CONSERVATION COUNCIL ACT REGION

Submission to ACT Chief Planning Executive

Materials Recovery Facility, Hume: Draft environmental impact statement

October 2023

The Conservation Council ACT Region is the peak non-government environment organisation for the Canberra region. Since 1981, we have spoken up for a healthy environment and a sustainable future for our region. We harness the collective energy, expertise and experience of our more than 40 member groups to promote sound policy and action on the environment.

We campaign for a safe climate, to protect biodiversity in our urban and natural areas, to protect and enhance our waterways, reduce waste, and promote sustainable transport and planning for our city. Working in the ACT and region to influence governments and build widespread support within the community and business, we put forward evidence-based solutions and innovative ideas for how we can live sustainably.

At a time when we need to reimagine a better future, we understand that the changes we need will only happen with the collective support of our community.

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Introduction

The Conservation Council ACT Region welcomes the opportunity to provide comment on the draft environmental impact statement (Draft EIS) for the ACT Government's proposed new Materials Recovery Facility (MRF)[1].

The Council supports the rebuilding of an advanced materials recovery facility on the existing site in Hume. Re-establishing recycling processing in the ACT is critical to recovering the confidence of Canberrans to put their valuable waste materials into the appropriate bins. Diverting waste from landfill is essential to reducing greenhouse gas emissions, and the ACT Government is aware of the imperative to rapidly cut emissions from all sources as damaging climate change accelerates.

The Council supports the ambition for the new facility to be "one of the first advanced facilities in Australia" so as to recover and resell high-quality products at their highest-possible value usage, consistent with circular economy principles and ensuring the financial sustainability of the new MRF.

The Government must, however, not allow the building of this facility to divert efforts from the top of the waste management hierarchy: avoidance. The scale should be designed to be modular, to accommodate current waste levels but be responsive to efforts to reduce consumption and divert usable/repairable goods and materials, rather than require "feeding the beast" to maintain financial viability.

The Council provides the following comments on selected aspects of the MRF Draft EIS.

High-value materials recovery

The Conservation Council recommends building the MRF to world best practice standard.

The greater the sorting capacity and technological capabilities of the facility, the higher quality the recovered materials will be, ensuring that these materials have a high market value which will help fund the facility.

The Council supports the inclusion of glass processing and washing. However, the Council urges the Government to aim for recovery and processing of glass from and for higher-value uses in a broader range of glass products (including windows, solar panels, electronic device screens, medical products, household glassware and fibre optic cables). More sources of glass should be sorted by colour and feed back into glass production rather than the increasingly common approach of downgrading recovered glass into trench filler and roadbase. Glass can be endlessly repurposed as glass[2], with significant material and energy savings compared to mining and processing virgin sand, consistent with circular economy principles. Only residual glass that would otherwise end up in landfill should then feed into construction materials[3].

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[1] GHD, 2023, Hume Material Recovery Facility: Draft environmental impact statement, ACT NoWaste, https://www.planning.act.gov.au/__data/assets/pdf_file/0007/2273029/MRF-Draft-EIS-202200011.pdf

[2] Dalla Costa, S, & De Meillon, M, 2022, 'Improving Australia's glass recycling', CSIRO, https://www.csiro.au/en/news/All/Articles/2022/August/glass-recycling
Glass Packaging Institute, n.d., Glass container recycling loop, https://www.gpi.org/glass-recycling-facts

[3] University of Melbourne, 2020, 'Breaking glass and breaking traditions: innovation in the construction industry', Faculty of Engineering and Information Technology, https://eng.unimelb.edu.au/industry/infrastructure/news-and-events/breaking-glass-and-breaking-traditions-innovation-in-the-construction-industry

Plastics should likewise be sorted by polymer, quality and colour to feed back into circular production to reduce demand for virgin plastics. The ACT Government should investigate expanding the plastics processing capability to include soft plastics following the collapse of RedCycle.

The Government should take the opportunity to collect and process a wider range of post-consumer products, partnering with local enterprises to invest in adjoining processing facilities for complex materials and feeding these back into the local market to support a circular economy. Technical nutrients such as plastics, metals, glass, concrete, textiles and minerals should be returned to technical cycles to reduce extraction of virgin resources. Invest in research collaborations, such as SMaRT@UNSW and the CSIRO, to develop solutions for complex wastes such as disposable coffee capsules, rubber tyres, electronics, medical wastes and mattresses.

For further discussion, see the Conservation Council's submissions on the Tarago Veolia Woodlawn Waste to Energy facility[4] and the Draft ACT Circular Economy Strategy[5].

The new facility should also include collection and processing of soft plastics, given the complete failure of REDcycle and the national industry to address this massive problem.

Environmental impacts

The Council appreciates the measures designed to minimise and manage environmental risks during both construction and operation.

The Council supports the approach of avoidance, salvage and onsite reuse of construction materials during demolition and redevelopment of the site.

Water flow, containment and treatment across the site must be managed to avoid washing of toxins and particulates into local waterways, including during extreme weather flood events. The Council recommends regular testing of runoff from the site to prevent toxins reaching local waterways.

The Council notes that the facility will be enclosed, which should minimise potential for materials to escape the boundaries and become environmental pollutants (such as wind-blown plastics). The operators should ensure that perimeters of buildings and the outdoor bale storage area are kept clean and tidy, and that doors and windows are effective at containing loose materials.

The Government should ensure state-of-the-art fire suppression systems are installed in both facilities to avoid a repeat of last year's fire. This needs to include temperature control measures to prevent combustion of materials and equipment in extreme hot weather and bushfire events.

Weber, K, 2020, 'Paving the roads with glass', The Fifth Estate, https://thefifthestate.com.au/innovation/materials/paving-the-roads-with-glass/

[4] Conservation Council ACT Region, 2022, Submission to NSW Government Major Projects: Woodlawn Advanced Energy Recovery Centre, https://conservationcouncil.org.au/wp-content/uploads/SUBMISSION_VeoliaWoodlawnIncinerator-CCACTR-Dec2022.pdf

[5] Conservation Council ACT Region, 2022, Submission to ACT Government: Draft ACT Circular Economy Strategy, https://conservationcouncil.org.au/wp-content/uploads/SUBMISSION_CircularEconomyStrategy_Dec2022-CCACTR.pdf

The ACT Government should implement a schedule of regular inspections and maintenance to ensure ongoing compliance and effectiveness of environmental risk management strategies.

Air quality

It is critical that the new facility manage odour, dust and airborne particulates, including during extreme weather high-wind events, so as to ensure good air quality and social acceptance of the facilities.

There are only three air quality monitoring stations in the ACT, and potential air pollution is a cause of concern for many residents of Canberra and surrounding suburbs. The building of this new facility provides the Government with an excellent opportunity to install a new air quality monitoring station in an industrial area. This would provide valuable data, contributing to preventative health measures for vulnerable residents. It would enable operators of the MRF to monitor and respond rapidly to any sources of pollution within the facility and provide assurance to the public.

Biodiversity and nature conservation

The Council notes that the Government intends to clear up to one hectare of grassland habitat in which no threatened species have been recorded.

The Government should plant native vegetation including grasses, ground covers and shrubs around the site. This would provide multiple benefits including visual screening, biodiverse habitat, soil moisture retention, wind-breaking and cooling microclimate. This should include restoration of indigenous grasses to offset the cleared grassland habitat.

Greenhouse gases

The Council notes that total greenhouse gas emissions during construction of the facility are estimated at 5,150 t CO2-e, and at full scale, operational emissions are estimated to be on average 24,960 t CO2-e per year.

Given that the majority of operational emissions are expected to be due to “feedstock contamination sent to landfill”, it is clearly imperative to minimise contamination of collected materials, and maximise diversion from landfill. Education is critical to minimising contamination in the first instance (more below). Expanding the sorting, washing and recovery capabilities of the facility will help to minimise contaminated loads sent to landfill (more in ‘circular economy’ below).

The remainder of the operational emissions will presumably be from operating facility machinery. The Government should seek to replace all fossil-fuel driven machinery with electric machinery, or, at the least, investigate low-emissions fuel alternatives such as methane gas captured from landfill or biodiesel from local agricultural sources.

Transport

Again, to minimise greenhouse gas emissions associated with the MRF, the Government should replace the fossil-fuel collection truck fleet with electric vehicles.

The Government should also ensure that collection trucks are restricted in size so as to safely navigate all Canberra streets without compromising mature trees and planning for active travel infrastructure.

Heritage

The Council urges the Government to take all appropriate measures to avoid disturbance to identified Aboriginal heritage sites and artefacts within the development site.

Community education

The Council fully supports the inclusion of an educational facility within the MRF site.

The new facility must be supported by significant investment in community education to minimise contamination of both comingled recycling and FOGO collected from households. Money spent on education is well spent. As the Government well knows, lack of education leads to high contamination rates which leads to poor quality products which cannot be sold, leading in turn to failure of economic viability of the facilities, plus greenhouse gas emissions from resulting landfill. An example is the highly contaminated organic waste exported from Sydney to Veolia's Woodlawn facility, leading to unsaleable product that ends up dumped in landfill, completely defeating the purpose of collecting it from households, and undermining public confidence in recycling services.

Community education could be delivered in partnership with enterprises such as Capital Scraps, the Canberra Environment Centre and SEE-Change (with adequate funding). This education should commence well ahead of completion of the facility and the start of scaled-up collections.

Circular economy

The ACT Government should invest further in developing a circular economy for Canberra. See the Conservation Council's submission on the Draft ACT Circular Economy Strategy.

Community and business education must drive a shift in thinking from "waste management" to "circular economy". This requires us to reconceptualise "wastes" as "valuable byproducts", ie that outputs from one process become inputs to another process either onsite or at a completely different operation. For instance, many organic byproducts could have higher-value uses than being composted, if they can be managed to an appropriate quality. Construction materials salvaged from demolition sites should be reused as construction materials wherever possible.

Government could support this transfer of materials through:

- Mapping these processes, inputs and outputs across the ACT via an online platform that enables organisations to connect.
- Removing regulatory barriers to higher value uses (e.g. Goterra's insects could become protein for human consumption).

Government efforts should include advocating at the national level for compulsory stewardship schemes across all product categories, and mandatory recycled content targets. These are essential for driving producer responsibility, funding to invest in recovery and processing, and markets for recovered materials, all of which are essential to the financial sustainability of this MRF.

Government should also continue with efforts to categorise materials and goods that cannot be recycled by the MRF and invest in developing solutions, including recycling technologies where feasible and policy solutions to avoid producing such goods and materials.

The ACT Government should expand partnerships with local enterprises (such as The Green Shed and Lids4Kids) and local research institutions (such as the CSIRO) to expand the sorting and recovery capabilities of the new MRF. Enabling more forensic manual and technologically advanced sorting would reduce contamination of materials at the facility and greater recovery of usable materials. Partnerships with industrial research institutions should be directed at developing recycling solutions for those materials the MRF will not yet be capable of.

The Government should also proceed with plans to build a FOGO facility and collection service, and a hygiene products strategy, both of which should reduce contamination of co-mingled recycling and waste-to-landfill.

Summary and recommendations

The Conservation Council supports the building of the proposed MRF at Hume with the following recommendations:

- Install an air quality monitoring station
- Implement environmental containment measures proposed
- Implement a schedule of regular environmental monitoring (including water runoff), maintenance and compliance
- Plant native vegetation around the facility for multiple benefits
- Replace the fossil-fuel collection truck fleet with electric vehicles, at a size suitable for slow-traffic streets safe for active travel
- Protect Aboriginal heritage values
- Partner with and adequately fund local enterprises and research institutions to expand the sorting and recovery capacity to maximise reuse, high-quality materials recovery and diversion from landfill
- Aim for the highest-value uses of glass, plastics and all other recoverable materials, according to circular economy principles
- Partner with and adequately fund community organisations to enhance community education