# In Opposition to the Proliferation of Waste-to-Energy Incineration in Victoria


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To whom it may concern,

I am an organiser of the No Sunbury Waste Incinerator community advocacy group. I have lived in Sunbury for the majority of my life, and our community has a great deal of concern around the proposed rapid expansion of Waste-to-Energy (WtE) projects in Victoria. We fully acknowledge that Victoria is facing a waste problem, and waste incineration seems to be a quick and convenient solution. We should not, however, be rushing into a commitment with large-scale WtE projects without adequately addressing long-term public health, environmental, local infrastructure, and community impacts in a meaningful and publicly accountable way.

There will be submissions received by this committee from people far more qualified than I am – true experts in their fields – to provide technical information on the dangers of these incinerators. It is therefore my intention to provide only a basic overview to demonstrate my concerns as a resident of Victoria and as a member of a community that could be directly impacted by a waste incinerator in our midst.

We have known about the health risks of burning plastics and other wastes for over forty years. It was, in fact, a staple for homes in Victoria, from the early 20th Century through to the 1970's, to have an incinerator in their backyards to dispose of their waste. However, it became clear that this practice was having a large negative effect on public health and air quality. This eventually led to backyard incinerators being banned in Victoria throughout the 1980s.

These negative health impacts were not, however, limited to backyard incinerators. Municipal solid waste incinerators are a major source of toxic air pollutants, including POPs such as dioxins and furans, heavy metals (including mercury, lead, arsenic, and cadmium), polycyclic aromatic hydrocarbons (PAHs), and other hazardous particulates. These have long been known to have adverse effects on human health. In a systematic review, Allsopp, Costner & Johnston (2001) found that workers at incinerators and populations residing near incinerators had a wide range of associated health impacts. These included, but were not limited to, both increased risk of and mortality from certain types of cancers, respiratory impacts, and congenital abnormalities. Similar patterns were also found in another review by Franchini *et al*. (2004) of studies between 1987 and 2003 on populations living in the vicinity of waste incinerators. Furthermore, Candela *et al*. (2015) found a positive association between exposure to emissions from a waste incinerator and miscarriage occurrence in women without previous miscarriages.

It must, however, be acknowledged that there have been improvements in the filtration and air-purification systems in these incinerators over the last 20 years. This does not, however, mean that

they are inherently safe for public health. This is effectively a dilution of these pollutants over time, but can still lead to a slow accumulation of contaminant particles in the food chain and the human body, extending the latency period of many of these health impacts. This was noted in Tait *et al.* (2020), which noted that while reports of adverse health effects were fewer in modern incinerators, this could be due to inadequate time for adverse health effects to emerge. There is also a remarkable scarcity of epidemiological studies on populations surrounding these modern plants. In a systematic review, Negri *et al.* (2020) only located seven epidemiological studies on waste incinerators that were active after 2006. It is also possible that there could be as yet unknown chemicals, or chemical interactions, that we are not currently monitoring or regulating (Domingo *et al*., 2020). While these modern incinerators no longer have the large plumes of black smoke like their backyard counterparts, given the lack of quality evidence, there is still every likelihood that they pose a threat to public health. Due to the latency period of many of these adverse health impacts, it is far too early to say that modern incinerators are now safe. As one Sunbury community member said about the Westgate Tunnel soil, but that applies once again to our current circumstances: "I refuse to allow my family to be guinea pigs while we wait to see what the long-term effects of these chemicals are" (Glass, 2022). Pregnant women, children, and the elderly are typically most at risk to these contaminants, and Sunbury – facing a proposal to burn 750,000 tonnes of waste annually – is a rapidly expanding community filled with young families. Going ahead with plans for large-scale waste incineration is gambling with the health of nearby residents.

While it is often argued that modern waste incinerators are safe and meet strict pollution control and environmental standards, it is becoming clearer that this is not the case. Modern incinerators still produce both bottom ash and fly ash, both of which are highly toxic. This makes up approximately 25-30% of the original volume of waste burned (IPEN, 2005). Bottom ash is often contaminated with dioxins, heavy metals, PFAS (IPEN, 2005), and microplastics (Yang *et al*., 2021). Fly ash (captured by filters within the stack) is even more highly toxic, containing higher concentrations of contaminants (IPEN, 2005). Both of these byproducts need to treated or stored carefully. This can be expensive, risky to transport, and there are limited facilities available within Victoria that are capable of doing this, and are currently unable to handle the volume implied by the current cap licences.

Waste incineration has been shown to produce numerous toxic chemicals that are released into the atmosphere, soil and waterways, even with Europe's "Best Practices". As a signatory of the Stockholm Convention, we are required to do everything we can to reduce dioxin emissions. As waste-incineration is one of the primary causes of dioxin formation, it is counterproductive to commence these projects. While these modern filtration systems do lower emissions, they are not removed completely. A study of a modern waste incinerator with state-of-the-art air pollution control devices in Shenzhen, China, found that

while dioxin emissions were lowered, they were not eliminated and persisted in the fly ash, bottom ash, stack gas, and leachate (Wei, Li & Liu, 2021). While waste incinerators are required to operate in excess of 850$^0$C to help prevent dioxin formation, this does not stop de novo synthesis of dioxins on ash in the cooling phase following combustion (Zhang & Buekens, 2017). These temperatures are also inadequate to fully destroy PFAS, as they have been detected in flue gas in one of Europe's "state-of-the-art" waste incinerators (Björklund, Weideman & Jansson, 2023). This also shows that the filtration systems are not adequately preventing contaminant release. Björklund *et al.* (2023) found that there were multiple paths for PFAS to be emitted, even by a state-of-the-art plant, including via ash, gypsum, treated process water, and flue gas.

Recent bio-monitoring by ToxicoWatch Foundation, a public benefit organisation based in Europe, found alarming levels of PFAS, dioxins, and heavy metals in the areas surrounding waste incinerators in Spain (ToxicoWatch & Zero Waste Europe, 2025), the Netherlands (ToxicoWatch & Zero Waste Europe, 2025b), and France (ToxicoWatch & Zero Waste Europe, 2025c). In Spain, bio-monitoring began in 2019, a year before the Gipuzkoa Waste Treatment Plant was commissioned, providing an environmental baseline. In 2025, a backyard egg from the region was found with dioxin levels over ten times the EU legal limit. They also found moss samples with dioxin levels 300 times higher than the baseline levels. Increased levels of PFAS and heavy metals were also found. The Reststoffen Energie Centrale (REC) incinerator is the newest incinerator operating in the Netherlands, and was announced by the Dutch Ministry of Economic Affairs as a "State of the Art" facility and "the best in Western Europe" when it was built in 2011 (Staff, 2019). By 2024, one water sample was found with PFAS concentrations 138 times the Dutch legal limit. Dioxin levels in soil were found to have increased sevenfold from samples taken in 2013. Heavy metals were also detected in moss at levels that exceeded those associated with significant health risks. It is also well known that residents of Paris have been warned against consuming eggs from backyard chickens, due to widespread contamination of POPs, likely from the Ivry-Paris XIII incinerator. In 2025, however, it was also found that there were PFAS, dioxins, and PAH exceeding EU safety thresholds in air filters and dust in primary schools that were in the vicinity of the plant (ToxicoWatch, 2025). This clearly shows that there is no such thing as a safe waste incinerator.

In 2024, the BBC released an article showing that, based on five years of data, waste incineration produced the same amount of GHG for each unit of energy as coal (Stallard *et al*., 2024). Their analysis did not include any emissions caused by the transport of the waste to the site. Other studies have found that waste incineration produces more GHG for each unit of energy than any other form of energy (GAIA, 2018; Tangri, 2023). It has also been argued that waste incinerators do not produce a net positive amount of energy (GAIA, 2018). Incineration has also been found to produce more GHG and toxic air pollutants

than landfill with mechanical biological treatment (Ballinger *et al*., 2022). None of this even touches on the unsustainable amounts of water required to run the incinerator itself.

With this perspective, the presentation of waste incineration as a "clean" or "sustainable" method of waste management has been a remarkable case of greenwashing sleight-of-hand by the waste industry. Many present their fuel source, in this case, municipal solid waste, as "renewable". Municipal solid waste is primarily composed of plastics, which are primarily made from petrochemicals. As a source of energy, this is trading burning one fossil fuel for another. This severely undermines Victoria's target to have net-zero greenhouse emissions by 2045 and a 75% reduction from 2005 levels by 2035. Despite lobbying efforts and continuing greenwashing from the waste industry, "there is no scientific basis to suggest that we can burn our way out of climate change" (Bell & Bremmer, 2013). These are just some of the reasons that Europe is moving away from waste-incineration (Gardiner, 2021).

They divert funds from true circular economy initiatives, such as recycling infrastructure, waste prevention and reduction programs, and true renewable energy projects (GAIA, 2018). The requirement for waste incinerators to be provided with a constant, high-volume stream of waste as fuel also undercuts any efforts at waste-minimisation.

In another shocking report by the BBC, it was revealed that the Beddington Incinerator had exceeded air pollution limits on 916 separate occasions between August 2022 and March 2024 (Stallard, 2025). This was reportedly due to incorrectly calibrated monitoring software. Furthermore, Viridia (the company behind the Beddington Incinerator) failed to inform stakeholders of the issue for 16 months following the discovery. Many of the waste management companies proposing to operate these plants have poor track records with permit compliance. For example, the EPA has previously laid 33 charges against HiQ, the company proposing to build a waste incinerator at 570 Sunbury Rd, Bulla, for breaches of EPA landfill licences and failure to comply with previous EPA remedial notices for instances between 2020 and 2022. These included improper leachate management, failure to institute a rehabilitation plan, improper waste cover, failure to establish a risk-based monitoring program, and improper disposal of asbestos, among others (Hart, 2024, *accessed via web archive*). Strangely, articles about this seem to have been removed, including from the EPA's own website. More recently, in 2025, HiQ pleaded guilty to breaching their licence and commencing construction of a new cell without satisfying their licence conditions (EPA, 2025). This shows a pattern of negligence and a prioritisation of profit over safety and compliance.

These incinerators have a large impact on the surrounding communities. One resident near the Runcorn incinerator stated that they "have been inundated with flies, rats, smell, noise. It's just been horrendous," (Stallard *et al*., 2024). The proposed incinerator by HiQ has received a cap licence from

Recycling Victoria to burn 750,000 tonnes of MSW annually. Estimates for MSW produced by Hume run between 14,000 tonnes and 45,000 tonnes per year, only a fraction of what HiQ will be burning. The rest will need to be brought in on trucks, running 24/7. Sunbury does not have the infrastructure to support hundreds of additional truck movements per day, and is already struggling with the current levels of road traffic, let alone levels as the suburb continues to grow.

When these plants are up and running, local councils often get locked into waste incineration due to restrictive, long-term contracts. In an analysis by the BBC (Stallard *et al*., 2024), it was found that there was at least £30bn worth of waste disposal contracts involving incineration, with some lasting longer than 20 years. Many also had clauses in their contracts to deliver minimum amounts of waste, with financial penalties if there was a failure to deliver. There was also a case of Derbyshire County and Derby City Councils being ordered to pay £93.5m as compensation for terminating their contract with the waste company RRC, despite the reason for this being the incinerator built for them by RRC failing to pass initial tests. These contracts have left these local councils unable to explore more environmentally friendly and sustainable waste management solutions, such as recycling or waste minimisation initiatives. This is not how Victorian rate-payers wish to see their rates spent, and this is not a situation we should seek to emulate here in Victoria.

There is a very clear pattern in the location of these waste incinerators – working-class communities – raising serious concerns about environmental and social justice. A BBC analysis found that low-income communities such as Runcorn were ten times more likely to have a waste incinerator in their midst than more affluent suburbs in the UK (Stallard *et al*., 2024). Similarly, it was found that of the 73 waste incinerators operating in the U.S., 79% were located in lower-income communities (Tishman Environment and Design Centre, 2019). This pattern appears to be continuing with the proposed locations for these waste incinerators, many of which are traditionally working-class. Many of the communities in the U.S. with an incinerator are classed as “environmental justice communities” (Tishman Environment and Design Centre, 2019), meaning that they bear a disproportionate burden of environmental pollution, health risks and climate impacts. These first two definitely apply to Sunbury and Bulla. HiQ is already a disposal and treatment site for asbestos, a highly carcinogenic material, and was the destination for the PFAS-contaminated soil from the Westgate Tunnel Project. In addition, it is also in close proximity to Melbourne Airport. A key purpose of any government is to protect their citizens, and those living in communities such as Sunbury deserve this, rather than being continuously treated as a dumping ground for the state’s waste.

While working on this campaign, it has been very disheartening to repeatedly hear members of our community say "it's a done deal." Many people in our community have seen this project as going ahead, regardless of our concerns, from the moment that HiQ announced their plans. Many communities are left feeling demoralised in the wake of current community consultation practices – a process that happens to us, rather than us meaningfully contributing to. We are left feeling unheard and taken for granted unless it is an election year (and many still feel that this is performative).

The community consultation process in relation to these types of projects has not served communities. For a clear example of this, one needs to look no further than the approval for HiQ (then Hi-Quality) to accept the contaminated soil from the Westgate Tunnel project. This decision by the EPA was investigated by the Victorian ombudsman, who ultimately found that while the science of the decision was sound, the EPA did not give any consideration to relevant human rights (Glass, 2022). Members of Sunbury Against Toxic Soil (SATS), the community advocacy group, stated that they had "hoped to 'be a part of the process' and be involved in the decision-making, with an opportunity to submit information and opposition to the proposal." The EPA did not have any meaningful interactions with the group, nor did they provide any information except for that which was available on their website – heavily redacted. The EPA reportedly told the ombudsman that consulting with the community would be a "waste of time" (Glass, 2022). Ultimately, SATS stated that they believed that "the EPA acted on behalf of the government and major corporations and [did] not [uphold] its core responsibility of protecting human health…." In the end, community consultation, as it is currently practised, is nothing more than a check-box exercise. Corporations and government departments inform communities of their plans, but never take action based on community feedback. Oftentimes, even the ability for community members to participate seems to be made purposefully difficult. For example, this inquiry itself gave an ambiguous at best – purposefully misleading at worst – deadline for public submissions, preventing many people from participating in this process, possibly including myself.

Victoria is in the advantageous position of being able to learn from Europe's experiences with this technology. Rather than investing in harmful technologies, we have the opportunity to lead by example in waste reduction and resource recovery. We can prioritise composting and recycling programs that keep materials out of landfills and incinerators. We can support innovative waste-to-resource technologies that repurpose materials for reuse in a circular economy. The focus should be on reducing consumption, improving recycling infrastructure, and educating the public about sustainable practices. We can expand programs that incentivise waste reduction at the source and explore options for zero-waste communities. By investing in these solutions, we can create new industries, generate green jobs, and build a resilient, sustainable future for all Victorians.

Our primary requests are for the committee to recommend a legislative ban on waste-to-energy incineration and thermal waste-to-energy facilities in Victoria, as well as prioritisation of investment in non-combustion residual waste disposal technologies. We urge the committee to carefully weigh the words of those with a financial stake in allowing waste-to-energy incineration to take hold in Victoria. They are merely trying to sell a quick and easy cure to our problems, but beneath the surface, it is just more snake oil.

Kindest regards,

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No Sunbury Waste Incinerator

# References


Allsopp, M., Costner, P., & Johnston, P. (2001). Incineration and human health: state of knowledge of the impacts of waste incinerators on human health (executive summary). *Environmental Science and Pollution Research*, *8*(2), 141-145. https://doi.org/10.1007/BF02987308

Ballinger, A., Shanks, W., Miles, T., & Degagny, S. (2022). *Greenhouse Gas and Air Quality Impacts of Incineration and Landfill*. Zero Waste Australia. https://zerowasteaustralia.org/wp-content/uploads/2022/04/Greenhouse_Gas_Air_Quality_Impacts_Incineration_Landfill_v2.2.pdf

Bell, L., & Bremmer, J. (2013). *Burning waste for energy: It doesn't stack up*. Toxics Free Australia. https://www.toxicsfreeaustralia.org.au/wp-content/uploads/2024/04/NTN-waste-to-energy-incineration-report-2013.1-1.pdf#:~:text=These%20two%20key%20factors%20are%20driving%20waste,the%20electricity%20they%20sell%20labeled%20as%20'renewable'.

Björklund, S., Weidemann, E., & Jansson, S. (2023). Emission of Per- and Polyfluoroalkyl Substances from a Waste-to-Energy Plant - Occurrence in Ashes, Treated Process Water, and Emission of Per- and Polyfluoroalkyl Substances from a Waste-to- Energy PlantOccurrence in Ashes, Treated Process Water, and Firs. *Environmental Science & Technology*, *57*(27), 10089-10095. 10.1021/acs.est.2c08960

Candela, S., Bonvicini, L., Ranzi, A., Baldacchini, F., Broccoli, S., Cordioli, M., Carretta, E., Luberto, F., Angelini, P., Evangelista, A., Marzaroli, P., Giorgi Rossi, P., & Forastiere, F. (2015). Exposure to emissions from municipal solid waste incinerators and miscarriages: A multisite study of the MONITER Project. *Environment International*, *78*(-), 51-60. 10.1016/j.envint.2014.12.008

Domingo, J. L., Marquès, M., Mari, M., & Schuhmacher, M. (2020). Adverse health effects for populations living near waste incinerators with special attention to hazardous waste incinerators. A review of the scientific literature. *Environmental Research*, *187*(-), 109631. 10.1016/j.envres.2020.109631

Environment Protection Authority. (2025, October 7). Hi-Quality licence breach. *EPA*. https://www.epa.vic.gov.au/hi-quality-licence-breach

Franchini, M., Rial, M., Buiatti, E., & Bianchi, F. (2004). Health effects of exposure to waste incinerator emissions: a review of epidemiological studies. *Ann Ist Super Sanita*, *40*(1). https://www.researchgate.net/publication/8441050_Health_effects_of_exposure_to_waste_incinerator_emissions_A_review_of_epidemiological_studies

Gardiner, B. (2021, April 01). In Europe, a Backlash Is Growing Over Incinerating Garbage. *Yale Environment 360*. https://e360.yale.edu/features/in-europe-a-backlash-is-growing-over-incinerating-garbage#:~:text=For%20years%2C%20European%20countries%20have,Netherlands%2C%20and%20the%20Scandinavian%20nations.

Glass, D. (2022). *Investigation into Environment Protection Authority decisions on West Gate Tunnel Project spoil disposal*. Victorian Ombudsman. https://assets.ombudsman.vic.gov.au/assets/Final_26.05.22_VO-PARLIAMENTARY-REPORT_EPA_May-2022-1.pdf

Global Alliance for Incinerator Alternatives (GAIA). (2018). *acts About "Waste-to-Energy" Incinerators*. No-Burn.org. https://www.no-burn.org/wp-content/uploads/2021/11/GAIA-Facts-about-WTE-incinerators-Jan2018-1-1.pdf

Hart, S. (2024, July 23). Court orders Hi-Quality to pay $40,000 to Sunbury project. *SunburyLife*. https://web.archive.org/web/20250429014903/https://sunburylife.au/court-orders-hi-quality-to-pay-40000-to-sunbury-project/

IPEN. (2005). *After Incineration: The Toxic Ash Problem*. -. https://ipen.org/sites/default/files/documents/After_incineration_the_toxic_ash_problem_2015.pdf

Negri, E., Bravi, F., Catalani, S., Guercio, V., Metruccio, F., Moretto, A., La Vecchia, C., & Apostoli, P. (2020). Health effects of living near an incinerator: A systematic review of epidemiological studies, with focus on last generation plants. *Environmental Research*, *184*(-), 109305. 10.1016/j.envres.2020.109305

Staff, Z. (2019, June 21). *The story of REC: The hidden emissions of the youngest Dutch incinerator*. Zero Waste Europe. https://zerowasteeurope.eu/2019/06/the-story-of-rec/

Stallard, E. (2025, August 28). Incinerator broke air pollution limits 916 times. *BBC*. https://www.bbc.com/news/articles/c627evk7yrzo

Stallard, E., McGrath, M., Clahane, P., & Lynch, P. (2024, October 14). Burning household rubbish now UK's dirtiest form of power. *BBC*. https://www.bbc.com/news/articles/cp3wxgje5pwo

Stallard, E., McGrath, M., Clahane, P., & Lynch, P. (2024, October 15). Flies, rats and hush money - living next to a 'monster' incinerator. *BBC*. https://www.bbc.com/news/articles/cwylepd79d5o

Tait, P. W., Brew, J., Che, A., Constanzo, A., Danyluk, A., Davis, M., Khalaf, A., McMahon, K., Watson, A., Rowcliff, K., & Bowles, D. (2020). The health impacts of waste incineration: a systematic review. *Australian and New Zealand Journal of Public Health*, *44*(1), 40-48. 10.1111/1753-6405.12939

Tangri, N. (2023). Waste incinerators undermine clean energy goals. *PLOS Climate*, *2*(6), e0000100. 10.1371/journal. pclm.0000100

Tishman Environment and Design Centre. (2019). *U.S. Municipal Solid Waste Incinerators: An Industry in Decline*. no-burn.org. https://www.no-burn.org/wp-content/uploads/2021/11/CR_GaiaReportFinal_05.21.pdf

ToxicoWatch. (2025). *PFAS, Dioxins and PAH in Primary School Air Filters Ivry-sur-Seine (suburb of Paris, France), 2024 - 2025*. Zero Waste Europe. https://zerowasteeurope.eu/wp-content/uploads/2025/09/2025_ToxicoWatch_Paris_PA_REP_S-Filters_AA26-KB26-JV2_K3.pdf

ToxicoWatch & Zero Waste Europe. (2025). *Biomonitoring research on persistent organic pollutants (POPs) in the surrounding environment of the WtE waste incinerator in Zubieta 2024*. The True Toxic Toll – Biomonitoring report in Zubieta, Spain. https://zerowasteeurope.eu/wp-content/uploads/2023/04/ZWE_TW_Annex1_April25_The-True-Toxic-Toll-Biomonitoring-research-Zubieta-Spain.pdf

ToxicoWatch & Zero Waste Europe. (2025). *Biomonitoring Research on persistent organic pollutants (POPs) in the surrounding environment of the WtE waste incinerator REC, Harlingen, the Netherlands 2025*. The True Toxic Toll – Biomonitoring report in Harlingen, The Netherlands. https://zerowasteeurope.eu/wp-content/uploads/2023/04/ZWE_TW_Annex1_April25_The-True-Toxic-Toll-Biomonitoring-research-Netherlands.pdf

ToxicoWatch & Zero Waste Europe. (2025). *TW Biomonitoring research on persistent organic pollutants (POPs) in the surrounding environment of the waste incinerator IPXIII Ivry-sur-Seine, Paris 2025*. The True Toxic Toll – Biomonitoring report in Paris, France. https://zerowasteeurope.eu/wp-content/uploads/2023/04/ZWE_TW_April25_The-True-Toxic-Toll-Biomonitoring-research-Paris-France.pdf

Wei, J., Li, H., & Lui, J. (2021). Fate of dioxins in a municipal solid waste incinerator with state-of-the-art air pollution control devices in China. *Environmental Pollution*, *289*(-), 117798. 10.1016/j.envpol.2021.117798

Yang, Z., Lu, F., Zhang, H., Shao, L., Ye, J., & He, P. (2021). Is incineration the terminator of plastics and microplastics? *Journal of Hazardous Materials*, *401*(-), 123429. 10.1016/j.jhazmat.2020.123429

Zhang, M., & Buekens, A. (2016). De novo synthesis of dioxins: a review. *International Journal of Environment and Pollution*, *60*(1-4), 63-110. 10.1504/IJEP.2016.082115