New South Wales Government
Independent Planning Commission

NAME REDACTED		**OBJECT**	Submission ID: 218339
Organisation:	*N/A*	Key issues:	*Land use compatibility (surrounding land uses),Other issues*
Location:	*New South Wales 2577*		
Attachment:	*Attached overleaf*		

Submission date: 11/25/2024 3:03:59 PM

Please find attached my submission

NSW Independent Planning Commission
Via – Online Submission
November 24, 2024

RE: Moss Vale Plastic Recycling Facility, SSD-9409987, Plasrefine Recycling Pty Ltd

Dear Commissioners,

Thank you for the opportunity to make a submission regarding the above proposal.

I am writing to submit my comprehensive objection to the proposed recommendation of approval by the Department of Housing and Infrastructure (DPHI) for the State Significant Development (SSD) application SSD-9409987 for the Moss Vale Plastics Recycling Facility, submitted by Plasrefine Recycling Pty Ltd.

As the owner and operator of a successful construction and development company in NSW for nearly 30 years, with extensive experience in high-end and civil projects from planning to completion, I believe I am well-positioned to offer insights into this matter.

My objection focuses on two primary concerns:

Firstly, the inadequacy of the Department of Planning, Housing and Infrastructure's (DPHI) assessment process under the Environmental Planning and Assessment Act 1979 (EP&A Act) and;

Secondly, the overall inadequacy of the provided assessment, including compliance issues with Environmental Impact Statement (EIS) requirements and potential inaccuracies in project representation and impact analysis.

We respectfully request that the Independent Planning Commission thoroughly examine these issues and critically review both the Applicant's submission and the Department's evaluation of this application and recommended conditions of consent.

The attached document provides a detailed analysis of our concerns, supported by relevant documentation and references.

Key points include:

- Insufficient assessment of microplastics and their potential environmental impacts.
- Lack of comprehensive evaluation of wastewater quality and treatment effectiveness.
- Non-compliance with Secretary's Environmental Assessment Requirements (SEARs)
- Uncertainties surrounding the project's feasibility and market impacts.

We believe these issues significantly undermine the integrity of the environmental assessment process and raise serious doubts about the project's potential effects on the local ecosystem and human health.

Thank you for your time and consideration of this important matter.

1. Inadequate assessment of SSD Application.

Upon examination of the Department of Planning Housing and Infrastructure (DPHI) assessment report for the Moss Vale Plastics Recycling Facility (SSD-9409987), dated October 2024, we find the Department's evaluation to be **inadequate** in two critical aspects:

1. Insufficient assessment of the application under section 4.15 of the Environmental Planning and Assessment Act 1979 (EP&A Act), particularly regarding matters for consideration.

2. Proposal of draft consent conditions that effectively alter the development impact profile, potentially modifying the original application to facilitate its approval. This includes deferment of essential considerations that must be considered by any consent authority and the requirement the plans be exhibited for public consideration prior to any approval. Conditions B39 (Water Management Plan) B43 (Air Quality Discharges) and B44 (Air Quality Management Plan) essentially failing the required exhibition, assessment, submission and therefore consideration required legally.

These concerns stem from a thorough analysis of both the DPHI Assessment Report and the Applicant's Environmental Impact Statement (EIS) along with its supporting materials. The following sections will delve into these issues in greater detail, highlighting the discrepancies between the proposed development and its assessment.

1.1 Section 4.15 EP&A Act

The Environmental Planning and Assessment Act 1979 (EP&A Act) outlines the assessment framework for development applications in *Section 4.15*. This section delineates the factors that a determining authority must evaluate when considering a development application.

Of particular importance is Section 4.15(1)(b) and (c), which mandates the examination of:

> (b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality.
> (c) suitability of the site for the development

For the consent authority to effectively assess these potential impacts, it is crucial that the EIS and its accompanying documents provide a comprehensive and accurate representation of these likely effects. The quality and thoroughness of this information directly influence the authority's capacity to make an informed decision regarding the development proposal.

1.1.2 Microplastics - Water, Air and Environmental Risk

The Environmental Impact Statement[1] exhibits a glaring omission in its failure to address critical terms such as *microplastics,* and/or *nanoplastics*. Although these concerns were subsequently raised by the general public, Council and as noted by the NSW Environment Protection Authority(EPA)[2] in the Response to Submissions (RtS), the applicant's response falls short of providing a comprehensive analysis. Instead, it merely refers back to the original EIS content, focusing primarily on the proposed dissolved air flotation (DAF) wastewater treatment process and the disposal of dewatered filter cakes to landfill.

This approach fails to offer any meaningful quantitative assessment of the actual risks, likelihood, or potential consequences associated with these pollutants. The lack of in-depth analysis and relevant data on these crucial environmental concerns represents a significant gap in the documentation, severely limiting the ability to conduct a thorough and appropriate evaluation of the project's potential impacts.

The environmental and health implications of microplastics pollution have gained significant attention in both scientific literature and public discourse over the past 3-5 years [3a][3b][3c][3d]. Plastic recycling processes are associated with several notable concerns:

- Environmental and Air Pollution.
- Aquatic Ecosystem Threats
- Persistent Environmental Contamination
- Socio-Economic Considerations

These multifaceted issues underscore the complex nature of plastic recycling and the need for comprehensive assessment of its potential impacts, including a *Human Health Impact Assessment*.

The EIS lacks a comprehensive description of the existing environment (**baseline data),** particularly regarding microplastic levels in local water bodies and air. This omission contravenes the SEARs' mandate for **detailed environmental assessment using adequate baseline information**. Furthermore, the EIS fails to meet the standards set by *Clause 191 of the EP&A Regulation 2021*, which necessitates adherence to environmental assessment requirements specified under the *EP&A Act*. These deficiencies impede the DPHI and thus Independent Planning Commissions' (IPC) ability to make a valid determination on the Development Application (DA) in accordance with the *EP&A Act.*

1.1.3 Lack of sufficient data to evaluate the effects on aquatic ecosystems, sewage systems, and the effectiveness of proposed mitigation strategies.

As previously mentioned, the absence of crucial baseline data undermines the IPC capacity to evaluate the development's likely environmental impacts, as required by *subsection 4.15(1)(b) of the EP&A Act*. Additionally, the Department's Assessment Report is notably silent on the existing baseline levels of microplastics in the environment and fails to provide any substantiated conclusions or address where this critical information is presented in the EIS. These shortcomings collectively compromise the integrity of the environmental assessment process the thoroughness and validity of the environmental impact assessment and the project's potential effects on the local ecosystem and human health.

The Response to Submissions (RtS) addresses **microplastics** in Appendix J, section 4.4 in 3 small paragraphs, primarily in relation to reproduced products would result in atmospheric emissions of fine particulate (not referred to as *Microplastics*). It is crucial to understand that measurements of PM10 and PM2.5 do not accurately represent microplastic levels. These particulate matter measurements encompass a wide range of substances, including organic materials like dust and other natural particles. Consequently, PM10 and PM2.5 data do not specifically reflect or quantify the risks associated with microplastic emissions. The distinction between general particulate matter and microplastics is significant when assessing environmental and health impacts.

It's important to highlight that the proposal lacks a detailed examination of technologies, methodologies, and specific emission thresholds for microplastics. Notably, these crucial aspects have been postponed for consideration until after the facility's construction, with definitive standards to be established only before operations commence. In light of this, any claims suggesting that discharges comply with local regulatory standards are **misleading**.

[1] https://www.planningportal.nsw.gov.au/major-projects/projects/moss-vale-plastics-recycling-facility
[2]https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=PAE-56301722%2120230331T071045.084%20GMT March 28, 2022
[3a] NSW Plastics: The Way Forward 2024 : https://yoursay.epa.nsw.gov.au/nsw-plastics-way-forward
[3b]Microplastics in drinking-water. Geneva: World Health Organization; 2019. Licence: CC BY-NC-SA 3.0 IGO.
[3c] https://www.unenvironment.org/explore-topics/chemicals-waste
[3d] Erina Brown et al, 'The Potential for a Plastic Recycling Facility to Release Microplastic Pollution and Possible Filtration Remediation Effectiveness' (2023) 10 *Journal of Hazardous Materials Advances* 100309, 100309.

Furthermore, the EIS lacks a thorough assessment of wastewater quality and does not describe the contaminants of concern that may leach into the wastewater, as required by the SEARs. The modelling presented focuses only on the volume of wastewater to be discharged, neglecting to address the quality of that discharge. It is essential to conduct modelling for pollutants expected to be released in the wastewater, including microplastics, the impact of the "Patented Solution" to wash the plastics and other harmful chemicals such as PVC and PAHs, particularly concerning their potential impact on Sydney's drinking water catchment, via the Council wastewater treatment plant (WWTP).[3d]

The proposed development is reliant on the installation of an on-site wastewater treatment facility using dissolved air floatation (DAF), with the Council WWTP future upgrades being relied on as a backup treatment for wastewater discharged as trade waste. However, the Council's wastewater treatment processes and testing guidelines have not been designed to effectively treat the unspecified pollutants from the proposals wastewater discharge. Assuming that Council services can handle industrial discharge, without clearly stating predicted water quality characteristics would be irresponsible.

There is no discussion on the effectiveness, or otherwise of DAF. The Proponent's reliance on a DAF treatment system (and intended deferred mitigation to the future development of Council wastewater treatment plant) demonstrates the absence of effective assessment and mitigation of a material risk and direct impact of the proposed development. In the absence of a robust discussion and assessment of the potential risks that microplastics present to human health and the environment, it is difficult to see how DPHI could have adequately assessed the likely impacts of the development. A summary discussion on effectiveness of DAF systems for microplastics is presented: [4] contradicting the effectiveness quoted by the proponent.

'However, different studies showed insufficient removal efficiencies of microplastics [19].Even in combination with flocculants and surface modifiers Wang et al. 2020 could only reach values between 68.9% and 43.8% for microplastic removal using DAF [20]. Microplastics can consist of a multitude of different types of polymers with different properties and surface chemistries. These can have a strong influence on the interaction of flocculants and microplastics and make finding suitable flocculants even more challenging [https://www.mdpi.com/1017768]'

In summary, these deficiencies in addressing critical aspects of water quality, air quality, and operational planning highlight significant gaps in the EIS. Without comprehensive assessments and accurate information regarding wastewater characteristics and potential environmental impacts, it is challenging to ascertain whether the proposed development can truly achieve its stated objectives regarding Sydney's drinking water safety.

1.1.4 SEARs – Lack of Compliance and Feasibility

The EIS exhibits further significant deficiencies in its compliance with the Secretary's Environmental Assessment Requirements (SEARs) and the *Environmental Planning and Assessment (EP&A) Regulation 2021*. The SEARS required that the EIS must contain "*a description of the existing environment, using sufficient baseline data".*

The SEARs specifically requested comprehensive details regarding the waste stream inputs for this development. However, the proposal fails to provide sufficient information to meet this requirement. The lack of thorough data on waste stream inputs represents a significant gap in the EIS, hindering a full assessment of the project's environmental implications and operational feasibility. This omission again raises concerns about the proposal's compliance with the SEARs and its ability to adequately address potential environmental and operational challenges associated with the waste processing facility.

[4]https://www.mdpi.com/1017768 - **Removal of Microplastics from Waters through Agglomeration-Fixation Using Organosilanes—Effects of Polymer Types, Water Composition and Temperature**

The proposal's reliance on modelled available feedstock figures and projections raises significant concerns about its commercial viability and overall feasibility. The application states that it will recycle 86,000 tonnes of plastics annually, as outlined in the MRA Plastics Feedstock Study (Table 9.1). However, these figures and the methodology used to produce them have not been thoroughly examined, nor are they likely to represent actual measured amounts. This lack of scrutiny poses a risk for the Department in approving a proposal without a comprehensive assessment of its commercial viability.

Table 9.1 Feedstock distribution

Source	Estimated available plastic feedstock supply (tonnes per year)[1]	Proportion %
Mixed plastic material produced by large NSW MRFs	16,500	19%
Mixed plastic material produced by small and medium sized processors of mixed plastic	10,200	12%
NSW Plastic segregators	19,680	23%
Commercial plastic waste collections	40,000	46%
Total	**86,380**	**100%**

1. Source: MRA Consulting, 2021. Plastic Feedstock Study

Furthermore, the proposal draws on the *DPIE Waste and Sustainable Materials Strategy 2041* (Infrastructure Needs Report)[4a] to justify its projected total recycling capacity. However, the report's assumption that 420,000 tonnes of plastic waste from NSW *can* be recycled is just that – an assumption.

The SEARs have requested a calculation of the Capital Investment Value (CIV) for the development, which should include all costs necessary to establish and operate the facility. However, it remains unclear whether the information provided for the CIV is accurate. According to the Planning Circular on CIV, "the development the subject of a CIV calculation must be capable of accurate identification so that the CIV can be determined with reasonable certainty."

Several critical questions arise regarding the costs associated with the proposal's operation and viability. These include whether Plasrefine has guaranteed supply or contracts for all 86,000 tonnes per annum of plastic waste, and how they plan to make up the shortfall to reach their stated 120,000 tonnes per annum capacity.

Moreover, the proposal's impact on the existing market structure is uncertain, potentially creating a monopoly and impacting the 18 processors identified in the MRA report. Additionally, it's crucial to understand whether Plasrefine has guaranteed demand for the products it intends to produce and if the company will be relying on government grants for its proposal.

Given that Plasrefine appears to have never operated a facility of this type in Australia, due diligence should be conducted on the company and its track record. It seems unlikely that a company without experience operating a facility of this scale and type in Australia, and with limited information on input supply, would successfully obtain government funding. These factors collectively underscore the need for a more thorough assessment of the proposal's feasibility and potential market impacts before any approval is granted.

1.1.5 Bush Fire Prone Land

Stated in “Agency Input” DPHI received correspondence from the NSW Rural Fire Service (RFS) on October 8, 2020, it was noted that the RFS raised no objections to the proposed Moss Vale Plastics Recycling Facility. The RFS indicated that no specific conditions were necessary to address potential bushfire risks since the site is not classified as bushfire-prone land. For further inquiries regarding this correspondence, individuals were directed to contact NSW RFS. Additionally, GHD's David Gamble asserted that *"this is not bushfire-prone land."* However, these assertions are fundamentally incorrect. Protocols dictate that a report should have been prepared to explain why the land was not classified as

bushfire prone. A basic search of the RFS website reveals that the land in question is indeed included in the Bushfire Prone Land maps [image 1.0]

The DPHI is required to ensure that all relevant matters, including bushfire risks are thoroughly assessed under *Section 4.15 of the Environmental Planning and Assessment Act 1979 (EP&A Act)*. However, the current proposal does not adequately address these critical considerations.

The EIS fails to include a detailed bushfire risk assessment, which is essential for evaluating the potential impacts of the development on both the site and surrounding areas. Without this assessment, it is challenging for the IPC to determine whether the development can be conducted safely and sustainably in a bushfire-prone area. The lack of specific information regarding existing vegetation, topography, and other factors that influence bushfire behaviour further complicates the evaluation process.

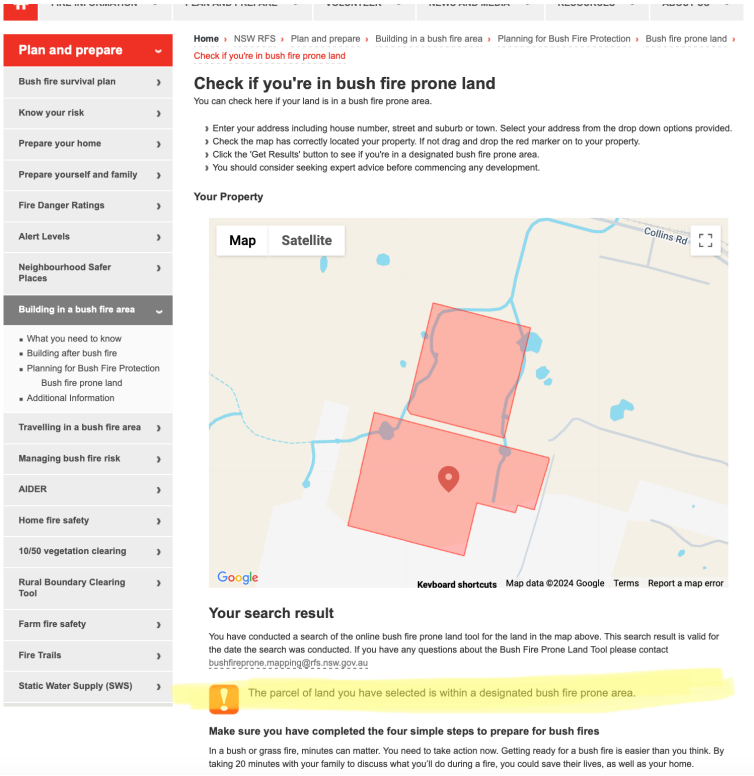

Image 1.0

The implications of this oversight are serious, as they suggest a lack of due diligence in assessing potential hazards associated with the proposed development. Given that bushfire risks are a critical consideration in planning and development processes, it is essential for regulatory authorities to ensure that all relevant assessments are conducted thoroughly and transparently. The failure to adequately address these concerns may jeopardise not only the integrity of the development proposal but also the safety and well-being of surrounding communities.

[4a] https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/recycling/nsw-waste-and-sustainable-materials-strategy-2041.pdf https://www.asbg.net.au/attachments/article/583/NSW-Waste-and-Sustainable-Materials-Strategy-A-guide-to-infrastructure-needs(1).pdf
Image 1.0 - https://www.rfs.nsw.gov.au/plan-and-prepare/building-in-a-bush-fire-area/planning-for-bushfire-protection/bush-fire-prone-land/check-bfpl

1.1.6 Principles of Ecological Development (ESG)

The EIS for the proposal raise significant concerns regarding its alignment with the principles of **Ecologically Sustainable Development (ESD**) S1.3 (of the EP&A Act), particularly in light of its proposed 25-year operational life, the intentional generation of Microplastics and fire risk. The principles of ESD, as outlined in the *Environmental Planning and Assessment Act 1979 (EP&A Act) and the Protection of the Environment Administration Act 1991*, emphasise the need for sustainable practices that consider environmental, social, and economic impacts.

One critical issue as previously mentioned is the **absence of quantification of the potential risks associated with microplastics** to human health and the environment. The lack of a thorough assessment regarding how microplastics may affect human health (human health impact assessment) local ecosystems and drinking water sources undermines the **precautionary principle**, which is fundamental to ESD. Without clear data on these risks, it is challenging to determine whether the proposed development can be conducted safely and sustainably.

Additionally, there is a **notable absence of valuation regarding potable water demand**. The proposal indicates that it will utilise potable water sourced from town mains as part of its process water stream. Given that potable water is a finite resource within the local government area (LGA), this reliance poses a risk to the community's future water availability, potentially constraining progressive social development in Moss Vale.

The proposal also lacks a **valuation of energy demand costs**, which are critical for understanding the overall environmental impact of the facility. Without this information, it is difficult to assess whether the energy consumption associated with operating the facility aligns with sustainable practices.

Moreover, there is a **deferral of wastewater treatment costs** to future upgrades by the local council by way of a third party. This reliance on prospective upgrades raises questions about the adequacy of current wastewater management practices and their ability to handle the anticipated wastewater discharge from the facility. The absence of clear plans for managing these costs further complicates the assessment of long-term sustainability.

The **absence of valuation processes for immediate and long-term management of waste streams**, including end product disposal to landfill, is another significant concern. The proposal generates various waste streams, including substantial amounts destined for landfill, which will ultimately contribute to environmental degradation rather than promoting sustainability (see below 9.11) – total of 25,300t of waste annually and over 288,000KL of process water generated annually.

Table 9.11 Operational waste quantities

Material	Quantity (t/year)
Food waste	9.6
General waste	10.8
Recyclable material	10.3
Batteries	Minimal
Cleaning products (eg. lubricants, oils)	Minimal
Sewage	9.7 kL per day
Cleaning products (eg. lubricants, oils)	Minimal
Sorting	
Entrained non-renewable solid waste (such as stones, wood blocks etc)	10,000
Crushing and cleaning	

Material	Quantity (t/year)
Dewatered sludge (filter cake residue) from the wastewater treatment plant	9,000
Process wastewater	288,000 kL per year (total generated) Up to 10 kL per day (effluent, requiring disposal)
Exhaust steam	4,500
Extrusion and granulation	
Filter residue and waste filters	1,800

Furthermore, there is a **deferred evaluation of full costs associated with decommissioning** at the end of the proposed 25-year operational life. Without a comprehensive understanding of these costs, including financial, tangible, and intangible aspects such as emissions costs and materials cleanup, it is difficult to ascertain whether the development will provide net benefits over its lifecycle.

Lastly, there is an **absence of a net environmental benefit assessment** comparing proceeding with the proposed development against not proceeding. This evaluation is crucial for understanding whether the potential environmental impacts justify the development's approval.

Given these significant gaps in information and analysis, it is challenging to see how Plasrefine has provided sufficient data for any consent authority to fulfill its obligations under *Section 4.15(1)(b) of the EP&A Act* concerning ESD principles. The proposal does not adequately demonstrate that it will achieve sustainable outcomes or effectively mitigate potential environmental impacts associated with microplastics and resource consumption. Without addressing these critical issues, it remains uncertain whether the Plasrefine project aligns with ESD objectives or serves the best interests of both current and future generations.

1.1.7 Conditions for Granting Approval by the Consent Authority.

Conditions of consent that necessitate minor design modifications should be limited to adjusting only minor elements of the development. They should not be employed as a means to justify granting consent for a proposed development; rather, the merits of the development application itself and its suitability for approval should be critically evaluated. Furthermore, all conditions must be clear and achievable.

Draft conditions of consent must adhere to the DPHI *Guide to Writing Conditions of Consent (August 2024)*.

"Conditions cannot be used to redesign significant aspects of a proposed development. Generally, if the only way a development application (DA) can be approved is through the imposition of conditions that require significant changes or redesign, it may be necessary to consider whether to request further information before approving the DA or refusing the DA. Similarly, a condition should not be so onerous that it is effectively a refusal of the DA." [5]

Upon reviewing the draft conditions, several aspects raise concerns regarding their ability to effectively assess impacts or address necessary mitigations:

- B39 – Water Management plan

The applicant is required to prepare Water Management Plan;

Prior to the commencement of operation of the development, the Applicant must prepare a Water Management Plan to the satisfaction of the Planning Secretary. The Water Management Plan must form part of the OEMP required by condition C5 and must:

(d) include a commitment to ongoing monitoring and implementation of potential measures to reduce the level of microplastics in wastewater released to sewer;

The DPHI assessment of the proposal makes unsubstantiated assumptions about the wastewater treatment system's effectiveness in collecting microplastics. It estimates a 90% collection rate, allowing for a discharge of up to 40mg of microplastics per litre of wastewater to the sewer. With a daily wastewater discharge of up to 10KL, this could result in a total microplastic discharge of 400 grams per day.

The assessment fails to evaluate Wingecarribee Shire Council sewage treatment plant (STP) capacity to handle or remove this additional microplastic influx, or its potential impact on downstream receiving waters. Council's submission dated 5 November 2024 explicitly states that its STP lacks the capacity to remove microplastics, and the planned 2026 upgrade does not include provisions for such capability.

It is unacceptable for the proposal to impose an unassessed environmental impact on a third party, in this case, the Council, with the expectation that the third party will manage the Proposals pollution effects. This approach undermines the integrity of the environmental assessment process and raises significant concerns about the project's potential environmental impacts.

The practical implementation of **B39** is limited due to the lack of meaningful regulatory performance criteria concerning microplastics.

- B43 – Air Quality Discharges

The applicant is required to install and operate equipment following best practices to ensure compliance with all load limits, air quality criteria, emission limits, and monitoring requirements as outlined in the Environmental Protection Licence (EPL) relevant to the site. The installed equipment must also be capable of retrofitting or upgrading.

The practical implementation of **B43** is limited due to the lack of meaningful regulatory performance criteria concerning microplastics, despite their explicit mention in **B44**.

- B44 – Air Quality Management Plan

  (b) detail and rank all emissions from all sources of the development, including particulate emissions ***and microplastics***.

  (c) identify the control measures that will be implemented for each emission source

The proposed conditions **B39** (Water Management Plan) and **B44** (Air Quality Management Plan) are legally problematic due to their inherent illogicality. The primary issue lies in the deferral of critical considerations:

- Risk assessment
- Management measures
- Discharge limits

These crucial elements are postponed until after project approval and construction, specifically just before the facility becomes operational. This approach creates an unlawful uncertainty regarding the implementation of control measures, if any, as the facility will already be constructed by this point.

[5]https://www.planning.nsw.gov.au/sites/default/files/2023-03/guide-to-writing-conditions-of-consent.pdf

This is further exacerbated by several key omissions:

- Absence of baseline data
- Lack of discussion on human health and environmental risks associated with microplastics
- No consideration of microplastics potential to amplify other pollutant risks
- Insufficient explanation of the Proponent intended practices or technologies for managing and minimising microplastic discharge
- Absence of proposed discharge limits

This deferral of critical assessments and decisions until after construction significantly undermines the effectiveness of the environmental impact evaluation process, fails to adhere to the *Guide to Writing Conditions of Consent (August 2024)* and potentially compromises the ability to implement necessary safeguards.

The draft conditions suggest that DPHI acknowledges the social and environmental risks linked to microplastics. However, any serious evaluation of the potential impacts stemming from the proposed development has been postponed by designating the assessment and control measures as part of the Air Quality Management Plan (B44) and Water Management Plan (B39). Additionally, DPHI has overlooked the lack of regulatory performance criteria regarding water quality discharge and accumulation in biological environments, failing to recognise similar gaps in consideration and certainty within the EIS.

It is also noted that during Day 3 of the IPC Public Meeting (online), the DPHI representatives stated:

Mr Chris Ritchie*…"but our conditioning will be saying that only while those doors are closed can the site be operating. So, from a noise impact, from an air impact, because they have to be shut while it's operating"*

This statement is misleading and not specifically included in the recommended conditions of consent and only provides: **B44 - (d) identify the control measures that will be implemented for each emission source including keeping all doors shut when not in use.**

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2. Adequacy of the Assessment

2.1 Project Description with Justification Gaps

The project description presents several critical shortcomings that must be addressed to provide a comprehensive understanding of the proposed development's impacts and sustainability.

Firstly, the project fails to account for the full life-cycle implications of the proposed activities. While it is framed as a solution for diverting waste plastic from landfill, it is essential to recognise that recycled plastic products ultimately **cannot be recycled indefinitely**. This means that, although the immediate disposal of plastics is deferred, these materials will eventually end up in landfill. Thus, the assertion that recycled plastics are being diverted from landfill is **misleading**; it merely postpones their inevitable disposal.

Plastic recycling is often touted as a key component of the circular economy, but its effectiveness in achieving true circularity is debatable. While recycling plastic can contribute to resource conservation and waste reduction, several factors limit its role in a truly circular economy, such as quality degradation, contamination, energy intensity and market uncertainties.

While plastic recycling can play a role in reducing waste and conserving resources, it falls short of true circularity, while plastic recycling contributes to circular economy principles, it is not a complete solution.

True circularity requires a more holistic approach that addresses the entire lifecycle of products and materials.

Additionally, there is insufficient justification for the proposed functional life of 25 years for the development, particularly when the plant and infrastructure are projected to have an operational life of 50 years. This discrepancy raises questions about the rationale behind such a timeline and suggests a lack of planning for the eventual decommissioning of plant and equipment. The potential loss of resource recovery after just 25 years, without an associated valuation or strategy for decommissioning, presents a significant oversight. (EIS section 7.6 p7-24)

The calculations related to waste stream management may also be misrepresenting water consumption requirements. Current references indicate that recycling facilities typically use approximately 3.48 kg of water for every 1kg of recycled plastic processed. With an anticipated output of 120,000 tons of recycled plastic per year, this translates to a staggering water requirement of around 417,600 kilolitres annually, not the quoted 288,000KL —far exceeding the estimated wastewater generation. This discrepancy suggests a potentially greater demand for potable water to supplement process needs, particularly in drought conditions or periods of low rainfall. Therefore, independent verification of both water demand and wastewater generation impacts is essential.

Moreover, the EIS lacks an energy balance analysis for the project. Although it notes that recycling plastics is generally less energy-intensive than producing virgin plastics, recycling remains an energy-demanding process. The anticipated energy requirements for the site could necessitate additional infrastructure for transmission and supply, leading to indirect impacts that may have their own direct consequences.

Finally, the project description does not adequately identify or quantify the nature and scale of microplastics/nanoplastic generation associated with the proposed activities. This omission is significant given the increasing concern regarding microplastics' environmental impact and their potential effects on human health.

In summary, these gaps in project justification highlight critical areas requiring further investigation and clarification to ensure a thorough assessment of environmental impacts and sustainability considerations associated with the proposed development.

2.2 Noise Assessment Omissions

It remains uncertain whether the new access roads leading to the proposed development has been evaluated in accordance with the *Roads Noise Policy* or the *Noise Policy for Industry* (N/S Road and Braddon Road)[6]. Braddon Road is not an industrial collector road - it is a residential road.

Given that the proposed roads primary function is to facilitate access exclusively to the site and that Braddon Road is a residential road, it should be assessed under the *Noise Policy for Industry* rather than the *Roads Noise Policy*, which applies to public thoroughfares.

Traffic assessments in the EIS indicate that approximately 100 heavy vehicles per day will enter and exit the site based on projected plastic volumes; however, this figure has not been verified against anticipated traffic increases from nearby developments or other applications in progress, the truck numbers have not been considered in the conditions of consent only the amount of waste allowed(120,000t).

The noise and vibration assessment in the EIS only considers construction impacts and does not evaluate operational effects of vibration and noise on local wildlife, neighbouring residential or commercial properties from impacts associated with road use and truck movements within the site.

2.3 Water, Air and Assessment of Environment

As previously detailed the EIS documentation does not sufficiently identify, assess, or evaluate the potential direct and indirect impacts related to the generation and management of microplastics during its operation, particularly air and water.

Air quality impacts are of significant concern. The EIS indicates potential effects on nearby facilities but lacks accountability for air quality management and does not adequately model or monitor microplastics or other hazardous emissions such as PVC and dioxins. Given that 20,000 tons of PVC waste are expected to be processed, comprehensive assessments of persistent organic pollutants (POPs) should be included.

Finally, greenhouse gas emissions from the proposed facility are projected at 90,000 tons of CO2 equivalent annually—well above reporting thresholds under national guidelines—suggesting that this facility operates similarly to heavy industries traditionally excluded from such zoning areas.

2.4 Assessment of Direct and Indirect Impacts

The EIS primarily focuses on the direct impacts of the proposed development on the designated site, offering limited consideration of indirect and downstream effects. Indirect and downstream impacts encompass various factors, including product waste, especially microplastics, energy generation, supply and consumption, infrastructure provision, operation and maintenance, and greenhouse gas emissions. The assessment should consider all consequences that can reasonably be anticipated by the proponent of the development, regardless of whether these consequences are directly controllable by them.

Moreover, it is essential to include an evaluation of cumulative indirect and downstream impacts, particularly given that the proposed development is situated within the **Sydney Water drinking water catchment** area. Since the consent authority is obligated to assess both direct and indirect impacts, the failure to identify and evaluate these indirect impacts constitutes a significant deficiency in the current EIS documentation.

2.5 Ecologically Sustainable Development - Precautionary Principle

As previously identified in significant detail the EIS fails to adequately demonstrate how the principles of Ecologically Sustainable Development (ESD) have been considered and applied throughout the assessment and proposed development.

The DPHI has failed to adequately consider the principles of ESD in its assessment of the proposed development, resulting in significant deficiencies. Notably, the EIS does not sufficiently identify the risks and potential impacts associated with microplastic waste, which is a growing environmental concern. Furthermore, the assessment overlooks the full lifecycle of plastics, misleadingly framing the project as a means to divert waste from landfills when, in reality, it merely defers landfilling without addressing the long-term implications.

Additionally, there is a lack of comprehensive valuation and net environmental benefit analysis for the development that considers both present and future generations. This analysis should encompass critical factors such as resource demands, waste generation, and exposure risks associated with waste materials. The EIS also fails to address the potential for early decommissioning of the facility before the end of its operational life, which could lead to lost opportunities for resource recovery. Moreover, it relies heavily on local council infrastructure to manage its waste streams—both landfill and wastewater treatment—without adequately assessing whether these systems can handle the anticipated volume and type of waste generated by the development.

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[6] https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/noise/17p0524-noise-policy-for-industry.pdf

Overall, these shortcomings indicate a significant gap in applying ESD principles within the assessment process, raising concerns about the long-term sustainability and environmental integrity of the proposed project.

The EIS for the proposed development lack a comprehensive valuation and net environmental benefit analysis that considers both present and future generations. This analysis should encompass several critical factors, including resource demands, waste generation, and the exposure risks associated with waste materials.

The absence of this comprehensive analysis undermines the ability to determine whether the proposed development will yield a net environmental benefit or impose additional burdens on local ecosystems and communities. Without a clear understanding of these impacts, it is challenging to justify the project's approval in light of its potential long-term consequences for both environmental health and community well-being.

2.7 Alternatives and Options (Site Suitability/Justification)

The consideration for the alternatives and options in the EIS is deficient, and is required as stated in the ***State significant development guidelines – preparing an environmental impact statement Appendix B*** July 2022 (first published to the state significant development guidelines) where the following is required under the guidelines:

The consideration of alternatives and options in the EIS is inadequate, as required by the State Significant Development guidelines outlined in the "Preparing an Environmental Impact Statement" Appendix B, July 2022 (first published in 2021). According to these guidelines, the EIS must thoroughly evaluate alternative sites and options to ensure that all potential impacts are minimised, and that the most suitable location is selected for the proposed development.

"*This section should also include an analysis of feasible alternatives considered having regard to the objectives of the development, including the consequences of not carrying out the development. The analysis of alternatives should explain how the project has ended up in its current form, summarising the key alternatives that have been considered and rejected* ***(e.g. alternative ways of achieving the objectives of the development; and alternative sites, designs, mitigation measures) and the reasons why they were rejected.*** *Where features of the project such as the site location and layout have been finalised through a masterplan or Concept Development Application, these should not be analysed further in the consideration of alternatives."*

In Section 4, specifically subsection 4.1 on page 4-1 of the main EIS document, the discussion of alternative sites and options is limited to a brief statement (below). This cursory treatment fails to meet the comprehensive analysis required by the State Significant Development guidelines.

> Plasrefine Recycling initially considered locating the facility in Western Sydney. One of the parcels of land that was considered was part of the Aerotropolis zone. However, the existing zoning of the site did not permit the use, and the future objectives of the Aerotropolis zone did not appear to be consistent with the activity proposed. Another site was also considered, but a future motorway appeared to significantly reduce the land area available. On these grounds, both sites were rejected.

This superficial approach to evaluating alternatives undermines the thoroughness of the environmental assessment process. A robust consideration of alternative sites and options is crucial for ensuring that all potential impacts are minimised, and that the most suitable location is selected for the proposed development. The EIS's failure to provide a detailed analysis of alternatives raises concerns about the adequacy of the overall assessment and the project's potential environmental and social impacts, and therefore has not provided any consideration for the option of 'do nothing'

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[7] https://www.planning.nsw.gov.au/sites/default/files/2023-03/ssd-guidelines-preparing-an-environmental-impact-statement.pdf

Conclusion

In conclusion, the proposed Moss Vale Plastics Recycling Facility (SSD-9409987) raises significant concerns that warrant refusal. The assessment process and Environmental Impact Statement (EIS) exhibit several critical shortcomings, which impede any consent authority ability to reasonably and objectively demonstrate satisfaction of the obligations under section 4.15(1)(b) of the Environmental Planning and Assessment Act 1979.

These shortcomings include:

- Inadequate evaluation of microplastics and their potential environmental impacts on human health, water bodies, air quality, and ecosystems.
- Insufficient baseline data and analysis of existing environmental conditions, particularly regarding microplastic levels as required in the Secretary's Environmental Assessment Requirements (SEARs).
- Lack of comprehensive assessment of wastewater quality and potential contaminants, including the effectiveness of the proposed Dissolved Air Flotation (DAF) treatment system.
- Non-compliance with SEARs, especially concerning baseline data, waste stream input details, and commercial viability projections.
- Uncertainty surrounding the project's feasibility, including questions about supply guarantees, market impacts, and the companies experience in operating similar facilities.

These deficiencies collectively undermine the integrity of the environmental assessment process and raise significant doubts about the projects potential effects on the local ecosystem and human health. The proposals reliance on unsubstantiated recycling figures and projections further compounds concerns about its commercial viability and overall feasibility.

Moreover, the lack of thorough consideration for alternative locations and the inadequate addressing of potential land use conflicts with surrounding residential and agricultural areas highlight additional shortcomings in the proposals assessment.

Given these substantial issues, it is warranted that the Independent Planning Commission refuse the application as proposed. The IPC is urged to critically review both the Applicant's submission and the Department's evaluation, considering the outlined objections and ensuring that all legal requirements under the Environmental Planning and Assessment Act 1979 are met before any decision is made regarding the approval of this development.

The approval of this facility in its current form would set a concerning precedent for environmental assessment standards and potentially expose the local community and environment to unacceptable risks. It is crucial that any development of this nature undergoes a rigorous and comprehensive assessment process to ensure the protection of public health, environmental integrity, and the long-term interests of the community.