GMCA GREATER MANCHESTER COMBINED AUTHORITY

Waste and Resources Committee

Date: 17 January 2024

Subject: Asset Management – Project Updates

Report of: Michael Kelly, Head of Engineering and Asset Management, Waste and Resources

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Purpose of Report

To present the following proposals for two projects set to be commence in 2024:

1. Investment in recyclate sorting infrastructure to deliver a new Mechanical Recovery Facility (MRF), required to meet the national Resources and Waste Strategy for consistency of collections (now referred to as Simpler Recycling) and to enable the collection for recycling of additional materials at the kerbside; and
2. City of Trees planting proposals at two former Landfill sites.

Recommendations:

Members of the Committee are recommended to:

1. Note the report and updates provided; and
2. Approve the planting proposals and arrangements with City of Trees for the Bredbury and Chichester St sites.

Contact Officers

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Equalities Impact, Carbon and Sustainability Assessment:

Recommendation - Key points for decision-makers

To approve the use of reserves to fund the investment in recyclate sorting infrastructure and to delegate to the Chief Executive GMCA and TfGM the conclusion of documentation to initiate a procurement process and the agreement of a Notice of Change for the ongoing operating costs with the contractor.

Impacts Questionnaire

Impact Indicator	Result	Justification/Mitigation
Equality and Inclusion		
Health		
Resilience and Adaptation		
Housing		
Economy	G	
Mobility and Connectivity		
Carbon, Nature and Environment	G	
Consumption and Production	G	
Contribution to achieving the GM Carbon Neutral 2038 target		

Further Assessment(s): Carbon Assessment

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		The proposal is to use an existing building at Salford Road to house the new mechanical sorting machinery
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...	N/A	

No associated carbon impacts expected.	High standard in terms of practice and awareness on carbon.	Mostly best practice with a good level of awareness on carbon.	Partially meets best practice/ awareness, significant room to improve.	Not best practice and/ or insufficient awareness of carbon impacts.

Risk Management

The English Resources and Waste Strategy and its implementation has been captured in the GMCA's Strategic Risk Register with the necessary mitigation actions identified.

Legal Considerations

Legal considerations of any consequences of undertaking actions contrary to the English Resources and Waste Strategy are captured within the report and have been more specifically considered in the Review and Options Appraisal processes carried out by external consultants WSP.

Financial Consequences – Revenue

Financial Revenue considerations are captured within the report.

Financial Consequences – Capital

Capital implications associated with a proposed new MRF facility are set out in section 1.7. There are no capital implications associated with the City of Trees proposals.

Number of attachments to the report:

Appendix A – City of Trees proposed planting plan at Bredbury; and

Appendix B – City of Trees proposed planting plan at Chichester St.

Comments/recommendations from Overview & Scrutiny Committee

N/A

Background Papers

- Waste Strategy Update – Part A Waste and Recycling Committee 15th March 2023
- Resources and waste strategy for England - GOV.UK (www.gov.uk)
- Near elimination of biodegradable waste to landfill - GOV.UK (www.gov.uk)
- Consistency in Household and Business Recycling in England - Defra - Citizen Space
- Extended Producer Responsibility for Packaging - Defra - Citizen Space
- Introducing a Deposit Return Scheme in England, Wales and Northern Ireland - Defra - Citizen Space

- The GMCA's combined and submitted responses to the EPR, DRS and Collection Consistency consultations – available from the Contact Officer

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?

No

GM Transport Committee
N/A

Overview and Scrutiny Committee
Briefing note, Investment in new Waste Mechanical Sorting Infrastructure, provided to the Committee in November 2023.

1. Proposed New MRF Facility

1.1 Introduction/Background

The existing Materials Recovery Facility (MRF) located at Longley Lane, Sharston has been operational since 2013 and processes c.90ktpa – 100ktpa of kerbside collected dry, mixed recyclable materials (referred to as commingled collections). The input specification for the commingled collections is based on glass, plastic bottles, ferrous and non-ferrous cans, aluminium foil, and aerosols. Plastic bottles are sorted using near infrared (NIR) separation equipment into High Density Polyethylene (HDPE), Polyethylene Terephthalate (PET) and a low-grade mixed plastic stream. The Longley Lane facility is the only MRF that GMCA operates, so maintaining facility availability is critical to continuity of collection services. The plant is now 10-years old and is showing age related issues.

1.2 National Resources and Waste Strategy (RaWS)

The Department for Environment, Food and Rural Affairs (Defra) has been consulting on the national Resources and Waste Strategy (RaWS) over the last 4 years with a series of prolonged delays in publishing consultation responses. The central purpose of the RaWS is to create a circular economy principally through products being designed for recyclability, improved labelling, fewer plastic polymers being used for packaging and a plastic packaging tax. All these measures are intended to make recycling easier, to stimulate demand and create markets for pots, tubs, and trays (PTTs) and to reduce consumption of resources.

The latest element of the RaWS to be published are the details on Simpler Recycling (formerly known as consistency of collections). Under these proposals, all local authorities will be obligated to collect additional materials at the kerbside which will include PTTs (from 2026) and plastic films/soft flexible plastics (from 2027).

In July 2023, Defra announced that it will be delaying some elements of the RaWS until at least October 25 and has yet to confirm all details on Simpler Recycling requirements. This is raising significant uncertainty within the waste industry as to whether the RaWS will be implemented in its current proposed form and when it will be necessary to have infrastructure in place to meet the policy requirements. Due to the delays and uncertainty, many local authorities are waiting to see what the final policy will look like before making changes to their collection and sorting infrastructure.

This means that once clarity is provided there will be a rush to appoint contractors and for investment in facilities to be made leading to constraints in the technology supply and construction markets. It is therefore essential to move quickly on decisions relating to investment in treatment capacity and to establish links with reprocessors and end markets for these additional materials.

1.3 WSP MRF Review

Given these incoming policies, the current MRF has been reviewed to determine whether it can be adapted to operate on the changing mix of materials or whether an alternate approach may be required. Consequently, GMCA has commissioned WSP to conduct a technical review of the facility and to develop an options appraisal for future service delivery. The review was based on a series of site visits and tonnage data modelled over a 10-year time frame allowing for the inclusion of PTTs, soft plastics and the likely impact of DRS, household growth and the impact of educating residents on what can and cannot be recycled.

The modelling output demonstrated that commingled collection volumes are expected to collect around 136,000 tonnes per year once fully embedded. This is significantly higher than the design capacity of the existing MRF facility, principally due to adding plastic film and PTTs to the targeted materials. The existing plastic separation systems at the MRF are not designed to capture these additional material types, film capture requires specialist air classification technology not installed at the facility. Based on the modelling outcomes, the existing MRF at Longley Lane will not be able to process this quantity of material and will require significant modifications to process additional material streams. It would also require significant additional third-party capacity (c. 45,000 tonnes per year) to be contracted. As a result of these initial findings an options appraisal was carried out to consider modifying the existing plant alongside alternative options at other GMCA assets.

1.4 Options Appraisal

WSP's options appraisal considered the following options to accommodate the forecast increase in the commingled stream tonnage and changes in composition:

1 Option 1 – Retain Longley Lane MRF

The current Longley Lane MRF would require extensive modifications to process the increased volume and to separate the additional materials. The existing MRF's layout is constrained by a lack of space, making it difficult to modify and extend the equipment in its

current location. Therefore, a building extension would be required to accommodate a larger material reception hall, polymer collection, and baled material outputs.

Capital costs for the required modifications are likely to be in the order of £4.0m – £8.0m. The works are forecast to take 24-36 months including planning/permitting process, building modification/extension, removal of current MRF equipment and installation of new MRF equipment. Taking this facility out of service for circa 24 months will also result in significant disruption to district collections and would require the use of third-party facilities to process the materials with haulage and gate fees estimated at circa £5m pa for the construction period.

2 Option 2 - Refurbish Bredbury IVC and Install a New MRF

Under this option, the redundant In-Vessel Composting (IVC) building at Bredbury would be repurposed through installation of new MRF processing equipment to replace the existing Longley Lane MRF. Half of the IVC building at Bredbury is currently used for bulking of mixed garden and food waste (biowaste) delivered by Stockport primarily with lower tonnages delivered by Tameside and Manchester. Should a MRF be installed in this building an alternative delivery point would be required for biowaste.

The capital cost for the process element of this new MRF is estimated at £15m–£18m and site development and refurbishment of the existing building is estimated at £1m-£2m. Development time is forecast to be 12 months for planning and permitting of the new facility and 24 months construction. This option also avoids the cost (circa £8m-£10m) of constructing a separate building to house the MRF as all proposed materials reception, processing and storage activities can be contained in the existing structure. This is subject to structural surveys to confirm the integrity of the steel work given the former use of the building as a composting facility.

This option would not result in any disruption to districts commingled collections as the Longley Lane facility remains operational while the development at Bredbury takes place. However, an alternate delivery point for biowaste would be required. There is not sufficient space at Bredbury to develop another facility for this waste stream meaning that either an existing third-party site would be required, or a site acquisition would be required followed by development which will add significantly to costs/timescales and would require district collection rounds to be reconfigured to deliver to an alternate location which may bring

additional resource and cost implications. Site traffic volumes, access and management would also need careful consideration due to the wider site access network.

3 Option 3 - Refurbish Salford Road IVC and Install a New MRF

Under this option, the IVC building at Salford Road, Over Hulton would be refurbished with new MRF processing equipment to replace the existing Longley Lane MRF. The IVC building is currently used for bulking biowaste waste in one half and houses a mattress recycling facility in the other half. These operations would need to be relocated if the building were to be use for a new MRF. Biowaste could be accommodated (subject to Environment Agency approval) in an existing transfer loading station (TLS) on site with no disruption to district deliveries. The mattress recycling operation could be relocated to either the Bredbury IVC or at Arkwright St, Oldham where GMCA has a redundant asset.

The capital cost for the process element of this new MRF is estimated at £15m – £18m and site development and building refurbishment costs are estimated at £2m - £3m. This figure includes an allowance for creation of additional carparking capacity and a new amenity building to house the increased staff numbers at this site. This development would require 12 months for planning and permitting and circa 24 months construction. The selection of this site is subject to structural surveys to confirm the integrity of the steel work given the former use of the building as a composting facility.

The significant advantages of this option are the ability to develop the new MRF without disrupting district collections and relocating current activities carried out in the building by repurposing other GMCA assets at alternate locations. This option also avoids the cost (circa £8m - £10m) of constructing a new building to accommodate a new MRF as all proposed materials reception, processing and storage activities can be contained in the existing structure.

Another significant advantage of this location is the adjacent GMCA owned ground mounted 2.2MW solar farm that is currently generating electricity for export to the National Grid. The connections are available on site to switch the power generated by the solar array to a direct wire feed for the operation of the MRF. This will reduce operational costs to run the facility and contribute towards our decarbonisation ambitions of the GMCA waste estate.

4 Option 4 - Develop Nash Road with a Purpose Built New MRF

Under this option, a new MRF of around 136,000 tonnes per year would be built at the Nash Road, Trafford site on a spare parcel of land in GMCA ownership and would replace the existing Longley Lane MRF. The cost of this new MRF is estimated at £30m based on

reported capital costs for recent MRF developments of similar size and processing capacity. The development timetable is forecast to be 12 months for planning and permitting of the new facility and 24 months construction.

Significant advantages of this option are the ability to develop the new MRF without disrupting district collections and continuing to use Longley Lane while construction progresses. This is, however, offset by the increased capital cost required for development of a building to house the processing equipment.

1.5 Preferred Option

Based on the options appraisal it is recommended a phased approach is taken. Under phase 1 the replacement MRF would be developed at Salford Road, Over Hulton in the existing IVC building (subject to structural surveys confirming the suitability of the building structure). The Longley Lane MRF will continue to operate during construction minimising operational impacts. Once the new plant is constructed and commissioned, the existing processing plant at the Longley Lane MRF will then be repurposed and decommissioned creating operational space for alternative future uses.

Once the new MRF is operational and there is a clearer position in relation to reprocessing capacity in the market and whether additional capacity has been developed in response to the RaWS, an assessment can be made to develop a washing and flaking plant in the vacant Longley Lane building to produce plastic flakes that can be sold directly to reprocessors. This development would be subject to a future decision and development as phase 2 of the GMCA approach to plastic recycling.

1.6 Development Timeline

Following the approval of the decision to develop a facility at the Salford Road, Overhulton site by GMCA at the 15th December meeting, then the following programme will be implemented:

- January 24 to December 24 – structural surveys, detailed design, planning application, variation of environmental permit, procurement and appointment of technology provider and construction contractor;
- January 25 to December 26 – relocation of food and garden waste bulking activity, relocation of mattress recycling activity, IVC building modification, installation, and commissioning of MRF equipment; and
- January 27 – commence operation of facility and decommissioning of Longley Lane MRF.

1.7 Financial Considerations

Final costs will be subject to a detailed inspection of the IVC building, remedial works specification and procurement for a technology provider and construction contractor. Capital costs of circa £20m will result in a revenue cost of circa £1m plus interest per annum for the anticipated 20-year life span of the facility. Capital repayments would start to flow in the 2025/26 financial year once construction activity commences.

Operating costs for the facility will need to be reviewed and developed once the detailed design stage has been completed. Given the additional separation equipment there will be some increase in maintenance/life cycle replacements and utilities consumption (however this will be offset through provision of electricity from the solar array.

2. City of Trees Planting Proposals

2.1 Introduction and Background

City of Trees (CoT) are a charitable organisation based in Greater Manchester (GM) who's key aim is to tackle climate change through planting and woodland restoration across GM. Their key ambition for the GM region is to plant 1 tree for every resident and restore greenspace and woodlands that can benefit local communities and wildlife. CoT have been active in GM since 1991 and delivered a wide range of diverse planting schemes across the whole of GM. The waste and resources team have linked up with CoT through GMCA to evaluate if our waste portfolio offered any opportunities for planting. After initial discussions it was evident that we could offer two parcels of land from landfill sites for planting at Bredbury in Stockport and Chichester Street in Rochdale. Both landfills are former dilute and disperse sites managed by waste and resources as part of our wider waste estate. The areas offered for consideration are not required for any operational needs and were deemed suitable for planning purposes.

2.2 Bredbury - Proposal

GMCA have offered an area of 0.27 hectares, which can accommodate a planting opportunity for 297 trees based on a planting density of 1100 trees per hectare.

CoT are proposing to provide a lowland mixed broadleaved woodland in line with The National Vegetation Classification W10. This would include sessile and pedunculate oak, birch, rowan, holly, hawthorn, and hazel. It is also advised that some wetter loving

species such as alder, willow, and downy birch will be better to plant in the boggier parts of the planting area.

A vegetation cut will be needed prior to the planting but rather than cutting the whole site, considering the gradient issue, it is proposed that brush cutting and hand screefing would be more suited. Trees will be protected from deer using 1.2m tree shelters (non-plastic and biodegradable) mulch mats will also be provided around the trees to help keep vegetation down that would compete with the trees for water.

Over a 3-year establishment period there will probably be a need to replace some trees and to manage vegetation around the trees and remove vegetation growing inside the tree shelters. Please refer to appendix A – Proposed Planting Plan – Bredbury.

2.3 Chichester Street – Proposal

GMCA have offered an area of 0.43 hectares, which can accommodate a planting opportunity for 473 trees based on a planting density of 1100 trees per hectare.

CoT are proposing to provide a planting scheme more suited to existing wet ground conditions in line with the National Vegetation Classification W6, providing alder and willow as the main tree species with shrubs in the very wet areas while pedunculate oak, downy birch, holly, hawthorn and guelder rose could be planted in the drier areas.

A vegetation cut will be needed prior to the planting, this will be provided by GMCA. Mulch mats may also be advisable here to help keep the vigorous grass and rush growth down. Over a 3-year establishment period there will probably be a need to replace some trees and to manage vegetation around the trees and remove vegetation growing inside the tree shelters. Please refer to appendix B – Proposed Planting Plan – Chichester Street.

2.4 City of Trees Offer

CoT will provide all trees and shrubs for each site, including all materials needed. All costs associated with planting will be absorbed by CoT, this will also include cutting back of a steep embankment area at Bredbury in preparation for planting. GMCA will cut back the area at Chichester Street as our cost through our existing grass cutting contractor.

CoT will plant both sites, replace any failures and manage the vegetation in and around the trees over a 3-year period after planting. After 3 years the trees are expected to reach establishment which enables them to develop into mature specimens. For a period of 15-years CoT will make intermediate site inspections to ensure that planted

areas are establish as expected, should any remedial works be required CoT will undertake these within reason and agreement with GMCA. After 15-years, all trees will be the responsibility of the landowner to manage and maintain. CoT and GMCA would enter into a partnership agreement for both sites which sets out the responsibilities of both parties.

Planting at both locations will form part of our decarbonisation plans for the waste estate by enhancing biodiversity across the portfolio.

2.5 Recommendations

To approve the CoT planting proposals.