

4.2 ADVANCED WASTE PROCESSING UPDATE

(SH ENV 17)

Responsible Director: Ossie Martinz

EXECUTIVE SUMMARY

PURPOSE

This report seeks to update and inform Council on the progress of the collective procurement for Advanced Waste Processing Facilities (AWP) in South-east Melbourne to provide long-term waste processing services that are alternatives to disposing waste to landfill. Also to seek support to participate in Stage 2 of the collective procurement.

KEY CONSIDERATIONS / ISSUES:

- Increasing volumes of waste and the practice of landfilling is a critical global issue that requires urgent action at domestic, municipal and regional levels
- Monash currently sends 32,400 tonnes of kerbside waste and 5000 tonnes of waste from the transfer station to landfill each year.
- South-east cluster Councils are involved in a collaborative arrangement facilitated by the Metropolitan Waste and Resource Recovery Group (MWRRG) to investigate AWP in Melbourne.
- The business case supports the establishment of AWP, formation of a special purpose vehicle (SPV) as the preferred contract model and details the steps in the procurement process for AWP.
- Monash has signed a Deed to participate in the procurement process and the EOI stage has now been concluded.
- Council is now asked to continue to be part of the collective procurement and participate in Stage 2, detailed solution development.
- Next year, Council will be asked to commit to a long term contract/s for an AWP and join the SPV.

FINANCIAL IMPLICATIONS:

Council's budget for residual waste disposal for the year 2020/21 is \$3,907,036. There are no direct financial implications from this report for 2020/21.

CONCLUSION

That Council note the progress of the AWP collective procurement process and endorse participation in Stage 2, detailed solution development. Next year a further report detailing formal arrangements for participation in the SPV and contract will be brought back to Council for consideration.

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RECOMMENDATION

That Council:

1. *Notes the progress of the Advanced Waste Processing collective procurement process.*
2. *Supports the participation in Stage 2 of the collective procurement process, detailed solution development .*
3. *Notes that a further report detailing formal arrangements for participation in the Special Purpose Vehicle and contract will be brought back to Council for approval.*

INTRODUCTION

Council currently disposes of its putrescible kerbside waste at Wyndham Landfill in Werribee and its transfer station waste to Suez Landfill in Hallam. It is likely that these arrangements will continue for several years until alternates to landfills are made available.

Given the dilemmas associated with disposing of municipal waste to landfill, there are growing expectations and opportunities for Councils to collaboratively procure waste Management services from a future facility employing advanced waste processing (AWP) that optimise the recovery of resources from waste streams. Such a facility has the potential to transform the waste management sector and contribute to Melbourne's liveability and sustainability.

BACKGROUND

The problems with landfills

Increasing volumes of waste and the practice of landfilling is a critical global issue that requires urgent action at domestic, municipal and regional levels. The disposal of waste to landfill is problematic for the following reasons;

- Increasing cost of landfilling: the Victorian State government's approach of approving less airspace for new landfills, \$60 per tonne increase to landfill levy over next 2 years and ever increasing landfill regulations have increased the cost of landfilling,

- Inefficient use of resources: waste materials that could be recovered for re-use, recycling or conversion to energy; and
- Potential environmental impacts: the decomposition of organic matter in landfills produces methane, a potent greenhouse gas. Landfills have also been known to contaminate land, groundwater and freshwater streams when liners and caps fail. Ongoing monitoring and management of landfills is required to address these risks.

risks.

The State Government allocated funding to the Metropolitan Waste and Resource Recovery Group from the Sustainability Fund to support Councils to develop a region-wide business case and procurement strategy for procuring AWP solutions. A number of Councils in Melbourne's south-east are collaborated with the assistance of the MWRRG to facilitate the development of the business case to explore procurement options for AWP solutions. Such regional collaboration is imperative to the aggregation of waste volumes to make the establishment of an AWP facility a viable proposition. A lack of aggregation due to waste management being distributed among 31 metropolitan municipalities has been a barrier to private sector investment in AWP facilities to date.

Monash landfill diversion targets set within the Waste Management Strategy 2017 aim to increase our waste to landfill diversions rates to 60% by 2022 and 75% by 2027. The introduction of food waste into the green bin on 1 July this year will help to reduce our waste to landfill and AWP will treat the majority of what's left.

MWRRG has taken a waste hierarchy approach (refer Figure 2 below) to identifying a range of potential interventions that could achieve the objectives of restricting the disposal of residual municipal waste to landfill.



Figure 1 The Waste Management Hierarchy

The modelling of resource recovery options indicates that for Monash and other member Councils of MWRRG to reach the landfill diversion objectives, local government could

procure and deploy a range of options that include expanding the collection and processing of food and garden waste (FOGO options), together with new waste processing infrastructure to manage residual municipal waste. The initial work on a regional cost-benefit analysis has taken the regional options appraisal to the next level and has considered the following three scenarios:

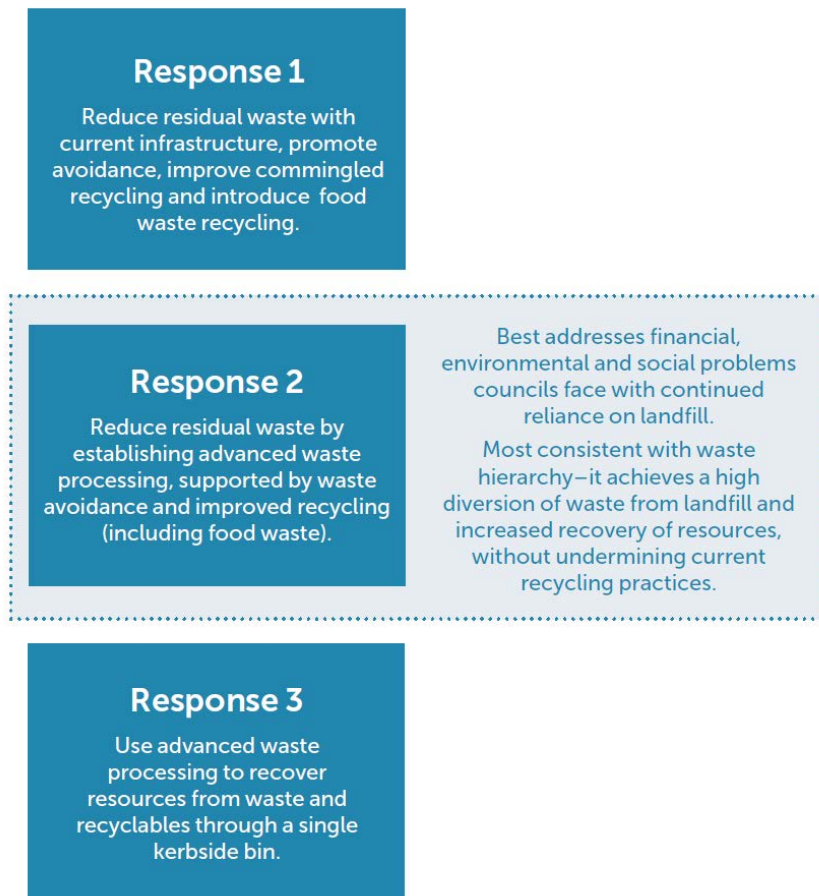


Figure 2 The preferred waste management response

The Monash Waste Management Strategy supports Response 2.

Next Steps

Establishing AWP solutions can take five to seven years, so councils have already started the process to find an alternative solution to landfill.

The Regional Business Case for Advanced Waste Processing, which was prepared by MWRRG, with input from council officers and support from external legal, financial and technical advisors, was released in September 2018.

Following this, MWRRG and its advisors worked with councils in the south east metropolitan region to develop the South East Business Case for Advanced Waste

Processing. The business case addresses the future residual municipal solid waste (MSW) requirements, based on the continuing diversion of hard recyclables and organic waste through kerbside services.

MWRRG also undertook market sounding with industry with respect to their interest in the provision of advanced waste processing (AWP) solutions for metropolitan councils.

In April 2019 Council resolved to;

- 1. Notes the advanced waste processing confidential summary business case;*
- 2. Notes the formation of a Special Purpose Vehicle as the preferred contract model for the establishment of advanced waste processing facilities;*
- 3. Advises the Metropolitan Waste and Resource Recovery Group that it wishes to participate in an expression of interest for advanced waste processing including further expenditure for a special purpose vehicle, as outlined in the business case and authorises the Chief Executive Officer to sign the relevant documents;*
- 4. Notes that any contractual arrangements will be brought back to council for approval.*

In September 2019, the 16 councils listed below signed a Management Deed with MWRRG to participate in a collaborative procurement process for AWP solutions to divert MSW from landfill through resource recovery.

Participating councils - Bayside, Boroondara, Cardinia, Casey, Greater Dandenong, Kingston, Monash, Whitehorse, Frankston, Glen Eira, Knox, Manningham, Maroondah, Mornington Peninsula, Stonnington and Yarra Ranges.

ACCC authorisation

The councils and MWRRG received authorisation from the Australian Competition and Consumer Commission (ACCC) in January 2020 to conduct the collaborative procurement.

Creation of a Special Purpose Vehicle (SPV)

In preparing the Regional Business Case, MWRRG sought advice from Holding Redlich with respect to establishing arrangement for an advanced waste processing solution that would serve multiple councils. Holding Redlich recommended that the councils establish a Special Purpose Vehicle (SPV) in the form of a company in which the participating councils hold shares. An SPV would provide the following benefits:

- it would bring economies of scale to the contract (by aggregating demand) and be attractive to the market as a contracting entity;
- rather than dealing with large numbers of individual councils, the private sector can deal with one entity - this simplifies several issues from a legal and financing perspective, which facilitates the contract management process
- it provides the vehicle to attract investment from other levels of government;
- it is easier to facilitate decision-making and administration between the councils with a clear decision-making structure;
- it will limit a council's liability to its shareholding in the SPV, protecting the council's financial position and wider asset pool ; and

- the SPV can own, operate or apply for planning permission for a facility.

MWRRG and its advisors have since worked with a sub-set of officers from the Working Group to develop a draft shareholder agreement and a draft constitution. The next steps include seeking formal endorsement of these documents from the Working Group, and then seeking formal commitments from each council prior to commencing the statutory process to establish the SPV.

On 10 March 2020 the invitation for expressions of interest was released.

DISCUSSION

Following a comprehensive EOI evaluation process three tenderers have been shortlisted;

- Veolia Environmental Services (Australia) Pty Ltd - An integrated mechanical and potential biological treatment solution which recovers recyclables, with a combustion process to treat non-recoverable residues and recover energy.
- Sacyr Environment Australia - An integrated mechanical and biological treatment solution which recovers recyclables, with either a combustion or gasification process to treat non-recoverable residues and recover energy.
- Pacific Partnerships and REMONDIS (A consortium comprised of Pacific Partnerships and REMONDIS Australia, together with CIMIC Group Companies CPB Contractors and UGL) - A mass burn combustion solution that recovers energy from residual waste with recycling of metals (and potentially bottom ash) post the combustion phase.

The procurement process will now move into the solution development phase (stage 2) where the solution(s) will be co-developed with the councils and the shortlisted tenderers during the second stage of procurement. Should any Council not wish to be part of stage 2 they need to advise the MWRRG by the end of July 2020. It is planned that this stage will be completed by July 2021.

Upon completion of the solution development stage, a proposed contract will be brought back to Council for consideration. The Council is not obliged to accept any contract should the proposed solution be unacceptable. It is planned that the new contract for AWP will be awarded in December 2021 for commencement around 2025.

SOCIAL IMPLICATIONS

The provision of AWP facilities will enable Council to continue to provide the essential waste collection and disposal services for the community in a more sustainable and responsible manner.

POLICY IMPACTS

The provision of AWP facilities supports the following Council Objective:

A Liveable and Sustainable City – *Delivering responsible and sustainable waste management services*

It also aligns with the;

Waste Management Strategy 2017 for the provision of kerbside waste collection services. *Action - The Waste Management Strategy aims to reduce waste sent to landfill to minimise the costs of waste disposal to the community; and*

Waste Management Strategy 2017 item 5.8 aims to minimise reliance on landfills and reduce the need for large transportation distances for waste disposal. *Action – New technologies, Council to work with industry and State Government to promote investment in alternative waste management options, including Waste to Energy.*

Waste Management Strategy 2017 KPI 1, Waste Diversion Rate. Current 51%. Target 60% by 2022 and 75% by 2027. The success of recycling and Fogo plus finding alternates to landfill is essential for Council to meet this KPI.

It also aligns with the Circular Economy Policy.

As part of Recycling Victoria , waste to energy solutions will play a significant role in achieving the Victorian Government’s new target to divert 80 per cent of household waste from landfill by 2030. Best outcomes will be achieved by minimising our waste, reusing and recycling, including separation of food and green waste for composting. What is left over can go to advanced waste processing which is more productive than burying it in the ground. The Victorian Government supports waste to energy projects where they create clear net benefits and complement efforts to reduce or recycle waste. The advanced waste processing procurement will ensure any facilities;

- meet best-practice environment protection requirements and energy efficiency standards;
- reduce the amount of waste sent to landfill;
- do not displace or inhibit innovation in reduce or recycle efforts;
- reduce greenhouse gas emissions compared to the waste and energy services they displace; and
- have sustainable business models creating new jobs and economic development in local communities.

FINANCIAL IMPLICATIONS

Council’s budget for residual waste disposal for the year 2020/21 is \$3,907,036. There are no direct financial implications from this report for 2020/21. It is considered that continued participation in next stage of the collective procurement process will deliver Monash the best long term waste disposal options, particularly given the significant increase to the landfill levy over the next 2 years.

CONCLUSION

That Council; note the progress of the AWP collective procurement process and endorse participation in Stage 2, detailed solution development. Next year a further report

detailing formal arrangements for participation in the SPV and contract will be brought back to Council for consideration.