

## Waste and Recycling Committee

Date: 17 January 2024

Subject: Biowaste Management Strategy

Report of: Paul Morgan, Head of Commercial Services, Waste and Resources Team

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### Purpose of Report

This report sets out the steps required to develop a strategy to manage kerbside collected biowaste from across the conurbation in light of the English Resources and Waste Strategy. By the nature and scale of the decision it has to be approved by the GMCA so this report is outlining the need and process for the procurement of biowaste treatment contracts under a framework for information and for the Committee to comment on the proposed strategy.

### Recommendations:

Members of the Committee are requested to :

- Note the contents of the report and comment on the proposed strategy.

### Contact Officers

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## Equalities Impact, Carbon and Sustainability Assessment:

### Recommendation - Key points for decision-makers

The Waste & Recycling Committee is asked to note the report as the decision by its scale and nature is one to be made by the GMCA.

### Impacts Questionnaire

| Impact Indicator  | Result | Justification/Mitigation  |
|---|--------|---|
| Equality and Inclusion                                      |        |   |
| Health  |        |   |
| Resilience and Adaptation                                   |        |   |
| Housing   |        |   |
| Economy   | G      | If future infrastructure developments are made in the conurbation the economic benefits will be derived locally.  |
| Mobility and Connectivity                                   |        |   |
| Carbon, Nature and Environment                              | G      | The recycling of organic waste is an important contributor to carbon reduction and the proposals may increase the contribution to net zero further.                                   |
| Consumption and Production                                  | G      | Treated residues can be returned to land as a soil improver.  |
| Contribution to achieving the GM Carbon Neutral 2038 target |        | The proposal sees the continued recycling of mixed organic waste (including food waste) with the possibility of creating capacity for the growth in the capture of this waste stream. |

|          |   |          |   |          |   |           |                           |
|----------|---|----------|---|----------|---|-----------|---------------------------|
| <b>G</b> | Positive impacts overall, whether long or short term. | <b>A</b> | Mix of positive and negative impacts. Trade-offs to consider. | <b>R</b> | Mostly negative, with at least one positive aspect. Trade-offs to consider. | <b>RR</b> | Negative impacts overall. |
|----------|---|----------|---|----------|---|-----------|---------------------------|

## Risk Management

As part of the development of the proposed biowaste strategy a risk assessment will be undertaken of options. However, at this stage key risks are considered to be:

- Market appetite for the GMCA's biowaste in the short and longer terms;
- Market capacity to accommodate the GMCA's biowaste; and
- The capital and revenue implications of change.

## Legal Considerations

Procurement law – final options will be assessed to ensure compliance with applicable procurement legislation.

## **Financial Consequences – Revenue**

The current contract costs have been inflated by indexation and included in the Waste Medium Term Financial Plan and levy projections for the next five years to ensure the procurement outcome is captured in the revenue budget.

## **Financial Consequences – Capital**

As with the revenue consequences, work will consider the whole life costs to inform our future new burdens claim.

**Number of attachments to the report:** None.

## **Comments/recommendations from Overview & Scrutiny Committee**

N/A

## **Background Papers**

### **Tracking/ Process**

Does this report relate to a major strategic decision, as set out in the GMCA Constitution

Yes

### **Exemption from call in**

Are there any aspects in this report which means it should be considered to be exempt from call in by the relevant Scrutiny Committee on the grounds of urgency?

N/A

### **GM Transport Committee**

N/A

### **Overview and Scrutiny Committee**

N/A

## **1. Introduction/Background**

Mixed biowaste (garden and food waste) collections form an important part of the recycling services provided by the authorities across Greater Manchester. The material collected is delivered to GMCA facilities for bulking up before being treated at contracted merchant facilities.

This report summarises:

- The implications of the Resources and Waste Strategy on district council biowaste collections;
- The consequential impacts on GMCA facilities and contracts;
- Treatment and technology options; and
- Proposals for a strategic approach to managing biowaste in the future.

## **2. Current Contractual Position**

The biowaste collected at the kerbside is delivered by the districts to our network of biowaste transfer loading stations and distributed to merchant treatment facilities (in-vessel composting sites) through two different contractual routes:

- Around 80,000 tonnes is managed by Suez through the Waste and Resources Management Services (WRMS) contract; and
- A framework of contractors is in place and through call-off arrangements two 'packages' of biowaste quantities are composted - an annual 'baseline' of around 100,000 tonnes and a seasonal amount of c.38,000 tonnes.

The Suez biowaste treatment contract is part of the WRMS Contract with the initial term expiring in May 2026. The biowaste framework and current call off contracts expire in May 2026.

## **3. Implications Of The Resources And Waste Strategy**

The English Resources and Waste Strategy proposes that food waste should be collected separately from garden waste and on a weekly basis from 100% of households. During consultation processes, Defra requested waste disposal authorities to identify if separate food waste collections would impact upon residual waste disposal arrangements. Where this could be demonstrated, then the waste collection authorities were able to apply for

Transitional Arrangements (TA) that would defer the requirement for weekly separate food waste collections.

In GM, this resulted in six of the collection authorities in the GMCA waste arrangements (Bolton, Bury, Manchester, Oldham, Rochdale and Salford) applying for and being granted TA until 2034. This means that those six authorities do not need to change services to weekly or to provide 100% household coverage until 2034.

Stockport, Tameside and Trafford did not apply for TA, instead seeking to rely on an assessment of technical, economic and environmental practicability (TEEP) to enable them to continue to collect mixed garden and food waste, albeit they would have to provide a weekly service to 100% of households. These 3 districts would also be able to receive financial support from a specific New Burdens fund of £295m to implement the change in services. This fund is ring fenced to collection activity only and is for the capital costs associated with additional vehicles/bins and, at the time of writing the allocation methodology remains unpublished.

In October 2023, Defra published its response to the previous consultation on consistency of waste collections (now known as Simpler Recycling) and confirmed that the requirement for weekly separate food waste collections was being pushed back to April 2026. The consultation response also proposed, subject to further consultation, an exemption that would enable the continuation of mixed garden and food waste collections and would remove the requirement for a TEEP assessment. This is a position that GMCA and districts strongly support as it enables current mixed collections of food and garden waste to continue.

The RaWS Simpler Recycling consultation response also states that Defra has a preference for the treatment of food waste in wet anaerobic digestion (AD) technology. This preference is based on the view that wet AD enables the generation of methane gas which can be used for energy generation and will play a future role in energy security for the UK.

Whilst this is a benefit of wet AD technology for processing of food waste, it does not give a complete picture of the overall economic and environmental factors. Alternate technologies do exist including dry AD treatment which enables collections of mixed garden and food waste to be treated thereby increasing the yield of methane and subsequent potential for electricity generation and carbon reduction (as it is not just the food being subject to AD treatment). GMCA Waste and Recycling team commissioned specialist organics consultancy WRM Ltd to undertake a review of the options for

collection and treatment of food and garden waste to consider environmental and financial aspects. This was based on 3 options:

1. Separately collected food treated using wet AD technology with garden waste being treated via open windrow composting (OWC);
2. Mixed garden and food waste collections with all material being treated via In Vessel composting (IVC) as now; and
3. Mixed garden and food waste collections with all material being treated via dry AD.

The options were analysed based on development of treatment facilities at a GMCA owned site, development at a 3rd party site and on a merchant facility basis. The analysis gave the following outcomes with all figures expressed as totals for a 20 year contract period:

#### Treatment capacity developed at GMCA owned site

| <b>Cost/Carbon</b>      | <b>Separate food to wet AD and garden to OWC (£M)</b> | <b>Mixed biowaste to IVC (£M)</b> | <b>Mixed Biowaste to dry AD (£M)</b> |
|-------------------------|---|-----------------------------------|--------------------------------------|
| Collection Cost (£)     | 492.6   | 360.08                            | 360.08                               |
| Treatment Cost (£)      | 76.19   | 132.25                            | 114.04                               |
| Total Contract cost (£) | 596.34  | 492.33                            | 474.12                               |
| Carbon saving (Tonnes)  | -17,495,508   | -6,264,324                        | -18,921,274                          |

#### Treatment capacity developed at 3rd party site

| <b>Cost/Carbon</b>  | <b>Separate food to wet AD and garden to OWC (£M)</b> | <b>Mixed biowaste to IVC (£M)</b> | <b>Mixed Biowaste to dry AD (£M)</b> |
|---------------------|---|-----------------------------------|--------------------------------------|
| Collection Cost (£) | 492.6   | 360.08                            | 360.08                               |
| Treatment Cost (£)  | 81.92   | 146.5                             | 126.73                               |

|                         |             |            |             |
|-------------------------|-------------|------------|-------------|
| Total Contract cost (£) | 618.27      | 538.42     | 519.16      |
| Carbon saving (Tonnes)  | -17,515,496 | -6,247,958 | -19,760,240 |

### Merchant Treatment Capacity

| Cost/Carbon             | Separate food to wet AD and garden to OWC (£M) | Mixed biowaste to IVC (£M) | Mixed Biowaste to dry AD (£M) |
|-------------------------|--|----------------------------|-------------------------------|
| Collection Cost (£)     | 492.6  | 360.08                     | See footnote*                 |
| Treatment Cost (£)      | 70.26  | 141.04                     |                               |
| Total Contract cost (£) | 607.90   | 560.75                     |                               |
| Carbon saving (Tonnes)  | -17,481,522                                    | -5,498,144                 |                               |

*\*There is currently no merchant dry AD capacity available so this was not modelled*

In all cases, the most expensive option is the Defra preferred approach of separate food waste collection with wet AD processing. This is due to the requirement for significant numbers of additional bespoke collection vehicles for separate food collections. The lowest cost and best performing option from a carbon perspective is dry AD. This is due to the ability to maintain the current mixed food and garden waste collection service and the ability to capture carbon from the full tonnage of material collected. This treatment could not be modelled under the merchant capacity route as no such capacity currently exists in the UK. IVC treatment performs well financially but has a lower carbon benefit as this technology does not enable gas capture for electricity generation.

## 4. Strategy For The Management Of Greater Manchester's Biowaste

Based on the consultation response on Simpler Recycling, continuation of mixed garden and food waste collections will be permissible (subject to confirmation). This will avoid

significant increases in collection costs that would have resulted from mandated separate weekly food waste collections.

It is now necessary to ensure that GMCA has treatment capacity in place for the long term for mixed garden and food waste collected by the districts. Capacity does exist in the merchant IVC treatment facilities and there is the potential to consider dry AD treatment as an alternative.

The proposed strategy and timeline for provision of future biowaste treatment capacity is therefore:

- 2024 – run a procurement for a biowaste framework that runs from 2026 to 2029 with the ability to award call off contracts through to 2034 to permitted offtake for mixed garden and food waste for IVC treatment for c. 200ktpa. Call off contracts to be awarded for c.135ktpa for the period 2026 to 2029 and Suez will continue to manage the remainder of the tonnage through the WRMS contract in this period;
- 2024 – run a market testing exercise for expressions of interest in a design, build, finance, operate arrangement for 2 x 100ktpa treatment facilities with technology to be dry AD or IVC with the bidder to provide sites (either their own or 3rd party, ideally located in the North West) with facilities to be available for operations by 2029. If there is a positive, financially viable response, then GMCA to consider running a procurement process for the development of the 2 facilities; and
- 2029 – GMCA to start delivering 200ktpa to newbuild facilities if the market testing and subsequent procurement has been successful, or, continue with the framework and call off contracts for merchant IVC treatment from 2029 to 2034.

## **5. Next Steps – Procuring Biowaste Treatment Capacity**

Subject to approval by GMCA in early 2024, commencement of the procurement process for the framework/call off contracts will be April with tender responses anticipated in June. A short period of evaluation would follow, meaning that contract awards would occur mid to late July. A delegation to the GMCA Head of Paid Service in consultation with the GMCA Treasurer and the Portfolio Lead for Green Cities will be sought to approve the award of contracts under the biowaste framework.

The market testing exercise of dry AD/IVC treatment capacity would commence in April with submissions due in June. Evaluation and dialogue is anticipated to be carried out in July and further details would be presented to GMCA in September.