

Greater Manchester Combined Authority

Date: 22 March 2024
Subject: Biowaste Management Strategy
Report of: Councillor Tom Ross, Portfolio Lead for Green City

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. It also seeks approval for the procurement of biowaste treatment contracts under a framework.

Recommendations:

The GMCA is recommended to:

1. Approve the commencement of the procurement process for biowaste treatment contracts for the period June 2026 to March 2034.
2. Delegate authority to the GMCA Head of Paid Service in consultation with the GMCA Treasurer and the Portfolio Lead for Green Cities to approve the award of contracts under the biowaste framework.
3. Delegate authority to the GMCA Monitoring Officer to complete all necessary legal agreements for the Biowaste treatment contracts.
4. Approve the market testing exercise as set out in the biowaste strategy at section 4.0.

Contact Officers

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Recommendation - Key points for decision-makers

The collection of mixed garden and food waste (biowaste) is an important part of GM's recycling service. Currently this material is treated under contract (expiring in 2026) is mandating the weekly and separately collection of food waste from all properties (although an exemption is proposed allowing mixed organics collections). To secure capacity in the longer term for biowaste approval is sought to undertake a soft market testing exercise to gauge market appetite for the development of facilities to treat GM's biowaste and to act upon the outcome.

Impacts Questionnaire

Impact Indicator	Result	Justification/Mitigation
Equality and Inclusion		
Health		
Resilience and Adaptation		
Housing		
Economy		
Mobility and Connectivity		
Carbon, Nature and Environment		
Consumption and Production	G	The treatment of biowaste generates byproducts that can contribute to renewable energy supply and the cycling of nutrients in soil.

Contribution to achieving the GM Carbon Neutral 2038 target	Diversion of food and garden waste away from landfill disposal to alternative forms of waste treatment such as in vessel composting or dry Ad treatment will make a significant contribution to the 2038 carbon neutrality target
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Further Assessment(s):

N/A

G

Positive impacts overall, whether long or short term.

A

Mix of positive and negative impacts. Trade-offs to consider.

R

Mostly negative, with at least one positive aspect. Trade-offs to consider.

RR

Negative impacts overall.

Carbon Assessment		
Overall Score 		
Buildings	Result	Justification/Mitigation
New Build residential	N/A	
Residential building(s) renovation/maintenance	N/A	
New build non-residential (including public) buildings	N/A	
Transport		
Active travel and public transport	N/A	
Roads, Parking and Vehicle Access	N/A	
Access to amenities	N/A	
Vehicle procurement	N/A	
Land Use		
La	No associated carbon impacts expected.	<div style="display: flex; justify-content: space-between;"> <div style="width: 20%; background-color: #28a745; color: white; padding: 5px;">High standard in terms of practice and awareness on carbon.</div> <div style="width: 20%; background-color: #17a2b8; color: white; padding: 5px;">Mostly best practice with a good level of awareness on carbon.</div> <div style="width: 20%; background-color: #ffc107; color: white; padding: 5px;">Partially meets best practice/ awareness, significant room to improve.</div> <div style="width: 20%; background-color: #343a40; color: white; padding: 5px;">Not best practice and/ or insufficient awareness of carbon impacts.</div> </div>

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

Capital implications will be subject to the successful outcome of the market testing exercise.

Number of attachments to the report: None

Comments/recommendations from Overview & Scrutiny Committee

None

Background Papers

N/A

Tracking/ Process

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

Yes

Exemption from call in

None

GM Transport Committee

N/A

Overview and Scrutiny Committee

N/A

1. Introduction/Background

1.1 Mixed Biowaste Collections

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

2.1 Biowaste Collections at the Kerbside

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. The initial term of the WRMS contract expires in May 2026; 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. These arrangements also expire in May 2026.

3. Implications Of The Resources And Waste Strategy

3.1 Collection Implications

The English Resources and Waste Strategy (RaWS) 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.

3.2 Transitional Arrangements

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.

3.3 Technical, Economic and Environmental Practicability

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 and likely timing of payments remains unpublished.

3.4 Defra Consultation Response

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 would, if confirmed, enable current mixed collections of food and garden waste to continue.

3.5 RaWS Simpler Recycling Consultation

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.

3.6 AD Technology

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. Wet AD would require the separate collection of food waste which would require c.90 additional bespoke collection vehicles across the 9 GM authorities. 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;
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.

3.7 Analysis of Options

The options were analysed based on development of treatment facilities at GMCA owned sites, development at 3rd party sites 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

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	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

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

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

4.1 GMCA Treatment Capacity and Strategy

Based on the consultation response on Simpler Recycling, continuation of mixed garden and food waste collections is highly likely to be permissible. This is subject to the publication of the next consultation response for which a timetable is not yet known, however Defra are under considerable pressure from the waste industry and local authorities to confirm these details. If approved, 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.

4.2 Proposed Procurement & Market Testing Exercise Timelines

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 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 full procurement process for the development of the 2 facilities; and
- 2029 – GMCA to start delivering 200ktpa to the 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 to commence the procurement process for the framework/call off contracts, this would be initiated in April with tender responses anticipated in June. This allows four months for Defra to confirm whether the proposed exemption for mixed collections will be included in the Regulations (the timetable may need to be flexed if Defra delay their responses beyond April 24). A short period of evaluation would follow, meaning that contract awards would occur mid to late July. It is recommended that delegated authority to the GMCA Head of Paid Service in consultation with the GMCA Treasurer and the Portfolio Lead for Green Cities to approve the award of contracts under the biowaste framework is therefore sought.

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.