

7.9 Advanced Waste Processing

Abstract

Boroondara is participating in the South Eastern Metropolitan Advanced Waste Processing (SEMAWP) project being led by the Metropolitan Waste and Resource Recovery Group (MWRRG). This project is progressing with 15 other Councils in the region and aims to address the issue of landfill capacity whilst providing improved environmental, social and economic outcomes compared with the current landfill treatment for waste.

Advanced Waste Processing (AWP) is a processing technology that recovers valuable materials or produces energy from waste. This technology is well established internationally and is an emergent technology in Australia.

The MWRRG is currently running a collaborative procurement to build, own and operate an advanced waste processing facility. Through the expression of interest phase a shortlist of three potential providers has been identified. The current phase involves engaging with these providers on their industry experience and possible solutions. These conversations are aimed at learning from the industry in order to develop the specification for a final tender, framework and evaluation methodology. This report considers Council's participation in the establishment of a Special Purpose Vehicle (SPV) to deliver the facility and the financial contribution required to remain part of the process.

Confidential information is contained in **Attachment 1 and 2**, as circulated in the confidential section of the agenda attachments, in accordance with Section 66(2)(a) and the definitions of 'confidential information' in Section 3(1) of the Local Government Act 2020. The information relates to private commercial information, being information provided by a business or commercial undertaking that if released, would unreasonably expose the business or commercial undertaking to disadvantage. The item has been included in the public agenda to facilitate transparency and accountability in Council's decision making.

If discussion of the confidential information in the attachments to this report is required in order for Council to make a decision, this item will be deferred to the confidential section of the agenda.

Officers' recommendation

That Council resolve to:

1. Participate in the establishment of a Special Purpose Vehicle to facilitate access to an Advance Waste Processing facility;
2. Pay Metropolitan Waste and Resource Recovery Group a one-off cost up to a maximum of \$75,000 (excl GST) for the establishment costs of the Special Purpose Vehicle and to support site selection and preliminary approvals; and
3. Note that a future report will be presented after completion of the tender process, which will consider the decision to enter a contract with the successful tenderer.

Responsible director: Daniel Freer, Director Places and Spaces

1. Purpose

The purpose of this report is to provide information about the South Eastern Metropolitan Advanced Waste Processing (SEMAWP) Project being led by the Metropolitan Waste and Resource Recovery Group (MWRRG) and specifically the establishment of a Special Purpose Vehicle to enable Council to make an informed decision on further participation in the project.

2. Policy implications and relevance to community plan and council plan

The matters presented in this report align with the following themes and strategies in the Boroondara Community Plan (2017-27) and Council Plan (2017-21):

Theme 3: The Environment

Strategy 3.2 Reduce the amount of waste generated and disposed of in landfill through initiatives to prevent, reduce, recycle and reuse waste.

Advanced waste processing aligns with the strategic goals and objectives outlined in Council's Waste Minimisation and Recycling Strategy 2017.

Advanced waste processing and landfill diversion are key pillars of the State Government's "Recycling Victoria: A new economy" (often referred to as the "Recycling Victoria Policy") released in February 2020. The policy states:

"The Victorian Government supports waste to energy projects where they create clear net benefits and complement efforts to reduce or recycle waste.

Waste to energy technologies have a role in an integrated waste and resource recovery system. As Victoria shifts towards a circular economy, and as part of a comprehensive policy approach, waste to energy facilities will divert waste from landfills and use it to create valuable energy. Generating energy from waste is better than sending waste to landfill, once valuable recyclable materials have been removed."

3. Background

The need for new waste management solutions

Despite improved recycling and waste diversion such as FOGO programs, an outcome of Melbourne's growing population is more waste being sent to landfill every year. By 2046, the amount of waste going to landfill each year is estimated to grow by 65% and would require the construction of additional landfill facilities to accommodate this waste.

In addition to growing demand, landfill supply is declining particularly in Melbourne's south-east, with a number of landfills approaching capacity, including Hallam landfill, which is expected to reach capacity and close in 2025. Boroondara has recently entered a contract for landfill services with a maximum term of 8 years, this contract allows for Council to exit and join an alternative arrangement with 12 a month notice period.

In responding to these issues, there are a number of relevant State Government policy levers. One is the target for Council's to achieve at least 80% landfill diversion by 2030. A second is the State Government's Landfill Levy, a levy applied to tonnages taken to landfill, which has steadily increased over time. The state government has forecast an increase in the landfill levy from \$65.90 (2019/20) to \$125.90 (2022/23).

Advanced Waste Processing technologies provide a potential mechanism to increase diversion from landfill and based on government price modelling is expected to become a cheaper processing option in 5 years.

Advanced Waste Processing is a processing technology that recovers valuable materials and then in turn produces energy from the residual waste. This technology is well established internationally and is an emergent technology in Australia.

Boroondara's need

Landfill diversion is a reporting metric under Local Government Victoria's performance reporting framework. Boroondara's 2020/21 estimate for landfill diversion is 71%, up from 49% in 2018/19 being the last full financial year prior to the introduction of FOGO.

In 2019/20, the highest reported landfill diversion by a metropolitan Council was 58% by Bayside City Council, who introduced a FOGO service in that financial year.

Geographic location is a highly relevant factor in consideration of any waste disposal approach with Boroondara well located to utilise waste facilities in Melbourne's south-east, north and western suburbs. This is primarily due to the proximity to the Monash Freeway and its extensions to the Westgate Freeway and Metropolitan Ring Road.

Given Boroondara's high landfill diversion levels, low residual tonnages of landfill waste, and its non-reliance on landfills in Melbourne's south-east, the urgency in securing alternative waste management options is far less than other Councils in the south-east region.

The SEMAWP Project

The MWRRG is leading a group of 16 councils (including Boroondara) in Melbourne's south-east to seek proposals from industry to build and operate an advanced waste treatment facility. The SEMAWP Project involves the identification and sourcing of a subject site and the tendering for a provider to build and operate an advanced waste processing facility. The other 15 participating councils have committed to making a financial contribution to the project.

As MWRRG does not have the ability to directly contract this type of arrangement, it is brokering it on behalf of participating councils. It is proposing the creation of a Special Purpose Vehicle (SPV) to be the contracting entity that will enter into the Public-Private Partnership with the appointed contractor.

Participating councils will purchase shares in the SPV, with shares likely to be proportional to the usage of the facility. The delivery timeline for this scale project is approximately five to seven years from tendering to commissioning.

The project now has three shortlisted entities and is seeking confirmation from participating councils about their intention to commit to the next phase of the process. Funding is required to establish a SPV and progress the tender process.

Alternatives to participating in the SEMAWP Project

There are a number of alternatives to becoming a SEMAWP shareholder. These include:

- Continue with a business as usual approach, which makes use of available landfill sites for non-diverted materials. Council has recently resolved to access a landfill contract for a maximum 8-year term. This has provided security while alternative options are considered. These opportunities are expected to be clarified in the next 1-3 years, likely allowing a decision to be made in the current council term
- Once the SEMAWP is operational, Council may elect to use it under a standard gate fee contract as a non-shareholder. It is expected that gate fees for non-shareholders will be more expensive and may not provide surety of supply. This option does not carry the risks of being a shareholder.
- Council could procure AWP services from alternative facilities. It became known through Council's recent landfill tender that there is a private venture establishing an AWP facility (with all approvals in place) in the western suburbs that is expected to commence accepting material within the next four years.
- The MWRRG have indicated plans for a similar project in Melbourne's north-west once the SEMAWP project is completed. At this stage there has not been a commitment to commence this process, no funding has been allocated and, given the timing of the SEMAWP project, it is unlikely that a facility will be established in Melbourne's north-west prior to 2030.

4. Outline of key issues/options

To date, Council has been able to participate in the SEMAWP Project without providing a financial commitment to being a shareholder. Continuation in the project now is subject to a financial contribution for the establishment of a SPV. Considerations for participating are:

Pros

- If the project is successfully delivered, participating councils will have guaranteed advanced waste service continuity.
- The SEMAWP is nominated as a priority project in the State Government's Draft Waste to Energy Policy and is assured an allocation of waste within the cap of material to be utilised in advanced waste processing.
- There is significant uncertainty about the development of alternative opportunities for advanced waste processing which may mean there is nothing delivered in the near future.
- If the project is successfully delivered, it is anticipated that the model will yield a competitive gate fee (in comparison to landfill gate and future levy rates) for shareholders.

- Council can continue to pursue alternative opportunities to achieve diversion from landfill and can withdraw from the SPV at any time.

Cons

- Becoming a shareholder will require a financial contribution.
- The project will require a high level of officer time, which diverts Council resources from other activities.
- The SPV model presents an unknown degree of risk. Whilst the project benefits are modelled benefits and not guaranteed the project itself will be subject to delivery risk associated with projects of this scale and complexity.
- Shareholders are likely to need to make long term commitments (currently expected to be 20 years); during that period Council will be committed to this waste processing solution. As technology changes and continues to develop further, it appears unlikely that Council will be able to participate in a competitive marketplace for an alternative provider.
- Withdrawing from this project after making a financial contribution will see these funds not returned to Council.

5. Consultation/communication

Consultation with the relevant internal Council departments has occurred. Consultation with other participating councils identifies that the other 15 councils have committed to making a financial contribution to the next phase of the SEMAWP process.

6. Financial and resource implications

Continuing in the SEMAWP Project as a shareholder will require financial investment, a large degree of officer time and carry with it a degree of risk. Should the project be successfully implemented as planned, it is expected to result in a gate fee that is more favourable than landfill costs given modelled increases in the landfill levy and gate fees provided by MWRRG.

The initial financial request is for a maximum of \$75,000 to remain a participant in the process. Council retains the right to withdraw from the process at any time without further financial contributions. The indicative total contribution by shareholders to fund the establishment of the SPV, site selection and preliminary approvals, is expected to be \$700,000-\$870,000 and is detailed in **Attachment 1**. Council's contribution can be funded through the waste services budget supported by the waste charge.

Not continuing in the SEMAWP Project as a shareholder will not require a financial investment and Council is free from the risks of being a shareholder in a Special Purpose Vehicle set up to establish large scale new technology. To access this facility under this arrangement, a higher gate fee for the new facility would be expected; however, present information suggests there will be alternative facilities that Council could also seek competitive tenders from.

7. Governance issues

Officers have no conflicts or concerns relating to the Human Rights Charter. Participation in the SEMAWP project has not been formally endorsed by Council.

The creation of a SVP involves risks for all participating councils. The Local Government Act 2020 requires that Council undertake a thorough risk assessment when exercising entrepreneurial powers. This has been undertaken with risks identified and mitigations included as shown in **Attachment 2**.

8. Social and environmental issues

There is a significant body of work that MWRRG has undertaken as part of its investigation into advanced waste processing. The Business Case for AWP considered air quality, carbon abatement and transport impacts of four technologies. As identified in this work, all four technologies had lower environmental impacts than landfill.

The proposal for a facility in the south-eastern region is agnostic to the treatment to be implemented. While environmental elements featured strongly in the EOI phase further information and consideration will be required throughout the future stages of the tender process. The impact of any technology needs to be assessed in a comparative model against contemporary landfill operations where methane capture and appropriate leachate management is in place. A full review of the environmental and amenity issues will be assessed during the final phases of the procurement process.

9. Conclusion

Boroondara has a low quantum of landfill waste given the recent introduction and uptake of the FOGO service, an existing high rate of landfill diversion, and a low risk of disruption of landfill services.

Considering the progress to date, legislative framework and the changing landscape of the waste industry, it is in Council's best interest to continue with this process through the next phase, in order to ensure access to best practice waste management. The next phase is joining the SPV, which will require Council to make a financial contribution.

After the tender phase, as a member of the SPV, Council will have the option to accept or reject the recommendation of the evaluation panel to enter a contract with the successful tenderer. If Council wishes to not enter a contract they will be able to exit the SPV and the project.

Manager: David Shepard, Manager Environmental Sustainability & Open Spaces

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