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PROSPECT HILL WASTE TO ENERGY FACILITY
SUBMISSION 3: OPPOSING APPLICATION # 1004200

This is the third submission Geelong Sustainability (GS) has made regarding the proposed Prospect Hill International (PHI) Waste to Energy Facility at 164-200 McManus Road, Lara. This document should be read alongside our previous submissions dated 28 October 2021 and 28 April 2021. Our persistence in responding for a third time matches the strength of our opposition to this facility, which entrenches a linear economy and takes our region in totally the wrong direction.

Despite the short timeline, we appreciate the opportunity to respond to the answers provided by PHI consultants, Jacobs to the EPA's questions. We've also reviewed PHI's answers to our queries in our second submission. On both accounts, we are disappointed to find unsatisfactory replies[1] and little, if any, new material. Hence, our third submission will reference and build upon our previous objections.

About Geelong Sustainability

Established in 2007, Geelong Sustainability (GS) is a not-for-profit, incorporated association, registered environmental organisation and charity. Our mission is to empower people to protect and regenerate the planet. GS inspires hope through action and effectively delivers a wide range of community projects, events and advocacy work within the Greater Geelong and G21 region. Our Strategy 2025[2], aligned to the UN Sustainable Developments Goals (SDGs), seeks to position our region for the bold transformative action required to become a net zero emissions region by 2035. We know a fast and fair transition can deliver economic opportunities and ecological benefits for Geelong and its people. Our activities fall under four pillars aligned to UN Sustainable Development Goals (SDGs) of 1) Climate Action, 2) Renewable Energy, 3) Sustainable Cities and Communities and 4) Circular Economy.

Our Concerns in a Nutshell

All of our key areas of concerns and questions remain:

1. **Feedstock sources** - Where will the waste come from?
2. **Community engagement & acceptance** - Where is the social licence for this project?
3. **Business case - project viability** - Where is the business case that shows the plant is viable?
4. **Operating period & transitional solution -** How can this plant be a transitional waste solution when it is planned to operate for 25 years?
5. **Contamination risks** - Why is there no front-end sorting of waste?
6. **Energy output** - Why is there no agreement with Powercor for energy off-take?
7. **Water usage** - How can PHI justify using 2.5Ml of potable water per day?
8. **EES requirement** - Why hasn't the applicant completed an Environmental Effects Statement?

As more facts come to light and studies are published, our concerns about this flawed waste management practice are escalating. These include:

9. **Adverse health impacts** - A systematic literature review has found old and new incinerators carry potential health risks
10. **Energy fallacy** - Further evidence that WtE incineration is not a low carbon source of electricity

[1] https://engage.vic.gov.au/download/document/31929
[2] https://www.geelongsustainability.org.au/strategy/

11. **Tech & other problems** - There are delays the implementation of this technology elsewhere in Australia and plants are being shut down overseas
12. **PHI's unsatisfactory answers** to EPA questions

Our Concerns

1. Inadequate feedstock sources

PHI claims the waste will be sourced from *a number of Victorian councils, with a preference for waste from local areas such as the Geelong, Surf Coast and Bellarine areas*. However it is clear that G21 councils don't require this facility and western Melbourne will be served by the already approved plant, Recovery Energy Australia at Laverton. [see Appendix, Fig 1]

The City of Greater Geelong (CoGG) and indeed the entire Barwon South West region are moving to a Circular Economy for waste, with the ultimate goal of zero waste to landfill. [3], [4] CoGG has set a net zero waste to landfill target by 2030. They are also conducting a food organics trial in Lara and begun its own Hot Rock food organics pilots adjacent to their Garden Organics facility at Anakie.

Barwon Water is utilising its 110-year knowledge of managing water and wastewater to partner with local councils to transform organic waste into valuable resources. From mid-2025, the **Regional Renewable Organics Network (Regional RON)** will start processing up to 40,000 tonnes of household, commercial and industrial organic waste each year, diverting waste from landfill and concentrating it into 8,000 tonnes of products that improve soil quality for agricultural uses, as well as generating renewable energy.

Barwon Water is progressing plans for a biophilic designed facility at their Black Rock Water Reclamation Plant in Connewarre. The RON will provide a local, long-term and lower financial and environmental cost waste solution for councils. It will generate 2.5 gigawatt hours of electricity and create 36 ongoing jobs. This innovative project will lead our region's transition to a circular economy, where materials are continually reused and recycled to increase their life span and reduce waste.[5]

As Greater Geelong and the G21 region are moving towards zero waste solutions, feedstock would need to be sourced from other parts of Victoria. If so then the additional transport emissions and costs will need to be factored in. We trust that PHI would not be permitted to import waste from other states or countries ~ that would be totally unacceptable!

2. Lack of community engagement or a social licence for this project

The Conference of Interested Persons survey data from July 2021 showed a very high dissatisfaction within the community for this project on many fronts including: air pollution, proximity to residential areas, and truck movements.

PHI's response to our query about insufficient community engagement was to blame the COVID lockdown. That may have been true in 2021 but Melbourne's Lockdown ended in October 2021, which is now more than 20 months ago. It is no longer a valid excuse as to why the proponents have not re-engaged with the community and sought to build a social licence for the project. Their reluctance to engage only fosters mistrust and apprehension.

As the proponents have never operated any type of waste facility, the community is entitled to be concerned about their bona fides and capabilities to run the plant safely and efficiently. PHI promises to engage with the community at appropriate milestones **once** the project is approved. Sorry this is not the right sequence and is disrespectful to the community.

3. Business case - project viability

The community has continually called for a business model to be released showing that the plant is commercially viable. However PHI has advised us that as the EfW project is privately funded it doesn't need to release its business plan/case publicly and that the information is commercial in confidence.

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[3] https://geelongaustralia.com.au/common/Public/Documents/8d7ec5c40d76376-28042020councilagenda-wasteandresourcerecoverystrategy2020-30-strategyattachment3.pdf

[4] https://www.reduce-recycle.com.au/about-us/regional-plan/

[5] https://www.barwonwater.vic.gov.au/about-us/major-projects/renewable-organics-networks

The plant has a lifespan of 25 years and hence this technology is inconsistent with Victorian Government statements on the Waste to Energy framework. We note that Infrastructure Victoria warned the state government about over investing in this kind of technology. The community was told there would be a cap of 1 million tonnes per year but now we're told the three plants already approved will not count towards the cap ~ this is grossly shortsighted and no explanation has been given. [see Fig 1, Appendix A]

The community is entitled to be suspicious and fearful of having a stranded asset in its neighbourhood when the project fails to stack up on so many criteria. Lara residents are still recovering from a previous disastrous waste facility, C&D Recycling where the owner went bankrupt and left town. The debacle exposed residents to significant fire and health risks and subsequently cost taxpayers over $70m in clean-up costs.

4. Operating period - Incineration is not a transitional waste solution

Incineration destroys the material forever, locking in an unsustainable linear approach and impeding innovative circular economy solutions.

In justifying the 25-year operating period, PHI references experiences across Europe and claims the ambitions of governments and councils for a zero waste society in Australia will not occur in the near future (10-20 years). However the truth is that Europe is rapidly realising the error of their incineration practices. The European Commission now classifies waste incineration in the same category as nuclear and coal energy, removing all renewable energy subsidies and funds for this sector. The Commission recommends that EU states decommission old incinerators and not build new ones. Waste to energy incinerators emit more GHGs and toxic air pollutants per unit of energy than most coal, oil and gas technologies. Waste to energy incinerators entrench an unsustainable linear economy based on raw materials extraction and disposal.

Many of PHI's generalised statements are insufficiently contextualised to our region. PHI uses average Victorian data which ignores the enormous strides being taken in our region to better manage our resources including:

- The Regional Renewable Organics Network to commence operations in mid-2025 (described above)
- The City of Greater Geelong's Garden Organics Processing Facility at Anakie and the recent addition of two in-vessel HotRot composting units for food waste[6]
- The best practice management of leachate at the Drysdale landfill site[7]
- The Drysdale Renewable Energy Facility - In 2018, LMS Energy converted this site into a landfill-biogas-to-energy facility. A 1.1MW biogas engine was commissioned, capable of generating approximately 8,900MW hours of reliable, base-load renewable electricity each year. The facility is registered under the Emission Reduction Fund (ERF), and to date (Dec-21) has been issued with 191,225 Australian Carbon Credit Units (ACCUs). From power generation activities alone, the facility will reduce nearly 58,000 tonnes of carbon dioxide emissions (CO2-e) from being emitted each year.[8]

So it is incorrect to say that without this incinerator our region's residual waste will be generating carbon emissions ~ it won't be. Our region is leading the way with innovative cleantech circular solutions. The state government should recognise this work and not impose contrary options on communities that do not want or need them.

5. Contamination risks - No front end sorting to remove hazardous items

PHI has said that the waste feedstock would exclude all material used within existing recycling programs (i.e. yellow kerbside bins) – only residual waste (i.e. red top kerbside bins) will be targeted. However they are assuming all materials residents place in their red-topped bins are OK to burn. It's an unacceptable processing risk for council waste to be fed directly into the hopper without screening and removal of dangerous and toxic materials like batteries and paint cans etc.

PHI obviously has little insight into the strange and dangerous items people put in their bins. We contend a rigorous front-end sorting process is essential. One presumes it would be a cost escalation that PHI would rather avoid. However without pre-screening of materials, the process would be a major health hazard for the community and a significant workplace health and safety risk.

6. Energy output - No grid connection agreement with Powercor

Despite years of planning, PHI has no agreement with Powercor for how (or even if) the produced energy will be fed into the grid. PHI has advised us that the local electricity network has the capacity to take the electricity

[6] https://www.geelongaustralia.com.au/recycling/news/item/8daef2cbcdc35ef.aspx
[7] https://youtu.be/3GiaX6VFLjA
[8] https://lms.com.au/projects

generated by the EfW plant but they have not even held proper discussions. This is yet another critical project part, PHI has said it will do in the design phase.

We've been advised that a high voltage transmission line would need to be installed to offtake the energy generated by the plant. Without detailed discussions with Powercor, it's unclear whether a grid connection is even feasible. The significant additional infrastructure cost is likely to affect the project's commercial viability.

7. Water usage - Excessive potable water requirement

PHI has indicated it doesn't want to deploy technology that reuses water. Knowing the impending shortfall in town water supply across our region, it's inappropriate for the plant to be allowed to use 2.5 Megalitres of potable water in its cooling towers each day.

While PHI has had discussions with Barwon Water, it remains unknown (and unlikely) whether the plant could readily access recycled water and who would pay to install pipeworks to the site. This important issue should be resolved thoroughly before approval.

8. EES requirement - clear public health and environmental issues

We believe the nature and scale of the proposed Lara WtE plant are such that they warrant an official Environmental Effects Statement (EES). Specifically in relation to these criteria of the Environment Effects Act 1978.

- Potential extensive or major effects on the health, safety or well-being of a human community, due to emissions to air or water or chemical hazards or displacement of residences.
- Potential significant effects on the amenity of a substantial number of residents, due to extensive or major, long term changes in visual, noise and traffic conditions.
- Potential exposure of a human community to severe or chronic health or safety hazards over the short or long term, due to emissions to air or water or noise or chemical hazards or associated transport.
- Potential greenhouse gas emissions exceeding 200,000 tonnes of carbon dioxide equivalent per annum, directly attributable to the operation of the facility.

We contend there are clear public health criteria which must be addressed and the Applicant is wrong in asserting that the proposed Lara EfW does not require an EES.

9. Adverse health impacts - potentially no incinerator is safe

A systematic literature review by Dr Peter Tait from the Public Health Association of Australia found significant health impacts associated with waste incineration. Older incinerators were linked with neoplasia, reproductive issues and other diseases. While newer incinerator technologies with robust maintenance schedules may be less harmful, any diseases from exposures tend to manifest only after many years of cumulative exposure, so it is premature to conclude that these newer technologies will improve safety. The study concluded that there is insufficient evidence to conclude that any incinerator is safe.

The review suggests that incineration is an option that needs to be pursued carefully with close monitoring. Local community groups have a basis for legitimate concern and so siting of incineration facilities needs to take these concerns into account. Early transparent consultation with communities about these facilities is essential.[9]

Note: Fig 2 in Appendix A shows the proximity of residential and agricultural areas to the site.

10. Further evidence that WtE incineration is not a low carbon source of electricity

In March 2022, the Climate Change 2022 Impacts, Adaptation and Vulnerability Working Group II Contribution to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, warned that time is rapidly running out to keep our planet below a 1.5C temperature increase and that urgent action is needed to drastically reduce greenhouse gas emissions. In this context, the widespread introduction of waste to energy incineration in Australia is cause for significant concern. Waste incinerators emit large volumes of GHGs and toxic air pollutants and create tonnes of hazardous ash that requires disposal. Waste incinerators maintain a linear approach to resource use, further exacerbating climate change by increasing the extraction of new raw materials to feed increasing materials production systems.[10]

[9] https://zerowasteaustralia.org/2022/04/22/climate-and-health-impacts-of-waste-incinerators-are-worse-than-landfill/
[10] https://www.ipcc.ch/report/ar6/wg2/downloads/report/IPCC_AR6_WGII_SummaryForPolicymakers.pdf

11. The problematic implementation of this technology elsewhere in Australia & overseas

Australia's first incinerator at Kwinana in WA has been in development since 2011 but it's been beset by delays and won't be operational until 2025. Jane Bremmer, Coordinator for Zero Waste Australia says, it's become a costly policy failure for the WA government.[11] The 7 councils, signed up to supply waste to the facility, have been locked into waste burning contracts for decades, delivering tonnes of climate and toxic air pollutants and huge stockpiles of toxic ash, that perversely requires secure hazardous waste treatment and landfilling.

The ACT government has concluded that there are better ways to approach the management of waste including through an increased focus on waste minimisation. They have moved to ban waste incineration projects after a number of proposals met with significant community backlash, out of fears of the potential toxic pollution created through the burning of rubbish.[12]

Across Europe and other northern hemisphere countries that had previously embraced waste incineration, there is now a trend away from this technology. [13], [14]

To better understand the direct climate and pollution impacts that residual waste technologies in Australia create, National Toxics Networks (NTN) engaged Eunomia Consulting UK to assess the current and proposed waste to energy incinerators, landfills and other residual waste technologies in Australia. The study concludes:

> Incineration cannot be considered a 'green' or low carbon source of electricity, as the emissions per kWh of energy produced are higher than CCGT (combined cycle gas turbine) and the likely aggregated future marginal source of electricity in Australia. The carbon intensity deficit of residual waste incinerators will increase as the electricity grid decarbonises. The use of incineration is therefore also incompatible with the achievement of local net zero climate change targets in respect of emissions from energy generation, unless coupled with carbon capture and storage. This technology is not yet commercially viable, and its use will considerably increase the cost of waste treatment.[15]

12. PHI's unsatisfactory answers to EPA questions

Fit and Proper Person
We are very concerned by PHI's failure to nominate a "Fit and Proper Person" to take full responsibility, including financial responsibility, for compliance with EPA licence requirements. It is very concerning that PHI says it is "*investigating partnership options with a range of large investors and O&M EfW companies*".

PHI's unwillingness to nominate a Fit and Proper Person is a major shortcoming in their application. It's definitely a red flag to the community.

General environmental duty re. GHG emissions
We dispute their claim that the project "*represents an improved environmental outcome for Victoria*" We are not convinced by their statement that they will "*continue to seek opportunities to reduce energy and greenhouse gas impact of the construction … and Operational Environment Management Plans (OEMP)*".

Concluding remarks

Geelong Sustainability urges the EPA to reject the proposed WtE facility at Lara once and for all. If not, given the project's potential to threaten multiple environmental values and human health, then the next step should be to call for an Environmental Effects Statement to be undertaken.

All societies, locally and globally, need to reduce overall waste. Under the state government's Recycling Victoria policy, all local councils are introducing separate household waste bins for food waste & garden vegetation, glass, and recyclables. [16]

The Victorian waste to energy framework claims to be '*supporting sustainable and appropriate investment*'[17]. This should not include incineration. We don't agree with Recycling Victoria (RV) that there is a role for waste to energy investment in Victoria. We are disappointed that the three plants already approved will not be included in the one million tonne per year cap as they total 950,000 tonnes.

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[11] www.zerowasteaustralia.org
[12] https://reneweconomy.com.au/act-set-to-ban-waste-incineration-for-energy-citing-community-concerns-33706/
[13] https://www.no-burn.org/europewasteburning/#resistance
[14] https://e360.yale.edu/features/in-europe-a-backlash-is-growing-over-incinerating-garbage
[15] https://ntn.org.au/eunomia-report-greenhouse-gas-and-air-quality-impacts-of-incineration-and-landfill/
[16] https://www.vic.gov.au/transforming-recycling-victoria
[17] https://www.vic.gov.au/sites/default/files/2022-02/Victorian%20waste%20to%20energy%20framework_0.pdf

Geelong Sustainability contends the incinerator is not required by Geelong or G21 councils and it's most definitely not wanted by our community. We don't want our region dragged in the wrong direction ~ away from our objective for a clean energy circular economy and our regional net zero by 2035 target. Incineration of waste is incompatible with the achievement of local net zero climate change targets.

Our region is already leading the way with innovative cleantech circular solutions. If the state government is serious about transitioning to a zero waste circular economy, it should not impose huge incinerators on communities that do not want or need them.

PHI's vague application is expecting approval before showing how its facility will meet RV's best-practice environment protection requirements, or that it has demonstrated a social licence with affected communities.

Geelong Sustainability endorses Zero Waste Oz's petition to the Federal Minister for the Environment[18].

We can't burn our way out of climate change!
We want Zero Waste Solutions not Waste to Energy Incinerator Pollution!

Thank you for the opportunity to make this additional third submission.

Yours sincerely,

Dan Cowdell

Dan Cowdell
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Geelong Sustainability Group Inc.

18 https://www.change.org/p/federal-minister-for-the-environment-remove-subsidies-for-waste-to-energy-incineration-in-australia

APPENDIX A

Figure 1: Approved VIC Incinerators

1.1. Existing facilities

Pre-existing approved facilities not subject to the cap

Facility	Annual feedstock	Electrical output	Thermal output	Notes
Australian Paper (Maryvale)[5]	650,000 tonnes	45 MW_e	225 MW_{th}	Electricity and heat to supply on-site paper mill
Recovered Energy Australia (Laverton)[6]	200,000 tonnes	15.1 MW_e		Output excludes 2.1 MW_e for plant operation; proposed capacity to provide thermal output to nearby properties in future
Great Southern Waste Technologies (Dandenong South)[7]	100,000 tonnes	7.9 MW_e		
TOTAL	**950,000 tonnes**	**68 MW_e**	**225 MW_{th}**	

Figure 3 Already approved WtE facility capacity

[5] https://engage.vic.gov.au/epa-works-approvals/australian-paper-wa
[6] https://engage.vic.gov.au/epa-works-approvals/recovered-energy-australia
[7] https://engage.vic.gov.au/epa-works-approvals/GSWT

Figure 2: Zoning of land around the proposed EfW site in Lara