

**Submission  
No 812**

## **INQUIRY INTO PROPOSED ENERGY FROM WASTE FACILITIES**

**Name:** Mr Shane Geisler

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## Executive summary

I oppose the proposed Woodlawn Advanced Energy Recovery Centre (ARC) at Tarago on environmental and public-health grounds, due to governance and regulatory shortcomings, because it entrenches regional inequity, and because it represents poor economics relative to alternatives that advance NSW's circular-economy objectives. The project would incinerate up to 380,000 tonnes per annum of residual municipal and commercial waste and export roughly 30 MW to the grid, figures confirmed in NSW Government materials. [NSW Planning Portal+1](#)

Contemporary evidence associates waste-to-energy incineration with increased pollutant loads (fine particulates, acid gases, metals, dioxins/furans) and with community concern about cumulative impacts. While NSW has moved to benchmark emission limits and tighten siting rules, no EfW plant is yet operating in NSW, and the burden of uncertainty is being shifted to regional communities such as Tarago, Bungendore and Goulburn-Mulwaree. The Government's own Waste & Circular Infrastructure Plan (2025) recognises looming capacity constraints from 2030, but it also acknowledges stagnant recycling performance (roughly 66% over a decade) and the need to prioritise waste avoidance and increased resource recovery, objectives that EfW can undermine if not tightly constrained. [EPA NSW+1](#)

I respectfully urge the Committee to recommend against the project and to direct policy and investment toward higher-order solutions (avoidance, reuse, repair, organics diversion, and advanced recycling) backed by transparent governance and enforceable regional-equity mechanisms. [EPA NSW](#)

### 1) Background and context

The Woodlawn Eco Precinct already receives large volumes of Sydney's waste by rail and hosts a bioreactor landfill and associated operations. The ARC would integrate into this footprint to combust ~380,000 tpa of residuals for ~30 MW of electricity. The project is a State Significant Development and remains under assessment on the NSW Planning Portal after public exhibition of the EIS; significant public submissions have been lodged. [NSW Planning Portal](#)

NSW policy channels large EfW to specific "priority precincts", including the Southern Goulburn-Mulwaree Precinct encompassing Woodlawn. These siting rules derive from the Energy from Waste Infrastructure Plan (2021) and related planning changes. [NSW Planning+1](#)

In parallel, the Legislative Council's Select Committee on Proposed Energy-from-Waste Facilities, established 6 August 2025, has called for submissions (closing 31 October 2025) to examine technology performance, emissions and health impacts, regional planning and international practice, explicitly naming the Tarago proposal. [Parliament of NSW+1](#)

## 2) Environmental and human-health impacts

### 2.1 Air pollutants and health risk

Modern EfW plants emit NO<sub>x</sub>, PM<sub>2.5</sub>/PM<sub>10</sub>, SO<sub>2</sub>/HCl/HF, and trace metals and organics (including dioxins/furans). A recent systematic review of health impacts of waste incineration identified associations with some cancers, congenital anomalies, infant deaths and miscarriage, noting heterogeneity and data limitations but nonetheless reporting adverse signals warranting precaution. [ScienceDirect](#)

Dioxins/furans remain of particular concern due to persistence and bioaccumulation. The World Health Organization notes long-term exposure's links with immune, developmental, endocrine and reproductive effects, reinforcing the need for stringent prevention and monitoring. [World Health Organization](#)

NSW commissioned benchmarking of EfW emission limits and monitoring approaches via the Chief Scientist & Engineer, emphasising “world best practice” limits and continuous emissions monitoring; however, even with best-practice controls, non-standard operations (start-up, shut-down, bypass) can transiently elevate emissions beyond steady-state modelled averages, underscoring community concerns about real-world variance. [Chief Scientist](#)

### 2.2 Fine particles (PM<sub>2.5</sub>)

PM<sub>2.5</sub> is a well-established risk factor for cardiopulmonary morbidity and mortality at low concentrations. Incineration contributes to local particulate loads; given the rural setting, incremental increases can be material to baseline exposures. The need for conservative design/operation and transparent, real-time public reporting is evident from NSW's own policy emphasis on rigorous monitoring. [Chief Scientist](#)

### 2.3 Fly ash and residues

Municipal solid waste incineration fly ash (MSWI-FA) is widely recognised as hazardous due to enrichment in toxic heavy metals and persistent organic pollutants; current research focuses on stabilisation/immobilisation but long-term risk pathways (leaching, handling, accidental releases) require robust containment and independent oversight. [PMC+1](#)

### 2.4 Water catchments and deposition

Local stakeholders have raised concerns about cumulative risks to groundwater and surface water via deposition and residue management within a complex hydrogeological setting, issues that merit conservative assumptions in the human-health and ecological risk assessments. Recent regional reporting underscores apprehension that emissions and ash handling could threaten the water table and food chain. [About Regional](#)

### 2.5 Cumulative impacts and operational history

NSW EPA pages dedicated to Woodlawn Eco Precinct document ongoing odour reports and provide community mechanisms for logging impacts; in July 2024 the EPA issued a \$30,000 penalty to Veolia for a licence breach related to the Mechanical Biological Treatment facility,

alongside warnings and pollution-reduction programs for leachate management, facts relevant to any “social licence” claim for an additional high-temperature process unit on the same site. [EPA NSW+1](#)

Conclusion of Section 2: Given the literature, WHO guidance on dioxins, and local compliance history, there is insufficient assurance that cumulative exposures, especially under upset conditions, can be maintained within risk thresholds acceptable to nearby communities without exceptional, independently verified controls and transparent reporting. [ScienceDirect+2World Health Organization+2](#)

### 3) Governance and regulatory deficiencies

#### 3.1 Policy and siting practice

While NSW has designated EfW precincts to “protect human health and the environment” and to align with a circular economy, siting alone does not eliminate risk; it presupposes robust consultation, cumulative-impact assessment, and benefit-sharing. The Woodlawn ARC sits in the Southern Goulburn-Mulwaree precinct, but the persistence of substantial local opposition indicates that consultation and social-licence prerequisites remain unmet. [EPA NSW+1](#)

#### 3.2 Transparency and monitoring

The Chief Scientist’s work highlights the importance of real-time emissions monitoring and public transparency. Any approval would need binding conditions for continuous publishing of stack and ambient data in near-real-time, with independent audits, not merely periodic reporting, to restore confidence. [Chief Scientist](#)

#### 3.3 Compliance confidence

EPA enforcement history at Woodlawn (odour, leachate, licence breaches) undermines assurances that conditions, however well-drafted, will reliably protect health and amenity over decades without robust independent oversight and clear sanctions. [EPA NSW+1](#)

#### 3.4 Parliamentary process and submissions

The Select Committee terms of reference encompass precisely the issues in contention (technology performance, emissions, health/environment, and regional planning). The inquiry has explicitly called for submissions on the Tarago proposal, closing 31 October 2025. The very need for this inquiry reflects unresolved public-interest questions that should be answered before any project determination. [Parliament of NSW+1](#)

### 4) Regional inequity and social justice

A long-running pattern in NSW is the export of metropolitan waste burdens to regional communities, in this case, residual Sydney waste by rail to Woodlawn for combustion. Regional media, councils and community groups have repeatedly pressed fairness concerns and urged residents to participate in this inquiry ahead of the 31 October deadline. This

perceived inequity erodes social licence, affects property values and amenity, and places rural livelihoods (agriculture, tourism) at risk. [Goulburn Post+1](#)

NSW policy makers should embed regional-benefit mechanisms and avoided-burden compensation, not simply rely on precinct designation. The Committee is well-placed to recommend a formal fairness framework for any residual-waste infrastructure. [Goulburn Post](#)

## 5) Economic inefficiency and circular-economy misalignment

### 5.1 Lock-in risk and feedstock pressure

EfW facilities require long-term, high-tonnage contracts to remain viable, creating structural pressure to maintain residuals and potentially cannibalise recyclable streams, contrary to the waste hierarchy. NSW's Waste & Circular Infrastructure Plan (2025) stresses that recycling rates have flatlined at ~66% and that about 7.7 million tonnes (2022–23) still went to landfill; the rational response is aggressive avoidance, reuse, repair, FOGO and advanced recycling, rather than committing to a 30-year incineration pathway at a modest ~30 MW output. [EPA NSW+1](#)

### 5.2 System planning and alternatives

The EPA's plan warns that key Greater Sydney landfills will close from 2030 without action. That action should prioritise organics diversion (FOGO) now being mandated across NSW, expanded materials recovery, and market development for secondary materials, approaches with lower externalities and stronger alignment to circular-economy goals than incineration. [EPA NSW](#)

### 5.3 Opportunity cost

Capital directed to a ~\$600m incineration plant (per public reporting on the Tarago proposal) could instead scale region-wide recovery, FOGO processing, and high-value re-manufacturing, creating jobs without binding the State to residual-waste combustion and its long-tail liabilities (ash management, decommissioning). [The Guardian](#)

Conclusion of Section 5: On system grounds, EfW at Woodlawn is a poor fit: low electrical output, high lock-in, and misalignment with the Government's stated circular-economy trajectory. [EPA NSW](#)

## 6) Conclusions and recommendations

In light of the evidence and the NSW policy context:

1. Recommend refusal of the Woodlawn ARC in its current form. The cumulative environmental-health risks, governance deficits, and regional-equity concerns are not acceptably resolved. [NSW Planning Portal+2Chief Scientist+2](#)
2. Mandate independent, transparent monitoring: If any EfW proposals proceed in NSW, require real-time public reporting of stack emissions and ambient air, third-party audits, upset-condition contingency plans, and enforceable penalties for non-compliance. [Chief Scientist](#)

3. Adopt a regional fairness framework: Establish statutory benefit-sharing, host-community compensation, and independent community oversight bodies for any residual-waste infrastructure. [Goulburn Post](#)
  4. Accelerate higher-order solutions: Prioritise FOGO roll-out, source-separation, advanced recycling, reuse/repair ecosystems, and demand-side procurement for recycled content, using the Waste & Circular Infrastructure Plan (2025) as the coordinating instrument. [EPA NSW+1](#)
  5. Sequence determinations to policy clarity: Defer determinations on large EfW until the Committee completes its inquiry and the Government responds, to avoid locking in infrastructure that may contradict the forthcoming statewide circular-economy roadmap. [Parliament of NSW](#)
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## References (selected)

- NSW Planning Portal—Woodlawn ARC project page (capacity, ~30 MW; assessment status). [NSW Planning Portal](#)
  - NSW Planning—EfW overview and precinct siting (Southern Goulburn-Mulwaree). [NSW Planning](#)
  - NSW EPA—Energy from Waste Infrastructure Plan (2021) (policy foundations). [EPA NSW](#)
  - NSW Chief Scientist & Engineer—EfW advice on emission limits and monitoring. [Chief Scientist](#)
  - NSW EPA—Waste & Circular Infrastructure Plan (2025) (landfill closures by ~2030; strategy). [EPA NSW](#)
  - NSW EPA—Waste & Circular Infrastructure Plan (2025) PDF (recycling ~66%, 7.7 Mt to landfill in 2022–23). [EPA NSW](#)
  - WHO—Dioxins and their effects on human health (health risks). [World Health Organization](#)
  - He et al., 2025; Yang et al., 2024—MSWI fly ash hazard and treatment. [PMC+1](#)
  - NSW EPA—Woodlawn Eco Precinct, Tarago (odour reporting and updates); \$30,000 penalty (16 Jul 2024) for licence breach. [EPA NSW+1](#)
  - NSW Parliament—Select Committee webpage and media release (29 Aug 2025) calling for submissions (close 31 Oct 2025). [Parliament of NSW+1](#)
  - Regional media noting the 31 Oct deadline and local mobilisation. [Goulburn Post](#)
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## Signature

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