New South Wales Government
Independent Planning Commission

FELICITY CADWALLADER		**OBJECT**	Submission ID: 218291
Organisation:	*Oxley College Parents and Friends Association*	Key issues:	*Social impacts,Visual impacts, design and landscaping,Land use compatibility (surrounding land uses),Traffic,Other issues*
Location:	*New South Wales 2576*		
Attachment:	*Attached overleaf*		

Submission date: 11/25/2024 2:15:21 PM

Our submission is attached.

Planning Commissioners
NSW Independent Planning Commission
By Website Upload

25 November 2024

Dear Commissioners,

Submission – Moss Vale Plastics Recycling Facility (SSD-9409987)

We are writing on behalf of the Oxley College Parents and Friends Association (the **Association**). The Association strongly opposes the proposed State Significant Development for the construction and operation of a plastics reprocessing facility in Moss Vale, with the capacity to process up to 120,000 tonnes of mixed waste plastic per annum and store up to 20,000 tonnes of mixed plastic (known as **Plasrefine**).

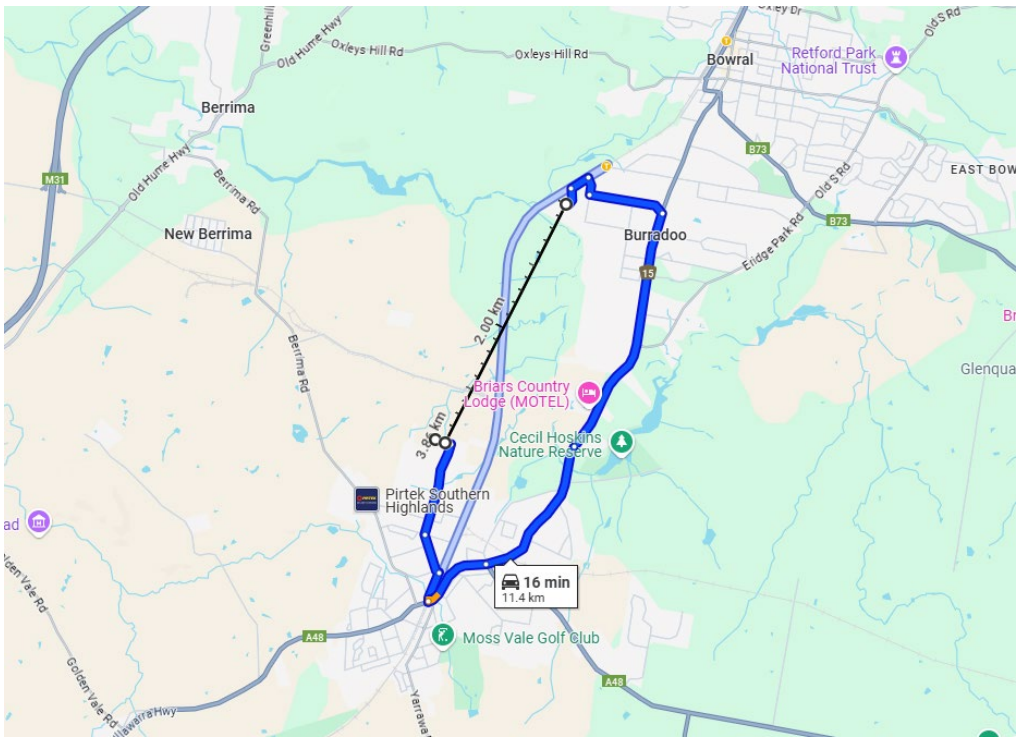
We refer to the case referral documents from the Department of Planning, Housing and Infrastructure (**Department**), including the recommended conditions of consent dated 10 October 2024 (**Conditions**) and the assessment report dated 10 October 2024 (**Assessment Report**).

Background

Oxley College (**Oxley**) is located at 11-29 Railway Road, Burradoo, which runs along the railway line and is a dead end street. Approximately **850** children from pre-K to year 12 and over **120** staff attend the school and the school has a substantial landholding, with established gardens and ovals. These children and staff come from all over the Southern Highlands, including Berrima and Moss Vale.

The Association is incredibly concerned at the location, size and nature of Plasrefine and the impact this facility will have on the health, safety and well-being of the children and staff who attend Oxley and Oxley's future enrolments.

Plasrefine would be situated only 3.8 kilometres from Oxley, as shown in the Google map below. Allowing an industrial facility of this scale and nature to be built and operated in such close proximity to our school, gives rise to unacceptable levels of risk of fire, pollution (including air, water, toxic smoke and microplastics) and increased truck movements during hours when our students and staff will be travelling to and from school.



We firmly believe that allowing Plasrefine to be built at this site will have a detrimental impact on the health and wellbeing of our students, staff and landholding and will potentially impact the current level of enrolments.

The Association **does not** agree with the Department's assessment that the environmental, health and social impacts of Plasrefine can be mitigated and/or managed to ensure an acceptable level of environmental performance, subject to the recommended Conditions.

Social impact

We refer to the Social Impact Assessment (**SIA**) as updated by the Social Impact Assessment - Addendum dated 17 January 2024 (**Addendum**). The SIA and Addendum sets out three study (or geographical) areas as a way of categorising potential impacts.

Under the SIA and Addendum, Oxley is considered to be part of the Secondary Study Area, being between 800 metres and 5 kilometres of the proposed site (**SSA**), see Figure 14 below from the SIA. Section 7.1.2 of the SIA sets out "key features" of the SSA - "*There are 146 residential properties within 1.2km of the site (GHD EIS January 2022). Most are contained to the south of the site to the Moss Vale town centre. Nearby sensitive receivers to the south of the site include Southern Highlands Early Childhood Learning Centre is located 935 metres south of the proposal site at 50 Beaconsfield Road, and has approximately 46 students and St Paul's Primary School at 18 Garrett St.*" These "key features" are misleading at best as they do not include reference to a number of additional schools and facilities captured within the SSA 5 kilometre radius, including Oxley. Further on, section 7.6 of the SIA outlines the true extent of the socio-economic nature of the SSA, including:

- 10 open space and recreation areas;
- 7 community and cultural facilities;
- 11 schools and educational facilities;
- 4 early childhood centres and
- 12 health and emergency services.

Figure 14 Primary and secondary study areas (800m and 5km radius)

Source: Ethos Urban

The "key findings" of the SIA note that "*In summary, the study areas are characterised by an **ageing population** and **lower than average socio-economic indicators**. Residents typically live in low density dwellings and home ownership is high. Households are typically characterised by couples with and without children, and lone persons*."[1]

The "key findings" of an ageing population do not match with the anecdotal evidence of the population growth of the Southern Highlands and due consideration in the SIA and the evidence presented to the Department and the Commission has not been given to social outcomes arising from COVID-19 and other socio-economic drivers, such as cost of living in capital cities, including private school fees.

For example, enrolments at Oxley since COVID-19 have shown a dramatic increase with an additional class added to most year groups in the junior school since 2021, including a new pre-K class. It is our experience that there has been a considerable increase in the number of families in the Southern Highlands region since COVID-19. This has not decreased since the lifting of restrictions. Our experience is not reflected in the data presented to the Department or the Commission in the SIA or Addendum.

We also note that a significant number of new enquiries for enrolments (ranging from approximately 30-50%) come from families looking to relocate from the greater Sydney region.

We are concerned that the number of new and current enrolments would be adversely affected by the proposed facility, given its close proximity to Oxley and that families move to the Southern Highlands to escape pollution and heavy industry, not to move closer to it.

[1] Page 53 of the SIA, as defined.

The Plasrefine proposal also includes facilities to enable educational activities for school groups and other interested parties to learn about plastic waste, plastic recycling and turning waste into valuable resources, which is also listed as a "potential positive social impact" in section 5.1 of the Addendum. The Association would not support educational activities for school groups from Oxley at Plasrefine in its current location or with its current design and associated risks.

Fire risk

Consent conditions A6 and A7 allow Plasrefine to process up to 120,000 tonnes per annum of mixed plastic matter and store up to 20,000 tonnes of unprocessed mixed plastic waste on the site at any one time.

This would typically include mixed plastic waste, comprising polyethylene terephthalate (PET bottles), high density polyethylene (HDPE bottles), polypropylene (PP bottles), acrylonitrile butadiene styrene (ABS), unplasticised polyvinyl chloride pipes (UPVC) and low-density polyethylene films. In addition, there will be an undisclosed volume of processed plastic product and an undisclosed quantity of unidentified chemicals used in processing stored at the proposed site.

We understand that the proposed site of Plasrefine may be located in designated bush fire prone land and as shown in the google map above, the land between the proposed site and Oxley is mostly undeveloped rural and grass land.

The Southern Highlands has seen first-hand how quickly fire travels during dry, hot and windy summers and the proximity of the proposed site to Oxley is incredibly concerning to the Association. This is particularly so, given that we all know that one cigarette butt out of a car window can result in an uncontrollable grass fire.

Can the Department and the Commission assure the community that a plastics fire can be effectively prevented, or even contained and extinguished, by any number of conditions imposed on Plasrefine, given the nature of the material, the lack of appropriate buffer zones and the lack of appropriate fire-fighting resources in the Southern Highlands?

Further, though Fire and Rescue NSW has advised that any toxic smoke from a prolonged fire at the development would "rise directly upwards", reducing the risk of impacts on the Garvan Institute[2], we take no comfort from this. Having experienced the strength of the winds in the Southern Highlands and noting the extensive lockdown zones of fires at other plastic recycling facilities (for example at Deer Park in 2024 and Keysborough in 2023), we consider Oxley's inclusion in the SSA to be concerning.

We need to know, as caretakers for our school and our children, what damage can a fire fuelled by 20,000 tonnes of stored mixed plastic waste result in?

We consider that there is a real risk that any fire at Plasrefine could potentially require the evacuation or lockdown of Oxley and its student and staff and / or risk the exposure of its student and staff to unacceptable levels of smoke or pollution from a fire involving plastics and chemicals.

There is no consent condition that the Department can impose or level of filtration measure that could prevent the toxic substances stored on the site from entering the surrounding air and waterways during a fire event. In its recent lawsuit against ExxonMobil, the State of California has

[2] Page v of the Assessment Report.

noted that “significant health harms to communities can result from fires fuelled by plastic waste”.[3] Oxley is of sufficient nexus to the site to render this of real concern to the Association.

We are concerned that the Department’s assessment of fire risk appears to be incomplete and to lack proper analysis and assessment of the likelihood of an incident, the environmental and community impact and the local emergency response capability.

Pollution - microplastics

Plastics recycling has recently been discovered to be a major source of microplastics pollution, both in the surrounding air and waterways. We know from recent research that microplastics accumulate in every human organ, with the brain being worst affected. Furthermore, microplastics can carry PFAS forever chemicals.

Plastics comprise thousands of different chemicals – more than 13,000 according to the United Nations – with more than 3200 of them known to be hazardous to human health.[4]

Microplastics are typically defined as fragments of any type of plastic less than 5mm in length. Nanoplastics are a type of microplastic that are even smaller in size, usually between 1 and 1000 nanometres.

Plastics recycling is a significant source of microplastic pollution (see below), with Australian researchers estimating that between 620,000–3,200,000 tonnes of microplastics may have been unintentionally generated by recycling globally.[5]

One recent study found that during the plastic recycling process, respirable airborne microplastics can exceed 1 million particles per cubic centimetre, making recycling facilities a potentially dangerous environment for workers.[6]

Sections 5.6 and 5.7 of the SIA sets out the risks associated with plastics pollution, including that *“There is evidence that plastic processing facilities such as recycling plants can contribute to microplastic pollution. A study conducted by Guo et al. demonstrated the prevalence of microplastic pollution caused by plastic bottle recycling facilities, which was being ejected into the local environment through wastewater.”*

Section 5.6 of the SIA notes that there are a number of potential sources of microplastics entering the environment from plastics recycling processes, including those shown in figure 13 of the SIA, as extracted below.

[3] https://oag.ca.gov/system/files/attachments/pressdocs/Complaint_People%20v.%20Exxon%20Mobil%20et%20al.pdf
[4] https://www.unep.org/resources/report/chemicals-plastics-technical-report.
[5] Stapleton, Michael J et al. “Evaluating the generation of microplastics from an unlikely source: The unintentional consequence of the current plastic recycling process.” *The Science of the total environment* vol. 902 (2023): 166090. doi:10.1016/j.scitotenv.2023.166090.
[6] Swinnerton, S et al. “The emission and physicochemical properties of airborne microplastics and nanoplastics generated during the mechanical recycling of plastic via shredding.” *Scientific reports* vol. 14,1 24755. 21 Oct. 2024, doi:10.1038/s41598-024-73775-0.

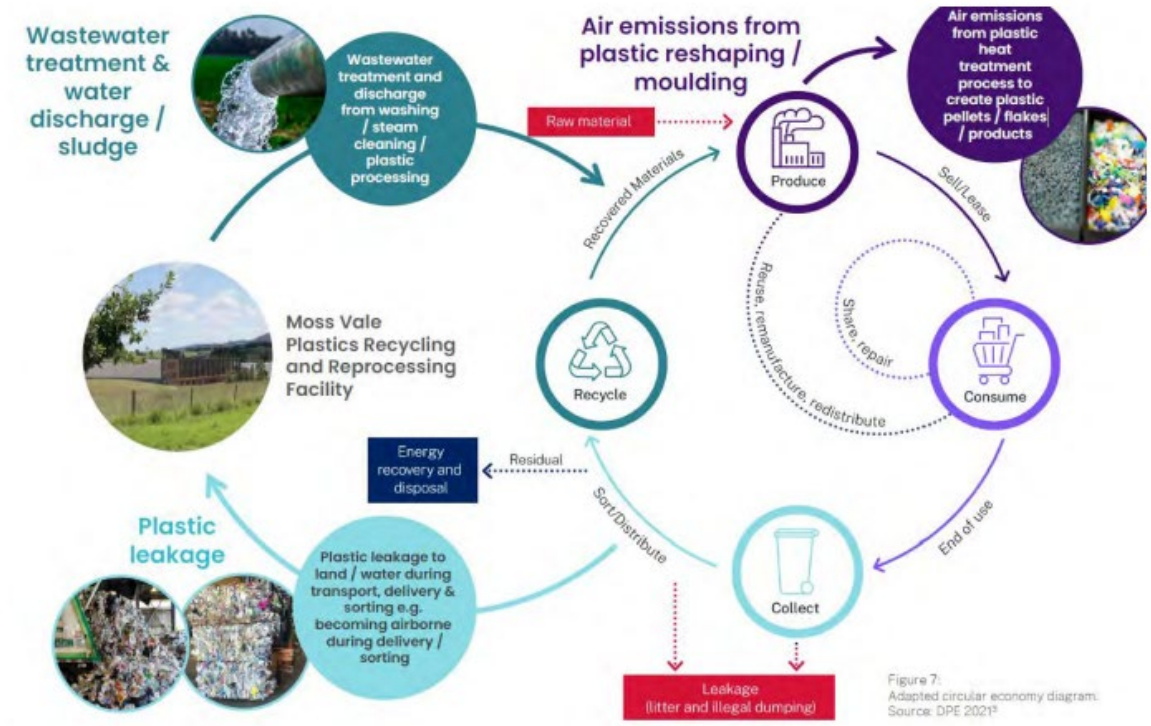


Figure 13 Adapted circular economy diagram

Source: dsquared/DPE 2021

Section 5.6 of the SIA then states that "*Notwithstanding, the project has measures in place to prevent microplastics escaping to air and water."* This seems contradictory to the scientific evidence presented by the SIA and other recent studies, as listed above. It is not clear whether there is any mitigation measure that can prevent microplastics from escaping to air and water from a plastics recycling facility such as Plasrefine and for that reason, the location of the site in the SSA is unacceptable, and certainly Plasrefine has not adequately demonstrated this in the project documentation.

The Wingecarribee Local Council also objects to the Plasrefine development and states that the Moss Vale Sewage Treatment Plant has no specific element capable of removing microplastics.[7] The Council states that the development "will inevitably result in a subsequent increase in microplastics making their way into the environment in treated effluent which is wholly within the Sydney Water Drinking Catchment".[8]

In short, there are significant hazards arising from plastics recycling – many of which scientists are only just beginning to understand. As such, Governments need to be extremely judicious about where plastics recycling facilities are located.

Crucially, they should be adequately distanced from residents and waterways. In the absence of clear data, we believe the application of some form of precautionary principle must be applied when the health and wellbeing of children is concerned.

The Minderoo-Monaco Commission on Plastics and Human Health found that *"Infants in the womb and young children are two populations at particularly high risk of plastic-related health effects at every stage of the plastic life cycle. Because of the exquisite sensitivity of early development to hazardous chemicals and children's unique patterns of exposure, plastic-*

[7] https://www.wsc.nsw.gov.au/files/assets/public/v/1/plan-and-build/community-interest-items/wsc-submission-to-ipc-re-plasrefine.pdf
[8] https://www.wsc.nsw.gov.au/files/assets/public/v/1/plan-and-build/community-interest-items/wsc-submission-to-ipc-re-plasrefine.pdf

associated exposures are linked to increased risks of prematurity, stillbirth, low birth weight, birth defects of the reproductive organs, neurodevelopmental impairment, impaired lung growth, and childhood cancer. Early-life exposures to plastic-associated chemicals also increase the risk of multiple noncommunicable diseases later in life. ...Plastics' disproportionate impacts on children's health are seen in ... children who live adjacent to plastic waste disposal sites ..."[9]

We firmly believe that the Commission is not in a position to approve Plasrefine without a full assessment of the potential impact of microplastics on human health, local agriculture, food chains, nearby land uses, water catchments and water courses and the local community, including (given our inclusion in the SSA) Oxley.

Pollution and truck movements

The conditions permit Plasrefine to operate 24 hours a day and 7 days a week, with truck movements permitted between 7am and 6pm per weekday. During operation, waste products and plastic products would be dispatched by 19 m semi-trailer between 7 am to 6 pm Monday to Friday. The operational heavy vehicle route would be via the Hume Highway, Medway Road, Taylor Avenue, Berrima Road, Douglas Road, Collins Road, the new 'north-south' access road and Braddon Road.[10] Heavy vehicles include trucks up to 19 metres.[11]

The proposed route will include roads that families travelling to and from school will use, which in our view, leads to a material increase in the risk of accidents and air pollution caused by the increase in heavy truck movements, given the size and number of the vehicles permitted under the proposed consent conditions and the proximity of the site to Oxley.

Conclusion

For the reasons outlined above, the Association believes that the Commission should refuse the application as proposed. The Commission should, and the Department should have, applied the precautionary principle when there are so many:

- uncertainties associated with the proposed facility;
- young children and schools located within the SSA; and
- conditions and mitigations required to bring the proposed facility to an "acceptable level of environmental performance", conditions and mitigations which may, and probably will, ultimately fail.

Yours sincerely,

the Oxley College Parents and Friends Association.

[9] Landrigan, Philip J et al. "The Minderoo-Monaco Commission on Plastics and Human Health." *Annals of global health* vol. 89,1 23. 21 Mar. 2023, doi:10.5334/aogh.4056

[10] Page v of the Assessment Report.

[11] Consent Condition B23.