New South Wales Government
Independent Planning Commission

NAME REDACTED		**OBJECT**	Submission ID: 217807
Organisation:	*N/A*	Key issues:	*Social impacts,Land use compatibility (surrounding land uses),Traffic,Other issues*
Location:	*New South Wales 2557*		
Attachment:	*Attached overleaf*		

Submission date: 11/24/2024 7:47:02 PM

Please refer to my attached written submission dated 24 November 2024.

24 November 2024

Commissioners
Independent Planning Commission

Dear Commissioners

Objection to Moss Vale Plastic Recycling Facility – SSD-9409987

1 I wish to formally register my objection to SSD-9409987 (the **Application**) for the reasons outlined below.

Inadequate and inconsistent information provided to enable proper assessment of impacts

The facility will not be fully enclosed during operation

2 The Assessment Report prepared by the Department of Planning and Environment (**Department**) dated October 2023 makes multiple references to the operations of the proposed Plastic Recycling Facility (**PRF**) being 'fully enclosed'. The Department relies on this as a basis to substantiate many of its conclusions regarding the acceptability of the PRF's impacts. I refer for example to the following extracts from the Assessment Report:

- [138] on p. 32 – "*Noise and emissions: operations are to be carried out within enclosed buildings with automatic closing doors which would be oriented away from residential areas*"
- [140] on p.32 – "*Air quality, noise and fire management can be satisfactorily managed through the Applicant's proposed management and mitigation measures and conditions of consent. Further, the proposal will also be fully enclosed thereby minimising amenity impacts on nearby current and future businesses. This ensures the development will provide a satisfactory transition between the residential area and broader SHIP land.*"
- Table 9 on p.46 – "*All plastic recycling and processing activities would occur within enclosed buildings, with no plastic coming into contact with stormwater that is released offsite.*"

3 In respect of the PRF's noise and vibration impacts, the Department's assessment report recommends that "stringent" conditions are imposed requiring the preparation of a TNMP [Traffic Noise Management Plan] that "*ensures all doors are closed when not in use*" to "*ensure operational noise remains as predicted*" (Table 9 on p. 48). This reference to the doors being closed "when not in use" is perplexing in circumstances where the PRF is proposed to operate 24 hours per day, seven days a week and waste delivery and product dispatch (requiring the opening of the doors to enable vehicles to enter and exit) will be carried out between 7am – 6pm, Monday – Friday. The Applicant's Traffic Assessment modelled this as being 10 heavy vehicles (5 in 5 out) and 120 light vehicles (60 in 60 out) per hour or a total of 100 heavy vehicle movements (50 in and 50 out) and 280 light vehicle staff movements (140 in, 140 out) per day.

4 This reliance on the PRF being fully enclosed was repeated to the IPC by the representative of the Department, Mr Chris Ritchie (Executive Director of Energy, Resources and Industry Assessments) at the Public Meeting held 23 October 2024:

- [15] – *"As I noted earlier, there will be no traffic coming in and out of the site, no heavy vehicles apart from a shift changeover because obviously staff coming in and out at the start of a shift. The operations are inside. So once all the waste has arrived, the doors*

close, everything occurs inside and the noise assessment has shown that at night time there won't be impacts on the surrounding residents. We looked at that carefully."

- [20] – (addressing site suitability) "*… The thing that obviously we look at in terms of the proximity are a lot of it is aimed at amenity issues and one of the key things with the proposal is it is fully enclosed. So, in terms of managing air, in terms of managing noise and in terms of managing water, I mean the site will be a nil discharge. These are some of the aspects that you look at when you're in those sort of interface locations*."

- [40] – "*In terms of air quality, everything, as I mentioned, will be in an enclosed building. There will be hoods above machinery, collecting any emissions and it will be put through air pollution control devices to clean those*."

5 These statements in the Assessment Report and at the Public Meeting and the efficacy of the conditions proposed by the Department having regard to the same are totally undermined by contradictory information provided in the Application and by the Applicant. As the IPC is aware, the Applicant has confirmed that the doors to the PRF will be open at least 5-hours per day during normal operations.

6 When the Department was specifically questioned during the Public Meeting about the doors being opened for 5 hours per day, the response by the Department was one of surprise and in the first instance reference to "fast acting doors" was made by Mr Ritchie, presumably to infer that the doors would *not* in fact be open for a 5-hour period. To Mr Ritchie's surprise, the Applicant had already informed the IPC that the 5-hour period was calculated factoring in the use of fast acting doors and having regard to the PRF's proposed 24-hour operation and number of daily truck movements in and out of the facility. When pressed by the IPC as to whether the Department's assessment would change having regard to the PRF's doors being opened approximately 5-hours per day, the following response was provided by Mr Ritchie:

> *"I mean, generally from an acoustic point of view, the facility, I mean there* [SIC] *doors that will primarily be closed, 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 whilst it is operating, I would say that the outcomes of the assessment would remain that those criteria would be addressed….but in terms of the particular 5 hours I just want to take that away, take that on notice and look at that a bit more and come back to the IPC."*

7 Contrary to what Mr Ritchie indicated to the IPC, the Department's recommended conditions of consent do nothing more than require the preparation of an Air Quality Management Plan and Operational Noise and Vibration Management Plan that "*identify control measures that will be implemented for each emission source including keeping all doors shut when not in use*" (conditions B44 and B57).

8 Having regard to the above, the IPC cannot be certain that any of the assessment reports supporting the Application, nor the Assessment Report prepared by the Department, accurately reflect the true extent of the PRF's impacts or suitable management and/or mitigation measures that will render these impacts 'acceptable'.

9 The Department's representations in the Assessment Report that it has looked at this aspect of the proposal "carefully" ([15] of Assessment Report) is disingenuous given the Department does not appear to have even turned its mind to how long the doors of the PRF would be opened (in total) each day once operational. There is a flippant disregard indicated by the nature of the abovementioned response given by Mr Ritchie (extracted at [6] of this submission) for the likely serious and significant ramifications this matter may have on the conclusions reached to date in the Department's Assessment Report. What it tells us is the Department's assessment has not considered that, inherent to the nature and intensity of the PRF's proposed operations is the need

for the doors to be regularly opening and shutting such that the time they are open in total, is substantial.

10 It must be concluded, based on the Assessment Report and information provided on behalf of the Department during the Public Meeting, that the acceptability of a number of the PRF's amenity and environmental impacts, including noise, vibration and air quality impacts, have not been adequately assessed. The conditions recommended by the Department are similarly infected by the Department's ignorance as to how the facility would operate and its inability to be fully enclosed (to otherwise contain a number of significant impacts) whilst operational.

Impermissible deferral of mandatory consideration of impacts to post grant of consent

11 The Department's Assessment Report states (p.47) the following:

> *"The Department acknowledges the public's concern regarding microplastics in the environment, however, is satisfied these can be restricted to an acceptable level."*

12 The questions that must be asked include, what is this so called 'acceptable level' in the absence of baseline data being included in the Application? Who has assessed this level and deemed it to be appropriate and are they qualified to do so? This is particularly important when the Department's Assessment report states in respect of microplastics (p.46) that recommended conditions will:

> *"Require the Applicant to:*
> - *undertake final design of the WTP in consultation with the EPA*
> - *include consideration of new technology for the reduction of microplastic in wastewater"*

13 It is apparent that these conditions seek to defer consideration of impacts that are required to be considered by the consent authority *before* the grant of consent, to a later stage after consent has been granted.

14 The absence of baseline data in the Applicant's EIS (and amended / additional documentation) makes this approach particularly concerning. Despite such baseline data being a requirement of the Planning Secretary's Environmental Assessment Requirements (**SEARs**), no such baseline data has been provided in respect of the existing level of microplastics in the site's existing environment. It follows that the impacts of these on the environment cannot be measured and assessed.

15 In relation to the Applicant's opinion (provided by Dr Mark Bowman in a letter dated 30 October 2024) on the potential for the facility to release unsafe levels of microplastics into the surrounding environment being "*not significant*", it is telling that he does not comment on the existing level of such contaminants in the existing environment. It is also important to observe that his opinion is prefaced on a reliance on the "*design features of the facility, the proposed mode of operation and the appropriate and stringent regulatory controls that would be enforced during normal operations*," though he does not specify what these stringent regulatory controls would be nor who would enforce compliance with them.

16 I urge the IPC to undertake its own independent research on the effectiveness of the mitigation measures proposed to mitigate the impact of microplastic pollution associated with the PRF. By way of example, I refer to a relatively recent article published May 2023 in the *Journal of Hazardous Materials Advances* titled "*The potential for a plastic recycling facility to release microplastic pollution and possible filtration remediation effectiveness*". In summary, this study analyses the microplastic pollution generated by a case study PRF in the UK and determines the effectiveness of a filtration measure employed at the PRF, recommending technical and policy impact responses. It observed the following:

"*Plastic recycling facilities (PRFs) use processes whereby plastics are separated by type, broken down and granulated, and then pelletised for re-processing. The use of mechanical friction, abrasion, or equivalent methods to breakdown the plastics within these recycling processes may increase the MP concentration in the wash water volumes often used and subsequently discharged in these recycling processes (Altieri et al., 2021). The release of MP pollution in wash water discharge from plastic recycling facilities is significantly understudied and there is a research and knowledge gap in understanding how plastic recycling facilities may contribute to the environmental plastic pollution problem.*

…

Although there is increasing research on the effluence of MPs from point sources such as wastewater treatment plants (WWTPs), little is known on the creation of MP pollution by plastic recycling processes. No legislation or standard exists within the UK - the country of study - to control the release of MPs into the environment from controlled activities."

17 I also refer to the following publication in the National Library of Medicine (National Centre for Biotechnology Information) dated February 2024 titled 'Innovative technologies for removal of micro plastic: A review of recent advances'.[1] This review considered the effectiveness of the removal of microplastics by various wastewater treatment technologies, including by dissolved air floating device (**DAF**), being the system proposed by the Applicant to be utilised in its on-site Water Treatment Plan (**WTP**). In relation to DAF, the publication noted the following:

"*…*

The DAF method is a three-stage procedure that involves the separation of solid particles (flakes) that are suspended in a liquid medium (water) through the action of microbubbles of gas (air). These air microbubbles cling to the flakes' surfaces, amplifying the force exerted on them and propelling them upward, where the sludge collects for some time before being collected by the proper mechanisms on the floatation tank's surface. When coagulants are added, DAF has the potential to be an effective method for MP removal from wastewater [59]. Studies evaluating the efficacy of DAF in removing MPs under various circumstances, such as MP density, size, shape, and composition, have not been conducted. As a result, it is now difficult to provide correct and thorough observations for this technology's elimination of MPs. This is an intriguing research gap that should be investigated further."

18 In respect of microplastics, the Assessment Report at [106] states that "*…although microplastics are an emerging contaminant, currently there is no legislative requirement to manage the complete removal of microplastics in wastewater. Any industrial-scale source for microplastics should be addressed at the source rather than at the treatment site."*

19 The Assessment Report relies on the proposed description of the WTP given by the Applicant (at [46] on p. 15):

"*… process water from plastic washing activities would contain microplastics, however, the DAF system at the WTP would capture more than 90 % of the microplastic particles in dewatered filter cake. This filter cake would be taken to landfill as general solid waste and would not enter the environment. The remaining 10 % (up to 40 milligrams per litre (mg/l)) of microplastic particles would remain in the process water sent to sewer as trade*

[1] Nasir MS, Tahir I, Ali A, Ayub I, Nasir A, Abbas N, Sajjad U, Hamid K. Innovative technologies for removal of micro plastic: A review of recent advances. Heliyon. 2024 Feb 10;10(4):e25883. doi: 10.1016/j.heliyon.2024.e25883. PMID: 38380043; PMCID: PMC10877293.

waste (up to 10 kL per day at full operations). This level is well below Council's trade waste requirement for maximum total particulates of 300 mg/l."

20 This said, as highlighted above, the actual 'final design' of the WTP has not been confirmed and the Department has suggested that this will occur after development consent is granted. I submit that consideration of such matters are jurisdictional prerequisites to the grant of consent which cannot be deferred to the post approval stage. As it stands, the IPC has no certainty as to the efficacy of the WTP to be designed, how the impacts of microplastic pollution arising from the PRF may change the existing environment, nor whether it is capable of ensuring 90% of microplastic particles would be captured as indicated by the Applicant.

21 I submit that the Application and Assessment Report's approach to microplastic pollution in the context of the proposed PRF is totally inadequate to enable a proper assessment of these impacts as required by s4.15(1)(b) of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**) and fails to meet the requirements of the SEARs.

Disregard for the Principles of ESD

22 The Department's approach to the PRF's microplastic pollution impacts is inconsistent with the principles of ecologically sustainable development (**ESD**).

23 When looking for the Department's assessment of the PRF having regard to the principles of ESD, the only detailed comment the IPC will find constitutes two paragraphs at Appendix D (p.66) which provides:

> *"The development is consistent with the principles of ESD: as it would utilise industrial land for waste recycling reducing the need for natural resources to create new products.*
>
> *The development incorporates environmental safeguards and would promote social and economic growth by providing infrastructure and jobs. The development also incorporates ESD measures to reduce energy and water consumption including installation of rainwater tanks and solar panels."*

24 Having read The Honourable Chief Justice Preston of the NSW Land and Environment Court's publication on the Principles of ESD[2], it is difficult to understand how the Department appears to take the view that, in summary, all the development must do to satisfy these principles is:

(a) be on land zoned for general industrial use;

(b) be for the purpose of waste recycling;

(c) provide jobs;

(d) install some rainwater tanks and solar panels.

25 In the context of microplastics, an emerging global environmental concern, the precautionary principle would in my view provide that microplastics and their potential harmful effects should be restricted in the context of this Application, despite the absence of scientific certainty as to the nature and extent of what these impacts may be. This principle encourages measures to prevent possible harmful effects, even if definitive proof of damage has not yet been identified, where there is a risk of serious and irreversible damage. In my view the application of the precautionary principle to the PRF warrants refusal of the Application given:

[2] Including his paper on the Judicial Implementation of the Principles of ESD in Australia and Asia dated 21 July 2006

(a) the Application provides no accurate or complete assessment of the impacts of the PRF (many of the impact assessments having been tainted by the erroneous reliance on the facility being "fully enclosed");

(b) latest research is overwhelmingly indicating that there is clear evidence of harmful effects from microplastic pollution on a global scale, which includes "…*harm to wildlife, harm to societies and cultures, and a growing evidence base of harm to humans. Added to that is the fact that microplastics are persistent contaminants, and once in the environment they are virtually impossible to remove*"[3]

(c) the Application seeks to defer consideration of such impacts and how these will be effectively managed and mitigated until a later stage, relying heavily on there currently being no legislative requirement to manage the complete removal of microplastics in wastewater or other emissions to justify this.

Site unsuitable for development of the nature, scale and intensity proposed

26 Subsection 4.15(1)(c) of the EP&A Act requires the IPC to take into consideration the suitability of the site for the development. The Department summarises its approach to this mandatory consideration in its Assessment Report as follows (Appendix D, p. 64):

> *"The development is a resource recovery facility located on E4 General Industrial zoned land which is permissible with development consent."*

27 This response from the Department is a troubling oversimplification of the matters that go towards determining whether a site is suitable for development.

28 I submit that the IPC could not be satisfied that the site is suitable for the largest plastics recycling facility in Australia in circumstances where it would:

(a) be located within 220 metres of residential homes and other sensitive receivers, including childcare centres and the adjoining Garvan Institute of Medical Research Facility;

(b) be situated within the Sydney Drinking Water Catchment;

(c) generate microplastics through the physical, chemical and biological fragmentation of plastic, the environmental impacts of which are at this point in time not properly known and fully understood and the management of which is proposed to be improperly determined and confirmed following the grant of consent for the Application;

(d) have a development footprint which covers 77% of the site's area for no other reason than because this is what is required for the facility to operate at the scale and intensity proposed;

(e) involve, once operational, and conservatively, based on the Department's assessment report, 120 light vehicles (60 in 60 out) and 10 heavy vehicles (5 in 5 out) every hour, during both the AM and PM peak times during operations;

(f) be located on the fringe of the Southern Highlands Innovation Park (**SHIP**) Master Plan, the draft of which has been the subject of extensive community consultation and is currently on public exhibition and underpinned by a key objective of encouraging growth within the SHIP centred on suitable sectors such as the agribusiness and equine

[3] Richard C. Thompson *et al.*, Twenty years of microplastic pollution research—what have we learned?. *Science* 386, eadl2746 (2024). DOI:10.1126/science.adl2746

industries that are compatible with the environmental and aesthetic objectives of the region;

(g) be located within the proposed 'Research and advanced manufacturing' Precinct of the SHIP Masterplan, despite providing no evidence of how the proposed development will involve such research or advanced manufacturing;[4] and

(h) comprise two large, generically designed warehouses and three ancillary buildings standing just over 15 metres high, a design incongruent with the vision articulated in the draft SHIP Masterplan which seeks to provide opportunities for high quality architectural design that considers sustainable materials and processes, including timber and recycled materials that differentiates built form from a typical industrial shed.

29 For the above reasons, I believe that the Application should be refused.

Sincerely,

[redacted]

[redacted]

[4] Advanced manufacturing has been defined as the set of technology-based offerings, systems and processes that will be used to transition the current manufacturing sector into one that is centred on adding value across entire supply chains. Advanced manufacturers are companies that rapidly create or adopt these technologies - CSIRO, November 2016, Advanced manufacturing: A Roadmap for unlocking future growth opportunities for Australia https://www.csiro.au/-/media/Do-Business/Files/Futures/manufacturing/IndustryRoadmap_AdvancedManufacturing.pdf