Adrian Ellson
19 Rosebery Street
Tarago NSW 2580

5th December 2022

Ms Sally Munk
NSW Department of Planning and Environment
Major Projects
Locked Bag 5022
Parramatta NSW 2124

Dear Ms Munk

RE: WOODLAWN ADVANCED ENERGY RECOVERY CENTRE (ARC) ENVIRONMENTAL IMPACT STATEMENT (EIS) - APPLICATION (SSD-21184278) - PERSONAL OBJECTION

Abstract

Veolia's submitted Environmental Impact Statement (EIS) for its proposed waste incinerator has proven five things:

1. The NSW Government has not adopted the world's most stringent standards governing the use of and emissions/waste from Energy from Waste (EfW) facilities.
2. Veolia has not committed to designing, building and operating an EfW facility to European Best Available Techniques (BATs) or incorporating world best practices from elsewhere, such as the USA regarding the design, use of and emissions/waste from EfW solution, which is in fact a waste incinerator by these World standards.
3. Veolia though it's own admission is only proposing to build and operate a common commercial waste incinerator that produces electricity as a byproduct. Veolia has shown no innovation in harvesting and commercialising the air heat energy produced from incineration. Veolia cannot achieve the required R1 Energy Efficiency Rating of 0.65 using the official formula for doing so, and is proposing that it be allowed to use the FDBR Guideline RL7 formula as an approved alternative measure on a periodic baisis, and only after the waste incinerator is in operation.
4. Based on the content of the EIS, including what has not been included, and my local Tarago knowledge of Veolia's current operations, performance and outcomes, and of that on public record regarding breaches of licences at Woodlawn and elsewhere, that Veolia is neither technically competent in managing, building and operating major EfW facilities, nor does it have the necessary financial funding to do so independent of Government grants. and
5. The Waste Industry and their consolidated and differing activities are shrouded in unknowns, misinformation, misleading guidance, and a concept of public naivety; however, what is known is that all activity undertaken by the major waste related companies are driven and focussed on profit rather than good ecological and environmental outcomes!

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5th December 2022

References:

A. NSW Environment Protection Authority (EPA): Energy from Waste - Policy Statement, June 2021
B. Veolia (/EMM) 'Woodlawn Advanced Energy Recovery Centre Scoping Report' dated 19th May 2021
C. NSW Department of Planning, Industry and Environment (DPIE): Veolia SEARs, 2 July 2021
D. Veolia (/EMM) 'Woodlawn Advanced Energy Recovery Centre - Environmental Impact Statement [and all associated Appendices and Attachments] dated 10th October 2022
E. NSW Government's .Energy from Waste Infrastructure Plan - Supporting the NSW Waste and Sustainable Materials Strategy 2041, September 2021
F. NSW EPA Draft Regulation: Protection of the Environment Operations (General) Amendment (Thermal Energy from Waste) Regulation 2021
G. PricewaterhouseCoopers and Sphere Infrastructure Partners: NSW Waste Sector Volume I: Key Findings, April 2019

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5th December 2022

1 Preamble

1.1 Who am I?

I am Adrian, Sandra is my wife, and we live at 19 Rosebery Street, Tarago, NSW, approximately 6 kilometres from the Woodlawn Eco Precinct, where Veolia proposes to build and operate a commercial waste incinerator.

We have 2 dogs, 2 birds, 2 standard horses and 2 miniature horses and all are rescued animals; the horses are agisted locally. Regrettably, one of our standards, Tessa, has injured herself - was spooked and then ran through a fence - $3,000 later she is now on the mend. Tessa is loved, she is family, and her health and well-being is as important to Sandra and I, as and equal to any human family member.

Our grandson, 4 years old, visits us often, and has regular sleep overs. He rides his bike, he rides our miniature horses, and he plays with local children. He is a delight to have visit.

Sandra and I are active within our (Tarago) Community; Sandra is a JP and until recently, I was active in Tarago and District Progress Association Inc. (TADPAI) and a community representative on Veolia's Community Liaison Committee (VCLC), and am still a community representative on Develop's Community Consultative Committee. I along with the last two community representatives on the VCLC, resigned from the VCLC on 29th October 2022, in opposition to Veolia's persistence in pursuing to build and operate a waste incinerator under the guise of it being an EfW solution, and despite Mr Richard Kirkman, CEO, being advised a number of times that the Tarago Community did not and still does not want Veolia to build and operate a waste incinerator within the Woodlawn Eco Precinct.

The NSW Chief Scientist has said that building EfW facilities in Sydney is too much of a risk to human health based on population density, but that it should be ok to build and operate in the regions where less people are likely to be affected.

My wife and I live in the Tarago Community, the Community most adversely affected by the construction and operation of any suggested Energy from Waste (waste incineration) facility within the Woodlawn Eco Precinct (/Southern Goulburn Mulwaree Precinct).

When you are reading this submission, please note that you are being asked to either make a decision or recommendation to do harm or not do harm to Sandra, me and our grandson, and everyone else within the Tarago and surrounding communities - which will you choose?

1.2 6 Week Exhibition - Not Enough Time to Properly Review

Veolia has had nearly two years and several teams of so-called experts to develop its Environmental Impact Statement (EIS) and we, the public, have been given a mere 6 weeks to read, review and provide constructive feedback - just not fair and reasonable. This is especially so, given the numerous flaws, inaccuracies, inconsistencies, misinformation, missing information, mis guidance, etc within Veolia's EIS.

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5th December 2022

It has been impossible to review the EIS properly, but what is included in this Submission is as accurate as possibly achievable in the time permitted to respond.

2 Summary of Sydney's Residual Waste and the need to Incinerate Waste

Veolia in its EIS claims that the Woodlawn Echo Precinct "*accepts approximately 40% of Sydney's residual putrescible waste, it is a critical waste management infrastructure for NSW*."[1] And the assertion is that long term landfilling is unviable - hogwash I say!

As a member of the VCLC for the past several years, I can attest that the figure quoted prior to the start of the development of the EIS was 20% based on 2019 licence approvals and residual waste tonnages being accepted at Woodlawn. The VCLC noted the change in Veolia claims on its website, and sought clarification from Veolia, but none has been provided.

The two positions are unhelpful, a baseline is needed.

NSW Waste Performance Data[2]

[1] Reference C, page ES.1
[2] NSW EPA 'Waste Performance Data' from https://www.epa.nsw.gov.au/your-environment/waste/waste-overview/waste-performance-data of 14th November 2022

Adrian Ellson
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5th December 2022

Lets review Veolia's claim using NSW EPA Waste Performance Data and Veolia's licenced waste tonnages below established in 2019. And it is appropriate to use the NSW aggregate figures because Veolia is accepting waste from Sydney, regional NSW and the ACT noting that the Territory's waste tonnages are not included in the NSW EPA analysis).

> Approved under the original consent (DA31-02-99) and subsequently modified by MP 10_0012, the Bioreactor was the first stage of the Eco Precinct developed by Veolia. The Bioreactor is located in the former open-cut mine void. The Bioreactor includes a landfill gas collection system. Landfilling operations commenced in September 2004. The Bioreactor is approved to receive up to 1,130,000 tpa of waste for landfilling, comprising up to:
>
> - 900,000 tpa of putrescible and non-putrescible waste received via rail from Sydney;
> - 130,000 tpa (with written consent) of putrescible waste received via road from areas regional to the Eco Precinct; and
> - 100,000 tpa of residual waste from the MBT facility.[3]

Extract from Reference C

In 2020-2021:

1. NSW processed or handled 22,000,000 tonnes of waste (reuseable, recyclable and residual).
2. NSW landfilled 2,781,000 tonnes of residual MSW.
3. NSW landfilled 2,236,000 tonnes of residual C&I waste.
4. NSW Landfilled a combined 5,017,000 tonnes of residual MSW and C&I waste.
5. Veolia's Bioreactor is licensed to receive and landfill 1,130,000 tonnes of waste, all sources.
6. Woodlawn Eco Precinct landfilled approximately 22.5% of all of NSW residual MSW and C&I waste.
7. Despite this, the Woodlawn Bioreactor has a remaining useful life of 25 years at existing residual waste intakes; and
8. A significantly longer remaining useful life as NSW's Circular Economy is implemented and residual waste volumes plummet over the next few years.

Thus under the above conditions, there is no justification to divert waste from the bioreactor to any waste incinerator, especially in light of Australia's and NSW's other policies, legislations, goals and objectives for achieving circular economies, carbon neutrality and climate change improvements within the next couple of decades.

3 Brief History on the use of Waste Incineration

"*The history of municipal solid waste (MSW) incineration is linked intimately to the history of landfills and other waste treatment technology. The merits of incineration are inevitably judged in relation to the alternatives available. Since the 1970s, recycling and other prevention measures have changed the context for such judgements. Since the 1990s alternative waste treatment technologies have been maturing and becoming viable.*

[3] Reference C, page 22

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5th December 2022

> *Incineration is a key process in the treatment of hazardous wastes and clinical wastes. It is often imperative that medical waste be subjected to the high temperatures of incineration to destroy pathogens and toxic contamination it contains."*[4]

The validity of using incineration to treat hazardous and medical wastes remains; however, the validity for the use of incineration on other types of waste is diminishing rapidly. The United Nations (UN) and others have since circa 2018 been proactively promoting the possible use of EfW in developing countries under certain conditions, but that developed countries should be avoiding its use because of associated adverse health impacts and climate change - the UN is encouraging the World to pursue the use of circular economies over waste incineration[5].

Incineration is a waste treatment process that involves the combustion of substances contained in waste materials.[6]

The use of waste incineration and the use of moving grate technology is not a recent or modern event as portrayed by Veolia and others within the waste industry, as example by:

- The first UK incinerators for waste disposal were built in Nottingham by Manlove, Alliott & Co. Ltd. in 1874 to a design patented by Alfred Fryer. They were originally known as destructors[7].
- The first US incinerator was built in 1885 on Governors Island in New York, NY[8]. and
- The first facility in the Czech Republic was built in 1905 in Brno[9].

"In the early 1900's the moving grate combustion system was developed, based on the premise that fuel ignites more easily when an already existing glowing mass is pushed back underneath it.

The concept was further developed over time and the grate proved to be the solution to creating efficient combustion of MSW and similar mixed wastes."[10]

The years between the 1960s and 1990s encompassed a lot of opposition arguments regarding the use of incineration of waste in the backyard or industrially, including in electricity generation, because of residual particulate matter, the emergence of dioxins and furans, and subsequently the finding of residual heavy metals. During this period of time, many Governments passed laws forbidding backyard barrel incinerations. And the building of new industrial waste incinerators stalled because of a lack of emission legislation, standards and controls.

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[4] https://en.wikipedia.org/wiki/Incineration of 12th November 2022
[5] United Nations Environment Programme's Waste to Energy - Considerations for Informed Decision Making, 2019
[6] Knox, Andrew (February 2005). "An Overview of Incineration and EFW Technology as Applied to the Management of Municipal Solid Waste (MSW)" (PDF). University of Western Ontario. Archived from the original (PDF) on 5 December 2008
[7] Herbert, Lewis (2007). "Centenary History of Waste and Waste Managers in London and South East England". Chartered Institution of Wastes Management. Archived from the original (PDF) on 26 November 2018. Retrieved 29 November 2019
[8] "Energy Recovery - Basic Information". US EPA. 15 November 2016.
[9] Lapčík; et al. (December 2012). "Možnosti Energetického Využití Komunálního Odpadu" (in Czech). GeoScience Engineering
[10] https://www.phoenixenergy.com.au/moving-grate-combustion/ of 9th November 2022

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5th December 2022

> *"According to the United States Environmental Protection Agency,[11] the combustion percentages of the total dioxin and furan inventory from all known and estimated sources in the U.S. (not only incineration) for each type of incineration are as follows: 35.1% backyard barrels; 26.6% medical waste; 6.3% municipal wastewater treatment sludge; 5.9% municipal waste combustion; 2.9% industrial wood combustion. Thus, the controlled combustion of waste accounted for 41.7% of the total dioxin inventory.*
>
> *In 1987, before the governmental regulations required the use of emission controls, there was a total of 8,905.1 grams (314.12 oz) Toxic Equivalence (TEQ) of dioxin emissions from US municipal waste combustors. Today, the total emissions from the plants are 83.8 grams (2.96 oz) TEQ annually, a reduction of 99%."*[11]

And this sounds great, but when one digs deeper:

> "*This paper reports the first known comprehensive survey of combustion operating conditions across the wide range of municipal waste-to-energy facilities in the U.S. The survey was conducted in a step-wise fashion. Once the population of 188 units operating at over 70 facilities was defined, this population was stratified by distinguishing characteristics of combustion technology. Stratum-level estimates for operating conditions were determined from data collected in the survey. These stratum-level values were weighted by corresponding design capacity share and combined to infer national-level operating parameter estimates representative of the overall population. Survey results show that typical municipal waste-to-energy combustion operating conditions in the U.S. are* ***(1) furnace temperature above 1160 °C****, (2) gas residence time above 2.4 s, (3) exit gas concentrations of nearly 10% for oxygen (dry basis), and (4) over 16% for moisture. These operating parameter values can serve as benchmarks for laboratory-scale studies representative of municipal waste-to-energy combustion as typically practiced in the U.S.*"
> [12]

Veolia's proposed technology solution has a nominal operating temperature of only 850^{0}C to 950^{o}C[13], well below the threshold for general thermal destruction in the US. Veolia's proposed solution can operate at higher temperature but for only short periods of time. Veolia will <u>not</u> achieve the same destruction and emission safety standards as that occurring in the US. Veolia falls well short of World BAT regarding the minimal operating temperatures to avoid polluting emissions.

Since the 1990s the waste industry, in response to increasing opposition to the use of waste incineration, has been actively greenwashing the technology.

This has worked to some extent; however, grass root community and family objections over incinerator performance, climate change, pollution and related health concerns has in recent years gained

[11] https://en.wikipedia.org/wiki/Incineration of 12th November 2022
[12] Abstract from Robert J.GiraudabPhilip H.TaylorcChin-paoHuanga: 'Combustion operating conditions for municipal Waste-to-Energy facilities in the U.S.' from Waste Management 132 (2021) 124-132 downloaded from https://reader.elsevier.com/reader/sd/pii/S0956053X21003834?token=4B275795CAB191E1063AF2B6705250A76F781F168A2D1574FCCF62DD2BC77D116788FA97F8D26EAF1FDF5B7A2DB5A7D5&originRegion=us-east-1&originCreation=20221112031514 on 12th November 2022
[13] Reference B, numerous references.

momentum as reflected in change of attitude, policies and laws within the UN and European Union, and the number of recent energy from waste (via incineration) proposals not being approved world wide, including those being proposed by Veolia. There is also a growing belief that waste incineration is not self-sufficient financially and that public monies is required to prop these ventures up.

The United Nations Environment Programme, observes and warns that:
"*Thermal WtE requires significant investment for startup, operation and maintenance. Income from waste disposal and energy sales is usually insufficient to cover the full investment and operational cost of a thermal WtE plant.*"[14]

Two examples that support the UNEP observation above:

1, from the United States of America:
"During the 1990s, the WTE industry in the US experienced several setbacks, which resulted in no new WTE facilities being constructed from 1995 through 2014. Expiration of tax incentives, significant public opposition in facility siting, and the US Supreme Court decision in Carbone dealing with solid waste flow control forced many communities in the US to opt for long-haul transport of their solid waste to less costly regional landfills. A more recent Supreme Court decision on flow control has restored the ability of communities to enact flow control ordinances and enable them to direct their wastes to WTE facilities. As a result, some WTE facilities have recently begun to expand by adding new processing lines to their existing operations. These facilities are basing their requests for financing and permitting on their successful records of operation and environmental compliance. In 2014, the first new WTE facility since 1995 was constructed by the Solid Waste Authority (SWA) of Palm Beach County, FL. The SWA's Renewable Energy Facility 2 (REF2) is a $672,000,000, state-of-the-art WTE facility. The REF2 project is the first of its kind in more than 15 years and is the most advanced and cleanest waste-to-energy power plant in North America."[15]

2. From Australia, Gilbert and Tobin identified that the Commonwealth Government has had to invest in the following EfW project in order for them to proceed:

- *"CEFC provided $90 million as part of a $400 million debt syndicate for the Kwinana EfW plant – the debt syndicate involves several other banks some of which have prior experience in banking EfW projects globally. ARENA also contributed a further $23 million in grant funding to the Kwinana project; and*
- *CEFC has also committed $57.5 million in funding (by way of subordinated debt) and ARENA $18 million (in recoupable grant funding) towards the construction of the East Rockingham EfW*

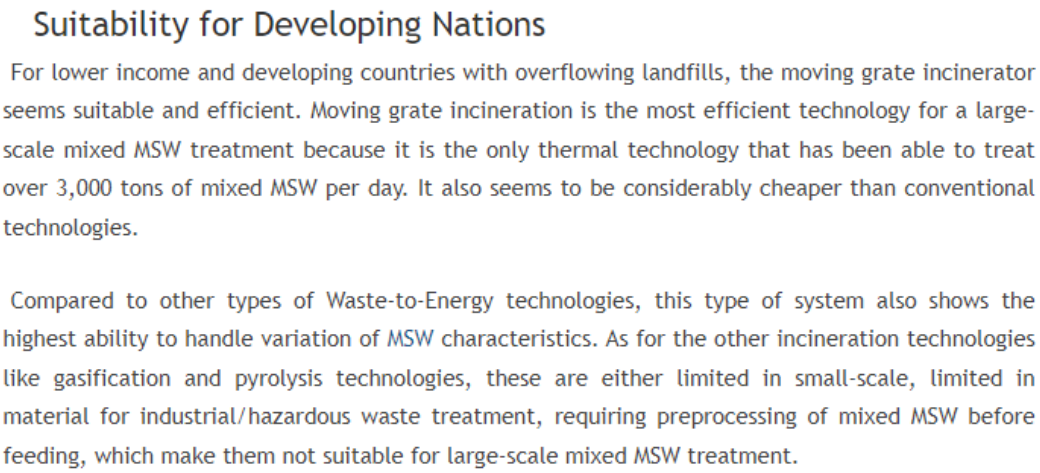
[14] United Nations Environment Programme's Waste to Energy - Considerations for Informed Decision Making - Summary for policymakers, 2019
[15] MSW Management: The Current Worldwide WTE Trend by Marc J Rogoff of 8th February 2019 from https://www.mswmanagement.com/collection/article/13036128/the-current-worldwide-wte-trend

project – this subordinated debt facility is the first of its kind for the EfW sector in Australia and provides capital structure innovation for the project."[16]

The East Rockingham EfW is a Veolia project and is in my mind proof that Veolia does not have the financial resources to fund the development of its Woodlawn proposed facility. And, I think that I voice on behalf of all communities, that public funds should not be granted to Veolia as it has received public monies for similar projects previously.

While there are heaps more that could and should be included in the history of waste incineration, I do not have time to write it and you do not have time to read it. But I want to leave you with two thoughts:

1. The moving grate technology is designed to burn anything and everything. And at great volumes, see Figure 1 below from BioEnergy Consult, and it is representative of other authors and reputable publications.[17] and



Suitability for Developing Nations

For lower income and developing countries with overflowing landfills, the moving grate incinerator seems suitable and efficient. Moving grate incineration is the most efficient technology for a large-scale mixed MSW treatment because it is the only thermal technology that has been able to treat over 3,000 tons of mixed MSW per day. It also seems to be considerably cheaper than conventional technologies.

Compared to other types of Waste-to-Energy technologies, this type of system also shows the highest ability to handle variation of MSW characteristics. As for the other incineration technologies like gasification and pyrolysis technologies, these are either limited in small-scale, limited in material for industrial/hazardous waste treatment, requiring preprocessing of mixed MSW before feeding, which make them not suitable for large-scale mixed MSW treatment.

Extract from BioEnergy Consult dated 25th April 2021

2. "*Moreover, incineration plants generate air pollution and chemical waste residuals and are expensive to build compared to modern landfills that have appropriate procedures for the prevention of leakage of harmful gasses*."[18]

Veolia's Bioreactor at Woodlawn is a prime example of point 2, and Veolia within its EIS has intentionally chosen not to compare its proposed waste incinerator to its functioning bioreactor!

[16] Gilbert and Tobin: Energy from Waste – A load of rubbish or a viable solution to landfill? Of 4th March 2021 from https://www.gtlaw.com.au/knowledge/energy-waste-load-rubbish-or-viable-solution-landfill
[17] Rachael Lew: 'Moving Grate Incineration: The Most Common WTE Technology' dated 25th April 2021 as download from https://www.bioenergyconsult.com/moving-grate-incineration/ on 12th November 2022
[18] L Levaggi, et al: Waste-to-Energy in the EU: The Effects of Plant Ownership, Waste Mobility, and Decentralization on Environmental Outcomes and Welfare, Sustainability/MDPI, July 2020

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5th December 2022

4 What is being Proposed?

Veolia is proposing to divert 380,000 tonnes of residual waste per year from being landfilled within its Woodlawn Bioreactor to be incinerated within a proposed on-site Waste Incinerator, with the intention of generating 30 MW of electricity under the guise of energy from waste protocols, and in doing so claim offset greenhouse gas (GHG) fugitive emissions from its Bioreactor. Seems simple enough, or is it?

There are three configuration options for modern commercial waste incineration[19], and how the Bioreactor has been designed and how it works has not been explained properly within Veolia's EIS.

4.1 Waste Incinerator - Basic Configuration and Operation

The most simplest form of commercial waste incineration is the basic moving grate waste incinerator. The flue stack is equipped with anti-air pollution capturing and monitoring systems. Waste is incinerated by preheating the waste, feeding in a fuel as required and actively burning the waste. The most common purpose for this type of waste incinerator is to burn and destroy medical and similar toxic/hazardous waste. Waste incineration for this purpose is permitted in NSW.

4.2 Waste Incinerator - Intermediate Configuration, with Electricity Generation as a Byproduct and Operation

While there exists some minor variants in design, the most common commercial waste incinerator remains the basic moving grate waste incinerator. The flue stack is equipped with anti-air pollution capturing and monitoring systems. Waste is incinerated by preheating the waste, feeding in a fuel as required and actively burning the waste. However, the heat from the boilers in which the waste is incinerated is harvested, normally by water pipes wrapped around the boilers, and the water heated to steam, which drives generators to produce electricity.

In terms of current reputable technology/facilities, all recently (past 20-30 years) built and proposed waste incinerators are at minimum based on this design. The primary purpose of these types of commercial waste incinerators is the burning and destruction of residual waste. And simply put, all of these types of waste incinerators are capable of producing electricity energy equivalent to or better than 25% of the total value of 100% energy consumed in incinerating waste. There is nothing special about these waste incinerators, and this type of incineration was generally banned from use in NSW by legislation until the publication of the NSW EPA Energy from Waste Policy Statement in May 2021.

[19] Waste incineration can take many forms , and some options exist for very good reasons, but for the purpose and relevance of this Submission, discussion is limited to commercial waste incineration, and excludes other thermal processing options (gasification, pyrolysis, etc.) unless the technology is used in a specific sense.

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5th December 2022

4.3 Waste Incinerator - Advanced Configuration, with Energy from Waste (EfW) a Key Component of Design and Use

While there exists some minor variants in design, the most common commercial waste incinerator remains the basic moving grate waste incinerator. The flue stack is equipped with anti-air pollution capturing and monitoring systems. Waste is incinerated by preheating the waste, feeding in a fuel as required and actively burning the waste. However, the heat from the boilers in which the waste is incinerated is harvested, normally by water pipes wrapped around the boilers, and the water heated to steam, which drives generators to produce electricity. But in addition to electricity, there is the capture of air heat energy, which is used commercially, in the EU predominantly in the heating and cooling via inversion of neighbouring buildings and other manufacturing processes.

Within the European Union, to be considered an EfW facility, the facility and incinerators have two meet at minimum, the following two criteria:

- producing electricity energy equivalent to or better than 25% of the total value of 100% energy consumed in incinerating waste; and
- producing an energy output (electricity and commercial productive usable heat), referred to as the R1 Energy Coefficient Rating of 0.65, or 65% of the total value of 100% energy consumed in incinerating waste - there is a specific formula for calculating this.

Excerpts from Waste Incineration BREF – BAT Conclusions (2019)

Plant	Municipal solid waste, other non-hazardous waste and hazardous wood waste		Hazardous waste other than hazardous wood waste (1)	Sewage sludge
	Gross electrical efficiency (2) (3)	Gross energy efficiency (4)	Boiler efficiency	
New plant	25–35	72–91 (5)	60–80	60–70 (6)
Existing plant	20–35			

(1) The BAT-AEEL only applies where a heat recovery boiler is applicable.
(2) The BAT-AEELs for gross electrical efficiency only apply to plants or parts of plants producing electricity using a condensing turbine.
(3) The higher end of the BAT-AEEL range can be achieved when using BAT 20 f.
(4) The BAT-AEELs for gross energy efficiency only apply to plants or parts of plants producing only heat or producing electricity using a back-pressure turbine and heat with the steam leaving the turbine.
(5) A gross energy efficiency exceeding the higher end of the BAT-AEEL range (even above 100 %) can be achieved where a flue-gas condenser is used.
(6) For the incineration of sewage sludge, the boiler efficiency is highly dependent on the water content of the sewage sludge as fed into the furnace.

Extract form page 49 Appendix L (i) BT Assessment

In theory, and as advised by the NSW Government the only type of waste incinerator **now** allowed to be built in NSW is an EfW waste incinerator, and the new Regulations and the NSW September 2021 Energy for Waste Infrastructure Plan (Reference), and the NSW EPA Energy for Waste Policy Statement (Reference A) were all designed to ensure this and at the most stringent emission standards - the Worlds best!

Veolia is proposing only to deliver a '*Waste Incinerator - Intermediate Configuration, with Electricity Generation as a Byproduct and Operation*' under the guise of delivering a '*Waste Incinerator - Advanced Configuration, with Energy from Waste (EfW) a Key Component of Design and Use*'. And why? - the new framework does not require '*an energy output (electricity and commercial productive usable heat), referred to as the R1 Energy Efficiency Rating of 0.65*' per European standards. And Veolia has openly articulated within its EIS no intention of harvesting and commercialising air heat energy at this time.

4.4 Veolia's Woodlawn Bioreactor

The waste industry loves fancy names! Veolia's Woodlawn Bioreactor is what is known as a wet landfill, as distinct from a dry landfill. Additional moisture is either retained or added to the landfill, normally in the form of leachate, to promote the rapid decomposition of residual waste and the rapid production of landfill gases, in particular methane. The landfill gases are harvested or captured through a series of pipe networks and pumps, and then fed into generators as fuel which is burnt, and where the generators produce electricity. The Bioreactor provides enough landfill gas to currently sustain the operation of seven (7) x 1MW generators, and an eighth (8th) generator will be needed in the very near future[20] to fully harvest existing volumes of landfill gases being produced; landfill gas not used to fuel a generator is flared.

The burning of the landfill gas means that there is minimal GHG emissions from the Bioreactor in its designed and built processes. Veolia under its licence is required to capture and burn landfill gas at a capture rate of 98% or better. Accordingly, any fugitive emissions escaping the Bioreactor should be less than 2% of the total gases generated through rapid decomposition. And, II believe that this is what Veolia is reporting to the NSW EPA within its annual reports based on what has been presented to me within the VCLC..

4.5 What needs to be compared, and done so properly!

Diverting 380,000 tonnes of residual waste per year from being landfilled within Veolia's Woodlawn Bioreactor to a Waste Incinerator of Intermediate Configuration to be incinerated with the intention of generating 30 MW of electricity, and in doing so comparing the environmental performance of both facilities and the offset greenhouse gas (GHG) fugitive emissions, climate change impacts, community and business impacts, etc. from its Bioreactor and its proposed Waste Incinerator, and to determine which is the better option of the two.

This, Veolia has not done!

[20] Planning needs to confirm that this is actually occurring and that funding and design work is under way - if not explanations as to why not should be sought.

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5th December 2022

5 Position with respect to Veolia's proposed Waste Incinerator

5.1 Community Objection

Paragraph 1 of the NSW EPA Energy from Waste Policy Statement (Reference A) states that Veolia or any other proponent EfW must get and prove "*community acceptance to operate such a process has been obtained*", and which is restated in the Veolia SEARs (Reference C). Albeit a voice of 1 - I do not give acceptance. I believe that the Tarago Community, that Community most affected by Veolia's proposed ARC also does **NOT** give acceptance to Veolia or any other proponent permission to build and operate its proposed ARC or any other Energy from Waste (Waste Incinerator) within the Woodlawn Eco Precinct (/Southern Goulburn Mulwaree Precinct).

Veolia has provided no proof, no evidence of any kind, that the Tarago and surrounding communities, including local governments and general populace of NSW accepts and supports the use of waste incineration at Woodlawn. Wheres, I believe that the Tarago and surrounding Communities' objection is both public and well known, and is evidenced by:

- TADPAI, has expressed publicly reiterated the Tarago community's objections by (and not limited to):
    - Writing to The Hon. Matthew Kean, MP, Minister for Energy & Environment on 27th September 2021 questioning the NSW Government's social licence for approving EfW proposals and requesting NSW Government to conduct a plebiscite regarding the communities' want for the use of energy from waste technology in the neighbourhoods.
    - Writing to The Hon. Rob Stokes, MP, Minister for Planning & Public Spaces on 27th September 2021 questioning the NSW Government's social licence for approving EfW proposals and requesting NSW Government to conduct a plebiscite regarding the communities' want for the use of energy from waste technology in the neighbourhoods.
    - Providing questions to Goulburn Mulwaree Council on 4th October 2021 to be put to the NSW Chief Scientist.
    - Writing to Mr Richard Kirkman, Managing Director & Chief Executive Officer, Veolia Australia and New Zealand on 12th October 2021 objecting to Veolia building and operating a Waste Incinerator at Woodlawn, and requesting Veolia on behalf of the Tarago Community to withdraw its ARC proposal and proposed EIS.
    - Writing to Mr Richard Kirkman (second time) on 9th November 2021 again objecting to Veolia building and operating a Waste Incinerator at Woodlawn, and again requesting Veolia on behalf of the Tarago Community to withdraw its ARC proposal and proposed EIS.
    - Writing to Ms Chang and Ms Stuart, NSW EPA, on 31st January 2022 objecting to the proposed Suez waste incinerator for Matraville - SSD-10373.

- Writing to Ms Mackey (CEO NSW Environmental Protection Authority) objecting to the Draft Regulation: Protection Of The Environment Operations (General) Amendment (Thermal Energy From Waste) Regulation 2021 on 15th March 2022.
- Writing to The Hon. Dominic Perrottet, MP, Premier on 24th May 2022 pointing out the conflict between the use of waste incineration and the achievement of NSW Climate Change objectives.
- Writing to Hon Wendy Tuckerman and Ms Nicole Overall on 9th June 2022 in support of CATTI's freedom of information request.
- Writing to Ms Mary O'Kane AC, Chair, Independent Planning Commission and The Hon. Justice Brian Preston SC, Chief Judge, Land and Environment Court of NSW on 20th June 2022 objecting to SSD-6236 TNG Eastern Creek Energy from Waste Facility.
- Writing to Goulburn Mulwaree Council on 22nd June 2022 expressing local traffic concerns and seeking a consolidated traffic impact assessment encompassing the needs of all State Significant Developments using regional local and State roads.
- Writing to Ms Kelly Lynch, Greater Metropolitan Water Sharing Plans, NSW Department of Planning and Environment on 16th August 2022 objecting to Veolia's landfilling of toxic and soluble ash at Woodlawn and within Greater Sydney's groundwater catchment area.
- Writing to Ms Kelly Lynch on 17th August 2022 objecting to Veolia's landfilling of toxic and soluble ash at Woodlawn and within Greater Sydney's unregulated river (surface) water catchment area. and
- Numerous emails opposing Veolia's proposed waste incinerator at Woodlawn and to the use of waste incineration generally.

- The VCLC advising Mr Richard Kirkman in person individually and collectively that the Tarago Community disapproves of Veolia building and operating a waste incinerator within the Woodlawn Eco Precinct (/Southern Goulburn Mulwaree Precinct).
- The last three (3) community representatives on the VCLC resigning from the Committee individually and collectively on 29th October 2022 because Veolia was and is still not listening and acting upon the Tarago Community feedback and guidance not to build and operate a waste incinerator at Woodlawn and of inaccuracies within Veolia's Environmental Impact Statement (EIS).
- Veolia's proposal has resulted in the emergence of a new incorporated community action group 'Communities Against the Tarago Incinerator (CATTI) that exists specifically to oppose the building and operation of Veolia's proposed Waste Incinerator, and that has an active membership of 900 or more people and now an established network with other NSW and Australian community groups/associations equally objecting the use of waste incineration in NSW and elsewhere in Australia.
- The Anglican Church Bishop for Canberra and Goulburn expressing concern re lack of community consultation, the Anglican Archdeacon for Goulburn being totally opposed to the use of waste incineration and other denominations' clergy expressing concerns and objections to the use of waste incineration, and in particular at Woodlawn.
- Other NSW and Australian community groups and associations opposing and objecting to the use of waste incineration generally and the use of waste incineration at Woodlawn.

- The fact that Goulburn Mulwaree Council and surrounding councils of Yass Valley and Queanbeyan-Palerang, and the ACT Government have all resolved opposition and objection to Veolia's proposed Waste Incinerator. and
- **It is my understanding that Veolia's clients which include the ACT Government, Queanbeyan-Palerang Regional Council, Upper Lachlan Council, Inner West Council, Bayswater Council, and others all have in place resolutions that their waste is not to be incinerated**.

Neither the NSW Government nor Veolia have been given a social licence to incinerate waste. The onus is on Veolia to produce:

- Council resolutions for all its local Government clients of their support for Veolia to incinerate its waste;
- ACT Government resolutions for the Territory's support for Veolia to incinerate its waste;
- Goulburn Mulwaree Council's resolution of support for Veolia to incinerate waste within the Goulburn Mulwaree local government area;
- Community letters of support, including one from TADPAI, for the use of waste incineration.

This is the minimum level of evidence required for Veolia to prove "*community acceptance to operate such a process has been obtained*". The NSW Government and Veolia do **not** have the acceptance or support of the Tarago Community to incinerate waste at Woodlawn.

5.2 Good Neighbour?

> "*The operators of an energy from waste facility will need to be 'good neighbours' – particularly if near a residential setting but also where there are workers in other facilities. This would apply to waste deliveries and operating hours, but most importantly with respect to readily available information about emissions and resource recovery outcomes*."
> NSW Energy from Waste Policy Statement, page 3

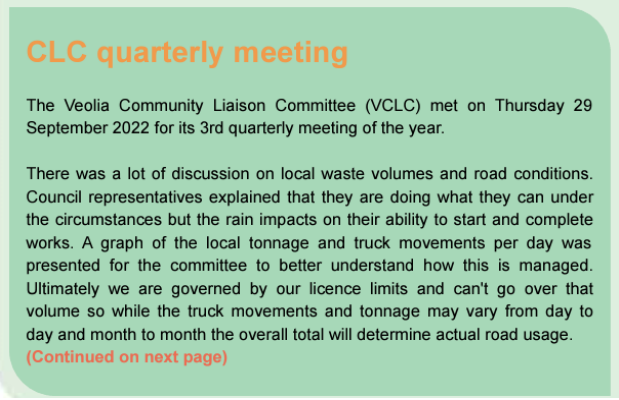
I do not believe that Veolia meets the required standards to be considered a 'good neighbour' for the following reasons:

Veolia at Woodlawn

- TADPAI has formally written to Veolia twice requesting that it <u>not</u> proceed with its proposed waste incinerator.
- the VCLC has also advised Veolia that the Tarago and surrounding communities do <u>not</u> want Veolia to proceed with its proposed waste incinerator.
- the VCLC on behalf of the Tarago Community requested that Veolia restrict its and its customers trucks using the Bungendore-Tarago Road to between sunrise and sunset (formal daylight hours) for safety reasons because of the current very poor condition of this road - Veolia chose to allow trucks to deliver waste between first and last light, which demonstrates Veolia's poor attitude towards the Tarago Community and safety in general.
- the VCLC has also been questioning the increasing volume of waste related trucks using the near unserviceable Tarago-Bungendore Road; the last three community representatives remaining on

the Committee until 29th October are all convinced that Veolia, at the VCLC Meeting of 29th September 2022, was not being transparent in its response and assurance that it is complying with its licence limit. Veolia has subsequently publicly reiterated what it was advising the VCLC in the November 2022 edition of the Tarago Times but with added data that appears to contradict explanations provided:

- Page 14:



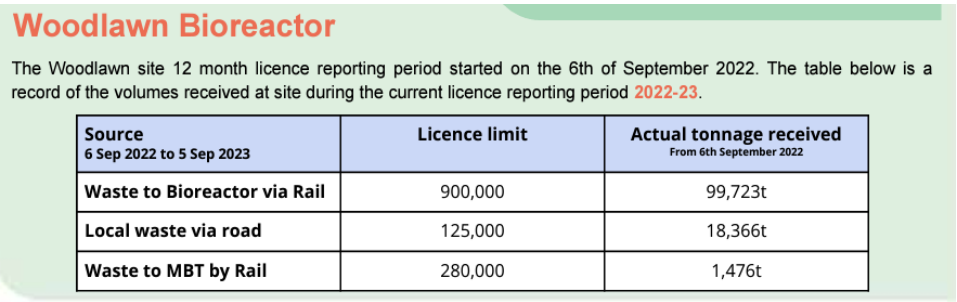
CLC quarterly meeting

The Veolia Community Liaison Committee (VCLC) met on Thursday 29 September 2022 for its 3rd quarterly meeting of the year.

There was a lot of discussion on local waste volumes and road conditions. Council representatives explained that they are doing what they can under the circumstances but the rain impacts on their ability to start and complete works. A graph of the local tonnage and truck movements per day was presented for the committee to better understand how this is managed. Ultimately we are governed by our licence limits and can't go over that volume so while the truck movements and tonnage may vary from day to day and month to month the overall total will determine actual road usage.

(Continued on next page)

- Page 15:



Woodlawn Bioreactor

The Woodlawn site 12 month licence reporting period started on the 6th of September 2022. The table below is a record of the volumes received at site during the current licence reporting period 2022-23.

Source 6 Sep 2022 to 5 Sep 2023	Licence limit	Actual tonnage received From 6th September 2022
Waste to Bioreactor via Rail	900,000	99,723t
Local waste via road	125,000	18,366t
Waste to MBT by Rail	280,000	1,476t

- The Maths:
  Veolia's has annual licence limit of 125,000 tonnes for Regional Waste (local waste via road) that equates to an average weekday tonnage of 479 tonnes[21]. Allowing for 15% variation as a reasonable upper maximum limit of any variation, the total tonnage for any given day should be around 551 tonnes. It is assumed that the reporting period above is 6 Sep 2022 to 20 Oct 2022 (cut off date for Tarago Time articles); therefore, at 18,366 tonnes for the reporting period, the working weekday actual is an average of 574 tonnes[22] (an amount greater than a reasonable variation), or in terms of annual tonnage 149,814 tonnes, which is nearly 25,000 tonnes over and above Veolia's current licence.

[21] Based on 365 days per year minus 104 days for Saturdays and Sundays - which equals 261 days. Regional waste does not normally get delivered to Woodlawn on Saturdays and Woodlawn is closed on Sundays. Therefore 125,000 divided by 261 equals 479 tonnes (rounded).
[22] Based on the number of working weekdays (32) between 6 Sep 2022 and 20 Oct 2022.

Conclusion - Veolia is not being transparent in its communications and consultation with the Tarago Community.[23]

- Veolia has not included in its EIS submission its aspirations to increase its annual Regional Waste volumes from 125,000 tonnes per year to 200,000 tonnes per year - this has been discussed at VCLC meetings.
- Veolia promised prior to any original approvals to build and operate waste facilities at Woodlawn that there would be no odours from this facility ever - this has not been the case and more than 270 odour complaints were lodged last year alone - Veolia, including Mr Richrd Kirkman himself, now again promise that there will be no odour arising from its proposed waste incinerator but buried deep within Appendix L: BAT Assessment, page 49 is the acknowledgement of residual odours and essentially a best effort commitment to minimising these odours.
- Veolia did not disclose to the VCLC at its 29th September 2022 meeting that it had a leachate contamination breach that it had to report to the NSW EPA, the Tarago Community and the community and local government representatives on the VCLC only found out about this breach after a journalist published the breach in a print media.
- Veolia struggles to attract and retain community representation on its VCLC because it does not listen and act correctly on community concerns.

Veolia Overseas

- Zero Waste Europe, Mariel Vilella, in her/his article 'Veolia, a European company exporting trouble' dated 1st December 2017, had this to say of Veolia:

> Veolia is known in Europe for being the culprit at the centre of many local anti-incineration battles, Particularly in the UK. It is worth mentioning the case of Sheffield, where the local council decided to close a contract 19 years early with Veolia due to the high costs of the system. The company has also been challenged by local communities in Hertfordshire, near London, where Veolia's planned incinerator was rejected in 2015 by the government. Despite this, the company has reapplied for a nearby location for another incinerator proposal, which is again being challenged by the local community.

- Within Wikipedia, there is an article on the Sheffield Energy Recovery Facility circa 2017 (downloaded on 10th December 2021), which includes the following:

> In 2017 details of an internal Veolia management email were leaked by the GMB union which alleged that recyclable waste was being diverted from the network of Sheffield household waste recycling centres around the city, and had been doing so since 2011. Veolia was accused of diverting the waste to try to plug a 50,000 tonne shortfall of waste needed to run the incinerator to fulfil its obligations to provide district heating for the city, despite Environment Agency regulations demanding that companies must recycle as much as they can. The GMB union was angered as GMB member workers at Veolias' recycling plant are given a bonus if recycling targets are met, and this task is made more difficult if recyclables are being diverted and incinerated. Veolia denies this and refuted the accusations.[10][11]

[23] These calculated actual tonnages increase if there were less than 32 working days in the reporting period.

- Hampshire Live, David George, reported the following on 3rd March 2022:

> Last Wednesday (February 23), Hampshire County Council **voted against plans** from Veolia for an incinerator on the A31, near Alton.
>
> Councillors voiced concerns about the impact the 80m stacks would have on the surrounding area, as well as whether the need for a new incinerator actually exists, with three already established in Portsmouth, Basingstoke and Southampton.

For the above reasons, and the numerous articles of pay disputes between Veolia and its employees, seen but not included here, as well as a number of articles referring to approved incremental increases and changes in licence, I do not see Veolia as being anyone's good neighbour. I believe that there exists a culture of deception within Veolia and within the EIS provided by Veolia.

I strongly believe that the Tarago Community is proactively supporting the State, Sydney local governments and Sydney residents in having Sydney's waste landfilled in our backyard. However, Veolia has demonstrated at Woodlawn, it is constantly seeking incremental creeps in activities and volumes of waste being received. It is reasonable public knowledge that Veolia does have aspirations to increase its regional waste intake at Woodlawn, especially so since acquiring and integrating Suez within Veolia; and Veolia's intentional non disclosure of its future aspirations is just another example of the lack of transparency by Veolia in its operations and future intentions.

I believe that the Tarago Community perception is that the NSW Government has little control and influence over Veolia and the waste industry as a whole, and in approving Veolia's request to build and operate a waste incinerator at Woodlawn further loss of control and influence. As demonstrated in the UK, Veolia has no problems in pursuing the use of multiple and unneeded waste incinerators; we do not want one at Woodlawn, and we certainly do not want any more somewhere in the future.

I see Veolia as positioning itself to be a monopoly or at minimum the ultimate big player in waste management in Australia, and in doing so undermining all efforts in creating circular economies within NSW and elsewhere, to minimise any reductions of residual waste and thus preserving long-term revenue and profit for Veolia. And while this is perfectly legal in terms of fiscal obligations to its shareholders; it is morally and ethically wrong from an ecological, environmental, and human health perspective.

6 Technical Objections

I also object to and opposes Veolia (/EMM) 'Woodlawn Advanced Energy Recovery Centre - Environmental Impact Statement [and all associated Appendices and Attachments] dated 10th October 2022 (Reference D) for the following reasons:

6.1 Main/Parent EIS Document

Numerous wrongs based on content and findings in Appendices

6.2 Appendix A 'SEARS Compliance'

I have no comment other than it is noted, but caveat this observation with the further observation that Veolia has not fulfilled all requirements of its SEARs and that the cross referencing of responses does not in itself mean compliance with SEARS as evidenced in responses below.

6.3 Appendix B 'Consolidated Consents'

I note the content of this Appendix and observe that this Appendix demonstrates the incremental changes in activities that have occurred within the Woodlawn Eco Precinct sought and implemented by Veolia since the commencement of the development and use of the Bioreactor.

I also note that Veolia does not comply with a number of the conditions within the approved consents; two examples being Veolia has not been updating TADPAI on a quarterly basis and Veolia does not contact people who submit complaints to either Veolia or the NSW EPA.

I believe that Veolia's lack of adherence to Consent conditions at Woodlawn and elsewhere in NSW, and its lack of transparency with the Tarago Community regarding its recent leachate breach discussed elsewhere in this Submission are sufficient reasons in themselves for the NSW Government to not approve this proposed waste incinerator.

6.4 Appendix C 'Woodlawn ARC Architectural Design Report'

I have only glanced through this Appendix, the focus of this Report appears to be the waste incinerator and its associated flue stack. There is a lot more than just this one building to be constructed for a waste incinerator to be properly operated and maintained. I believe that I need to see the complete facility design, including all storage tanks, before being able to make proper comment on this Appendix.

6.5 Appendix D 'Woodlawn ARC Process Overview'

I note this Appendix and makes the following observations:

- the Appendix confirms that what Veolia is proposing, is a waste incinerator and not an EfW solution as defined in the European Union's BATs for EfW - Veolia is **not and has no intention** of harvesting the heat and making it commercially available to others;
- a thermal efficiency of only 26% is relatively low compared the minimum efficiency requirements for an EfW, and when compared to world leading WfE facilities, suggesting little effort in design for efficiency; and
- the calorific value of residual waste of a circular economy should be less than 7.0, which raises the question of what alternate/supplement feedstock Veolia plans to use in the future, and how

this impacts on everything else within EIS on exhibition, such as the emissions from the flue stack.

I note the following observation from IEA Bioenergy Task 36 Report 'Material and Energy Valorisation of Waste in a Circular Economy' dated 2022[24]. What immediately comes to mind are two points:

1. That despite Veolia's claim that it is building a modern advanced EfW facility - it is not. and
2. The technology proposed by Veolia is consistent with technology that has been in use for some time and is being phased out elsewhere in the World because of emissions and inefficiencies.

EFFICIENCY GAINS VIA PROCESS HEAT [5]

When discussing traditional incineration based WtE, a lot of the focus is put on the power supplied by that route. However, waste is not the optimal fuel for pure power production. The chemical composition of the waste makes it challenging to push the electrical efficiency while maintaining a high availability of the plant. There is a large, and in many cases untapped, potential in supplying heat from WtE. In a case study within an intertask project about industrial process heat [5], the Åmotfors plant was showcased. The WtE plant supplies a paper mill with both electricity and process steam. In order to supply the steam at 6 bar and 180°C, the original pressure is reduced in a back-pressure turbine, generating electricity.

Considering the numbers of different industries around the world that needs process heat at low or medium temperature range, there could be a far more efficient recovery of the energy from waste into those applications.

Extract from Material and Energy Valorisation of Waste in a Circular Economy

I strongly believe and recommend that the NSW Government not pursue the use of waste incineration within NSW, despite the poor judgement of other States of Australia.

6.6 Appendix E 'Ash Management Study'

I dispute this Appendix in full.

The Global Alliance for Incinerator Alternatives (GAIA) released a report on the use of bottom ash in January 2022 (of which the abstract of the report is on the next page) that describes bottom ash to be highly toxic and possibly as toxic as Fly Ash.

[24] Page 13

Abstract

Bottom ash is fallout from the grate of mass-burn waste incinerators. Large quantities are produced and this residue has negative value. Visible proportions of sand, glass, and stones make it appear, on the surface, to be low hanging fruit for use in a circular economy; but bottom ash also contains appreciable quantities of toxic 'high level of concern' elements and persistent organic pollutants.

A secondary 'fallout' occurs when these substances leach from bottom ash into its surroundings across a range of conditions and timescales. The waste incineration industry fails to mention these facts when advertising bottom ash as a 'green' building material. In comparison to direct airborne pollution from waste incinerators, bottom ash has gone somewhat under the radar, making it ripe for greenwash.

This report uses independent empirical research to evidence that incinerator bottom ash is insidiously hazardous and underregulated. Risk is heightened by the fact that testing methods for its use as a building material are outdated. A list of fifteen concerns for public health and safety is provided in relation to the use of waste incinerator bottom ash in cement-based products and as road/pathway aggregate. Calls for the support of its use within a circular economy are premature, and, as per the precautionary principle, all ongoing usage should cease. Examination of independently analysed bottom ash provides a diagnostic on the operational steady state of waste incinerators, incidentally raising concerns about operational compliance with emissions legislation and the capacity of incinerators to produce benign bottom ash when fed with municipal solid waste.

[25]

Also of concern is the proposed landfilling of Ash within Woodlawn that is within Greater Sydney's water catchment area.

All waste incinerator ash is toxic and soluble[26], and will leach from whatever containment cell is used - it is an intergenerational issue and wrong of us to leave a toxic mess to the next generation to clean up. This sort of ash should be avoided, it should not be landfilled anywhere near potable water sources

6.7 Appendix F 'Woodlawn Encapsulation Cell Design'

My observations and comments above apply.

I note that the proposed site for the hazardous waste encapsulation cells (ED1)[27], is also the site of the recent leachate contamination breach involving leakage to groundwater, that is Sydney's drinking water. And noting that Veolia did not disclose to the VCLC at its 29th September 2022 meeting that it had a leachate contamination breach that it had to report to the NSW EPA, the Tarago Community and the community and local government representatives on the VCLC only found out about this breach after a journalist published the breach in a print media.

[25] Global Alliance for Incinerator Alternatives (GAIA): Toxic Fallout Research Report - January 2022 'Waste Incinerator Bottom Ash in a Circular Economy' page 2
[26] Or at least considered to be toxic and soluble based on the mix of evidence provided by all parties. The risk of getting this wrong is too great, as the cost to remediate, if doable at all, will be very expensive.
[27] NSW EPA Prevention Notice 3503885 dated 24th October 2022

6.8 Appendix G 'Waste Acceptance Protocol'

I dispute the processes described in this Appendix. For example, it will be impossible for an individual operating a crane hook to visually sight multiple small contaminates in the waste within the tipping hall. It would be unsafe for an individual to enter the tipping hall to retrieve any contamination based on waste volumes in the hall. To remove contaminated waste, Veolia would have to shutdown the waste incinerator and landfill all the content of the tipping hall and clean the tipping hall itself, and then restart operations. In closing down and starting up the waste incinerator, Veolia will be emitting toxic emissions from the flu stack at rate greater than permitted.

Veolia's proposed waste acceptance process is unacceptable, noting that the movable grate technology is renowned for being able to process multiple types of waste in volume effectively and efficiently in terms of feeding waste into an incinerator.

6.9 Appendix H 'Woodlawn ARC Commissioning Outline Plan'

I note the content of this Appendix.

I observe in the media that the construction of Veolia's proposed WA EfW facility is reported in the media as being behind schedule and over budget. TADPAI also noted that Veolia has received Government funding for this proposed EfW facility. TADPAI objects to any Government giving any more money to Veolia to build waste incinerators, or for that matter any other proponent of EfW. The building and operation of these facilities should be based solely on merit within the proponents capabilities: technical and financial.

6.10 Appendix I (i) 'Waste Feedstock Assessment'

I note the content of this Appendix.

I remain firm on the position that it is better to landfill the diminishing waste volumes and to harvest and use the landfill gases, than to burn the waste within a waste incinerator.

6.11 Appendix I (ii) 'Chlorine Content Analysis'

I note the content of this Appendix.

I note the following from the Appendix[28], which is a controlled laboratory test.

[28] Page 3

> It can be seen that on Day 2 the chlorine content of the composite sample was greater than 1%, however this was caused by a sampling error that resulted in the Day 2 composite sample containing 21% PVC. This was as a result of a large PVC inflatable boat being included in the sample. It is unrealistic to assume that 21% of the waste feedstock of the ARC would be made up of PVC. Nevertheless, the mean average of the adjusted chlorine percentage is 0.58% even including the anomalous Day 2 result.

I reject Veolia's proposition that "*It is unrealistic to assume that 21% of the waste feedstock of the ARC would be made up of PVC*." It is rejected on the basis that I object to Veolia's proposed waste acceptance procedures (See Section 4.8), and the point is, it's not all about chlorine. The emissions from the stack is based upon whatever is fed into the waste incinerator and that can vary from scoop to scoop, container to container,etc. Final visual inspections provide no assurance over the input going into a waste incinerator.

I view that this provided Appendix as a veiled attempt by Veolia to seek approval to minimise monitoring and testing of emissions. My position is **NO** to the incineration of waste, but should this not be the case, then monitoring and testing of every container of waste has to occur before it is dumped in the tipping hall and this information should be made publicly available upon keystroke entry into the monitoring record system. And in terms of emissions, this should be being monitored and tested real time with an updated live site within every minute. Every batch of ash, no matter its source, has to be tested and if found hazardous, treated accordingly. Veolia has not provided sufficient evidence that this is what it is committed to and shall do.

6.12 Appendix J 'Statutory Compliance Table'

Not reviewed due to time constraints placed on the exhibition of Veolia's EIS.

6.13 Appendix K 'Project Engagement'

My view is that Veolia has staged a number of events but has not engaged or consulted with the Tarago and surrounding Communities. This is evidenced by a lack of supporting Council resolutions, client letters of support, community letters of support and individual letters of support.

In accordance with paragraph 1 of the NSW EPA Energy from Waste Policy Statement (Reference A), Veolia is responsible for proving "*community acceptance to operate such a process has been obtained*". This has also been restated in the Veolia SEARs (Reference C). This Veolia has not done and at this time is in breach of its SEARs.

Neither the NSW Government nor Veolia have been given a social licence to incinerate waste. The onus is on Veolia to produce:

- Council resolutions for all its local Government clients of their support for Veolia to incinerate its waste;
- ACT Government resolutions for the Territory's support for Veolia to incinerate its waste;

- Goulburn Mulwaree Council's resolution of support for Veolia to incinerate waste within the Goulburn Mulwaree local government area;
- Community letters of support, including one from TADPAI, for the use of waste incineration.

This is the minimum level of evidence required for Veolia to prove "*community acceptance to operate such a process has been obtained*". The NSW Government and Veolia do **not** have the acceptance or support of the Tarago Community to incinerate waste at Woodlawn.

6.14 Appendix L 'BAT Assessment Report' & 'Reference Facility Assessment Report'

Veolia's proposed waste incinerator is not considered to be an EfW solution.

Veolia has strategically used the NSW EPA Energy from Waste Policy Statement statement "*Heat recovery as far as practicable*" to present a common waste incinerator as an energy from waste solution.

With the above established, Veolia has henpecked what it wants and does not want as World best practice or to commit to financially. For example:

6.4 Thermal Efficiency Criteria

Table 6-10: Thermal efficiency criteria

Technical criteria:	Proposed Plant	Reference Plant
Plants that do not recover energy are outside the scope of the NSW EfW Policy.	Electricity is generated from the facility and therefore meets this requirement.	Not applicable.
At least 25% of energy will be captured as electricity (or an equivalent level of recovery for facilities generating heat alone).	The plant will be designed to achieve a minimum of 25% energy recovery to electricity or its equivalent in heat output	
Any heat must be demonstrated to be recovered as far as practicable.	The facility will be designed with potential for future heat offtake. There are no practicable offtake options at the current time.	The plant was designed with the potential to supply heat via a tapping on the steam turbine. No supply has to date been implemented.

Veolia has not made the effort to design in value-added third party industries to use commercialised heat. This lack of initiative is a concern moving forward with any waste incinerator built and operated by Veolia; and it also denies better local economic growth and benefit to the Tarago and surrounding communities.

It is very important to note that Veolia at Woodlawn could have provided a fully compliant EfW solution per European BAT but it appears that it has simply chosen not to. I would still be opposing any proposed EfW solution by Veolia, as it is common knowledge that these types of facilities contribute to adverse climate

change. The point being reinforced is the lack of effort on Veolia's behalf to offer a fully compliant EfW solution, and for this reason alone, its proposed waste incinerator at Woodlawn should be rejected.

A second example is:

6.3.1 Plant Design and Operation

Table 6-6: Technical Criteria

Technical criteria:	Proposed Plant	Reference Plant
Meet 850°C for at least 2 seconds in the combustion chamber [equivalent to the European Waste Incineration Directive] or 1100°C for 2 seconds if the waste contains more than 1% of halogenated organic substances, expressed as chlorine.	The proposed plant has been selected to operate at 850°C for at least 2 seconds in the combustion chamber to meet this requirement.	The plant achieves this requirement.
Total organic carbon (TOC) or loss on ignition (LOI) content of the slag and bottom ashes must not be greater than 3% or 5% (dry weight) respectively.	The proposed plant will be including this as standard within its design.	Information has been provided (appended) demonstrating test results that confirm that this requirement is met by the reference plant.

The burning of waste at 850°C does not prevent the creation of dioxins, furans and other POPs, And while this is the European standard, it is not the World's best standard, which the USA holds (reinstated for emphasis), as exemplified below:

> "*This paper reports the first known comprehensive survey of combustion operating conditions across the wide range of municipal waste-to-energy facilities in the U.S. The survey was conducted in a step-wise fashion. Once the population of 188 units operating at over 70 facilities was defined, this population was stratified by distinguishing characteristics of combustion technology. Stratum-level estimates for operating conditions were determined from data collected in the survey. These stratum-level values were weighted by corresponding design capacity share and combined to infer national-level operating parameter estimates representative of the overall population. Survey results show that typical municipal waste-to-energy combustion operating conditions in the U.S. are (1) furnace temperature above 1160 °C, (2) gas residence time above 2.4 s, (3) exit gas concentrations of nearly 10% for oxygen (dry basis), and (4) over 16% for moisture. These operating parameter values*

can serve as benchmarks for laboratory-scale studies representative of municipal waste-to-energy combustion as typically practiced in the U.S."[29]

The onus is now on the NSW Government to prove to the NSW population that when it says that the NSW EPA Energy from Waste Policy Statement is the most stringent in terms of emission reductions, controls and monitoring, that it does so enforce what World best practice is, and in this case it is incinerating waste at an operational temperature above 1100°C for 2.4 seconds or more per the above criterion to avoid the creation of dioxins, furans and other POPs.

If Veolia is insistent on referring to its waste incinerator as an EfW solution than its energy efficiency rating should be calculated using the official and formal method for calculating the R1 rating as shown below[30], and not be using the proposed FDBR Guideline RL7, which is a distortion of the official rating.

The formula used to calculate this value of energy efficiency, "the R1 Energy Efficiency Formula" is:

$$\text{Energy Efficiency} = \frac{(E_p - (E_f + E_i))}{(0.97 * (E_w + E_f))}$$

In which:

E_p	The annual energy produced as heat or electricity. It is calculated with energy in the form of electricity being multiplied by 2.6 and heat produced for commercial use multiplied by 1.1 (GJ/year)
E_f	The annual energy input to the system from fuel contributing to the production of steam (GJ/year)
E_i	The annual energy imported excluding ,E-w and E-f (GJ/year)
E_w	The annual energy contained in the treated waste calculated using the net calorific value of the waste (GJ/year)
0.97	The factor accounting for energy losses due to bottom ash and radiation

It should be noted that the R1 formula does not calculate a conventional efficiency but the efficiency at which the produced energy is utilised.

The Staffordshire Report is noted but only addresses the electricity generation aspects of the plant, and for all intensive purposes in context here, it too is no more than a common waste incinerator.

6.15 Appendix M 'Mitigation Measures Summary Table'

Not reviewed due to time constraints placed on the exhibition of Veolia's EIS.

6.16 Appendix N 'Transmission Line Environmental and Social Sensitivity Analysis'

I note that the proposed transmission lines pass the Tirranna Public School with a chainage CH7000, setback approximately 10 m. I have no expertise in the health and environmental impacts of high voltage

[29] Abstract from Robert J.GiraudabPhilip H.TaylorcChin-paoHuanga: 'Combustion operating conditions for municipal Waste-to-Energy facilities in the U.S.' from Waste Management 132 (2021) 124-132 downloaded from https://reader.elsevier.com/reader/sd/pii/S0956053X21003834?token=4B275795CAB191E1063AF2B6705250A76F781F168A2D1574FCCF62DD2BC77D116788FA97F8D26EAF1FDF5B7A2DB5A7D5&originRegion=us-east-1&originCreation=20221112031514 on 12th November 2022

[30] https://www.ciwm.co.uk/ciwm/knowledge/the-r1-energy-efficiency-formula.aspx

but found on internet search the following[31]. Human (child) health was not addressed within this Analysis, more information is required.

> There has been a lot of research on whether exposure to ELF EMF from electrical sources below the exposure limits causes any health effects. Most of the research indicates that ELF EMF exposure normally encountered in the environment, including in the vicinity of powerlines, does not pose a risk to human health. However, there are some epidemiological (population) studies that have reported a possible association between prolonged exposure to ELF magnetic fields at levels below the exposure limits but higher than what is typically encountered and increased rates of childhood leukaemia. Based largely on this limited evidence the International Agency for Research on Cancer has classified ELF magnetic fields as possibly carcinogenic to humans.

6.17 Appendix O 'Air Quality Impact Assessment'

I have tried hard to read and understand everything in this very large Appendix, and time restrictions prevent full analysis. The statement below for page ES.4 essentially sums up the matter and issues, and the Tarago Community is distrusting of the modelling.

> The results obtained from the dispersion modelling show that all predicted concentrations and deposition rates are below the applicable impact assessment criterion at all surrounding sensitive assessment locations. Furthermore, it is noted that the cumulative impact results presented for the three project scenarios are not significantly different from the results presented for existing operations at the Eco Precinct. This indicates the following key points:
>
> - the introduction of the project will not significantly change air quality impacts currently associated with the Eco Precinct;
> - the diversion of waste to the ARC and away from the Bioreactor will reduce particulate matter emissions associated with the movement of trucks on unpaved roads; and
> - relative to ambient background concentrations, air quality impacts associated with the Eco Precinct and the project are minor at surrounding sensitive assessment locations.

I strongly believe that there should be no further developments by Veolia within the woodlawn Eco Precinct until the existing odour issues are resolved fully and proven fully resolved over a 12 month period.

There is also a lot of irrelevant data in this Appendix. The only data, information and knowledge that should be here is the direct comparison between the existing Woodlawn emissions and the future emissions after the proposed waste incinerator is operational.

[31] Australian Radiation Protection and Nuclear Safety Agency: Electricity and Health at https://www.arpansa.gov.au/understanding-radiation/radiation-sources/more-radiation-sources/electricity#:~:text=The%20scientific%20evidence%20does%20not,near%20powerlines%20causes%20health%20effects.

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6.18 Appendix P ‘Human Health Risk Assessment’

This Risk Assessment proves that it is inappropriate to build and operate waste incinerators anywhere. ‘Negligible’ no matter how small is a form of risk. Negligible risk only exists if there is something that must happen, there is no choice. There is a choice here to continue to landfill waste to avoid incineration, hence the risk is not negligible and should be avoided.

The NSW Government and Veolia do not have the right to impose health risks on the Tarago and surrounding communities.

6.19 Appendix Q ‘Greenhouse Gas Impact Assessment’

This Appendix is totally flawed by Veolia’s intentional attempt to use landfill gases generated/produced by the Bioreactor that are captured and used to fuel generators to create electricity that is inputted to the national grid, as fugitive emissions from the Bioreactor (see extract next page) and as such has rendered this Appendix as unusable in supporting any other claim injected by Veolia within its EIS. The removal of these emissions from all greenhouse gas calculations makes the Bioreactor less GHG emitting and more environmentally friendly than Veolia’s proposed waste incinerator (see table next page).

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Table 6.1 Estimated annual GHG emissions (baseline – Eco Precinct operations)

Scenario	Source	GHG emissions (t CO_2-e/year)			
		Scope 1	Scope 2	Scope 3	Total
Baseline	Transport: waste from Sydney to IMF by rail	-	-	5,525.1	5,525.1
	Transport: waste from IMF to Eco Precinct by road	-	-	522.6	522.6
	Transport: local waste to Eco Precinct by road	-	-	576.1	576.1
	Combustion: diesel (Bioreactor)	2,108.8	-	108.1	2,217.0
	Combustion: diesel (MBT)	209.9	-	10.8	220.7
	Combustion: diesel (ARC)	-	-	-	-
	Combustion: petrol (Bioreactor)	5.5	-	0.3	5.8
	Combustion: petrol (MBT)	15.3	-	0.8	16.1
	Combustion: ethanol (MBT)	0.0	-	-	0.0
	Combustion: petroleum oils (Bioreactor)	3.2	-	0.8	4.1
	Combustion of landfill gas	3,397.7	-	-	3,397.7
	Flaring of landfill gas	486.6	-	-	486.6
	Fugitive emissions of landfill gas	97,344.0	-	-	97,344.0
	SF_6 emissions	3.0	-	-	3.0

GHG emissions (t CO2-e/year)	Baseline - current operations	Scenario 1 - Landfilling only	Scenario 2 - Waste Incinerator
Veolia Claimed GHG Total emissions	117,228.3	238,072.2	323,849.5
Fugitive emissions of landfill gas	97,344.0	205,302.1	146,274.6
Corrected Totals	19,884.3	32,770.1	177574.9

We know from Veolia reporting to the VCLC that the 97,344.0 tonnes equates to the tonnage/volume of landfill gas harvested and used as fuel (for the baseline year). If this is now not the case then Veolia has been incorrectly reporting its fugitive gas emissions for many years, which would now need immediate investigation as to why. Either way there is a dishonesty here that needs correcting.

The waste incinerator is 5.4 times more polluting than the Bioreactor.

Veolia has not conducted a proper comparison of its Woodlawn Bioreactor to its proposed Waste Incinerator by diverting 380,000 tonnes of waste per annum from the bioreactor to the waste incinerator, and in the process tried to obscure the poor performance of the Waste Incinerator in reducing GHG emissions.

6.20 Appendix R 'Life Cycle Assessment'

This Appendix is totally irrelevant to the comparison of taking 380,000 tonnes out of the Bioreactor each year burning it in a waste incinerator. The comparison is solely between these two design solutions, coal and gas electricity generation and emissions are irrelevant.

The above said, I note that many independent analysts of electricity comparing the use of Coal versus Gas versus Waste Incineration would dispute the claim below.

> The results of the LCA show that the residual MSW and C&I waste-based power generation system performs better across all environmental impact categories compared to both coal and biomass-based power generation systems. When comparing with a natural gas-based power generation system, MSW and C&I waste-based power generation system showed superior performance in all environmental impact categories except acidification.

What is really needed here is a whole of life consideration from design to decommissioning, complete with full minor, mid and major maintenance programs and schedules, technology upgrades, decommissioning, etc. and a fully funded financial model for all this, and confirmation that Veolia has the financial capacity to pay for everything in the the whole of life analysis without any Government assistance. This must be done as a priority because it is often the case that the State and Local Governments are left to deal with the issues and costs of refurbishments.

6.21 Appendix S 'Noise and Vibration Impact Assessment'

I note the content of this Appendix.

My concern is for the underground miners' safety from vibrations coming from the waste incinerator and associated activities. It is appalling that this EIS has been released with what appears to be so little consultation with Develop.

6.22 Appendix T 'Traffic Impact Assessment'

This Appendix does not comply with Veolia's SEARs. It does not address the cumulative impact of Veolia's, Develop's, and Blind Creek Solar Farm's heavy truck movements through and around Tarago,

and the volume of these three developments with the Gundary Solar Farm requirements through Goulburn.

The statement below from page ES.7 of the Appendix is also incorrect and understates the volume of Veolia's heavy vehicle traffic.

> ES2.2 Haulage routes
>
> On average, 75% of the incoming trucks carry waste from the Crisps Creek IMF. The remaining 25% of trucks, which includes trucks transporting daily cover material for the Bioreactor, originate from various regions in NSW and arrive by the regional road network.

Re discussion at Section 5.2 Good Neighbour of this Submission, Veolia is receiving at Woodlawn approximately 574 tonnes regional waste per working day, that equates to around 28-36 vehicles. By Veolia's calculations based on the upper limit of 120 trucks between Crisp Creek being 75% of Veolias heavy vehicle movements, then the total vehicle movements would be around 160 per day. That is 156 heavy vehicle waste trucks and 4 heavy vehicle logistic trucks per day. The figures and underlying assumptions in this Appendix are incorrect, and any subsequent claims injected into this Appendix by Veolia are also incorrect, and thus null and void.

There is a requirement for major road improvements before any construction work starts on any proposed local State Significant Development.

This Appendix does confirm that Veolia is the major user of the local roads and should therefore bear the lion's share of funding the necessary road improvements. It would be prudent of the NSW Government to build into Veolia's consents/licences:

- Veolia's existing licence:
    - confirmation of road levies for the use of the Tarago-Bungendore Road; and to add
    - construction of an overtaking lane between Crisps Creek and Collector Road as a precursor for ongoing operations; and
- In the sad case of Veolia's proposal being approved, and prior to any on-site construction:
    - construction of a Tarago bypass to resolve the traffic issues on the corner of Braidwood, Lumley and Wallace intersection; and
    - general improvements to Braidwood Road and Tarago-Bungendore Road to cater for heavy vehicles and wet weather without the need for frequent minor repairs, including overtaking lanes in both directions every 10 kilometres apart.

The NSW Government also needs to upgrade the route from Bungendore to Nerriga, via Tarago from regional roads to State Route/Roads. This upgrade should also include design and builds to cater for all types of heavy vehicle use.

6.23 Appendix U 'Groundwater Impact Assessment'

Not reviewed due to time constraints placed on the exhibition of Veolia's EIS.

Above said, the recent leachate breach into Groundwater via ED1 the proposed site for the long term storage of hazardous waste is noted.

6.24 Appendix V ‘Surface Water Impact Assessment’

Not reviewed due to time constraints placed on the exhibition of Veolia’s EIS.

Above said, the recent leachate breach into Groundwater via ED1 the proposed site for the long term storage of hazardous waste is noted.

6.25 Appendix W ‘Preliminary Site Investigation’

I have only glanced through this Appendix because of time constraints.

The lack of reference to Develop the mine operator suggests that this Appendix is dated, and should be updated to properly include Develop’s new mining approach.

6.26 Appendix X ‘Bushfire Protection Assessment’

Not reviewed due to time constraints placed on the exhibition of Veolia’s EIS.

6.27 Appendix Y Biodiversity Development Assessment Report‘

Not reviewed due to time constraints placed on the exhibition of Veolia’s EIS.

6.28 Appendix Z ‘Aboriginal Cultural Heritage Assessment’

Not reviewed due to time constraints placed on the exhibition of Veolia’s EIS.

6.29 Appendix AA ‘Historical Archaeological Assessment’

Not reviewed due to time constraints placed on the exhibition of Veolia’s EIS.

6.30 Appendix BB ‘Landscape and Visual Impact Assessment’

I have only glanced through this Appendix, the focus of this assessment appears to be the waste incinerator and its associated flue stack. There is a lot more than just this one building to be constructed for a waste incinerator to be properly operated and maintained. I believe that I need to see the complete facility design, including all storage tanks, before being able to make proper comment on this Appendix.

6.31 Appendix CC 'Social Impact Assessment'

I disagree with the findings and recommendations of this Appendix. The Social Impact Assessment has significantly understated Tarago Community concerns and has ignored the concerns of surrounding communities.

To describe 'Public safety related to primary haulage route on local roads' as a low negative is dishonest when one looks at the number of truck accidents that have occurred between Goulburn and Woodlawn, and Bungendore and Woodlawn in the past couple of years. Veolia's decision not to restrict its and client's truck movements to daylight hours, as discussed above, demonstrates that the purpose of these discussions and findings is to avoid either the State Government or Veolia from undertaking important road works before construction starts on any waste incinerator.

With respect to potential 'odour' independent reports from communities living in proximity to waste incinerators, all communities report odour issues. Veolia has not provided a suitable explanation as to how it shall / can avoid odours within emissions from the flue stack and fugitive from the incineration facility itself. There is admission within Appendix L 'BAT Assessment of the potential for odour emissions.

This social impact assessment also fails to recognize the potential for more agricultural long-term jobs being lost from emission related contaminations than long-term jobs created from operating and maintaining the waste incinerator.

6.32 Appendix DD 'Economic Assessment'

I have only glanced through this Appendix as there might be some limited economic benefit to the wider Goulburn Mulwaree and Queanbeyan-Palerang[32] local government areas; however, other than possibly a few jobs there is no economic benefit for the Tarago Community.

The above said, I do note the lack of consideration and assessment on the adverse impact that the emissions for Veolia's proposed waste incinerator will have on other local agricultural industries, such as meat, crops, wine, honey, poultry, etc. Ambient claims by Veolia of non hurt, is simply not reflective of overseas experiences. Veolia must get the appropriate peak associations of all the local types of agricultural businesses to sign off on this proposal, and for each to acknowledge full support and acceptance of Veolia's waste incinerator. Without which the NSW Government leaves itself open to future claims of financial losses. And this is highly likely!

An example is the conflict of increasing dioxins, furans and POPs in the environment from waste incineration; and increased quality standards, and associated monitoring and testing being imposed overseas on imported goods. See Australian Oilseeds Federation: ISCC Certification with Sustainable

[32] TADPAI does note that Queanbeyan-Palerang and the ACT were essentially overlooked in this assessment.

Grain Australia, (http://www.australianoilseeds.com/iscc_certification). Any increase in toxins and pollutants will have an adverse impact on canola growers exporting canola to Europe. Financial losses in the agriculture sector have the potential to far exceed the profits to be gained by Veolia and the 40 odd long-term jobs being offered.

The NSW Government has to appreciate that there has been lots of independent reputable and credible articles published in the past 10 years, including that of its own independent advisor on WfE[33], and multiple foreign governments passing legislation opposing and reducing the use of waste incineration in the same period, that a defence of ignorance by the Government and Veolia will not hold up in any Court of Law. I personally do not believe that either the NSW Government, Veolia or the waste industry has fully considered this issue and its financial ramifications. It is strongly recommended that the NSW Government seek independent legal, risk and financial advice with regard to Veolia's likely impact on other industry sectors before reaching any decision of approval.

6.33 Appendix EE 'Preliminary Hazard Assessment'

I note the paucity of this Appendix in terms of the Woodlawn Eco Precinct's remoteness from emergency services and the time it will take for properly attired and equipped respondents to be on the ground addressing any hazardous/toxic incident that has occurred. And of the environmental damage that will occur through delayed response.

I also find it appalling but consistent with the remainder of this EIS, that the presence of Develop and of miners being underground is understated. The proposed waste incinerator is not kilometres from third parties, it is metres (100-150 m). And any explosion within the waste incinerator or associated storage facilities has potential/probable fatalities among the miners operating beneath the waste incinerator.

The smoke from any fire will not linger above the Woodlawn Eco Precinct, it will plume in whatever direction the wind takes it. If toxic, which is most likely, the smoke could cause the Hume Highway, Federal Highway and other local roads to be shut down. Toxic smoke could also force the evacuation of residents from their homes in Goulburn, Bungendore, and other regional communities.

Veolia has not considered or model the potential implications from any major incident correctly and fully. Veolia needs to provide a worst case incident model, based on 15 minute intervals describing:

- the damage that has occurred in the 15 minutes;
- the response that has occurred within each 15 minutes and by whom;
- response is to include fire, ambulance,hospital, environment, logistics, etc;
- the cumulative cost of response and damage; and
- the modelling should cover the first three days.

[33] PricewaterhouseCoopers and Sphere Infrastructure Partners: NSW Waste Sector Volume I: Key Findings, April 2019

Most importantly, this Appendix needs to advise who is covering all the costs of responding to any hazardous or otherwise incident at Woodlawn.

6.34 Appendix FF 'Fire Safety Study'

I have only glanced through this Appendix because of time constraints. The Appendix is noted. I observe that there are no recommendations regarding site fires turning into bushfires, and subsequent protection of neighbouring properties. This is a real risk because site based emergency teams will be occupied by containment of site fires and there is potential/probability for delay to any bushfires due to toxic and hazardous smoke from site fires.

6.35 Appendix GG 'Operational Data Staffordshire ERF'

I have only glanced through this Appendix because of time constraints. I did not spend much time on reviewing this report because it was noted for one year (2017) - suspected to be the best year out of all the annual reports; hence, the report presented is considered to be out of context.

I would prefer the NSW Government to provide more information and clarity around why Sheffield terminated its contract with Veolia and why Hampshire voted not to approve Veolia's proposed EfW facility within its County.

7 Other Observations

7.1 Energy Efficiency

Waste incineration is not an effective nor efficient method for generating electricity, despite the waste industry claims and push for this to be accepted. It is now generally recognised that the generation of electricity for the incineration is less effective than that of gas and coal, and might I say dirtier than the use of coal. Veolia's proposal is not a good option.

7.2 Innovative Alternatives

For me personally, Veolia that promotes itself as the '*A Global Champion of Ecological Transformation*'[34] failed dismally to live up to its self proclaimed title.

Veolia is proposing a common waste incinerator with the potential of producing around 30 MW of electricity energy and the expense and consumption of around 110 MW (rounded and near enough). Veolia is proposing a waste incineration solution in which it does not capture and

[34] https://www.veolia.com/anz/about-us/ecological-transformation

commercialise the air heat energy produced from the waste incineration process (and which it should have but chose not to). The proposal is lacklustre, it is not forward thinking, and it is not innovative!

There are two proposed State Significant Development solar farms proposed within the local area: Blind Creek Solar Farm and Gundary Solar Farm; both of which are essentially offering to produce around 140 MW for around $500m capital investments. This compares to Veolia's 30 MW (at a net loss of 80MW) proposal with all sorts of emission issues for $600m. Hardly a business case if you ask me.

Veolia has the land to build and operate a solar farm, in conjunction with sheep farming and with a little smarts some cropping, but chooses not to. It's not discussed as a viable alternative. And this is disappointing.

Mr Kirkman was joint but a separate presenter with Mr Ali Abbas of the Waste Transformation Research Hub at the Committee for Sydney: 'A circular and sustainable waste strategy' webinar/conference on 15th October 2021; where Mr Abbas presented to the wider community of his teams work in designing, building, testing and at the time commercialising the extraction of hydrogen from methane, for use within a hydrogen hub. A brilliant presentation.

Veolia, including Mr Kirkman, has shown no interest in creating a commercialised hydrogen hub centred on Tarago-Goulburn and its intersection with the Hume Highway. True ecological transformation, adopting, promoting and commercialising NSW innovation and design. And what do we have being proposed - a waste incinerator!

I refer back to my truck movements in Sections 5.2 and 6.22, Veolia producing its own fuel, and reducing its vehicle GHG emissions could be sufficiently profitable in itself. However, if a hydrogen hub could be established around Goulburn based on Woodlawn; NSW and Victoria would only then need to create hydrogen hubs in Melbourne, and around Benalla and Albury/Wodonga to create a hydrogen highway from Sydney to Melbourne and return. The next step could be a hydrogen hub in Wagga Wagga to create the hydrogen highway to Adelaide.

Government needs to set the ecological and environmental visions, and this is missing. Without this private companies, including Veolia, will seek out the cheap option with maximum profit. The time has come to acknowledge profit but not at the cost of continuing and worsening climate change and human health risks.

8 Concluding Remarks

The NSW Government is not adhering to the independent advice provided by Price Waterhouse Cooper with respect to the use of Energy from Waste (Reference G), and in doing so has created some weaknesses in its policies and legislation.

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5th December 2022

Veolia has strategically used the NSW EPA Energy from Waste Policy Statement statement "*Heat recovery as far as practicable*" to present a common waste incinerator as an energy from waste solution.

The building and operating of a waste incinerator for the primary purpose of waste destruction is inconsistent with other stated NSW Government articulated Climate Change, Environmental and Human Health positions, policies, legislation and objectives/goals, but a common waste incinerator is what Veolia is proposing.

Veolia has shown zero initiative in commercialising air heat from the waste incinerator and is trying to change the way to prove it is achieving an R1 Energy Efficiency Rating of 0.65. This should not be allowed.

In attempting to manipulate GHG emission calculations, Veolia has made an error that when corrected easily proves that the Bioreactor is more environmentally friendly than the proposed waste incinerator.

Veolia has provided no evidence of Community, local government and client acceptance and support for the incineration of waste at Woodlawn, and without which Veolia's proposed waste incinerator should not be approved. I strongly object, and believe that the Tarago Community objects to Veolia's proposed waste incinerator for Woodlawn and waste incineration in general.

Landfilling and harvesting gases is more effective, efficient and eco-friendly than waste incineration, and the absolute last thing to do with waste is to incinerate it. The movement and incineration of waste is a major contributor to/facilitator of climate change that should be avoided at all cost. NSW should not be replicating the situation in Denmark!

> "*Denmark is Europe's top waste burner. Incineration accounts for about a fifth of district heating and about 5 percent of its electricity.*
>
> *But what just a few years ago seemed like a clever way to deal with garbage has now become a problem.*
>
> ***"Today, we import waste with a high content of plastic in order to [use the excess] capacity at the incineration plants, with increasing CO2 emission as a result" — Dan Jørgensen, Denmark's climate minister***"[35]

Denmark has now committed to reducing waste incineration by 30%! We do not want the same future in Tarago that Denmark has now.

[35] https://www.politico.eu/article/denmark-devilish-waste-trash-energy-incineration-recycling-dilemma/, Politico: Denmark's 'devilish' waste dilemma, by Eline Schaart, 17 September 2020

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5th December 2022

9 Political Donations

I have never made any political donations.

The above said, can you please provide me with the declaration from Veolia, as I do not recall seeing it.

10 Department's Disclaimer and Declaration

I accept.

Yours Sincerely

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