change in energy value were seen as the significant factors influencing AD gate fees as part of future contracts.
- EfW: Based on the operator interviews, gate fees can be dependent on the length of contract and when the contract was procured. Many of the EfW contracts seen in the surveys were procured before 2022 and so recent energy prices may not yet be reflected within them.
- NHLF: The operator interviews highlighted that gate fees have increased in 2022 due to increases in inflation and, in some cases, limited competition from other facilities. This was also reflected in the LA surveys. Landfill is less limited to a particular annual throughput than other forms of waste treatment, and therefore issues of supply and demand tend to be less of a driver of gate fees.

[3] This is the view of the interviewee. LAs should carefully consider the inclusion of any clauses regarding guaranteed minimum tonnages.

2.0 Contents

3.0 Tables

4.0 Figures

5.0 Glossary

AD	Anaerobic Digestion
APCr	Air Pollution Control Residues
ADEPT	The Association of Directors of Environment, Economy, Planning and Transport
AHP	Absorbent Hygiene Products
C&I	Commercial and Industrial
C&D	Construction and Demolition
DCN	District Councils' Network
DMR	Dry Mixed Recycling
DRS	Deposit Return Scheme
EfW	Energy from Waste
EPR	Extended Producer Responsibility
Green Waste	Garden waste
HAFS	Hospitality and Food Sector
HWRC	Household Waste Recycling Centre
IVC	In-Vessel Composting
JWA	Joint Waste Authority
LA	Local Authority
MBT	Mechanical Biological Treatment
MRF	Materials Recovery Facility
MSW	Municipal Solid Waste
NAWDO	The National Association of Waste Disposal Officers
NHLF	Non-hazardous landfill
PAMs	Printed Advertising Material
PFI	Private Finance Initiative
PTT	Pots, Tubs and Trays
QFS	Quality and Food Safety
rPET	Recycled Polyethylene Terephthalate
RDF	Refuse Derived Fuel
RPI	Retail Prices Index
SRF	Solid Recovered Fuel
UA	Unitary Authority
WCA	Waste Collection Authority
WDA	Waste Disposal Authority
WMC	Waste Management Company
WRA	Wood Recyclers Association

6.0 Acknowledgements

We would like to thank all of the UK local authorities and facility operators whose officers and staff took time to contribute to this survey, and all the waste management companies and individuals who generously provided information or agreed to be interviewed.

1.0 Introduction

The Gate Fees Report 2022/23 contains the findings of WRAP's annual gate fees survey for 2022. It summarises the gate fees charged to Local Authorities (LAs) for a range of waste treatment, recovery and disposal options. The Gate Fees Report 2022/23 also looks at the factors likely to influence current and future gate fees and includes comparisons to the previous year's results.

The aim of the gate fees survey is to increase price transparency and, by improving the flow of information, improve efficiency in the waste management market. A lack of market information can reduce an LA's ability to make informed decisions on waste management options. Therefore, the publication of indicative gate fee information, such as that contained within this report, should assist LAs in making better informed decisions regarding waste management options. The objectives of this year's survey were:

- To capture the variation in gate fees by treatment/disposal option, by surveying LAs that procure waste treatment and disposal services and service providers including Waste Management Companies (WMCs) and operators of waste treatment facilities;
- To encompass a broad regional distribution of gate fees for facilities across the UK, including England, Wales, Scotland and Northern Ireland; and
- To provide insights regarding current trends and factors likely to affect gate fees in the future.

For the first time select survey responses were shared with Defra in order to help inform modelling for the packaging Extended Producer Responsibility (EPR) scheme. Respondents to the survey were asked to give permission for their responses to be shared with Defra, where explicit permission was given individual responses were shared. All data from the gate fees survey used in the packaging EPR will undergo additional quality assurance and cross-checking. The data will be used to support modelling for the packaging EPR, alongside other sources of data that are being collected to cover gaps not covered by the gate fees survey.

2.0 Approach and scope of this study

The Gate Fees Report 2022/23 compiles information regarding gate fees charged in the 2022 calendar year for a variety of waste management treatment and disposal options. The geographic scope covers the whole of the UK, with data broken down to the level of each of the UK's four nations, as well as showing London separately from the rest of England, where sample size allows. Requests for gate fee information were issued to LAs, including all Unitary Authorities (UAs), Waste Disposal Authorities (WDAs), Waste Collection Authorities (WCAs) and Joint Waste Authorities (JWAs) within the UK. The waste management facility types included in the LA survey questionnaire were:

- Materials Recovery Facility (MRF);
- In-Vessel Composting (IVC);
- Anaerobic Digestion (AD);
- Energy from Waste (EfW); and
- Non-hazardous landfill (NHLF).

A similar survey was also issued to a sample of commercial operators of each of the five facility types. This involved another online survey, which included gate fee questions relating to waste supplied from both municipal (i.e. LA services) and commercial and industrial (C&I) sources.

In addition, video conferencing interviews were hosted with representatives from a selection of the major WMCs. These interviews were flexible in their scope, in that they addressed all major waste treatment and disposal options offered by the company in question. The purpose of the interviews was:

- To obtain an overview of the market and factors influencing current and future gate fees for the different treatment options, particularly for commercial waste; and
- To sense check the gate fees gathered through the LA survey.

Responses reflect the views of the interview respondents at the time of interview.

It should be noted that the Gate Fees Report 2022/23 summarises outputs only based on responses received and is not necessarily reflective of all contract costs.

3.0 Survey response rates

Overall, responses were received from or on behalf of 266 local authorities, or 62%. Responses were received from 66% of English WDAs, covering 72% of WCAs and responses were received on or behalf of 82% of local authorities in Northern Ireland. However, responses were received from only 34% of Scottish authorities and 50% of Welsh authorities. The response rate is lower for some treatment/disposal options in some parts of the UK because some of the treatment types are less prevalent in those areas.

3.1 Local authorities

A summary of response rates by authority type and the gate fee data by facility type is shown in Table 6 below. The number of responses from WDAs includes Joint Waste Disposal Authorities and Waste Partnerships. These are also counted within the 'unitary' category for Scotland, Wales and Northern Ireland, where relevant.

Table 6: Local authority response rates by region and facility 2022

	England				Scotland	Wales	NI	UK
	WDA	WCA	Unitary	London	Unitary		Unitary	Total
No. of Local Authorities	29	212	85	37	32	22	11	428
Responses received from or on behalf of	19 (66%)	148 (70%)	41 (48%)	23 (62%)	11 (34%)	11 (50%)	9 (82%)	262 (61%)
Number of LA survey respondents that provided gate fee data for the following facilities								
MRFs	151 (58%)							
IVC	60 (23%)							
AD	69 (26%)							
EfW	49 (19%)							
NHLF	36 (14%)							

The total number of WCAs in England has reduced slightly compared with previous surveys as a result of local government restructuring. Further restructuring took place in April 2023.

The overall number of authorities for which responses were received was higher than in 2021/22, rising from 200 to 262 LAs overall. In England, the number of responses increased from 168 (50%) to 231 (64%). The number of UA respondents in England increased from 33 to 41, whilst the number of responses from WDAs decreased from 21 to 19. Responses received either directly from or on behalf of WCAs increased from 93 to 148. In London, the number of respondents showed a small increase from 21 to 23. Responses from LAs in Scotland fell slightly from 12 to 11. Responses for Wales and Northern Ireland remained the same at 11 and 9 respectively.

Across all LAs, the common reasons cited for not being able to fully complete the survey included:

- the use of integrated contracts, resulting in difficulties disaggregating specific gate fee values;
- commercial confidentiality (i.e., contractually obliged to not share gate fee information);
- Teckal company or other contractor overseeing the details of the contract; and
- authorities in two tier areas stating that material reprocessing/disposal contracts were the responsibility of the WDA – a question was included in the survey so that WCAs could indicate who should be contacted for this information.

3.2 Interviews with waste management companies

Eight interviews were conducted at a senior level across five WMCs to test initial findings from the LA surveys, as well as to gather information on commercial gate fees and future influences on gate fees.

The interviewees represented all waste management treatment/disposal options highlighted in the survey, as can be seen in Table 7 below. The interviews provide further context to the observed results.

Table 7: Number of interviewees per facility type

Facility type	Number of interviewees
Materials Recovery Facility	2
In-Vessel Composting	1
Anaerobic Digestion	1
Energy from Waste	2
Non-hazardous Landfill	2

The interviews with these companies were timetabled so that the initial gate fee findings of this year's surveys could be discussed. Discussions were guided by a predetermined list of interview questions but also allowed for open discussion, potentially including all aspects of the market that were relevant to gate fees in the UK. The interviews themselves were conducted using videoconferencing software, and notes were taken during the meeting. Relevant information from these interviews can be found at the end of each waste disposal section within this report.

4.0 Results and analysis

As with previous years, analysis of the cleansed survey data focussed upon generation of:

- median gate fees (i.e., the value in the midpoint of the distribution of gate fee data collected, with an equal probability of falling above or below it); and
- gate fee ranges (i.e., the range between the minimum and maximum values obtained in the survey).

The mean and mode of the gate fees has also been calculated. The mode has been calculated due to the problems of interpreting the sometimes-large range between minimum and maximum figures collected. In this case, mode is the gate fee range (in £5 per tonne increments) which received the most responses in the survey data.

In this year's survey, respondents were asked to provide the following data:

- The gross gate fee per tonne charged by the MRF operator in the latest quarter (3-month period from July-September) of 2022/23. This figure is exclusive of any rebate received for the sale of reprocessed material; and
- The net gate fee per tonne charged by the MRF operator in the latest quarter (3-month period from July-September) of 2022/23. This is the gross gate fee minus any rebate received from the MRF for the sale of reprocessed material.

This approach was adopted because, where a revenue sharing mechanism is in place, net and gross gate fees can differ greatly when material prices are high and therefore comparing them against one another may lead to incorrect assumptions on the range of prices and some loss of granularity in the data. Collecting net and gross gate fees separately also allows for comparison against other factors to examine if the use of net or gross gate fees correlates with other behaviours or responses.

This year, gate fees weren't differentiated by including and excluding transport costs. Instead, a separate question requested respondents to provide bulking, storage and haulage costs where they could indicate what the costs for the different elements were. This change was introduced to improve information regarding transport costs. For comparison purposes, the 'including transport' rates from last year's survey would be expected to incorporate all of these costs but direct comparison would be inadvisable. Where gate fee amounts have been compared with the results from 2021/22, they have been compared to the 'excluding transport' costs.

It should also be noted that, where a respondent reports a negative value, this denotes an income whilst a positive value denotes a cost to the LA.

Please note that due to rounding of responses received, some percentages may not equal exactly 100%.

The individual survey responses which combine to form the results presented in this report were shared with Defra, where explicit permission was granted. The data shared with Defra will be used to inform modelling for the packaging EPR. All data from the gate fees survey used in the packaging EPR will undergo additional quality assurance and cross-checking. Data from the gate fees survey used in the modelling will be supported by other sources of data to cover aspects not covered by the gate fees survey.

4.1 Materials Recovery Facilities (MRFs)

Of a total 155 responses from LAs, four gate fee responses were removed due to the responses either being identified as significant outliers or being discounted after follow-up with the LAs identified inaccuracies. Some authorities gave the same value for net and gross gate fees, and it was decided that in such instances the gross gate fee would be taken, and the net gate fee excluded from consideration.

4.1.1 Collection methods for materials sent to MRFs

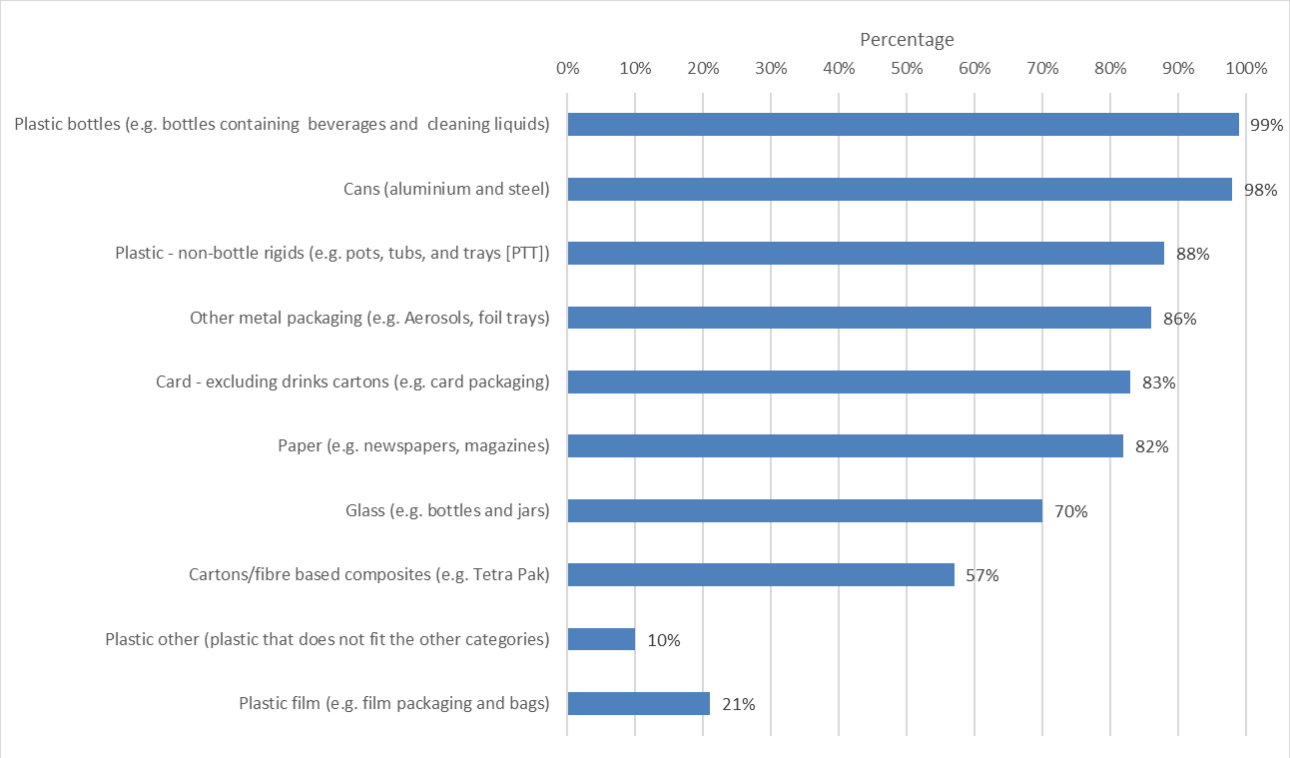
The survey asked LAs to specify which materials they target through their collection services that are sent to a MRF. Table 8 and Figure 1 summarise the findings.

Table 8: Material types that UK respondent LAs collect and send to a MRF (%)

Material type	Percentage (%)
Plastic bottles (e.g., bottles containing beverages and cleaning liquids)	99%
Cans (aluminium and steel)	98%
Plastic: non-bottle rigids (e.g. pots, tubs, and trays [PTT])	88%
Other metal packaging (e.g. aerosols, foil trays)	86%
Card – excluding drinks cartons (e.g. card packaging)	83%
Paper (e.g. newspapers, magazines)	82%
Glass (e.g. bottles and jars)	70%
Cartons/fibre-based composites (e.g. Tetra Pak)	57%
Plastic film (e.g. film packaging and bags)	21%
Plastic other (plastic that does not fit the other categories)	10%
Other	7%

The data in Table 8 does not necessarily reflect the proportion of LAs that collect these material streams for recycling at the kerbside, as materials may be collected separately and therefore not require processing via a MRF. Separately collected material streams are likely to be delivered directly to material reprocessors.

Figure 1: Material types that UK respondent LAs collect and send to a MRF (%)

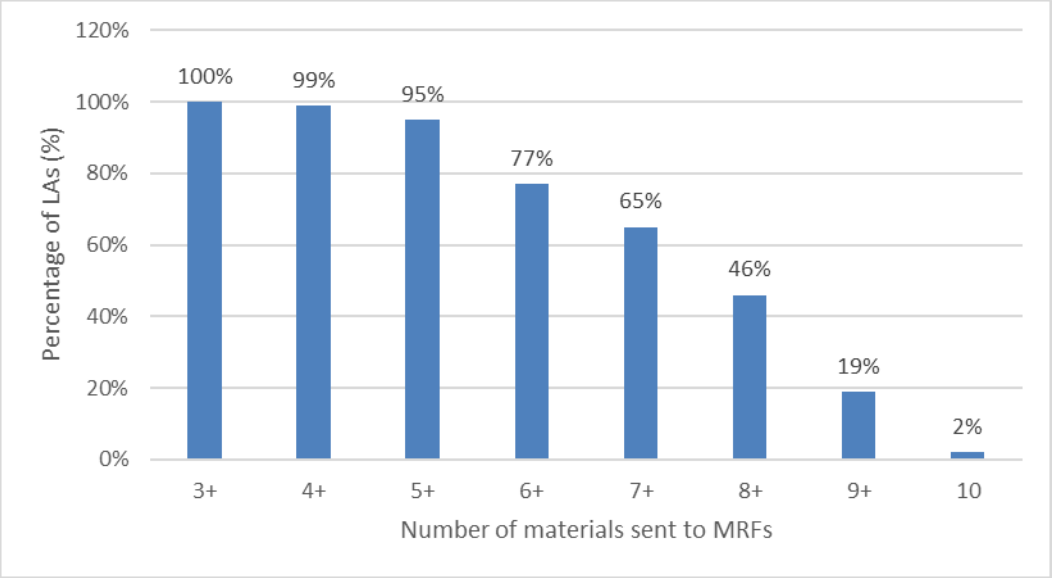


No materials were collected and sent to MRFs by all responding LAs, but cans and plastic bottles were the most common. Regarding the number of materials collected by each respondent, Table 9 and Figure 2 show that just under half of responding LAs collect at least eight materials, while 2% collect ten materials. Table 9 shows only responses where at least three or more materials were collected (i.e., value for '3+ materials' is 100% of responding LAs).

Table 9: Minimum number of materials collected and sent to MRFs by responding LAs (cumulative %)

Minimum number of materials collected	Percentage of LAs (%)
3+	100
4+	99
5+	95
6+	77
7+	65
8+	46
9+	19
10	2

Figure 2: Minimum number of materials collected and sent to MRFs by responding LAs (cumulative %)



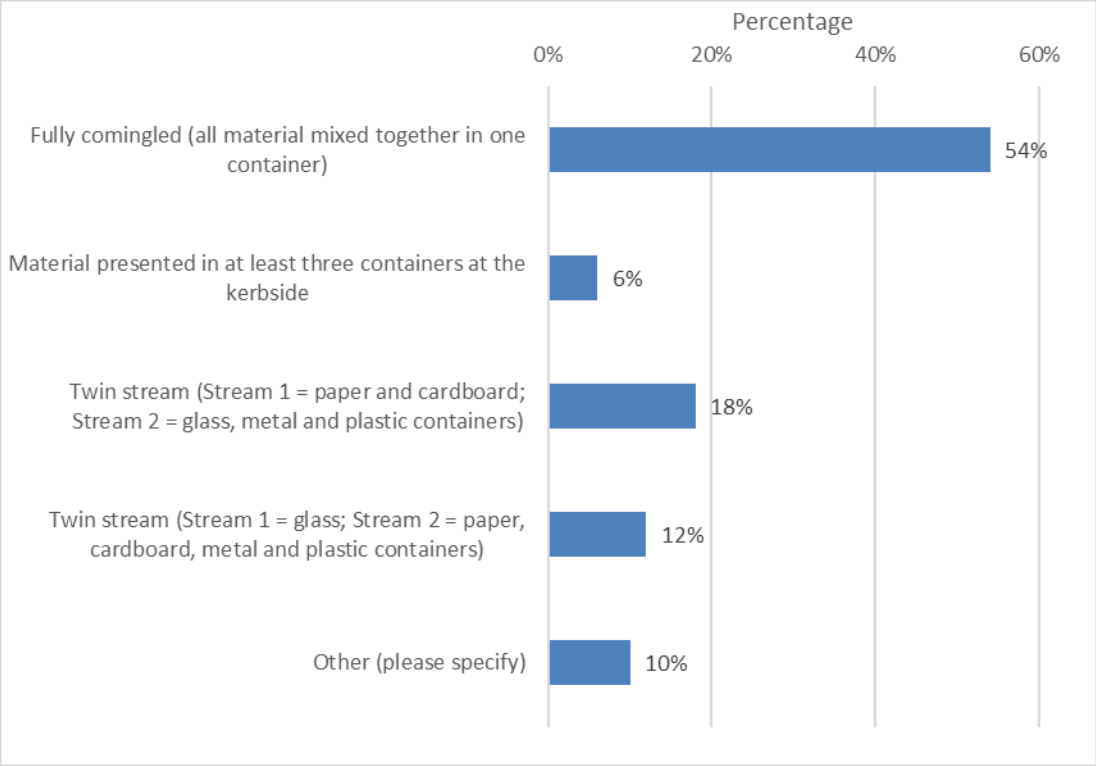
As shown in Table 10 and Figure 3, the majority of respondent LAs that reported a MRF gate fee employ a fully commingled collection method (54%). This is not surprising, as the use of a MRF is often an integral part of commingled recycling collections, whilst kerbside collection methodologies that separate materials into different streams are less likely to require the services of a MRF. 30% of responding LAs collect using 'twin stream' systems. The 'other' collection methods described by authorities included:

- source separated materials (including separately collected mixed cans and plastics);
- twin stream, with newspaper and PAMS collected in a caddy separately from card, glass, metals and plastics;
- twin stream with one fibres stream of paper and cardboard and one container stream of metal and plastic but no glass; and
- a combination of fully commingled and twin stream across different properties in different parts of the authority.

Table 10: Methods of collection of materials sent to MRFs by respondents (%)

Collection method	Percentage (%)
Fully commingled	54
Twin stream (Stream 1 = paper and cardboard; Stream 2 = glass, metal and plastic containers)	18
Twin stream (Stream 1 = glass; Stream 2 = paper, cardboard, metal and plastic containers)	12
Material presented in at least three containers at the kerbside	6
Other (please specify)	10

Figure 3: Methods of collection for materials sent to MRFs by respondents (%)



4.1.2 Gross gate fees and trends

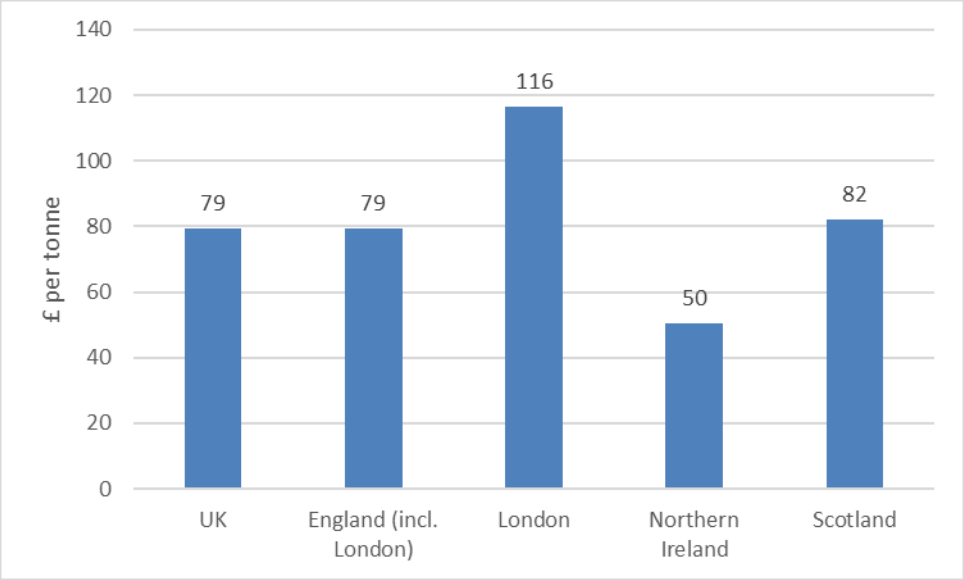
Gross gate fees have been collected from LAs (Table 11/Figure 4). No gross MRF gate fees were provided for Wales, reflecting the fact that most authorities collect source separated recycling that does not require sorting at a MRF. A mode figure was not available for Scotland due to there being no matching responses. The median gross gate fee in the 2022 survey, for UK MRFs sorting two or more materials, is £79/tonne. This is based on 108 responses which ranged from -£36 (i.e., an income) to £133/tonne. This is a significant increase in the median gross gate fee compared to the previous published surveys. The median gate fee for 2021/22 was £60/tonne and for 2019 was £43/tonne. The median gross gate fee in London has increased significantly from £80/tonne in 2021/22 to £116/tonne.

Table 11: Gross MRF gate fees reported by local authority by region (2022) (£/tonne)

Country/Region	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
UK	79	85.01 to 90	75	-36 to 133	108
England (incl. London)	79	85.01 to 90	75	-36 to 133	95
London	116	115 .01 - 120	98	60 to 129	14
Scotland	82	-	75	22 to 133	5
Northern Ireland	50	50.01 to 55	58	50 to 92	8

The median gross UK gate fee for contracts commenced since 1st April 2022 is £58/tonne, which is lower than the median gate fee for all current contracts across the UK by £21/tonne. This is based on only seven relevant responses for contracts commenced since 1st April 2022, so significant conclusions cannot be made.

Figure 4: A comparison of median gross MRF gate fees by region (£/tonne)



Further to this analysis, the gross gate fee data for MRFs is broken down by collection method in Table 12 below.

Table 12: Gross MRF gate fees reported by collection method (2022) (£/tonne)

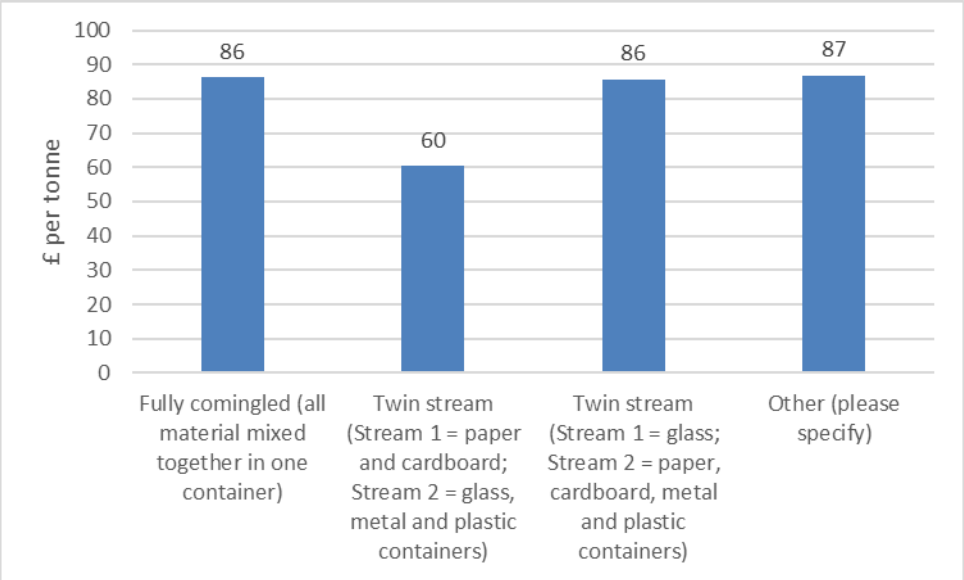
Collection method	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
Fully commingled	86	85.01 to 90	78	-36 to 133	79
Twin stream (Stream 1 = paper and cardboard; Stream 2 = glass, metal and plastic containers)	60	60.01 to 65	61	22 to 103	14
Twin stream (Stream 1 = glass; Stream 2 = paper, cardboard, metal and plastic containers)	86	15.01 to 20	70	16 to 115	9
Other	87	85.01 to 90	79	12 to 107	6

The median gross gate fee in the 2022/23 survey, for material sourced from commingled collections, was £86/tonne. This was the most common form of respondent collection method with 79 responses, ranging from -£36/tonne to £133/tonne. There were only two responses to this question from respondents defining their recycling collection as 'Material presented in at least three containers at the kerbside' and neither recorded a gate fee value. It is not common for significant

amounts of material, collected in at least three separate containers at the kerbside, to be processed at a MRF, as evidenced by the low response rate.

For the 14 responses using the 'Twin stream (Stream 1 = paper and cardboard; Stream 2 = glass, metal and plastic containers)' collection method, the median gate fee was £60/tonne. This contrasted with respondents using the 'Twin stream (Stream 1 = glass; Stream 2 = paper, cardboard, metal and plastic containers)' collection method, with the median gate fee much higher at £86/tonne. Six respondents selected 'Other' as their collection method, with this category having the highest gate fee figure at £87/tonne. Figure 5 illustrates the median gross MRF gate fees for each different collection method. It should be noted that the graph may not be reflective of LA reprocessing costs as it is likely that more segregated material not passing through a MRF will be generating an income, but this will not be captured in the survey (which specifically focuses on material going through the MRF). 'Other' may include contracts that would naturally give rise to higher prices (e.g. material from communal properties only). In this context, fully commingled appears as the second cheapest option which does not reflect the challenges nor the increase in this cost compared to last year's survey.

Figure 5: A comparison of median gross MRF gate fees by collection method (£/tonne)



4.1.3 Net gate fees and trends

Net gate fees have been collected from LAs (Table 13). No net MRF gate fees were provided for Wales, reflecting the fact that most authorities collect source separated recycling that does not require sorting at a MRF. A mode figure was not available for Scotland due to there being no matching responses. Net gate fees reflect any material rebate concerning the sale of output recyclate where this value is known by the LA, often as it forms part of the contract payment mechanism.

The median UK net gate fee in the 2022 survey, for UK MRFs sorting two or more materials, was £16/tonne. This was based on 126 responses which ranged from -£83/tonne to £106/tonne. The mean figure was £10/tonne. The gate fee range with the most responses was £15.01 - £20/tonne (i.e., the mode).

The median, net UK gate fee for contracts commenced since 1st April 2022 (-£5/tonne) is lower than the median net gate fee for the UK (£16/tonne). This seems to suggest that more recent contracts may have better rebate outcomes for LAs, most likely arising from relatively buoyant material commodity prices at the time of survey. This is based on only 12 responses however, so significant conclusions cannot be made.

Table 13: Net MRF gate fees reported by local authority by region (2022) (£/tonne)

Country/Region	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
UK	16	15.01 to 20	10	-83 to 106	126
England (incl. London)	16	15.01 to 20	10	-83 to 106	116
London	85	85.01 to 90	80	16 to 106	9
Scotland	50	-	37	-40 to 85	4
Northern Ireland	18	15.01 to 20	28	18 to 76	6

The net gate fees recorded span a wide range. The range of responses for England is the widest, spanning -£83 to £106/tonne. The ranges for Northern Ireland are £18 to £76/tonne and for Scotland -£40 to £85/tonne. This may reflect the relatively large number of responses for England, but also points to contractual differences in how LA costs and income are recorded and attributed between LA and MRF operator, particularly when compared to a much narrower range for gross gate fees (Table 12).

Some authorities provided net gate fees that were higher than gross gate fees. A decision was taken to remove the net gate fees in such cases as it appeared that this was unlikely to be an accurate representation of the result of material rebates being taken into account.

The net gate fee data for MRFs is broken down by collection method in Table 14 below.

Table 14: Net MRF gate fees reported by collection method (2022) (£/tonne)

Collection method	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
Fully commingled	17	15.01 to 20	12	-67 to 106	102
Twin stream (Stream 1 = paper and cardboard; Stream 2 = glass, metal and plastic containers)	-9	25.01 to 30	-14	-78 to 29	10
Twin stream (Stream 1 = glass; Stream 2 = paper, cardboard, metal and plastic containers)	22	55.01 to 60	18	-83 to 84	8
Other	-0	-	-2	-17 to 16	6

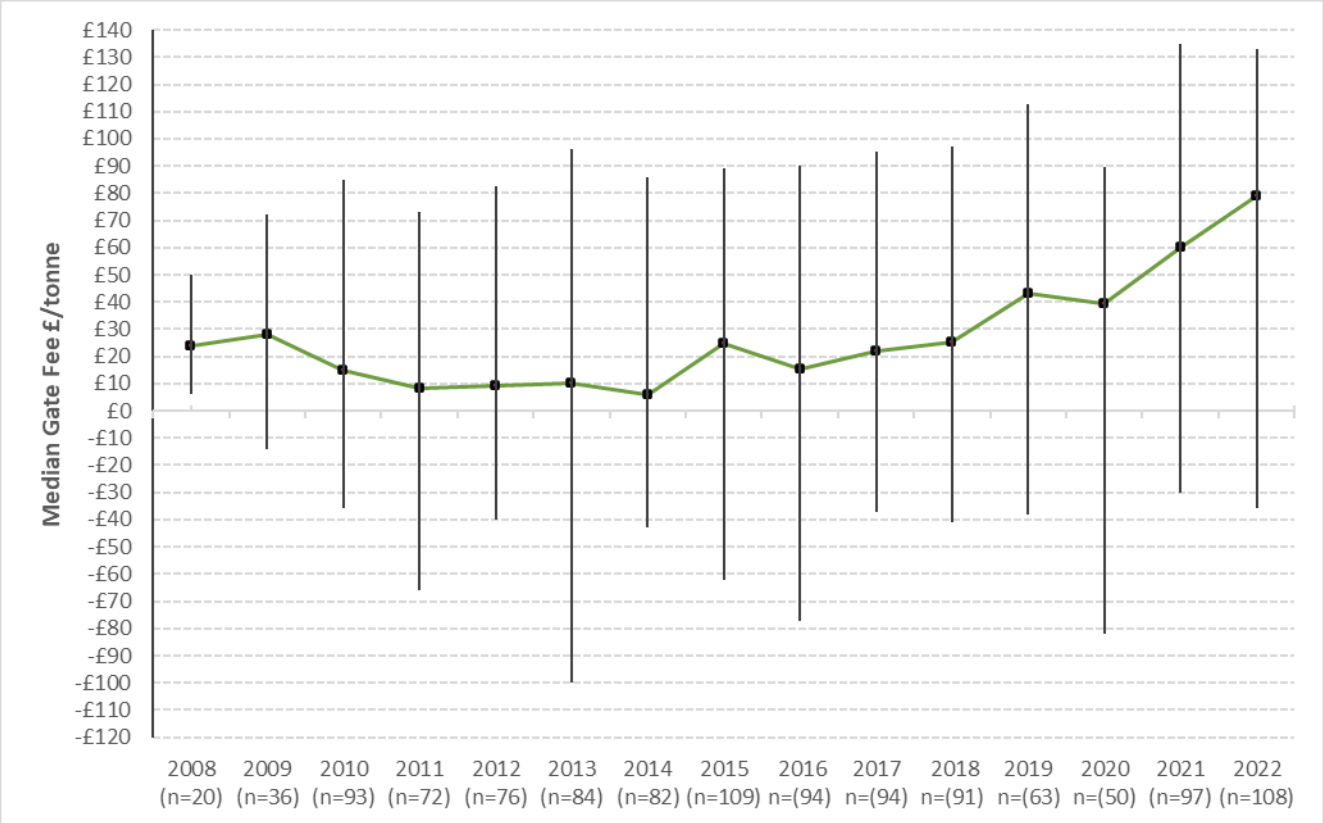
The median net gate fee in the 2022 survey, for material sourced from commingled collections, was £17/tonne. This was the most common form of respondent collection method with 102 responses ranging from -£67 to £106/tonne. There were two responses for 'Material presented in at least three containers at the kerbside' but gate fee values were not provided.

For the 10 responses using the 'Twin stream (Stream 1 = paper and cardboard; Stream 2 = glass, metal and plastic containers)' collection method, the median gate fee was -£9/tonne. This contrasts with respondents using the 'Twin stream (Stream 1 = glass; Stream 2 = paper, cardboard, metal and plastic containers)' collection method, with the median gate fee being somewhat higher at £22/tonne (based on 11 responses). Six respondents noted 'Other' as their collection method, with this category having a median gate fee figure of £0/tonne and a range of -£17 to £16/tonne.

4.1.4 Comparison of median gross MRF gate fee with previous years

Figure 6 charts the median MRF gate fee over time from the 2008 survey and provides min-max ranges.

Figure 6: UK MRF gate fees reported by local authorities over time, 2008 to 2022 (£/tonne) [4]



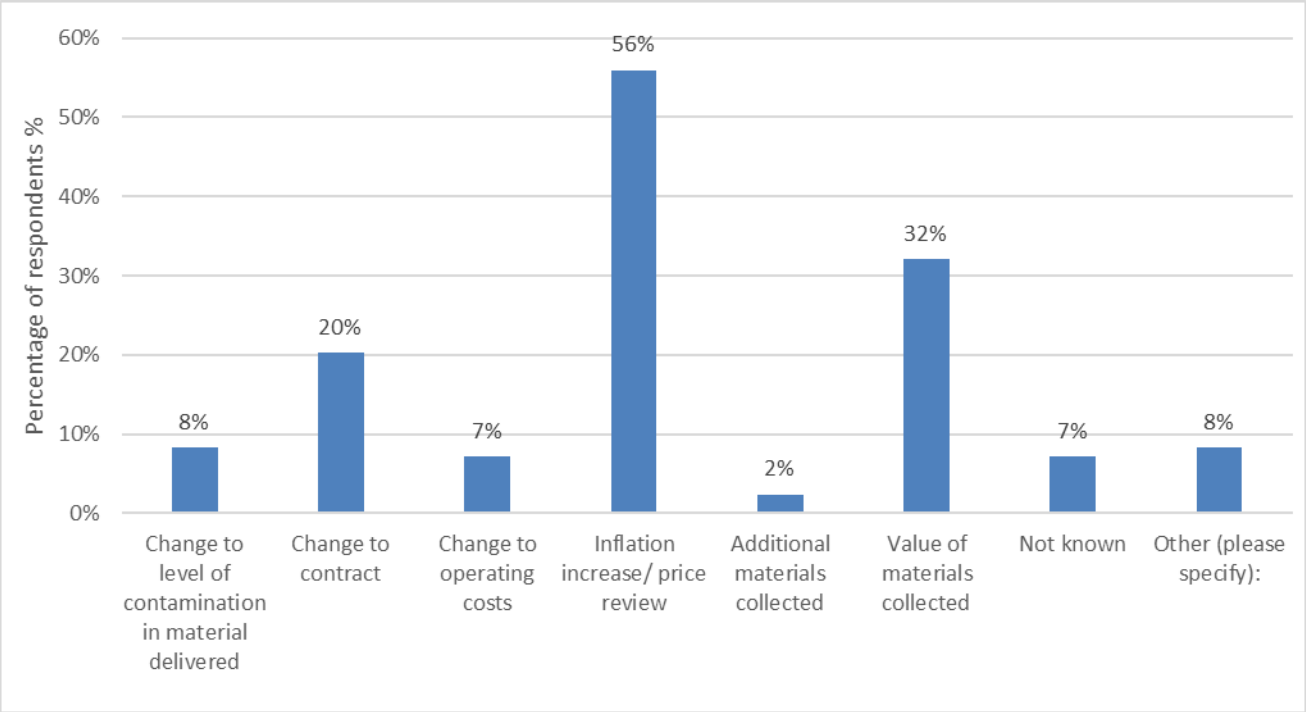
The 2021 and 2022 figures and ranges in Figure 6 represent the 'gross' median gate fee. Previous years' studies, however, did not make a distinction between the 'gross' and 'net values, requesting a single reported gate fee figure for each LA. It should also be noted that the 2020 data in Figure 6 is for England only. The 2022 results illustrate that the maximum gross gate fee remains high at £133/tonne but is very slightly lower than in 2021 where it was £135/tonne.

[4] In the chart, n = the number of responses

4.1.5 Changes to the MRF gross gate fee in the last 12 months

Responding LAs were asked how their gross gate fee had changed in the last 12 months. 13% said there had been 'no change', 52% suggested an increase of more than 5%, 20% suggested a decrease of more than 5%, and 15% suggested a 'limited change' (i.e. no more than 5% increase or decrease). Figure 7 illustrates the reasons LAs gave for the change in gross MRF gate fee. Respondents were able to provide more than one response.

Figure 7: Reasons respondents provided for the change in MRF gate fees in 2022 (%)



The 'Other' responses provided included the following reasons, not necessarily in order of frequency of responses:

- Gate fee is linked to share of material income;
- Operational changes;
- New contract resulting in new costs; and
- Change to a twin-stream collection model.

4.1.6 Changes to collection methods

Responding LAs were asked if they envisaged changing their collection method for dry recyclables at the next available opportunity. Of the 92 responding LAs, 28% said 'Yes' and 72% said 'No'.

Respondents answering 'Yes' were then asked what collection method they are likely to move to. The general trend from responses was towards dual stream/source segregation, with no responses indicating a likely move towards greater commingling.

Of the 25 LAs responding, 32% said that they would shift to a 'Twin stream system (Stream 1 = paper and cardboard; Stream 2 = glass, metal and plastic containers)' and 8% said they would move to 'Twin stream (stream 1= glass; Stream 2= paper, cardboard, metal and plastic containers). A further category was added for twin stream without glass (stream 1= paper and cardboard; stream 2= metal and plastic containers) as multiple respondents wrote this in their reply to 'other'. A total of 12% of respondents replied with this option.

A further 20% stated that they would move to a system with 'Material presented in at least three containers at the kerbside'.

The remaining 28% of LAs selected 'Other'. Their comments indicated that they felt unable to answer this question until they received further information from a national policy perspective or that they were representing multiple authorities. Of those LAs seeking to change their system, 58% of these were currently using a commingled methodology.

For those LAs using commingled collections that indicated they intended to change methodology, 20% propose to switch to 'Twin stream (Stream 1 = paper and cardboard; Stream 2 = glass, metal and plastic containers)', 33% proposed to switch to 'material presented in at least three containers at the kerbside' and 7% proposed to switch to 'Twin stream (stream 1= glass, stream 2 = paper, cardboard, metal and plastic containers)'. 13% responded with the twin stream category which was added 'Twin stream (Stream 1= paper and cardboard; Stream 2= metal and plastic containers)'. A total of 27% answered 'other', with the following comments:

- Dependent on Waste and Resources Strategy;
- Not yet decided; and
- Likely to be a mixed approach of twin stream and kerbside sort but as yet not determined.

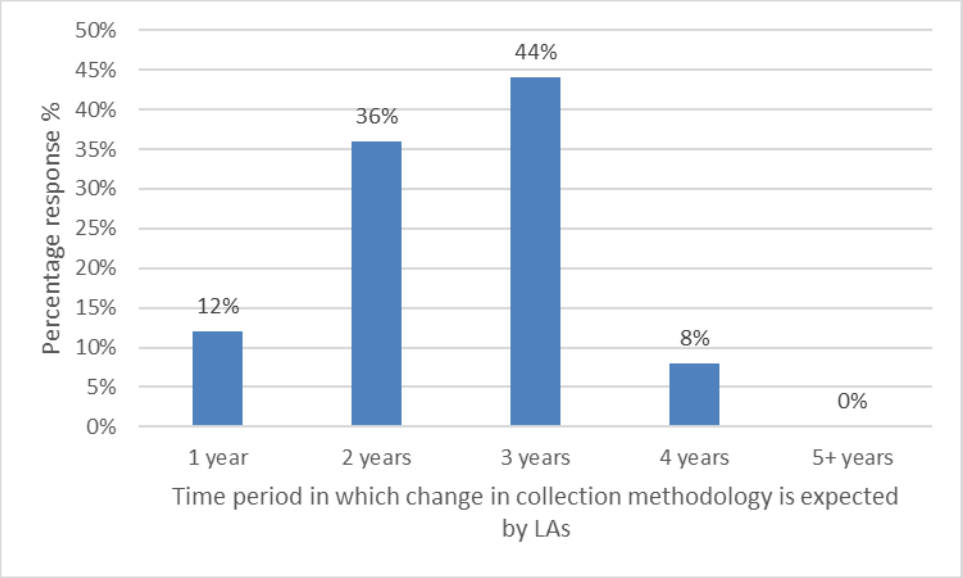
Of those that selected 'Other' as their collection method, 57% proposed to move to 'Twin stream (Stream 1 = paper and cardboard; Stream 2 = glass, metal and plastic containers)' and 14% proposed to move to the twin stream category which was added 'Twin Stream (Stream 1 = paper and cardboard; Stream 2 = metal and plastic containers)'. 14% responded proposing that they would move to 'Twin stream (Stream 1 = glass; Stream 2 = paper, cardboard, metal and plastic containers)' and 14% responded with 'other' and said that it is dependent on the materials chosen/required to be collected.

Only 4 LAs currently operating a 'Twin stream (Stream 1 = glass; Stream 2 = paper, cardboard, metal and plastic containers)' system responded that they that intended to make a change. Finally, there were no LAs currently using the method 'Material presented in at least three containers at the kerbside' or 'Twin stream (Stream 1 =paper and cardboard; Stream 2 = glass, metal and plastic containers)' that responded to this question. No LAs suggested that they would change their existing collection method to a commingled approach.

Respondents stating that they may change their collection methodology at the next opportunity were asked how many years from now they anticipate that this change will take place. Responses to this question were slightly limited with only 25 received. Figure 8 illustrates responses to timings over the next 5 years (by percentage), with 92% of respondents to this question suggesting that

their dry recyclables collection method will change in the next 3 years. This is a significant increase from last year's survey where 65% said their method would change in the next 3 years.

Figure 8: Timing for LAs changing collection methodology (%)



4.1.7 Bulking, storage and haulage

LAs were asked about their arrangements for bulking, storage and haulage, where collection vehicles do not tip directly at the MRF. They were asked whether they pay for these separately, pay for bulking and storage combined and haulage separate or pay for all combined. LAs were then requested to complete the cost for the relevant arrangement they had chosen.

Table 15 illustrates the reported costs for the three arrangements. Due to the low response count for some of these costs, mode was not included.

Table 15: Comparison of bulking, storage and haulage costs (£/tonne)

Stage	Median (£/t)	Mean (£/t)	Range (£/t)	Response count
Bulking	4	5	4 to 21	9
Haulage	11	11	4 to 35	13
Storage	11	10	9 to 11	21
Bulking and storage	10	12	0 to 25	41
Haulage separate	18	21	9 to 53	47
Bulking, storage and haulage costs combined	21	28	-21 to 84	11

Where respondents were able to provide values for bulking, storage and haulage, specifically apportioned according to the categories 'bulking and storage' and 'haulage separate' costs, this is reflected in the rows shaded grey above.

This data is independent from the gate fee data provided by the LAs. The findings are based on responses to this specific question only and provide an indicative breakdown of the costs of getting dry recyclable materials from the transfer station to the MRF where applicable.

For bulking, storage and haulage separate, the median cost of bulking was £4/tonne (9 responses) the median cost of hauling was £11/tonne (13 responses), and the median cost of storage was £11/tonne (21 responses)

For bulking and storage costs combined but haulage separate, the median cost for bulking and storage was £10/tonne (41 responses) and the median cost for haulage was £18/tonne (47 responses). The median cost for bulking, storage and haulage cost combined, was £21/tonne (11 responses).

Multiple figures were removed from the original LA responses. A cost for haulage in excess of £350 was removed as a significant outlier figure, as the authority did not respond to requests for clarification. It is suspected that this may be a cost per load rather than per tonne. A cost of nearly £150 was also removed from the cost for bulking and storage and a cost of over £100 from the combined cost as these seemed substantially higher than the expected range. As well as this, a cost of over £75 for haulage and a cost of over £75 for bulking and storage were removed as these were also apparent outliers.

In addition, a number of authorities referenced a cost per load for haulage and bulking rather than a cost per tonne. In these instances, if an authority was not able to confirm the figure on a 'per tonne' basis, these figures were removed.

Other factors that will impact haulage costs include responsibilities in two tier areas for the WCA or WDA to make arrangements for material/waste transfer, the application of inter-authority payments, specific geographies/road networks, contract scope (e.g. where an LA may require a contractor to provide transfer and reprocessing), contract risk share arrangements and total contracted material tonnage inputs. These exert significant influence over gate fees, but cannot be fully disaggregated, particularly given the breadth of contract options and values observed in the Gate Fees Report 2022/23. The figures should therefore be considered in this context when interpreting and utilising the data.

4.1.8 Contracts with MRFs

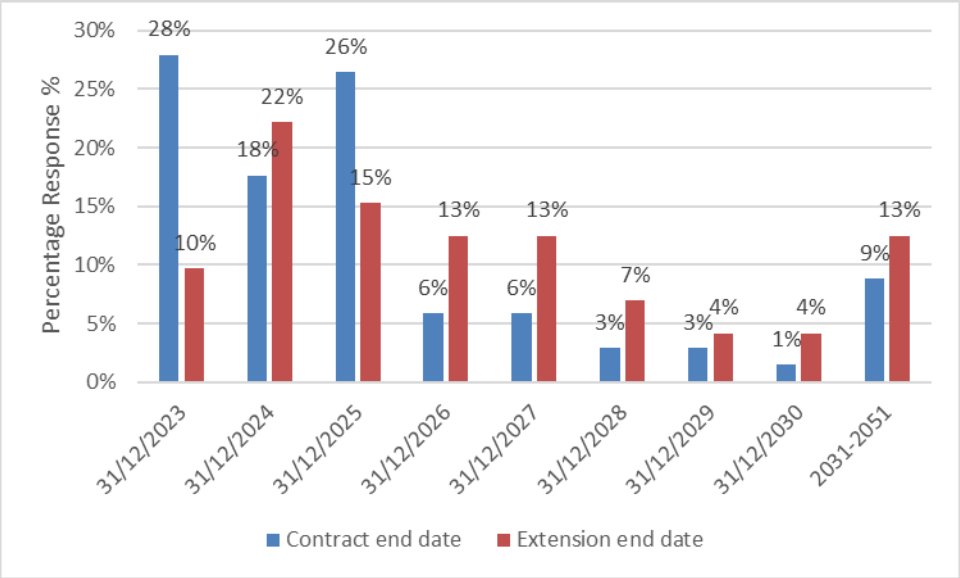
LAs were asked whether the material that is sent to the MRF is under a contract. Of the 100 respondents, 93% said 'Yes' and 7% said 'No'. Respondents with contracts were asked for the end date of their contract along with the end date of any contract extensions, where applicable.

The results are summarised in Table 16 and Figure 9 below. A total of 77 LAs responded to the question concerning initial contract end date, with 72 providing responses to the question concerning potential extension end dates. Some contracts have extension clauses whilst others do not. Nine responses were removed because the contract end date was in 2022 or 2021.

Table 16: Contract end dates, including extensions (% responses)

Year End	Contract End Date (% responses)	Extension End Date (% responses)
31/12/2023	28	10
31/12/2024	18	22
31/12/2025	26	15
31/12/2026	6	13
31/12/2027	6	13
31/12/2028	3	7
31/12/2029	3	4
31/12/2030	1	4
31/12/31 to 31/12/51	9	13

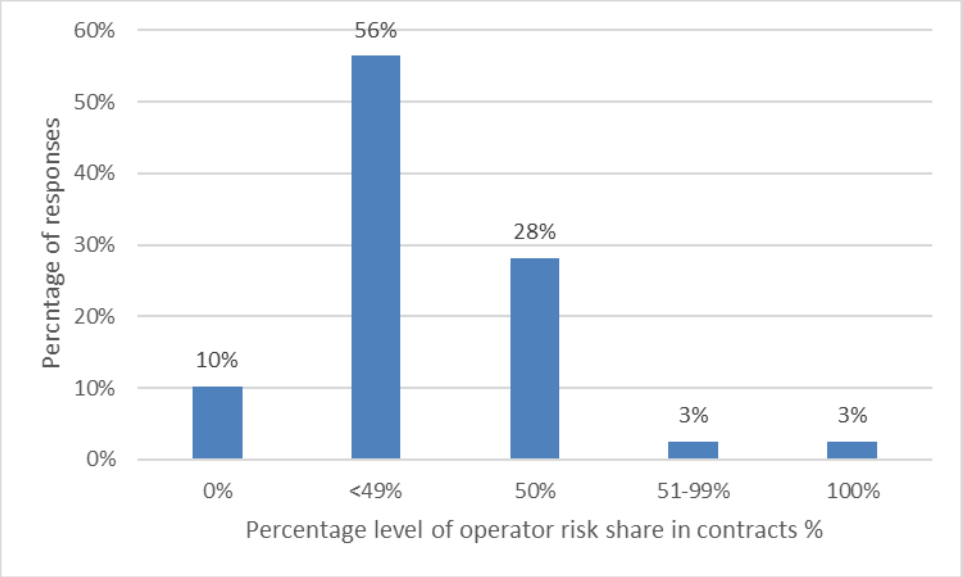
Figure 9: Contract end dates, including extensions (% responses)



Just over a quarter of respondents (28%) specified contract end dates in 2023, with 78% of contracts ending by the close of 2026. If we consider end dates with extensions included, 60% of contracts are expected to end by 2026. Nine respondents specified initial contract end dates in 2022 or 2021 but most of these had extensions to 2023 or 2024.

LAs were asked if their MRF contracts include an element of contractor risk share, with the contract being structured so that risks associated with the sale of recycled material, primarily commodity value and material quality, are shared. From the 90 responses, 52% answered 'Yes' and 48% 'No'. LAs that answered 'Yes' were asked what percentage of the risk, concerning the value of sorted material, rests with the operator. Figure 10 summarises the responses.

Figure 10: Percentage level of operator risk share in local authority waste management contracts (% responses)



Where contract risk share is in effect, only 6% of respondents stated that the operator accepts more than 50% of this risk. For the remaining 94% of contracts where this mechanism is in place, the LA assumes 50% or more of the risk share and for 10% of the contracts, the entire risk lies with the LA. Two responses in the free text category were added to the '<49%' count. A further eight respondents did not provide a quantifiable response that could be captured in Figure 10. Three respondents referenced that there is no specific share but that rebates are linked to average LetsRecycle prices. Other qualitative responses included the following:

- Market indices, along with contractor actual sales and mixed recycling sampling composition is used to determine a basket price for value of material reprocessed;
- The risk share concerning value of the material processed at the MRF site is not easy to define in terms of 100% split due to the complexity of the PFI payment mechanism; and
- Core prices are fixed based on tonnage level set during the contract procurement.

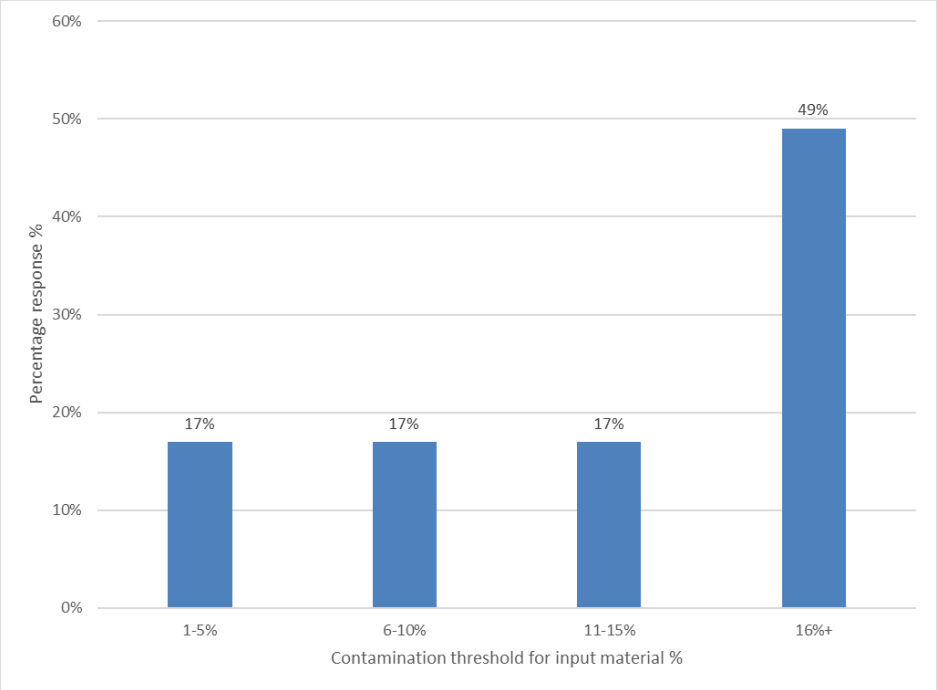
4.1.9 Contamination

LAs were asked 'Beyond what level of contamination are recycling loads rejected or subjected to additional costs?' 86 LAs responded to this question and overall 62% of respondents had a contamination limit whereas 38% did not have a limit. The 'Not applicable/no contamination limit' responses were then removed to assess the split of contamination limits. This is shown in Table 17 and Figure 11. The results highlight that 34% of MRF contracts specify that input contamination rates must not exceed 10% whilst 51% of respondents stated that the contamination threshold must not exceed 15%.

Table 17: Contamination threshold for input material, beyond which loads are rejected or charges imposed (% responses)

Percentage contamination limit	Percentage responses (%)
<5%	17
6-10%	17
11-15%	17
16%+	49

Figure 11: Contamination threshold for input material, beyond which loads are rejected or charges imposed (% responses)



LAs were asked whether their 'MRF provider more proactively monitors and enforces excessive contamination compared to last year'. Of the 87 responses, 24% stated 'Yes' and 76% said 'No'. Whilst the percentage stating 'Yes' is lower than last year, it provides some indication of an ongoing trend of increasingly strict monitoring and enforcement. This may result in additional charges to LA inputters, associated with managing material deemed unacceptable for sorting at the MRF or requiring disposal after sorting.

Respondents were asked whether their contractor sets a moisture content threshold for paper. Of the 86 respondents, 26% said 'Yes', 48% 'No' and 27% said that they did not know.

4.1.10 MRF gate fees direction of travel

LAs were asked 'what are the three key factors influencing MRF gate fees under their existing arrangements', with the ability to select up to three options from a pre-determined list of factors. The results are summarised in Table 18.

The most common response was 'commodity prices/end markets', with 68% of respondents choosing this. This was closely followed by 'operating costs' (54% of respondents) and 'inflation increase/price review' (52% of respondents). This question was not asked in last year's survey so the results cannot be compared.

'Other' responses included:

- Rising energy costs;
- Tracking of material pricing, for example LetsRecycle; and
- The MRF recovery performance level is adjusted by reference to the degree of input non target materials measured by the MRF code of practice sampling process.

Table 18: Reasons provided for the change in existing MRF gate fee with up to three responses allowed (% respondents)

Factor influencing MRF gate fee (existing arrangements)	Percentage (%)
Commodity prices/end markets	68
Operating costs	54
Inflation increase/price review under current contract terms	52
Quality/contamination of input material	42
Lack of competition with other nearby MRFs	18
Contractual changes, other than an inflation increase	10
Emerging national policy: addition of new more difficult to recycle materials	10
Volume of material supplied to facility	9
Costs of managing residues	8
Investment/capital costs	2
Emerging national policy: enhanced sampling	2
Other (please specify)	4

The survey sought to determine LA views on future changes to gate fees and asked: 'what is the most likely direction of travel for gross MRF gate fees in the next 12 months?'.

Of the 90 responses, 82% suggested that there would be an increase, 2% said there would be a decrease, and 13% said there would be limited change (i.e., no more than a 5% increase or decrease). 2% stated there would no change.

LAs were asked to select reasons for potential changes in future gate fees and could provide multiple responses. These are summarised in Table 19.

Table 19: Reasons provided for the potential change in future MRF gate fee with up to three responses allowed (% respondents)

Reason given for the potential change in future MRF gate fee	Percentage (%)
Commodity prices/end markets	60
Inflation increase/price review under current contract terms	53
Operating costs	49
Quality/contamination of input material	20
Lack of competition with other nearby MRFs	14
Contractual changes, other than an inflation increase	14
Emerging national policy: addition of new more difficult to recycle materials	11
Emerging national policy: deposit return scheme	8
Volume of material supplied to facility	7
Costs of managing residues	4
Investment/capital costs	3
New contract with different price in next 12 months	2
Emerging national policy: enhanced sampling	2
Other (please specify)	4

The most frequent response was 'commodity prices/end markets' (60%), which are a major driver of the economics of MRF sorting. 'Inflation increase/price review' (53%) and 'operating costs' (49%) followed closely after, with the respondents anticipating that there will continue to be high inflation affecting MRF costs over the next year. The fourth most popular response, 'quality/contamination of input material' was selected by 20% of respondents.

The most common responses are similar to those in the Gate Fees Report 2021/22. However, in the previous survey 'inflation' (51%) was the most commonly selected factor followed closely by 'change in product/commodity end market prices' (43%). Expectations of changes in product/commodity end market prices appear to have grown substantially since last year, perhaps reflecting anticipated lower commodity prices for output MRF materials following peaks observed in 2021 and 2022.

Of the 'Other' responses, one referenced the introduction of a Deposit Return Scheme (DRS), so this response was added to the 'emerging national policy: deposit return scheme' category.

LAs were asked 'whether a requirement to collect additional materials (cartons, metal packaging and plastic film) would result in a change in gate fee?' The 77 responses are summarised in Table

20 below, with 43% suggesting there would be an increase of more than 5% and 18% stating there would be limited change. 39% of respondents said they did not know what impact there would be.

Table 20: Whether the requirement to collect additional materials will change MRF gate fees (% responses)

Response	Percentage (%)
Don't know	39
Increase (>5%)	43
Limited change (no more than 5% increase or decrease	18
Decrease (>5%)	0

The survey asked LAs if 'their existing MRF contract allows materials to be added'. Table 21 shows that, of the 90 responses, 47% of LAs said 'Yes', 28% 'No' and 26% 'not sure'.

Table 21: Whether the existing MRF contract allow materials to be added (% responses)

Response	Percentage (%)
Yes	47
No	28
Not Sure	26

4.1.11 Waste contractor interviews

Interviews were held with two MRF operators that handle mixed recyclables from a mixture of LA and C&I sources. Online operator surveys were also received from a further six MRFs providing additional data and perspectives.

Range of gate fees charged

Both interview respondents are responsible for MRFs that largely accept dry mixed recyclables from nearby LAs.

Respondent 1 is responsible for five MRFs, four of which are fully commingled and one of which is commingled excluding glass. They receive material from London, the South East, the North West and East Anglia.

Respondent 2 is responsible for eight MRFs receiving fully commingled material from the South East, the East Midlands and the North West of England.

Factors driving gate fees over past 12 months and the next 12 months

Both respondents reported that increases in energy and labour costs in 2022 were largely offset by income from buoyant material prices and therefore increases in gate fees had not been significant, but that greater increases might occur in 2023 if material income declines.

Red diesel, from April 2022, no longer has duty-free status. Both respondents reported that this had resulted in an increase in plant and machinery running costs.

Size and duration of the contract was not reported as impacting the gate fee significantly but could affect the decision to bid for contracts or not. Long term contracts are usually preferred but short-term contracts can be attractive if they fit in with periods where there is capacity in their portfolio of facilities.

The composition of the material received must be within the specification for the facility design and major deviation from this specification may result in the operator deciding not to bid or pricing in additional processing costs. Composition will impact the rebate component of the gate fee.

One respondent rejects material when the level of contamination in the material exceeds 12%. They stated that the decision on whether to bid for material that exceeded this reject rate would depend on the competition for material in the local area.

This same operator will take no more than a 20% risk share on material income fluctuations, but their preference is to have 0% operator risk. Risk share is more of a priority when deciding whether to bid compared with calculating the gate fee to be charged.

Both respondents reported one of the biggest factors impacting the gate fee charged to LAs is whether it is a merchant or build contract.[5] The factors impacting gate fees in 2023 most significantly are likely to be indexation and any fluctuations in material income.

Respondents to the 2021 survey reported an increased material supply exacerbated by covid due to people spending more time at home and the increase in online orders/deliveries. By contrast, this year one respondent reported that the current economic climate is reducing householders' consumption of packaging. This was leading to the tonnage received being lower than the current processing capacity and resulting in spare capacity in the operator's MRFs.

Only two respondents to the online operator survey gave a gate fee, both of which were broadly consistent with the average values provided by LA respondents.

The online operator survey supports the findings that increases in gross gate fees have been driven by increased operator overheads (such as fuel, labour and driver costs). In many instances, however, this has been offset by the increased value of material, which has led to a decrease in net gate fees in real terms in some circumstances, depending on contract structure.

[5] A merchant contract is where a MRF focuses on the processing and sale of commodities and may open for operation and then source materials, whereas a build MRF contract is built on the back of agreed contracts, is usually longer term and processes larger amounts of materials.

Four out of the five operators that responded said the overall direction of travel for gate fees over the next 12 months will be an increase. Reasons for this increase were reported to be due to changes in:

- operating costs;
- investment/capital costs;
- inflation;
- quality or contamination of the input material;
- commodity process or end markets; and
- emerging government policy (DRS and the addition of difficult to recycle materials).

Impact of new requirements to segregate recycled materials (including cartons, plastic film and foil) upon gate fees in future

Respondents 1 and 2 suggested that costs would increase with the inclusion of new materials in the feedstock supply. They already collect and accept drinks cartons and, whilst the inclusion of further materials such as plastic film was technically feasible, it would require investment in further sorting and compaction equipment. It was suggested, therefore, that contract terms would need to reflect additional capital investment.

Respondents 1 and 2 also stated that the introduction of DRS is likely to increase gate fees due to additional processing costs of managing a different composition of material and the impact on material sales income from the loss of beverage containers.

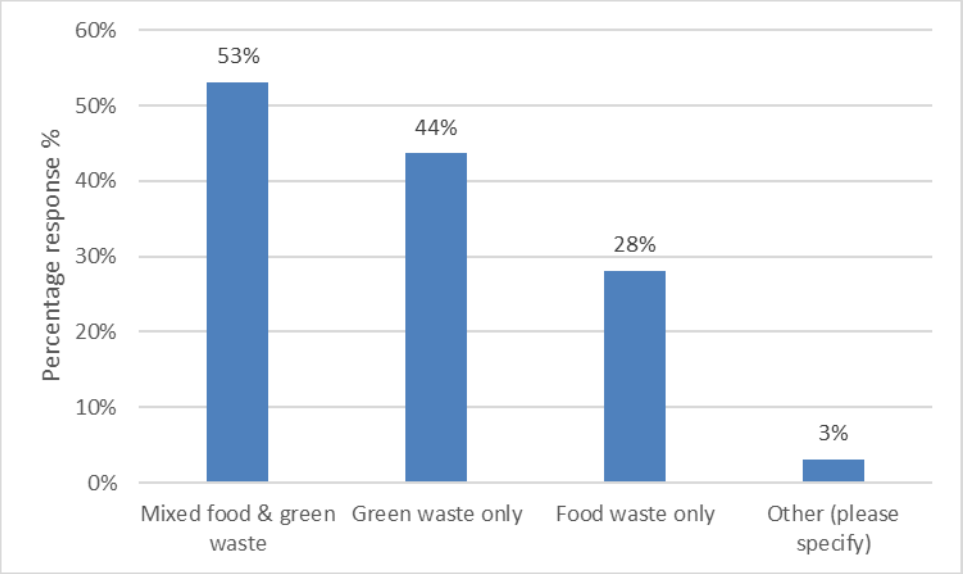
Changes in markets for reprocessed material in the past 12 months

All respondents stated that material markets have been very buoyant over the past 12 months, with all materials commanding a higher value than had been budgeted at the start of the year. These high values made the potential removal of plastic bottles and cans, through a DRS, more of a concern than if values were low. Whilst demand for material is currently very strong, there are concerns regarding haulage capability due to the ongoing challenge of driver shortages.

4.2 In-Vessel Composting (IVC)

61 LAs provided gate fee cost data for waste that is managed at an in-vessel composting (IVC) facility. LAs were asked which materials they send to IVC facilities, selecting all options that apply (Figure 12). Of the 32 respondents, the majority (53%) send mixed food and green waste, with 44% sending green waste only and 28% sending food waste only. The single answer to the 'other' category stated that the facility does accept food waste but that the authority does not collect food waste separately.

Figure 12: Material types that UK respondent LAs collect and send to IVC facilities (% responses).



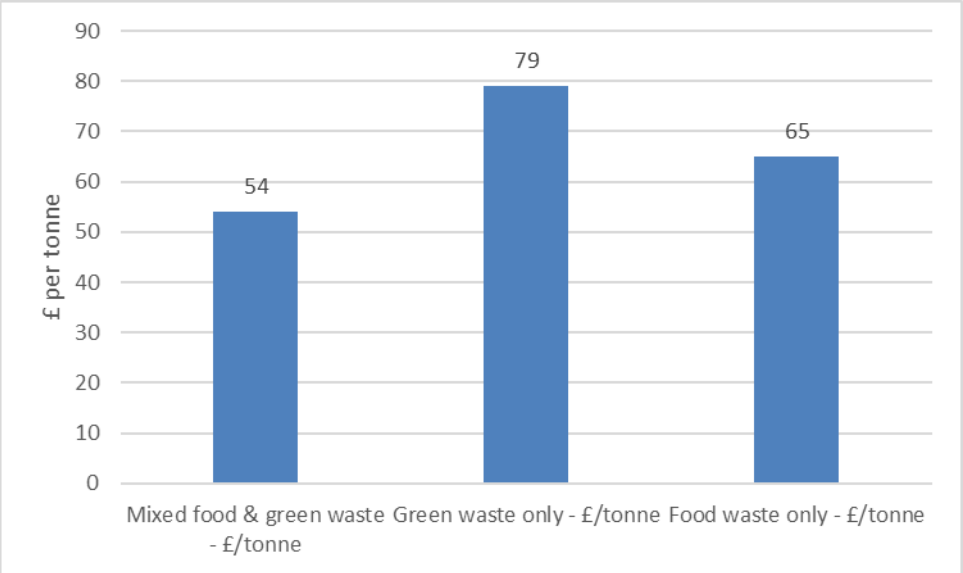
4.2.1 Current gate fees

The UK gate fees for IVC facilities are summarised in Table 22 and Figure 13 below, according to material collected. The median gate fee for mixed food and green waste was £54/tonne (38 respondents). 39 respondents provided a gate fee for 'green waste only' (£79/tonne). The median gate fee for 'food waste only' was £65/tonne (27 respondents). These figures represent an increase in gate fees for 'green waste only' and 'food waste only' but a very small decrease in the 'mixed food and green waste' gate fee compared to the median figure for 2021/22. In 2021/22, the median 'mixed food and green waste' figure was higher at £55/tonne compared to £54/tonne for 2022/23. The median figure for 'green waste only' was much lower in 2021/22 at £30/tonne, whilst the median gate fee for 'food waste only' was slightly lower at £63/tonne in 2021/22 compared to £65/tonne in 2022/23.

Table 22: UK IVC gate fees according to material collected (£/tonne)

Material collected	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
Mixed food & green waste - £/tonne	54	40.01 to 45	63	34 to 112	38
Green waste only - £/tonne	79	75.01 to 80	67	26 to 112	39
Food waste only - £/tonne	65	110.01 to 115	69	22 to 112	27

Figure 13: UK IVC median gate fees according to material treated (£/tonne)



IVC is most commonly used to reprocess mixed food and green waste. No responses were received for Wales, where separate food waste collections predominate. As shown in Table 23 the median in England (including London) was £54/tonne compared to £41/tonne in London. In Northern Ireland, the median was higher at £65/tonne, representing the highest median of the different regions. Scotland had 3 responses with a median of £60/tonne.

Table 23: IVC gate fees for mixed food and green waste by region

Region	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
UK	54	40.01 to 45	63	34 to 112	38
England (including London)	54	40.01 to 45	63	34 to 112	27
London	41	40.01 to 45	41	41	7
Northern Ireland	65	65.01 to 70	66	65 to 70	8
Scotland	60	-	64	48 to 84	3

The results for IVC gate fees for green waste only by region are displayed in Table 24. The median is highest in the UK and England (including London) at £79/tonne. No responses were received for London and only one response was received for Wales. Two results were received for Scotland, providing a median and mean but not enough values to provide a mode.

Table 24: IVC gate fees for green waste only by region

Region	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
UK	79	75 .01 to 80	67	26 to 112	39
England (including London)	79	75.01 to 80	67	26 to 112	29
Wales	45	-	-	0	1
Northern Ireland	51	50.01 to 55	52	51 to 58	7
Scotland	37	-	37	35 to 39	2

The results for IVC gate fees for food waste only by region are shown in Table 25. No responses were received for food waste only for Wales or London.

Table 25: IVC gate fees for food waste only by region

Region	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
UK	65	110.01 to 115	69	22 to 112	27
England (including London)	65	110.01 to 115	69	22 to 112	15
Northern Ireland	65	65.01 to 70	67	65 to 76	7
Scotland	51	-	48	22 to 62	5

Only four responding LAs have commenced new IVC mixed food and garden waste contracts since 1st April 2022 and therefore the gate fees provided should not necessarily be viewed as representative of current contracts. The median gate fee (£65/per tonne) for these authorities is higher than the overall UK median (£54/tonne). Only one responding LA commenced a new 'Green waste only' contract since 1st April 2022. No responding LAs commenced a new 'food waste only' contract since 1st April 2022.

4.2.2 Bulking, storage and haulage

LAs were asked about their arrangements for bulking, storage and haulage of materials to the IVC facility. They were asked whether they pay for these separately, pay for bulking and storage combined and haulage separate or pay for all combined. LAs were then requested to complete the

cost for the relevant arrangement they had chosen. Due to low response rates for some of the costs, a mode was not calculated.

Table 26 illustrates the responses in terms of the respective costs for the different arrangements.

Table 26: A comparison of bulking, storage and haulage costs (£/tonne)

Stage	Median (£/t)	Mean (£/t)	Range (£/t)	Response count
Bulking	8	8	0	7
Haulage	10	13	10 to 17	20
Storage	3	3	0	7
Bulking and storage	13	18	7 to 47	5
Haulage separate	8	8	5 to 10	6
Bulking, storage and haulage cost combined	25	-	0	1

Where respondents were able to provide values for bulking, storage and haulage, specifically apportioned according to the categories 'bulking and storage' and 'haulage separate' costs, this is reflected in the rows shaded grey above.

This data is independent from the gate fee data provided by the LAs. The findings are based on responses to this specific question only and provide an indicative breakdown of the costs of getting food waste and garden waste from the transfer station to the IVC facility where applicable.

Based on the LA responses regarding 'bulking, storage and haulage paid separate', 7 responded with the cost of bulking with a median cost of £8/tonne. From a further 20 responses, the median cost of haulage was £10/tonne and the median cost of storage from 7 responses was £3/tonne.

In respect of bulking and storage costs combined but haulage separate, the median cost for bulking and storage was £13/tonne and the median cost for haulage was £8/tonne. The median cost for bulking, storage and haulage cost combined was £25/tonne, but this was based on only one response so should be considered with caution.

Again, a number of authorities provided a cost per load rather than per tonne. Where the authority could not confirm how many tonnes were in a load, this value was removed. In a number of responses, £0 was removed as this was confirmed to not be a cost but the authority trying to indicate that they had no associated costs.

4.2.3 Caddy liners

LAs that send food waste to IVC were asked whether they provide replacement caddy liners and if so what type of caddy liners they provide. A total of 25 LAs responded, with 56% answering that they provided biodegradable plastic liners, 4% providing non-biodegradable plastic liners and 36% not providing liners. Three responses were added from the 'other' category to biodegradable plastic

liners, as they referenced compostable liners and biodegradable starch. No LAs reported issuing paper liners. One other response (4%) referenced that liners were supplied by some but not all of their constituent WCAs.

LAs were asked what type of caddy liners are permitted by their IVC operator. 71% of operators permitted biodegradable plastic liners or compostable liners and 17% non-biodegradable liners. 29% permitted paper liners and 8% did not permit caddy liners. Five responses were added from the 'other' category to biodegradable plastic liners as they referenced compostable liners and biodegradable starch.

Due to the limited overall sample size, the data is indicative and is not necessarily reflective of caddy liner provision across all UK LAs.

4.2.4 Gate fee trends

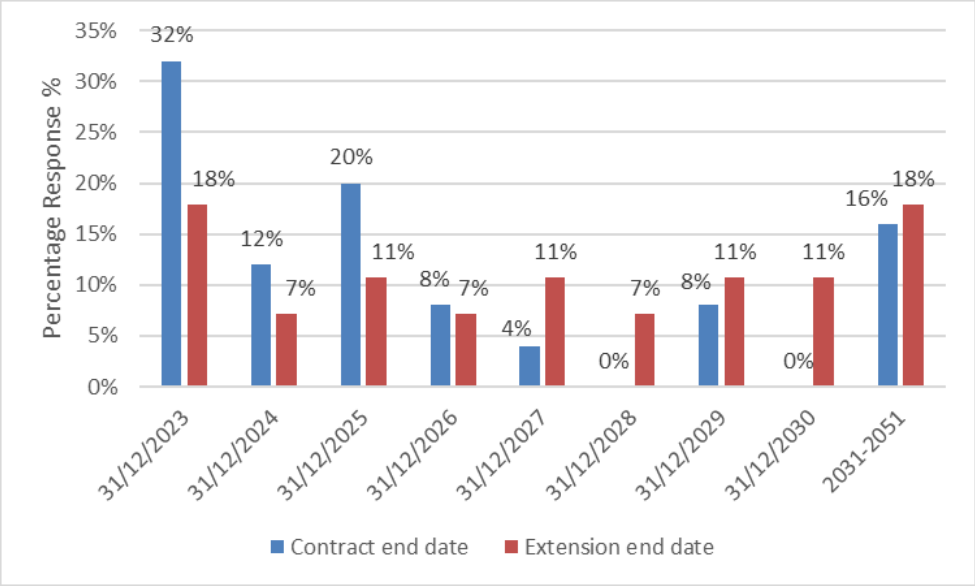
LAs were asked how their gate fee has changed in the last 12 months, with 60% stating that it had 'increased', 7% saying it had 'decreased' and 27% suggesting 'limited change (i.e., no more than a 5% increase or decrease)'. 7% said there had been no change. When asked for the reasons for this change, there were a variety of responses. The most frequent response by a significant margin was 'inflation increase/price review' (79% of respondents). Following this the next most popular response was 'change to operating' costs with 25% of respondents and 'change to contract' with 18% of respondents. Other responses noted the change to red diesel fuel duty and increased permitting and haulage costs. No LAs cited a change to level of contamination in material delivered, or a change to composition of input materials as contributory factors to changes to gate fees levied.

4.2.5 Gate fee contracts

LAs were asked whether the material is sent to IVC facilities under a contract. Of the 32 respondents, 97% answered 'Yes', with 3% responding 'No'.

LAs were also asked when their existing contract ends, with an additional question concerning the potential end date if extensions could be applied. Three responses were removed because they referenced end dates before 2023. The responses are illustrated in Figure 14.

Figure 14: Contract end dates, including extensions (% responses)



64% of respondents' contracts will conclude by the close of 2025, although this falls to 36% if extensions are applied, where permitted.

4.2.6 IVC gate fee influences and direction of travel

LAs were asked 'what are the three key factors influencing IVC gate fees under their existing arrangements', with the ability to select up to three options from a pre-determined list of factors. The results are summarised in Table 27.

The primary influencing factor was 'inflation increase/price review', selected by 69% of respondents, followed by 'operating costs' (59%) and 'lack of competition with other nearby facilities' (34%). 'Operating costs' (49%) was the primary factor in the 2021/22 report, followed by 'inflation' (38%), and 'availability of IVC capacity' (35%). It appears that respondents continue to be focussed on similar issues, although concerns about inflation have come to greater prominence.

Six LAs selected 'other'; of these, one referenced that this question was not applicable due to an integrated contract and another highlighted general environmental legislation under emerging policy.

Table 27: Key factors influencing IVC gate fee under existing arrangements with up to three responses allowed (% respondents)

Factor influencing IVC gate fee (existing arrangements)	Percentage responses (%)
Inflation increase/price review under current contract terms	69
Operating costs	59
Lack of competition with other nearby facilities	34
Emerging national policy: separate food waste collections	19
Contractual changes, other than an inflation increase	16
End markets for outputs	9
Quality/contamination of input material	9
Volume of material supplied to facility	9
Investment/capital costs	9
Emerging national policy: higher quality standards for material outputs	3
Costs of managing residues	3
Other (please specify)	6

LAs were further requested for their views on 'the most likely direction of travel for IVC gate fees in the next 12 months'. Of the 31 respondents, 81% suggested an 'increase' with none a 'decrease' and 16% 'limited change (i.e., no more than a 5% increase or decrease). 3% said there would be no change.

Finally, LAs were asked what will influence IVC gate fees as part of future contracts, selecting up to three options from a pre-determined list of factors. The results are presented in Table 28.

Table 28: Key factors influencing IVC gate fee under future contracts with up to three responses allowed (% respondents)

Reason given for the potential change in future IVC gate fee	Percentage responses (%)
Operating costs	75
Inflation increase/price review under current contract terms	59
(Lack of) competition with other nearby facilities	28
Emerging national policy: separate food waste collections	25
Contractual changes, other than an inflation increase	19
Investment/capital costs	19
Quality/contamination of input material	16
Volume of material supplied to facility	13
Emerging national policy: higher quality standards for material outputs	9
End markets for outputs	3
Costs of managing residues	0
Other (please specify)	3

The most influential factor was thought to be 'operating costs', which was selected by 75%, followed by 'inflation increase/price review' (59%). The next most popular responses were 'lack of competition with other nearby facilities' (28%) and 'emerging national policy: separate food waste collections' (25%). In the 2021/22 survey, 'emerging national policy: separate food waste collections' (51%) ranked highest, followed by 'operating costs' (46%), 'emerging national policy: higher quality standards for material outputs' (35%); and 'availability of capacity' (35%). This suggests that inflation and operating costs have become increasingly prominent concerns.

4.2.7 Waste contractor interviews

Only one IVC operator participated in an interview. Their facility was fed primarily by LA garden waste, with limited quantities of commercial material. The facility has a 15,000 tonne per year capacity. In addition, one operator responded to the online survey, and reported handling local authority material (mixed food and green waste).

Factors driving gate fees over past 12 months and the next 12 months

Both the interviewee and online respondent suggested gate fees over the past 12 months have increased by around 5%, largely due to inflation and increased operating costs (including changes to duty on red diesel and increased energy costs) and is likely to increase by a further 5% in the coming 12 months, again due to inflation and operating costs.

The interviewee stated that end market fluctuations have a negligible effect as income from this material is very low and it is often given away to local farms as a soil improver.

Impact of quality and contamination on gate fees

The interviewee stated that their feedstock quality is very consistent and therefore variations in gate fee due to contamination is not experienced by this operator. In their view, quality of inputs varies depending on the source of material. This operator stated they receive garden waste from an affluent area which produced material with low contamination. Material with a low percentage of non-target material is less expensive to process.

4.3 Anaerobic Digestion (AD)

A total of 78 LAs provided gate fee data for waste that is managed at an anaerobic digestion (AD) plant. LAs were asked which materials they send to AD facilities, selecting all options that apply. In the 2022/23 survey, gate fee responses were collected from LAs for both 'food waste' and 'mixed food and green waste'. However, no responses were received for 'mixed food and green waste'. 94% of respondents send food waste to the AD facility and 6% of respondents selected 'other' which refers to organic material extracted from residual waste via a mechanical biological treatment (MBT) process.

4.3.1 Current gate fees

The UK and regional gate fees for food waste presented at AD facilities are summarised in Table 29 and Figure 15 below. No responses were received for Northern Ireland.

Table 29: AD gate fees for food waste only by region (£/tonne)

Region	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
UK	13	10.01 to 15	16	-26 to 71	78
England (including London)	13	10.01 to 15	16	-26 to 71	72
London	-26	-30 to -25.01	-17	-26 to 45	9
Wales	38	-	42	20 to 71	4
Scotland	20	-	20	0	2

The median UK gate fee for food waste sent to AD was £13/tonne (with a range of -£26 to £71/tonne), with the same figures applying to England. This is lower than the median UK gate fee of £30/tonne recorded in 2021/22. 3 contracting authorities, representing 9 LAs, provided a negative gate fee, signifying that this is not a single authority anomaly but is occurring across multiple authority AD contracts. These contracts also all commenced recently, and it is not clear if these results are anomalous to this year's survey. It is recommended that LAs exercise caution when considering these figures as these values may not be reflective of future costs. The next iteration of this survey will provide further context for these values.

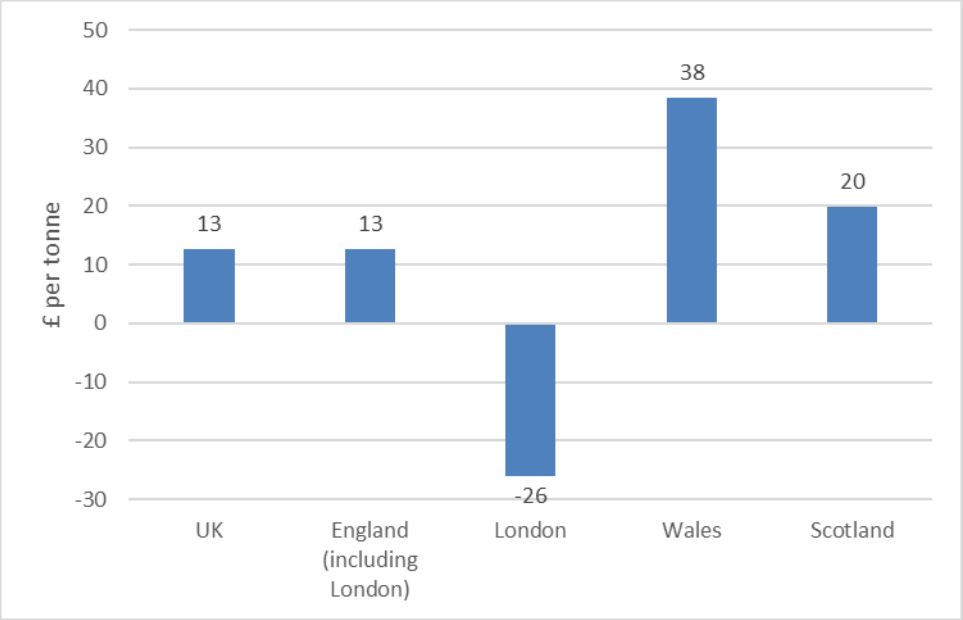
The median figure for London was significantly lower at -£26/tonne. London responses were mainly through a waste partnership, so it is expected that a low fee contract was negotiated due to the high level of competition for materials and end markets for digestate (according to London responses regarding factors influencing gate fees).

Further regional differences in gate fees can be seen, particularly in Wales (£38/tonne), which had the highest median gate fee for food waste processed via AD. This, however, is a decrease from a median gate fee for Welsh LAs of £50/tonne from 7 responses in 2021/22. There was no mode available due to a lack of matching values.

The median for Scotland (£20/tonne) was above the UK figure but only two responses were received, so the results should be treated with caution.

Five responding LAs had commenced new AD contracts for food waste only since 1st April 2022, with a median gate fee of -£15/tonne. As mentioned above, this should be considered with caution.

Figure 15: AD median gate fees for food waste only by region



4.3.2 Bulking, storage and haulage

LAs were asked about their arrangements for bulking, storage and haulage of materials to the AD facility. They were asked whether they pay for these separately, pay for bulking and storage combined and haulage separate, or pay for all combined. LAs were then requested to complete the cost for the relevant arrangement they had chosen.

Table 30 illustrates the responses in terms of the respective costs for the different arrangements. Due to low response counts for some costs, a mode was not calculated.

Table 30: A comparison of bulking, storage and haulage costs (£/tonne)

Stage	Median (£/t)	Mean (£/t)	Range (£/t)	Response count
Bulking	8	11	8 to 30	8
Haulage	26	19	7 to 26	24
Storage	9	6	1 to 9	20
Bulking and storage	46	38	21 to 47	3
Haulage separate	11	12	9 to 26	16
Bulking, storage and haulage cost combined	18	21	0 to 62	18

Where respondents were able to provide values for bulking, storage and haulage, specifically apportioned according to the categories 'bulking and storage' and 'haulage separate' costs, this is reflected in the rows shaded grey above.

This data is independent from the gate fee data provided by the LAs. The findings are based on responses to this specific question only and provide an indicative breakdown of the costs of getting food waste and garden waste from the transfer station to the AD facility where applicable.

Based on the LA responses, the median cost of bulking was £8/tonne (8 responses), the median cost of hauling was £26/tonne (24 responses), and the median cost of storage was £9/tonne (20 responses).

For bulking and storage costs combined but haulage separate, the median cost for bulking and storage was £46/tonne and the median cost for haulage was £11/tonne. Only 3 respondents provided cost for bulking and storage with 16 giving a cost for haulage, so these costs should not be considered together. The median cost of bulking, storage and haulage cost combined was £18/tonne.

A number of authorities gave a cost per load rather than per tonne. These values were removed unless the authority could confirm the figure on a 'per tonne' basis. The cost for haulage was removed from one authority that explained the figure was based on weighted averages.

4.3.3 Caddy liners

LAs were asked whether they provide replacement caddy liners free of charge to households. A total of 30 LAs responded, with 33% answering 'Yes'. Most of these LAs (55%) issued replacement liners at the kerbside upon request. Of the respondents providing caddy liners, the most common type was biodegradable plastic liners (50%), closely followed by non-biodegradable plastic liners (33%). Three responses were added from the 'other' category to biodegradable plastic liners as they referenced compostable liners. No LAs reported issuing paper liners.

LAs were asked what type of caddy liners are permitted by their AD operator. 69% of operators permitted biodegradable plastic liners or compostable liners and 54% non-biodegradable liners. 15% did not permit caddy liners. LAs were asked whether packaging and caddy liners are mechanically separated from the organics. There were 31 responses, of which 77% answered 'Yes, 29% said 'not sure' and 3% said 'no'.

Due to the limited overall sample size, the data is not necessarily reflective of caddy liner provision across all UK LAs.

4.3.4 Gate fee trends

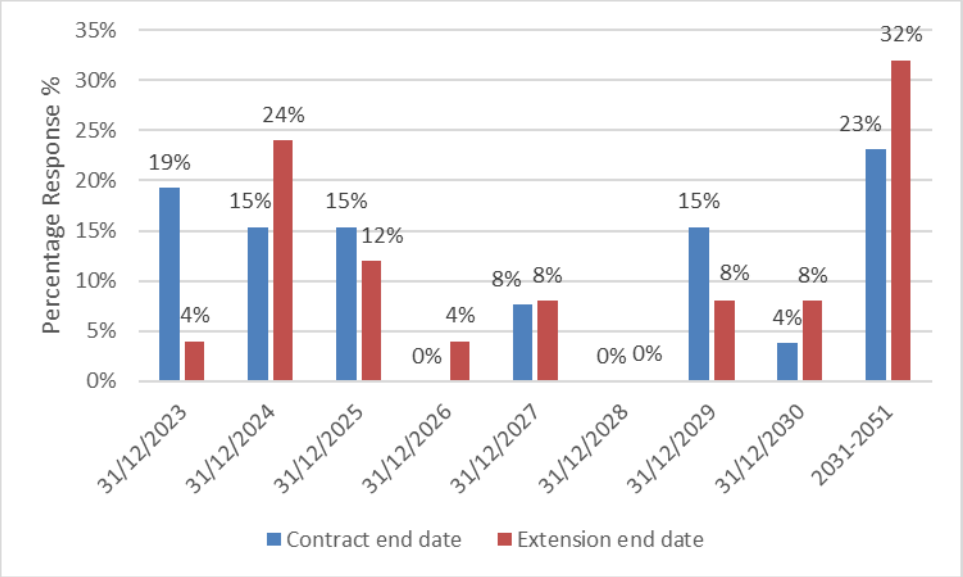
LAs were asked whether the gross gate fee had changed in the last 12 months. A total of 27 LAs responded, with 41% suggesting there was no change and 15% limited change (i.e., no more than a 5% increase or decrease). 30% suggested it had increased and 15% decreased.

LAs were asked for the reason(s) for the change, with the option to select more than one response. 82% of respondents stated that this related to 'inflation increase/price review', 12% a 'change to contract' and 12% a 'change to operating costs'.

4.3.5 Gate fee contracts

LAs were asked whether the material was sent to the AD facility under contract. A total of 31 LAs responded, with 97% answering 'Yes' and 3% 'No'. The survey asked LAs to provide end dates for their current contracts, inclusive of extensions where applicable. The results are illustrated in Figure 16. Two responses were removed because their end dates were prior to 2023.

Figure 16: Contract end dates, including extensions (% responses)



49% of respondents' contracts end by the end of 2025, although this falls to 40% if extensions are applied. 23% of contracts have an initial end date beyond 2030, increasing to 32% if extensions are applied.

4.3.6 AD gate fee influences and direction of travel

LAs were asked to highlight the likely factors influencing AD gate fees under their existing arrangement, with the ability to select up to three options from a pre-determined list of factors. The results are summarised in Table 31.

The primary influencing factor was 'inflation increase/price review', selected by 55% of respondents, followed by 'operating costs' (52%) and 'change in value of energy generated' (32%). In the 2021/22 survey, 'availability of AD capacity' was reported to be the main influencing factor (40%), followed by 'operating costs' (34%) and 'inflation' (30%). As with IVC, it is evident that operating costs and energy costs are having a significant impact.

Table 31: Key factors influencing AD gate fee under existing arrangements with up to three responses allowed (% respondents)

Influencing factor	Response rate (%)
Inflation increase/price review under current contract terms	55
Operating costs	52
Change in value of energy generated	32
End markets for digestate	19
Investment/capital costs	10
Emerging national policy: separate food waste collections	10
Emerging national policy: higher quality standards for material outputs	10
Contractual changes, other than an inflation increase	6
Lack of competition with other nearby facilities	6
Quality/contamination of input material	6
Costs of managing residues	3
Volume of material supplied to facility	3
Other (please specify)	16

LAs were asked to provide their input on 'the most likely direction of travel for AD gate fees in the next 12 months'. Of the 29 respondents, 48% suggested an 'increase' with 3% suggesting a 'decrease' and 28% 'limited change (i.e., no more than a 5% increase or decrease). 21% selected 'no change'.

LAs were further prompted on the factors that will influence AD gate fees as part of future contracts, selecting up to three options from a pre-determined list of factors. The results are presented in Table 32.

Table 32: Key factors influencing AD gate fee under future contracts with up to three responses allowed (% respondents)

Influencing factor	Response rate (%)
Change in value of energy generated	45
Emerging national policy: separate food waste collections	42
Inflation increase/price review under current contract terms	35
Operating costs	35
End markets for digestate	23
(Lack of) competition with other nearby facilities	16
Volume of material supplied to facility	16
Investment/capital costs	13
Contractual changes, other than an inflation increase	13
Quality/contamination of input material	10
Emerging national policy: higher quality standards for material outputs	10
Costs of managing residues	0
Other (please specify)	6

The factors that respondents judged as most influential on future contracts were 'change in value of energy generated' (45%), followed by 'emerging national policy on separate food waste collections' (42%), 'inflation increase/price review' (35%) and 'operating costs' (35%). No single impact predominated to the same degree as inflation and operating costs did in respect of the existing arrangements.

This was somewhat different from the results of the Gate Fees Report 2021/22, which listed 'availability of AD capacity' (40%) as the most important factor. This was followed by 'emerging national policy on separate food waste collections' (36%), 'competition between similar facilities' (32%) and 'operating costs' (32%).

4.3.7 Waste contractor interviews

An interview was held with one operator with a significant number of AD facilities, which accept feedstock from both commercial and LA sources. A further online operator survey was completed by an AD operator, which also accepts feedstock from both commercial and LA sources.

The interviewee stated that their main commercial feedstock supply originates from supermarkets and hospitality and food services (HaFS) premises.

Range of gate fees charged

The interviewee reported gates fees within a similar range to the gate fees reported by the online survey respondents.

Factors driving gate fees over past 12 months and the next 12 months

The online survey respondent reported that the gate fee they charged decreased during 2022 by around 5% due to a price review under current contract terms and changes to local competition. They predicted a further gate fee price decrease during 2023 of around 5% due to changes in the volume of material that they anticipated would be delivered to their facility.

This was contrasted with the view of the interviewee, who stated the gate fee increased in 2022 and predicted they would increase again in 2023 due to increased operating costs and a shortfall in capacity available in their facilities. They commented that some operators had taken a risk by reducing gate fees in the expectation that energy prices would increase during 2023; but the interviewee took the view that energy prices would stabilise and perhaps come down and so had not reduced gate fees.

The interviewee commented that digestate income is negligible and won't impact the gate fee. On occasions it is given away free of charge to local farms, and they considered it unlikely that this would change in the near future.

They also reported that the capacity they have available will affect the gate fee charged. For example, in parts of Scotland and Wales the gate fee is higher as the demand exceeds capacity. In these circumstances, the operator is able to specify higher energy material with low contamination and contracts will be more specific on contamination tolerances.

The interviewee reported that long-term contracts may price in more risk. This was due to their expectation that a significant amount of food waste will be coming on to the market (as a result of mandatory food waste collections in England) and that this would lead to a shortfall in capacity and thus an increase in gate fees. While capacity is available, the operator is happy to take on short term contracts to fill their facilities' capacity.

The interviewee stated that, for commercial sources of material, the gate fee is very much determined by the biogas and calorific yields generated from the feedstock. A high energy product will produce a higher yield of energy with less wear and tear on the equipment. Short term commercial contracts are attractive to this operator as these often relate to high energy products and avoid risk on operating cost and energy income fluctuations.

The interviewee was very clear that if more local authorities start to collect food waste there will be a significant lack of capacity unless tonnages can be guaranteed under contract. They therefore predicted that gate fees will rise significantly in the future. They expected that commercial customers would fill any additional capacity if LAs did not secure the capacity they needed under contract.

Impact of quality and contamination on gate fees

The interviewee stated that caddy liners of any material are not a problem as they will all be removed, including biodegradable and compostable caddy liners, and they have the facilities set up to do this. However, the interviewee suggested the higher the percentage of caddy liners within their input material, the higher the gate fee they would charge (due to the need to cover disposal costs) and when capacity is low the operator would set lower tolerances for contamination of non-target materials, including liners[6].

Regarding commercial waste, the gate fee charged is affected by the proportion of packaging contained in the material received, with higher levels of packaging resulting in higher processing and disposal costs.

Future plans

The interviewee said they would not commit to building any additional capacity until they had guaranteed tonnage but understood that English LAs were unable to commit until they knew the outcome of the government's consultation on consistency in waste and recycling collections.

[6] WRAP research (available at: https://wrap.org.uk/resources/guide/household-food-waste-collections-guide/food-waste-caddies-caddy-liners) evidences that residents prefer the use of liners and liner provision enhances participation and food waste capture

4.4 Energy from Waste (EfW)

A total of 45 LAs provided gate fee cost data for waste that is managed at an energy from waste (EfW) facility.

4.4.1 Current gate fees

The UK and regional gate fees for waste treated at EfW facilities are summarised in Table 33 below. No responses were received from Northern Ireland.

Table 33: EfW gate fees by region (£/tonne)

Region	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
UK	103	115.01 to 120	103	45 to 175	46
England (including London)	103	115.01 to 120	103	45 to 175	39
London	73	-	88	45 to 162	4
Wales	117	-	131	102 to 175	3
Scotland	96	-	98	63 to 139	4

The median UK gate fee for waste sent to EfW facilities was £103/tonne (with a range of £45 - £175/tonne). This compares to a UK median gate fee of £95/tonne in the 2021/22 survey report. The median gate fee for Scotland was slightly lower than for the UK at £96/tonne, with London the lowest figure at £73/tonne.

Wales was the highest at £117/tonne, but this was based on only three responses. There were not enough similar responses to record a mode for London, Wales or Scotland

No LAs responding to the survey had commenced new EfW contracts since 1st April 2022.

4.4.2 Bulking, storage and haulage

LAs were asked about their arrangements for bulking, storage and haulage of materials to the EfW facility. They were asked whether they pay for these separately, pay for bulking and storage combined and haulage separate or pay for all combined. LAs were then requested to provide the cost for the relevant arrangement they had chosen. Due to a low response rate for some costs, mode was not calculated.

Table 34 illustrates the responses regarding the costs for the various arrangements.

Table 34: A comparison of bulking, storage and haulage costs (£/tonne)

Stage	Median (£/t)	Mean (£/t)	Range (£/t)	Response count
Bulking	10	10	9 to 10	2
Haulage	12	14	10 to 20	4
Storage	9	-	0	1
Bulking and storage	14	32	8 to 102	7
Haulage separate	13	17	10 to 42	10
Bulking, storage and haulage cost combined	19	40	8 to 118	8

Where respondents were able to provide values for bulking, storage and haulage, specifically apportioned according to the categories 'bulking and storage' and 'haulage separate' costs, this is reflected in the rows shaded grey above.

This data is independent from the gate fee data provided by the LAs. The findings are based on responses to this specific question only and provide an indicative breakdown of the costs of getting materials from the transfer station to the EfW facility where applicable.

The median cost for bulking was £10/tonne, for haulage it was £12/tonne and for storage £9/tonne. These values are based on a limited number of responses and so may not be representative. Where bulking and storage are combined with haulage separate, the median bulking and storage cost was £14/tonne and £13/tonne for haulage separate. Where bulking, storage and haulage costs are combined, the median was £19/tonne.

Costs for bulking, storage and haulage were removed from one authority's response because it emerged that these were part of a broader gate fee and so could not be reliably separated out. The bulking cost for one authority was removed as it was an outlier and possibly represented a cost per load rather than per tonne.

LAs were asked if all the material is delivered directly to the EfW plant: 22% said 'Yes', while 78% said 'No'.

4.4.3 Gate fee trends

LAs were asked whether the gate fee had changed in the last 12 months (excluding any adjustment for inflation). A total of 58 LAs responded, with 55% suggesting this had 'increased' whilst 34% said there had been 'limited change' (i.e., no more than a 5% increase or decrease). 9% said there had been no change and only 2% of LAs responded to say there had been a 'decrease'.

LAs were asked for the reason(s) for the change (with the option to select more than one response). 84% cited 'inflation increase/price review' followed by 20% suggesting it was because of a 'change to operating costs'. The other options were only chosen by a few respondents, with 5% selecting

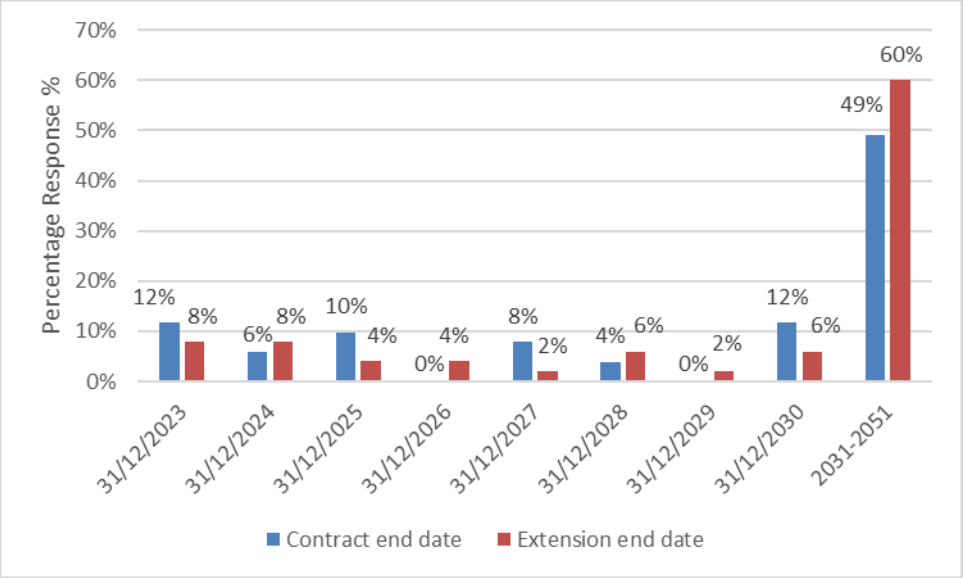
'change to contract' and 'increase in value of energy generated'. Three respondents stated 'contract waste inputs' in their response to 'other'. The remaining responses were either 'not known' (4%) or 'other' (5%) with these responses covering the following themes:

- Changes to red diesel duty;
- Tonnage band met as part of the contract; and
- Relevant to contract agreement.

4.4.4 Gate fee contracts

LAs were asked whether the material is sent to their EfW facility under contract. A total of 62 LAs responded, with 97% answering 'Yes' and 3% 'No'. The survey asked LAs to provide end dates for their current contracts including extensions, where applicable. The results are illustrated in Figure 17.

Figure 17: Contract end dates, including extensions (% responses)



28% of respondents' contracts will end by the close of 2025, falling to 20% if extensions are included. These contracts will likely require extensions or re-procurement in the near future. 49% of contracts are longer-term, ending between 2031 and 2061, rising to 60% with contract extensions included. Three respondents gave an end date of earlier than 2022 and these were removed from the contract end date analysis.

4.4.5 Additional EfW questions

LAs were also asked whether they receive income from energy recovered by their EfW facility. Of the 60 respondents, 33% answered 'Yes', 62% 'No' and 5% 'Not sure'. LAs were further prompted about whether material is subject to pre-treatment prior to incineration: 48% answered 'No'. Of those that responded 'Yes', 48% of respondents selected that bulky waste was removed through a dedicated shredder, 21% stated that materials were removed to reduce health and safety risks (e.g. gas canisters) and 30% stated that magnets were used to remove metals for recycling.

4.4.6 EfW gate fee influences and direction of travel

The survey asked LAs to record the factors influencing EfW gate fees under their existing arrangements with the ability to select up to three options from a pre-determined list of factors. The results are summarised in Table 35.

Table 35: Key factors influencing EfW gate fees under existing arrangements with up to three responses allowed (% respondents)

Factor influencing EfW gate fee (existing arrangements)	Response rate (%)
Inflation increase/price review under current contract terms	74
Change in value of energy generated	33
Operating costs	31
Emerging national policy: new restrictions at existing EfW plants	28
Volume of material supplied to facility	20
Contractual changes, other than an inflation increase	18
Investment/capital costs	10
Lack of competition with other nearby facilities	10
Quality/composition of input material	8
Costs of managing residues	5
Emerging national policy: reduced residual waste arisings	5
End markets for digestate	2
Emerging national policy: fall in RDF exports	0
Other (please specify)	7

The primary influencing factor was 'inflation increase/price review' (74%), followed by 'change in value of energy generated' (33%), and 'operating costs' (31%). In the 2021/22 survey, some of the same themes emerged as key influencing factors, with 'inflation' the main factor (37%) followed by 'availability of EfW capacity' (34%) and 'operating costs' (29%). Whilst there are similarities therefore with responses to last year's survey, 'Change in value of energy generated' features as a prominent factor influencing existing EfW gate fees in the latest survey. In some cases, this may reflect a reduction to some LA costs through energy rebates, particularly if the contract has been re-based during the survey period.

The biggest emerging policy influences were thought to be 'new restrictions at EfW plants' (28%), and 'reduced residual waste arisings' (5%). In general, these emerging areas of waste policy were perceived as less influential than the more market-centred factors of inflation, cost, and capacity.

Four respondents selected 'other'. Two did so because they were unable to comment. Further responses in this category included:

- Fulfilling needs of Environment Agency RPS 264 on shredding waste with dust abatement systems; and
- UK emissions trading scheme, electricity generator levy[7].

LAs were further prompted for their views on 'the most likely direction of travel for EfW gate fees in the next 12 months'. From the 61 responses, 82% suggested that gate fees would 'increase' and no respondents suggested this would 'decrease'. Another 13% thought that there would be limited change (i.e., no more than a 5% increase or decrease) and 5% thought there would be no change.

LAs were asked what key factors will influence EfW gate fees as part of future contracts, with the ability to select up to three options from a pre-determined list of factors. The results are summarised in Table 36.

Table 36: Key factors influencing EfW gate fees for future contracts with up to three responses allowed (% respondents)

Reason given for the potential change in future EfW gate fee	Response rate (%)
Inflation increase/price review under current contract terms	53
Operating costs	45
Potential impact of emissions trading scheme (ETS)	40
Change in value of energy generated	29
Emerging national policy: new restrictions at existing EfW plants	22
Investment/capital costs	19
Emerging national policy: landfill bans	16
Contractual changes, other than an inflation increase	14
Volume of material supplied to facility	12
Lack of competition with other nearby facilities	7
Emerging national policy: reduced residual waste arisings	7
Quality/composition of input material	5
Costs of managing residues	2
Emerging national policy: fall in RDF exports	2

[7] This measure introduces a new tax on exceptional electricity generation receipts of qualifying generating undertakings from 1 January 2023 to 31 March 2028. More information available at: Electricity Generator Levy - GOV.UK (www.gov.uk).

Reason given for the potential change in future EfW gate fee	Response rate (%)
End markets for digestate	0
Other (please specify)	10

The primary influencing factor on future contracts was 'inflation increase/price review' (53%) followed by 'operating costs' (45%), 'potential impact of emissions trading scheme (ETS)' (40%) and 'change in value of energy generated' (29%).

These are broadly in line with the factors from the 2021/22 survey, although 'availability of EfW capacity' (41%) was the top factor in place of 'inflation increase/price review' (27%), although this and operating costs (35%) did feature.

4.4.7 Waste contractor interviews

Two large waste management companies that operate EfW facilities participated in interviews, but no responses were received from EFW operators via the online gate fees survey.

Range of gate fees charged

Both interview participants represent large waste management companies and both operate several EfW plants across the UK. Both interviewees reported gate fees in line with online survey respondents.

Factors driving gate fees over past 12 months and the next 12 months

Respondents 1 and 2 stated that larger facilities have lower gate fees due to economies of scale. However, they also said that gate fees are very dependent on the length of contract and when the contract was procured. Some mature contracts have low gate fees and those signed in the last 10 years tend to have higher gate fees.

Longer term contracts give more certainty to the operator and therefore tend to result in a lower gate fee more consistently. However, short term contracts to bridge gaps may be priced very competitively if spare capacity is available.

There had been a reduction in waste available towards the end of 2022 which had resulted in capacity becoming available. Securing tonnage from C&I sources had become more important to ensure that facilities are running efficiently. If a facility has capacity, lower gate fees will be offered in an attempt to fill the shortfall in material.

The composition of the waste delivered to the EfW is important. If there is a shortage of capacity, the operator can specify waste with a higher caloric value. When there is capacity available in the facility the operators' preference is to receive tonnage to keep processing material, even if it has a lower calorific value.

Power prices were acknowledged to have an impact on gate fees, but Respondent 1 sells power 12-18 months in advance and therefore the prices they received do not fluctuate in line with short term changes in the market.

Bulky waste was an issue for one respondent due to the increased processing costs associated with pre-shredding the material. Bulky waste containing Persistent Organic Pollutants (POPs) has increased as this material can no longer be landfilled, which was increasing processing costs.

Respondent 1 explained that, towards the end of 2022, some existing MSW contracts had needed more C&I waste to offset a decline in their main LA feedstock. The reduction in LA waste was thought to be due to the economic climate leading to people reducing their consumption. The respondent thought that these supply issues may continue throughout 2023.

Respondents 1 and 2 stated that gate fees in 2022 increased in line with indexation and expected gate fees in 2023 to increase further due to inflation and increased diesel costs, the energy generation levy and increases in the cost of ammonia and chorine used during treatment. Increases in operating costs were not being fully offset by the increases in energy prices, so the net effect on gate fees was likely to be an ongoing increase.

The respondents also explained that a requirement to collect additional dry materials (cartons, metal packaging and plastic film) for recycling, as part of the implementation of the Resources and Waste Strategy, would not result in a change in gate fee; but they thought that mandatory food waste collections might have a small impact due to the resulting change to the calorific value of the feedstock. In one operator's opinion, the introduction of a Deposit Return Scheme (DRS) resulting in the removal of a proportion of incoming recyclable materials will not impact gate fees.

Respondent 1 explained that they were not seeing any impacts from diminishing use of landfill since the areas surrounding their facilities had already moved away from this form of disposal.

Respondent 2 explained that the North East of England and Yorkshire and Humberside have a lot of competition from RDF exports and that this competition could result in a lower gate fee due to the need to secure tonnage for facilities.

One respondent was not expecting to see an impact from the Emission Trading Scheme (ETS) in 2023 whereas the other respondent is expecting that the impact of including incineration in the ETS would result in an increase of around a £36-38 per tonne.

4.5 Non-hazardous landfill (NHLF)

34 LAs provided gate fee cost data for waste that is managed at a non-hazardous landfill (NHLF). All figures are exclusive of Landfill Tax. The cost of Landfill Tax, standard rate, from 1st April 2022 was £98.60/tonne, and increased to £102.10/tonne from 1st April 2023.

4.5.1 Current gate fees

The UK and regional gate fees for waste received at NHLF facilities are summarised in Table 37 below. No responses were received for London and Wales.

Table 37: NHLF gate fees by region (£/tonne exclusive of Landfill Tax)

Region	Median (£/t)	Mode (£/t)	Mean (£/t)	Range (£/t)	Response count
UK	28	10.01 to 15	32	11 to 87	36
England (including London)	28	10.01 to 15	32	11 to 87	25
Northern Ireland	24	20.01 to 25	22	18 to 27	5
Scotland	37	10.01 to 15	35	11 to 63	6

The median UK gate fee (exclusive of Landfill Tax) for waste sent to NHLF facilities was £28/tonne (with a range of £11 to £87/tonne). This is the same as the UK median gate fee in the 2021/22 survey report.

The median gate fee for England was the same as the UK figure, with Northern Ireland slightly lower at £24/tonne. Scotland (£37/tonne) was higher than the UK median figure.

Respondents were asked to provide their gate fee exclusive of Landfill Tax, but many gave a figure that included the tax. Where gate fees exceeded the value of Landfill Tax, the authority was contacted to confirm the gate fee provided. All authorities that were contacted and responded confirmed they had provided the figure inclusive of tax, so it was decided to apply this assumption also to the one local authority that did not respond to the enquiry. A number of respondents also reported a value of £0 but indicated that this was because the gate fee was confidential, so these zero values were removed.

No LA respondents had commenced a new landfill contract since 1st April 2022.

4.5.2 Bulking, storage and haulage

LAs were asked about their arrangements for bulking, storage and haulage of materials to NHLF. They were asked whether they pay for these separately, pay for bulking and storage combined and haulage separate or pay for all combined. LAs were then requested to provide the cost for

the relevant arrangement they had chosen. A mode was not calculated due to the low response counts.

Table 38 illustrates the responses regarding the costs for the various arrangements. There were no responses received for the cost of bulking separate from haulage and storage.

Table 38: A comparison of bulking, storage and haulage costs (£/tonne)

Stage	Median (£/t)	Mean (£/t)	Range (£/t)	Response count
Haulage	25	25	12 to 38	2
Storage	9	-	0	1
Bulking and storage	13	23	10 to 48	6
Haulage separate	21	23	0 to 42	5
Bulking, storage and haulage cost combined	29	40	8 to 118	6

Where respondents were able to provide values for bulking, storage and haulage, specifically apportioned according to the categories 'bulking and storage' and 'haulage separate' costs, this is reflected in the rows shaded grey above.

Limited responses were received regarding bulking, storage and haulage, with an insufficient number received to give accurate costs for bulking, haulage and storage separately. For bulking and storage combined, the median cost was £13/tonne and for haulage it was £21/tonne. For bulking, storage and haulage cost combined, the median was £29/tonne.

One authority provided an unusually high bulking and storage cost. Following contact with the authority, it was found that this was part of a broader gate fee, so the value was removed from the analysis.

4.5.3 Gate fee trends

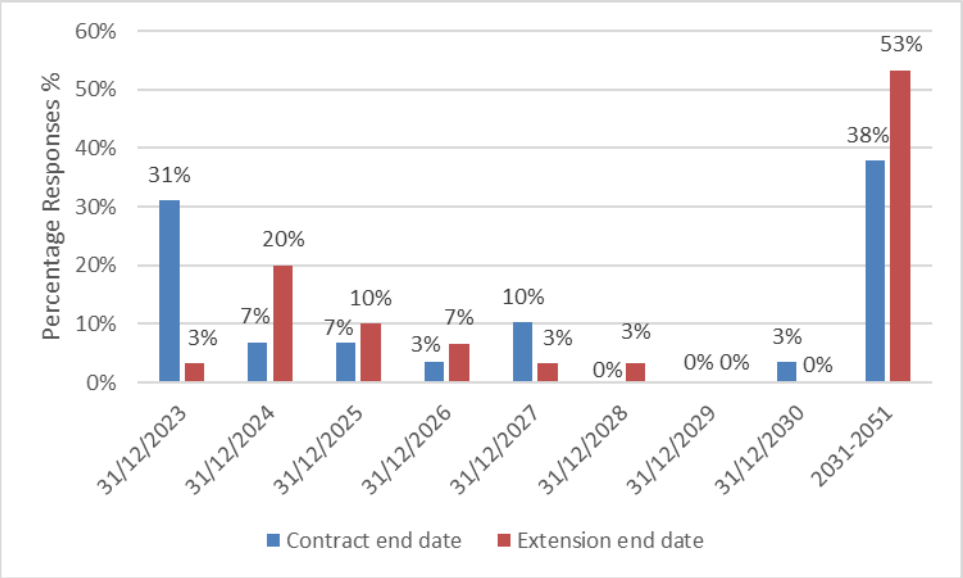
LAs were asked whether the gate fee had changed in the last 12 months (excluding any adjustment for inflation). A total of 36 LAs responded, with 56% suggesting this had 'increased' whilst 36% said there had been 'limited change' (i.e., no more than a 5% increase or decrease). 6% said there had been no change and only 3% of LAs responded to say there had been a 'decrease'.

LAs were asked for the reason(s) for the change (with the option to select more than one response). 86% cited 'inflation increase/price review'. The other options were only chosen by a few respondents, with 6% suggesting it was because of a 'change to contract' and 3% selecting 'change to operating cost'. Three respondents stated 'contract waste inputs' in their response to 'other'. The remaining response was either 'not known' (9%).

4.5.4 Gate fee contracts

LAs were asked whether material sent to their NHLF facility was under contract. A total of 38 LAs responded with 92% answering 'Yes' and 8% 'No'. The survey asked LAs to provide end dates for their current contracts including extensions where applicable. The results are illustrated in Figure 18.

Figure 18: Contract end dates, including extensions (% responses)



45% of respondents' contracts will end by the close of 2025, falling to 33% with extensions included where applicable. 38% of contracts are longer-term, ending between 2031 and 2051, rising to 53% with contract extensions included. Contracts appear to either be ending quite soon or be much longer-term and not expiring for some time. Two respondents gave expiry dates of before 2023, so these were removed from the analysis.

4.5.5 NHLF gate fee influences and direction of travel

The survey requested LAs to state the factors influencing NHLF gate fees under their existing arrangements, with the ability to select up to three options from a pre-determined list of factors. The results are summarised in Table 39.

The primary influencing factor was 'inflation increase/price review' (73%), followed by 'Landfill Tax' (70%). The next most selected option was much lower with 'operating costs' at 22%. In terms of emerging policy, the biggest influences were thought to be 'reduced residual waste arisings' (8%) with a 'fall in RDF exports' (3%) seen as less significant.

In the 2021/22 survey, some of the same themes emerged as key influencing factors. The other most common responses in the 2021/22 survey included: 'availability of landfill capacity' (54%), 'operating costs' (43%) and 'inflation' (35%). Landfill Tax was not given as an option so can't be compared to the 2021/22 results.

The 'Other' responses included the following:

- Change in legislation; and
- Potential biodegradable municipal waste landfill ban.

Table 39: Key factors influencing NHLF gate fees under existing arrangements with up to three responses allowed (% respondents)

Factor influencing NHLF gate fee (existing arrangements)	Response rate (%)
Inflation increase/price review under current contract terms	73
Landfill Tax	70
Operating costs	22
Contractual changes, other than an inflation increase	11
Composition of input material	8
(Lack of) competition with other nearby facilities	8
Emerging national policy: reduced residual waste arisings	8
Investment/capital costs	5
Emerging national policy: fall in RDF exports	3
End markets for digestate	0
Change in value of energy generated	0
Volume of material supplied to facility	0
Other (please specify)	11

LAs were further prompted for their views on 'the most likely direction of travel for NHLF gate fees in the next 12 months'. From the 38 responses, 87% suggested that this would 'increase' and no LAs suggested this would 'decrease'. The remaining 13% thought that there would be limited change (i.e., no more than a 5% increase or decrease).

LAs were asked to note key factors that will influence NHLF gate fees as part of future contracts, with the ability to select up to three options from a pre-determined list of factors. The results are summarised in Table 40.

Table 40: Key factors influencing NHLF gate fees for future contracts with up to three responses allowed (% respondents)

Reason given for the potential change in future NHLF gate fee	Response rate (%)
Landfill Tax	58
Inflation increase/price review under current contract terms	47
Emerging national policy: landfill bans	37
Operating costs	24
Lack of competition with other nearby facilities	16
Contractual changes, other than an inflation increase	16
Volume of material supplied to facility	16
Lack of facilities/facilities being further away	13
Emerging national policy: reduced residual waste arisings	11
Investment/capital costs	11
Composition of input material	5
Potential impact of emissions trading scheme (ETS)	5
End markets for digestate	0
Change in value of energy generated	0
Emerging national policy: fall in RDF exports	0
Other (please specify)	8

The main influencing factor on future contracts was 'Landfill Tax' (58%), followed by 'inflation increase/price review (47%) and 'emerging national policy: landfill bans' (37%). This is fairly similar to 2021/22 except 'availability of landfill capacity' (60%) was the most chosen factor, followed by 'operating costs' (44%) and inflation (31%).

Five of the 'other' responses referenced 'location of sites' or 'lack of facilities' so to reflect this, a new category was made to include these responses. In total 13% of respondents chose 'lack of facilities/facilities' being further away'.

'Other' comments, including the potential ban to landfill of biodegradable waste and treatment of persistent Organic Pollutants (POPs).[8]

4.5.6 Waste contractor interviews

One landfill operator participated in an interview. The operator's sites focus mainly on material from municipal sources, while accepting some C&I waste.
One operator completed an online NHLF survey and reported that they solely received waste from LA sources.

Range of gate fees charged

The interview respondent reported gate fees in line with the gate fees reported by online survey respondents.

Factors driving gate fees over the past 12 months and the next 12 months

Both respondents reported an increase in gate fees of around 5% during 2022 due to inflation increases and a lack of competition from other facilities. Both respondents also stated that emerging national policy could potentially impact gate fees due to diverting material from landfill resulting in there being less material available.

The online survey respondent stated they predicted less than 5% change in gate fees during 2023 due to a lack of competition from nearby facilities.

Variance of gate fees by waste type/source

The interview respondent suggested that the gate fees for landfill do not vary based on source, unless it is hazardous or asbestos-containing material. In fact, the respondents stated a preference for material with a high biodegradable content as it yields more biogas which is extracted at all of the sites owned and operated by the company. A third of all revenue from the business is derived from biogas extraction. That said, all new consignments are subject to stringent spot-checks and analysis to determine origin and composition. One-off consignments of commercial waste require more sampling and, as result, command a gate fee at the higher end of the quoted range (i.e., around £30/tonne).

Other influences affecting gate fees

The interviewee respondent stated that one of the main influences affecting gate fees was regional location. For example, it was stated that in parts of England there is sufficient landfill and treatment capacity and thus a good deal of competition. Landfill gate fees in such areas are therefore relatively low.

Another factor affecting gate fees is the proximity of EfW facilities. In the South East of England, during 2022, operational challenges with alternative waste treatment options led to an increase in

[8] POPs are chemical substances that do not break down in the environment. Organisations including LAs must follow government guidelines for waste that contains POPs. Common waste types containing POPs are upholstered domestic seating and waste electrical and electronic equipment.

the use of landfill at short notice as a waste disposal option. Furthermore, some EfW plants were unwilling to accept some RDF that has recently been 're-shored' due to the inherently high calorific value of the material, and this had instead been landfilled.

Another factor influencing landfill gate fees is the issue of 'reserved' capacity. To illustrate the point, the interviewee respondent used the example of a recent site in England which reserved capacity for municipal bulky waste, which is not suitable for EfW. This raised gate fees at the site, due to an absence of any other local competition.

The operator answering the online survey suggested that a requirement for LAs to collect food and garden waste, separate from residual waste, as part of the implementation of the Resources and Waste Strategy, would not result in a change in gate fee. In most of the regions in which they operate, recycling levels are already high and they mostly deal with residual waste.

Future plans

The interviewee respondent stated that, if managed well, landfill still has an important role to play in the UK waste management industry. In the longer term, they plan to maintain some sites. They still own and operate two sites that have a long lifespan, whereas most other sites will close within the next 5 to 10 years. The respondent confirmed that they retained significant permitted landfill capacity.

5.0 Key points of note

5.1 Understanding and interpreting the data

The 2022/23 survey has followed a similar approach to previous years in attempting to obtain gate fee and related data for waste management facilities through an annual survey. This year, efforts were made to provide a clearer distinction between bulking, storage and haulage costs. LAs were asked to provide separate costs for these if they could. In addition, for MRF facilities, where income from material sales can impact upon the gate fee, respondents were asked to distinguish, where possible, between the gross gate fee and the net gate fee paid once material income share had been accounted for. This approach was employed to further improve the accuracy of the data and the level of insight it provides.

Readers of the Gate Fees Report 2022/23 must exercise caution when drawing conclusions from gate fee data in isolation and without sufficient context. In some cases, response rates were low and therefore may not be representative. In other cases, the low number of responses represents the dearth of a particular facility type in a particular region.

For the questions requiring costs for bulking, storage and haulage, some LAs responding have only entered one data point – for example, a cost for bulking but not storage or haulage. This means that the responses are not directly comparable across the tables and figures as they do not necessarily relate to the same LAs. For example, one council may have provided a haulage cost only and another a bulking and storage cost, but these cannot be considered as one price package.

There are myriad factors that will impact gate fees, particularly for MRFs. These include:

- dry recycling collection methodology;
- materials collected;
- length of contract;
- quality of material delivered;
- inclusion of contractor/LA risk share arrangement regarding the sale of reprocessed material;
- the presence of contamination thresholds (beyond which loads can be rejected or subjected to additional charges);
- wider LA levies/financial mechanisms;
- the ability of LAs to deliver directly to facilities/use of transfer facilities;
- geographic location and proximity to other facilities;
- energy costs and other operating costs;
- capital costs;
- availability of competitor capacity.

The purpose of this report is not to statistically determine the impact of any of these factors in isolation. Readers should therefore be aware that the cumulative impact of these factors can exert significant influence over the gate fees charged. This is evidenced, for example, by the fact that the net MRF gate fee range across the UK is £189/tonne (Table 13), despite the services delivered being broadly similar in character.

Relatively high commodity values (which have prevailed in 2022/23) will reduce the cost of MRF treatment where a figure is reported inclusive of a rebate mechanism. This was referenced as the most common reason for MRF gate fee change over the past 12 months. Increasingly, MRF contracts now include an element of LA risk share concerning the sale of reprocessed material. Where such contract mechanisms exist, 94% of respondents confirmed that the LA is responsible for at least 50% of the material risk share (Figure 10). This represents an increase from 70% in last year's survey.

Interviews with MRF operators (4.1.11 Waste contractor interviews) revealed an increase in operational costs, and in particular a significant increase in energy prices, and the need to invest in new plants to accommodate the reprocessing of new materials. These costs may have been offset to some degree during the past 12 months due to the enhanced commodity prices, but may lead to rising gate fees if material prices decline as a result of market changes and the introduction of a DRS.

There is no single consistent LA methodology for the calculation of gross and net gate fees which makes direct data comparisons difficult. Examples of factors that could influence how the gross/net gate fees have been reported include:

- Reporting of contamination/rejected loads, which may exist as separate budget lines and therefore not be incorporated into the true net cost;
- Some WCA gate fees may incorporate a subsidy/levy from their WDA that cannot be disaggregated (e.g. tipping away payments, payment for bulking/haulage);
- Some LAs have an interest in the MRF that they use (and may own it). In such cases, the gate fee may not be representative of the price that would be paid to a commercial operator (as the build/operational costs may be already paid/allocated elsewhere within budgets);
- Some LAs may not be able to disaggregate transport costs as these may form part of one holistic payment mechanism; and
- Some LAs may use more than one MRF. Whilst we have tried to report separate gate fee costs, where appropriate, this has not always been possible.

5.2 Key points from the survey for LAs to consider

For LAs considering future contracting, there is no one single influencing factor that the data from the survey points to as a key consideration. Instead, there are a range of factors that LAs should consider, subject to their individual circumstances, prior to going to market to tender future reprocessing/disposal contracts. These are summarised below.

5.2.1 MRF contract considerations:

- The majority of respondents stated that their MRF contracts included an element of LA risk share concerning the sale of reprocessed material (52%). In comparison with last year's results, there appear to be fewer contracts where 100% of the risk share rests with the operator. This was 23% in the 2021/22 survey but just 3% this year. Increasingly, MRF contracts now include an element of LA risk share concerning the sale of reprocessed material. This year's results showed that where a risk share mechanism is in place, 94% of LAs are responsible for 50% or more of the material value risk with the LA compared to 70% in last year's survey. Historically, a number of MRF contracts operated on a fixed gate fee basis. LAs should be mindful that prospective contractors may not agree to receive material without such risk share arrangements, or that the exclusion of a LA risk share may impact the gate fee levied due to the contractor pricing in risk. Interviews confirmed a preference from operators to mitigate material price risk and stated that they may be discouraged from tenders when required to bear substantial risk.
- 51% of respondents stated a maximum contamination threshold of up to 15%, beyond which loads are rejected or charges imposed. LAs will generally obtain more competitive gate fees as quality improves and the level of contamination in recyclable material reduces.
- Of those LAs that highlighted a potential recycling service change at the next opportunity, none indicated a move towards less segregation of material. This accords broadly with the direction of travel set by the Environment Act 2021 regarding the separate collection of core material streams.
- LAs in England should consider potential requirements set out in the Defra consistency consultation to incorporate additional materials in kerbside recycling collections and how this could impact existing and future MRF contracts. 43% of LA respondents thought the requirements to collect additional materials would result in a change of gate fee, while 39% didn't know what the impact would be. Four of the interview respondents suggested that costs will increase with the inclusion of new materials in feedstock and contract terms will have to reflect additional capital investment, and thus an increase in gate fee. 47% of respondents also said that their existing MRF contract allows for material streams to be added, while 28% said it did not and 26% were not sure. For the latter group, renegotiation or retendering may prove necessary to enable new requirements to be met.
- The survey highlights that 46% of MRF contracts expire by the end of 2024 (though some are able to be extended). Operator interviews suggested size (tonnage and contract value) and duration of the contract was not a significant influence on gate fees but might affect their decision whether or not to bid for the contract. Long term contracts are usually preferred, but short-term contracts can be attractive if they fit in with periods where there is capacity in an operator's portfolio of facilities. It is vital that LAs consider their contractual requirements as early as possible, taking into account factors highlighted in the Gate Fees Report 2022/23, in order to secure efficient contracts that will satisfy existing and forthcoming legislative requirements.

- MRF operational costs could be subject to a further increase in the next 12 months. According to the operator interviews, this stems from the impact of changes to red diesel duty, increased costs due to operator overheads, general operating costs and inflation. The value of commodities and their ability to offset these costs will therefore continue to have a significant influence on the overall direction of gate fees in the next 12 months. Three respondents in the operator survey suggested that a fall in commodity prices would result in an increase in gate fees over the next 12 months. This is in-line with the general themes that emerged from the survey with many respondents seeing increased operating costs and inflation as reasons for potential price increases.
- Interviews suggest that future policy changes are also likely to place further pressure on MRF operator costs. The removal of valuable materials due to the introduction of a DRS, and the requirement to invest in order to adapt processes to handle additional materials (cartons, metal packaging, and plastic film) will likely result in a change to gross gate fees to help offset costs. Four respondents from the operator survey suggested that the introduction of DRS would affect gate fees, with three saying this would increase gate fees by more than 6%.

5.2.2 Other contract considerations

- Forthcoming policy changes: Following Defra's DRS consultation response in January 2023, there is now more information available for LAs on upcoming changes, albeit this may be insufficient to enable them to plan changes to their MRF contracts. LAs should endeavour to keep up to date on forthcoming policy changes that may impact composition/yields as these can have a significant impact on contract prices. They should remain aware within current contracts that policy changes and the addition of difficult to recycle materials could result in gate fee increases over the coming years.
- IVC: Gate fee trends appear to be going in different directions based on the materials. Gate fees for mixed food and garden waste have reduced (from £55/tonne in 2021/22 to £54/tonne in 2022/23) compared to gate fees for garden waste only increasing (from £30/tonne in 2021/22 to £79/tonne in 2022/23. The operator interviews outlined that gate fees have increased by up to 5% over the last 12 months and could be expected to rise by another 5% in the next 12 months due to the increase in inflation, increased operating costs and changes to red diesel duty. The requirement for the separate collection of food waste should be considered by LAs as this could change some LA material splits. This is referenced in Section 57 of Environment Act 2021, which requires written assessment for co-collection of food and garden waste and requires that food waste is collected no less frequently than weekly.
- AD: Around 46% of respondents' AD contracts are due to expire by the end of 2025 (though some have the option to extend) and, given the anticipated increase in the number of LAs requiring AD capacity for separately collected food waste, LAs are advised to ensure sufficient timescales for market engagement and procurement. It was raised in the AD interview, that in the interviewee's opinion, if more English LAs start to collect food waste there would be increased pressure on capacity. The interviewee suggested guaranteed tonnages may need to

be offered to secure a contract with them.[9] They suggested that commercial customers will fill any additional capacity that LAs do not secure under contract. If capacity is tight, gate fees may increase and toleration of contamination may decrease.

- AD: The impact of increasing inflation and operating costs is less stark with AD than with some other treatment types. Separate food waste collections and the change in energy value were seen as the significant factors influencing AD gate fees as part of future contracts. Operator responses were varied, and one operator suggested that AD gate fees had decreased due to a price review under current contract terms and changes to local competition. This is a significant departure with last year's AD gate fees, and it is not clear whether this is a one-off occurrence or a new trend, so it is recommended that LAs should exercise caution when considering the negative AD gate fees as future costs are unknown. Next year's survey will seek to assess whether the results from this year are an anomaly or not.
- EfW: Based on the operator interviews, gate fees can be dependent on the length of contract and when the contract was procured. Many of the EfW contracts seen in the surveys were procured before 2022 and so recent energy prices may not yet be reflected within them. One interviewee thought that mandatory food waste collections might have a small impact on gate fees due to the resulting change to the calorific value of the feedstock.
- NHLF: The operator interviews highlighted that gate fees have increased in 2022 due to increases in inflation and, in some cases, limited competition from other facilities. This was also reflected in the LA surveys. Another factor affecting gate fees highlighted in one of the interviews was the proximity of EfW facilities. There had been instances where operational challenges with alternative treatment options led to an increase in landfill at short notice. Landfill is less limited to a particular annual throughput than other forms of waste treatment, and therefore issues of supply and demand tend to be less of a driver of gate fees.

[9] This is the view of the interviewee. LAs should carefully consider the inclusion of any clauses regarding guaranteed minimum tonnages.

6.0 Appendix 1 – Data collection methodology

Local authority survey

This year's survey followed broadly the same format of the last eight surveys. It was conducted using a web-based questionnaire hosted by the website Survey Monkey.

The online questionnaire was publicised to local authorities (LAs) through an email containing a survey link for each LA contact. At least one email was sent to a specific contact at every LA in the UK. Where multiple contacts were available for a single authority, the survey was sent to each. The survey was also publicised on WRAP's website and via the Local Authority Recycling Advisory Committee (LARAC), Chartered Institution of Wastes Management (CIWM), Zero Waste Scotland (ZWS), the National Association of Waste Disposal Officers (NAWDO), Local Government Association (LGA), District Councils' Network (DCN) and the Association of Directors of Environment, Economy, Planning and Transport (ADEPT). The covering email contained summary information about the gate fees survey in general and provided a blank Excel workbook for authorities to use to gather the data internally. This support was extremely beneficial in demonstrating the importance of the survey. The covering message was sent to all LAs via email, with responses and queries monitored throughout the survey.

Questionnaire

A single questionnaire was used for capturing all data from LAs. This questionnaire included detailed questions covering all waste management treatment/disposal options outlined within the survey scope. Question logic was built into the survey so that if the authority answered 'no' to using a specific treatment or disposal facility (e.g. a MRF or IVC) they then bypassed all subsequent questions concerning that facility. In this manner the questionnaire was kept relevant to the individual authority.

All questions relating to gate fees and changes in gate fees were open questions that required the input of £/tonne values. For bulking, storage and haulage, several possible options were provided to respondents which could be selected from a predefined list; however, respondents could also select 'other', and add additional comments in a free text box if relevant factors were not contained in the list. The question sought to understand whether they pay for bulking, storage and hauling as one payment, pay for bulking and storage combined with haulage separate or if they pay for bulking, storage and haulage separately.

Survey of waste treatment operators

The waste treatment operators' survey followed the same approach as the LA survey, in that it was conducted using web-based questionnaires. The same questionnaire was compiled for all operators, but with logic built into the survey so they could bypass questions on treatment types that were not relevant to them. The questionnaires were hosted by market research website Survey Monkey. The online questionnaires were publicised to waste treatment operators by a covering

email containing the relevant survey links depending on the contact and which treatment technologies were relevant to them. Where multiple contact details were available within a company the survey was sent to each one. The survey was also publicised on WRAP's website. After the introductory email was sent to waste treatment operators, a follow-up email was then sent after approximately four weeks, to encourage further responses.

Waste management companies (WMCs)

Several WMCs that cover a broad range of regions and treatment/disposal technologies were identified. Key contacts within these companies were contacted to see whether they would be willing to take part in either a telephone or virtual meeting. As was the case in previous years, it was anticipated that information gained from these interviews would not necessarily be actual gate fee data associated with facilities, but, more likely, a range of gate fees and a market trend commentary. This information was used to 'sense check' and provide context to the information received from LAs. The rationale was that by not asking for gate fees for specific facilities, companies would be more willing to participate and would also engage in a discussion about relevant drivers in the marketplace. The approach taken was to present a summary of the gate fees collected in the LA survey (median and regional differences) and ask the company representatives to confirm or otherwise comment on them. General questions, rather than specific questions about gate fees, were also asked concerning LA and commercial markets.

Data analysis and quality assurance

Whilst there is some data analysis functionality available through the website used to host the online questionnaires it was insufficient for all of the survey requirements. Consequently, the data was exported into Microsoft Excel file format to facilitate detailed analysis and the production of charts.

Where explicit permission was granted individual survey responses were shared with Defra to support modelling for the packaging EPR. Where data from the gate fees survey is used to inform modelling for the packaging EPR it will undergo additional quality assurance and cross-checking.

Data checking and cleansing

Once the data was exported it was checked for obvious errors, as well as less likely errors, which required potential clarification with the respondents. This primarily involved senior members of the team examining the data and highlighting potential errors using their knowledge of the market. Typical issues which were identified during this data checking and cleaning stage included for example:

- Where £0/tonne gate fees were stated, checking with the submitting authority that these were valid and that they had not intended to leave fields blank;
- The same gate fee entered in both the net and gross gate fee fields or the bulking, haulage and storage fields;
- Data which appeared to be outlying (either high or low) or illogical; and

- Respondents providing the landfill gate fee inclusive of landfill tax.

Such issues were identified within the data, checked with the supplying LA by phone or email and corrected prior to analysis of the data. In some cases, where responses were not received and gate fees looked significantly out of step with others, they were eliminated from the analysis.

Bulking, storage and haulage costs

The key data from this survey are the gate fees charged at each type of facility (£/tonne). For comparability reasons these must exclude all other costs which may be associated with the management of a waste, e.g. collection, bulking, storage or haulage costs. For this reason, in a change in approach from the 2021/22 survey, this survey has asked for separate prices for bulking, storage and haulage. These costs were requested separately from the net and gross gate fees in order to disaggregate, understand and present individual components.

Private Finance Initiative (PFI)/integrated contracts

A number of LAs with existing PFI or integrated contracts quoted gate fees which were obviously not 'gate fees' for a specific treatment facility, but represented the whole, or part of a payment for an integrated service. Comments provided within the survey and further questioning of some of these authorities revealed that complex payment mechanisms were in place for waste treatment and disposal, whereby the true cost of the technology or technologies used was masked by the structure of the payment mechanism. This issue is particularly marked under integrated contracts, where service fees may be paid to operators covering a range of services.

Due to the issues outlined above, all gate fees that were identified as being linked to complex payment mechanisms, and that led to unusual gate fees being quoted, were excluded from the analysis. Clear examples of this issue are when authorities quote the same gate fee for a range of services.

Materials Recovery Facilities (MRFs)

MRF gate fees depend on the range of materials collected for sorting, and therefore to allow for comparability, only gate fees provided which represented sorting of a typical commingled mix of at least two key materials or twin stream systems were included in the overall analysis.

WDAs and WCAs

Where WDAs, Joint Waste Authorities or Waste Partnerships responded with a MRF, IVC or AD gate fee, this gate fee was applied to the number of WCAs that they represented providing it was identified that the value was applicable across all WCAs. This was not done for EfW and NHLF as it would not be expected that a WCA would act as a contracting authority for a function that remains primarily the responsibility of the WDA. Checks were completed to ensure this data was consistent and to prevent double counting. It was checked whether any responding WCAs also provided gate fees and also if there was any reason in the response for the gate fee provided by the WDA to not be applied. If any of the WCAs supplied different gate fees, for example, if they contract for

reprocessing of recyclables and organic material via a MRF, AD or IVC facility, then they were excluded from this process.

Data analysis limitations

In the analysis of the data collected, relevant sample sizes are reported. When examining data in detail or comparing results per waste management service from this year to those obtained from previous years, the size of the sample on which results are based needs to be considered. This is particularly relevant when, for instance, comparing results for a waste management type at national level, or comparing results between UK nations where a small sample size per individual nation may make robust comparison difficult. Where such issues arise, they are highlighted in the text.

In the questions requiring costs for bulking, storage and haulage, some LAs responding have only entered one data point – for example, a cost for bulking but not storage or haulage. This means that the responses are not directly comparable across the tables and figures as they do not necessarily relate to the same LAs. For example, one council may have provided a haulage cost only and another a bulking and storage cost, but these cannot be considered as one price package.