



**URSULA O'DWYER**

**OBJECT**

Submission ID: 217926

Organisation: N/A	Key issues: <i>Social impacts, Visual impacts, design and landscaping, Land use compatibility (surrounding land uses), Traffic, Other issues</i>
Location: <i>New South Wales 2577</i>	
Attachment: <i>Attached overleaf</i>	

Submission date: 11/25/2024 4:28:52 AM

*Please refer to attached document for my full written submission*

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# Objection to Plasrefine Development - SSD-9409987

## Ursula O'Dwyer

Dear Commissioners,

Thank you for your time, patience and for listening to our community's concerns - we really do appreciate it.

I spoke on Day 1 of the public meetings and I am so grateful for your thoughtful and considered questioning of the applicant and DPHI on Day 3 of the public meetings. Much information has been surfaced during that time, and our community has shown up in force from subject matter experts to local insights, to those of us who have spent considerable hours pouring over research material and proposal documentation so that we could put our best case forward and call out clear concerns and inconsistencies with the applicant's proposal and with DPHI's report, findings and recommendation for approval.

I have gathered my objections and grouped them by topic below but what you will see is that the key theme/issue that is present throughout each topic is **site Proximity**. The applicant and GHD or any future operator (should the facility be sold) could change or attempt to change many (but definitely not even close to all) of the objectionable items but what it **cannot change is it's proximity**: to residences, schools, daycares, the town centre, riparian zones, sensitive flora and fauna habitats and critically: Sydney, Goulburn and the Wingecarribee's drinking water catchment. As the famous real estate saying goes - *location, location, location*.

### 1. Site Suitability

The concerns regarding site suitability are many and varied starting from zoning and ending again with proximity.

**Zoning:** The land is zoned E4 General Industry - the fact this facility has been recommended for approval under this zoning is entirely problematic from the outset given the hazardous, toxic and combustible nature of the material being recycled and the chemicals used during this process. The zoning E4 allows for "resource recovery facilities" within its framework but what is not taken into consideration with plastics recycling is the nature of this waste or 'resource material'; or the types of hazardous chemicals stored onsite and used at scale, to process this

waste. The Southern Highlands community argues that this facility should not be considered as a “resource recovery facility” given its use case and the nature of the material or be approved as E4 general industry - it should be classified as E5 heavy industrial/hazardous industry. Based on my extensive reading of all GHD and Plasrefine documents, it seems that this industry label of E4 has been self-appointed by the applicant and not by any external body - finding a loophole and exploiting it if you will. To quote a [2022 article from The Atlantic](#) written by Judith Enck (former USA EPA regional administrator) and Jan Dell (chemical engineer) “The problem with recycling plastic lies not within the concept or process but with the material itself.”

This site does not have *any* buffer zone between itself and the drinking water catchment, residences, centres for children to learn and play in, and endangered species habitats. There are safer sites for a proposal such as this to be located - Parkes Brightmark site as an example, where there is kilometres of buffer zone and it is not anywhere near a drinking water catchment.

Australia implements its obligations under the Basel Convention through the Hazardous Waste (Regulation of Exports and Imports) Act 1989. Due to the fact Plasrefine will be accepting already ‘baled’ plastic waste from a series of contracted waste partners it is impossible for them to guarantee that there will be no overlap between regulated waste plastics and ‘hazardous waste’ as defined in the Hazardous Waste (Regulation of Exports and Imports) Act 1989. There is an unacceptable margin of error for contamination here given the sensitive nature of the land, its proximity to residences, and the water catchment, that it cannot be allowed to be approved.

As Susan from the Wingecarribee shire council stated in her speech(es) - just because you technically could approve this facility under this zoning does not mean that you should - given the site is located in a significant water catchment, further scrutiny is required and common sense applied (and I trust you have this in spades).

## **2. Microplastics and PFAS Potential Impact**

In the EPA’s most recent paper ‘[NSW Plastics: The Way Forward](#)’, there is acknowledgement that “plastic is an inherently ‘problematic’ and harmful material containing thousands of chemicals such as plasticisers, pigments and flame retardants, as well as PFAS and PFAS - all of which have now *well known and documented* hazardous properties such as persistence in the environment, bioaccumulation in the body, and properties that may disrupt hormone function, damage the nervous system or cause cancer.” “As well as leaching chemical additives, microplastics can

concentrate and *transport other toxic chemicals (PFAS, PFOA), organic pollutants and heavy metals through the environment via 'hitchhiking' on their surface*. Research also suggests that microplastics may damage aquatic and terrestrial organisms, impact soil health and impede plant growth” “The chemicals in plastics and microplastics are also posing challenges to recycling and reuse, they can contaminate new products made from recycled plastics””To ensure we can **safely use** recovered materials and **protect our waterways, plants, animals and communities, we need to take a precautionary approach.”**

The above are all **direct quotes from the EPA’s paper from September 2024**. The EPA has proposed a series of proposed actions that include developing and publishing ‘green’ and ‘red’ lists of chemicals that are permitted or proposed to be phased out in plastic and non-plastic food packaging below certain tolerable risk thresholds, both by the end of 2027 - which demonstrates that the EPA’s research, regulatory frameworks and enforcement on this clearly hazardous material (and associated chemicals) is still evolving.

Again referring to the study “[The potential for a plastic recycling facility to release microplastic pollution and possible filtration remediation effectiveness](#)” in the Journal of **Hazardous Materials Advances** (please again, note the **hazardous**): even the use of filtration systems at a ‘state of the art’ plastic recycling facility in the UK could not adequately remove microplastics from waste water (see my previous submission from my speech), but “the results also revealed high levels of microplastics in the air around the recycling facility, with 61% of the particles less than 10 microns in size. Particulate matter less than 10 microns has been linked to human illness. This facility was a “best case scenario”, Brown said, given that it had made efforts to install water filtration while many other recycling plants may not.” Although GHD believes the communities concerns are predominantly about the waste/wash water - our concerns are also around the fact that they had confirmed that there would be a “low level of particulate matter” released from the “stacks” and ventilation vents, which as you pointed out Commissioner Milligan, would settle outside of the building. The community’s concern is that what in actuality has been found from other ‘state of the art’ recycling facilities globally is that even with the most advanced technology and filtration systems, that actually a high level of microplastics were found in the air and surrounding these facilities - which could very easily and quickly find its way into homes, and our waterways and drinking water supply. GHD continually states that the levels emitted will be ‘within EPA standards’ but the EPA is clearly still evolving their regulation and standard on microplastics. What happens when those microplastics settle on the ground and then heavy rain occurs? The riparian corridors 10m to each side of the facility will transport those microplastics straight into the Wingecarribee river, which flows downstream to Warragamba Dam, not to the Wingecarribee reservoir as GHD would have you believe from their proposal.

It is remarkable to me that DPHI did not pick up on the fact that according to GHD the Wingecarribee river runs the opposite direction? Perhaps another one of GHD's grand designs is that they will change the way the water flows?.....

The contempt that GHD has for the southern highlands community is enormous. It is clear they believe we are imbeciles who will believe anything they say as they deliberately try to mislead us (and you commissioners) with their vagueness, changing opinions, ever changing plans, or their ridiculously definitive statements.

One of many examples like us is when Mr. Gamble stated that there was "no possibility of microplastics.. going outside" which was then contradicted as he confirmed that particulate matter would be emitted.

Another example: GHD provided email communications to the IPC citing Dr Mark Bowman's letter, "a renowned authority on PFAS in Australia' as an expert opinion on the matter of PFAS contamination risk. Firstly, Dr Bowman is clearly not an independent expert, he is an employee of GHD. Secondly, his opinion of negligible risk is totally reliant on the proposed controls and filtration processes (for both air and water) which in the study I have referred to above, have been found to be not as effective as described or anticipated by the operators.

Thirdly, Dr Bowman on the TalkingPFAS podcast (Episode 40 - PFAS in Australia) can be quoted verbatim: "it is fine to use a chemical that has been approved for commercial use but we need to ensure that unlike some of the challenges with PFAS where have been dispersively released and haven't controlled how we have used those chemicals that has been a key take-away. We need to really not let those chemicals out into the environment in the first place. It often doesn't matter what the chemical is. ***We don't want it in our drinking water. We don't want them in our food. We want to have safe, breathable air. We want to have safe drinking water and it is best to ensure that we are not releasing chemicals into areas that we are using for food and water***".

An absolute contradiction, no? This site is within agricultural & viticultural lands, and is **within the drinking water catchment for over 6 million people - areas that we use for food and water.**

Final example: During a community update briefing held by GHD and Plasrefine in May/June 2023, GHD tried to assure the community that this facility would be state of the art and using state of the art technology to ensure no contamination of the environment, air and waterways from microplastics. I asked the Mr. Gamble of GHD to confirm exactly what state of the art equipment and filtration systems they would be using at Plasrefine and how they would be categorically and markedly different and improved from the so-called 'state of the art'

technologies and filtration systems used at the unnamed 'State of the art' facility in the UK which was the subject of the study in the Journal of Hazardous Materials Advances. Mr Gamble then could not answer my question except to say that he *thought* it would be carbon filtering, but that he did not know exactly. I was shocked and horrified by this answer and by the fact that the principal technical advisor for a proponent who has no history in Australia of plastics recycling, could not answer this simple question. I asked GHD and Mr. Gamble to take this question on notice and advise of the exact differences in their proposed technologies are, and what marked improvement in the technology is that would mean that the same contamination would not occur in this case. I have received no answer to this question to this day. There are over 10 community witnesses to this interaction, that would be happy to write an affidavit confirming this interaction.

Approving a plastic recycling facility **within such close proximity (150m) to residences, schools, childcares (550m), riparian corridors (10m) that lead into our waterways and into the drinking water catchment for over 6 million Australians** would be premature and the fact that the DPHI has recommended this to be approved is quite frankly negligent. Please commissioners, I implore you to please heed the EPA's call to action to apply a precautionary approach and reject this proposal in this site.

### 3. The Recycling Industry

Plastic Recycling holistically is a fake environmental and business case - fabricated by industry executives to greenwash and avoid negative PR. It is inefficient, expensive and hazardous, and there is no real market or demand for recycled plastic meaning the industry itself, let alone this facility, is not commercially viable nor profitable without its dependance on extensive taxpayer subsidies (like the \$88M AUD grant in taxpayer dollars this facility is relying on). Recycled plastic itself is inherently far more toxic and risky than virgin plastics, and are mostly 'downcycled' or made into lower quality lower value products and so its uses are minimal at best. Plastic commonly absorbs not only toxic chemicals created in the recycling process, but also may have come into contact with toxic chemicals throughout its lifecycle. As environmental chemist Dr Charlotte Lloyd has stated, "the potential for a cocktail of chemicals, none of which will be removed by the recycling process" to be present in recycled plastics. Lloyd (2023) 'Toxins hidden in plastics are the industry's dirty secret - recycling is not the answer', The Guardian, <https://www.theguardian.com/commentisfree/2023/may/25/toxins-in-plastics-industrys-dirtysecret-recycling-not-answer> ; Rung et al (2023) 'Identification and Evaluation of (Non-)Intentionally Added Substances in Post-Consumer Recyclates and Their Toxicological Classification', Recycling, <https://doi.org/10.3390/recycling8010024>. Research has found that large quantities of microplastics are generated in the recycling process, and that, as a result, recycling centres are likely to be "a

major point source of microplastics pollution” (Suzuki et al (2022) ‘Mechanical recycling of plastic waste as a point source of microplastic pollution’, Environmental Pollution, <https://doi.org/10.1016/j.envpol.2022.119114>).

As such, it seems clear that the focus of recycling plastic from the Environment ministers (State and Federal), DPHI and the government at large is on the wrong area - we should legislate to reduce the use of plastic in the first place, and reduce manufacture, consumption and therefore plastic waste, rather than trying to hastily, sloppily, questionably, and dubiously push through this proposal as a corporate greenwashing box ticking exercise. For those in the state government (DPHI staff reviewing this proposal and providing recommendation for approval, as well as planning minister Scully and Environment minister Sharpe) who are supposedly “expert” in their field, an extremely alarming lack of critical thinking and common sense has been utilised or applied in this case. It reeks of desperation to meet a 2040 target (after a review found that the original 2025 targets were unlikely to be met), and of a ‘circular economy’ greenwashing PR move, rather than thinking or caring about the actual real life implications, especially ***given the proximity of this site to residences, childcares, schools, playing fields, significant riparian corridors, that flow into the drinking water catchment for over 6 million people.*** The DPHI report was full of typos, “DRAFT”, and the fact that they asked for details and further reports to be shared AFTER the proposal has been approved is appalling.

The Hon Penny Sharpe, State Environment Minister visited the site at 74-76 Beaconsfield Rd Moss Vale, on 30th Jan 2023 (less than one year ago) and verbally agreed that this was not the right site for Plasrefine nor any facility of this nature ***given its proximity***, yet she has allowed this proposal to be pushed through and has remained silent right when the community needed her voice of opposition most. This has absolutely destroyed community trust in the government, its ministers and their process. How can we “trust the process” (as premier Minns advised our community to do), as it is seemingly only there to support incompetent and/or self-serving individuals? Per the Australia Institute 2024 report - [Plastic Waste in Australia](#) - “If Australia is to turn the tide on plastics waste, more effective policies that reduce production and consumption are needed”.

#### 4. **Air Pollution**

I have already outlined my concerns with the efficacy of the filtration systems and ‘state of the art’ technology proposed by GHD and Plasrefine to manage the particulate matter (Microplastics) that will settle outside of the building, on the roof and surrounding land and riparian corridors. This area of Moss Vale is extremely susceptible to high winds as you have heard from many community members, and very regularly the wind is in excess of 90km/hr +.

The distance these airborne particulates could travel in a matter of minutes is immense, spreading into agricultural land and residences as far as east as Robertson, and north as Mittagong. This land is extremely rich agricultural land, with livestock, crop and other food produce and grapes for wine production filling these landscapes. If the particulates have PFAS, PFOA or other toxic chemicals 'hitchhiking' on them, these lands and their viability/prosperity will be impacted for generations. I will cover these potential impacts on the agriculture industry of our shire in a subsequent heading. Not to mention the tens of thousands of homes, hundreds of schools/childcares, businesses, outdoor playing fields/areas, native habitats, national parklands, and waterways.

This site specifically (and the highlands in general) also experiences prolonged and extremely heavy fog sometimes well into midday, which would undermine Fire and Rescue NSW's assessment that any smoke or emissions would "rise directly upward". What is the implication when there is heavy fog? The emissions would be suspended in the fog until it clears and then would be dispersed and settle on the ground further afield.

What goes up must come down - what about the particulates that do rise directly upward? They don't just disappear, they would be suspended in the air, moved with the wind before coming down and settling, or they may be suspended in the clouds, moving further and further afield until they are rained down on unsuspecting residents. We have a notoriously wet climate here in the Southern Highlands, with lots of cloudy and rainy days in our annual calendar. What does that mean for the spread of microplastics? **There are too many unknown and uncertain elements to the risk profile of this proposal on this very sensitive site so close to homes, waterways and agricultural lands.**

I'd like to now address the additional information provided to the IPC and Mr Ritchie from DPHI, regarding the roller doors. The fact this had not been addressed prior to the community's review and justified criticism is farcical and alarming, but the most recent update is also preposterous. I hope Plasrefine will be employing the likes of Daniel Ricciardo, as the speed and accuracy that they are proposing these enormous vehicles to move in and out of these roller doors is insane and would more than likely cause an accident. Large trucks cannot reverse that quickly in a safe manner even with the best drivers behind the wheel. GHD is again employing desktop analysis. It is unlikely that anyone working for GHD has ever had to reverse a B double, but they cannot brake quickly so doing any manoeuvre at speed is inherently dangerous. Respectfully the community insists they perform a feasibility study of this procedure, with *50 different* drivers so to ensure that they are not relying on the Daniel Ricciardo's of the truck transport world to prove their point - as in practice this process will take much longer than 30 seconds to reverse. They have also only provided times, but not speeds - I believe if they were



to articulate the km/h speed the trucks would need to use to manage these manoeuvres in the time allotted, it would be clearly considered unsafe.

GHD's assertion that their negative air pressure system will negate the westerly winds is also preposterous - They clearly have not been at the site on a windy day. They are reliant on this system to tick the box to say that the factory can continue operating regardless of whether the roller doors are open or not. If the facility had to cease operations everytime the roller doors were open, it would not be running for the majority of the day - the heavy industrial grinding and crushing machinery used in this type of facility cannot simply be turned on and off or paused on tens of occasions throughout the day. Mr. Ritchie stated during day 3 of the meetings that he was under the impression that the factory would stop operating when it was not a 'fully enclosed building' i.e. when the roller doors are open... It cannot be fully enclosed as they do not have an airlock. The only way to negate the westerly winds and remain 'fully enclosed' is to have the trucks reverse into an airlocked loading bay. This is not the case in this design, so I would argue that DPHI have fundamentally misunderstood the proposal and as such should have been rejected on those grounds alone. GHD are carelessly reliant on their substandard design and blatant misleading processes to tick their box. The only way to determine if it works is once the facility is already operational, and they are monitored after months or years of operation and the damage and contamination has already been done.

***This site and it's proximity is far too sensitive for this type of reckless, lackadaisical and thoughtless design when it comes to the hazardous nature of the material being processed.***

## 5. Water

I have covered a lot of my concerns already about microplastic contamination into the waterways, via the riparian zones and via the wind transporting the airborne particulates which would then settle elsewhere in the water catchment and other waterways in the area. I (and many others) have covered extensively that this site had 2 significant Riparian corridors on, that feed into Sydney's water catchment. The Southern Highland's drinking water ironically just won the prestigious 2024 IXOM best tasting tap water title for NSW and the ACT - presented by the Water Industry Operations Association of Australia (WIOA).

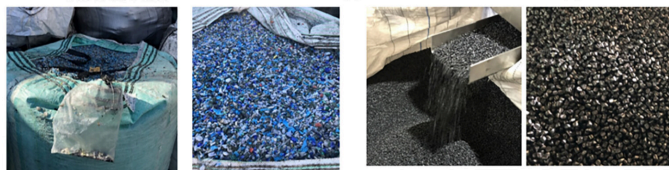
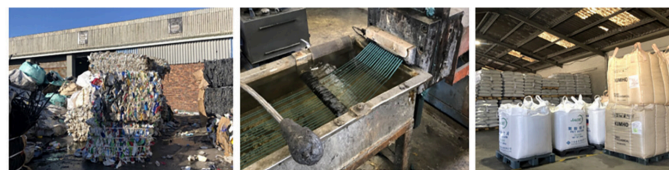
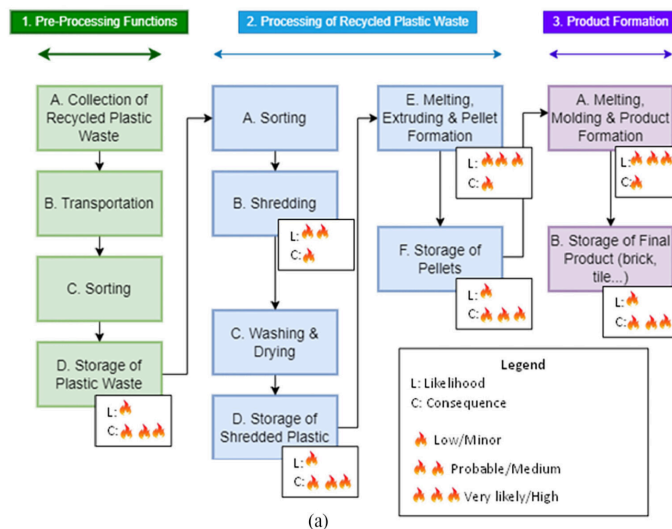
It is common human survival instinct and knowledge that to source purer water, you can find it at elevation or the mountains. Our Southern Highlands water is sought after, disproportionately contributing to the Warragamba Dam, but it is also bottled by Coca-cola for its Mt Franklin brand, and also bottled at the source by local company Alka Power - meaning our water is relied upon by locals, Greater Sydney, Goulburn and Nationally by consumers of those brands.

But I would also like to touch on the sheer volume of water that this facility requires to operate, and what the process will be during times of drought (and with the effects of climate change this could be a very real and very frequent occurrence). Will the facility be consuming water that local agribusinesses and residents need for its own requirements during times of drought? And how about the 'propriety' mix of chemicals that will be used to wash the plastic, and how it includes tea tree melaleuca oil - which has explicit warnings that it should not be discharged into drains, watercourses or into the ground...

I am honestly still so shocked that the DPHI has recommended this proposal to be approved, given the clear inappropriateness of the site and it's proximity to water and food production as well as to the water catchment and residences. It is not the right site for this type of facility - there are much more appropriate locations.

## 6. Very real Fire risk

As over 99% of Plastics are made from petroleum or are fossil fuel based, the material/product is inherently extremely flammable and combustible. There are major fire hazards identified in the plastic recycling process as seen in the figure below (From the Literature review and hazard identification relating to fire safety in



commercial plastic recycling facilities, <https://doi.org/10.1177/073490412311998>) which indicates both the likelihood and consequence of a fire in the different stages of the recycling process.

The risk of fire in a plastic recycling facility is truly a matter of *when* not if. And when a fire does break out, the Southern Highlands is woefully ill equipped to deal with the unfolding catastrophe. You have already heard about the fact that the Moss Vale fire station is unmanned, and that across the highlands there is only a total of 6 fire trucks, which is not nearly enough to battle a plastic factory blaze. There is also inappropriate access for the correct angle required to fight such a blaze once appropriate reinforcements arrive (50 mins-1 hr later from Campbelltown or Goulburn), due to the size of the building, nature of the type of blaze, and the riparian corridors next to the facility making it impossible for the firetrucks to actually get the right approach to attempt to combat the fire.

And what about the lives at risk? The nearest residences are 200m away. The employees and mice at Garvan institute would not be able to complete evacuation procedures in time. The amount of feedstock in the facility would create a severe inferno in a matter of minutes and there is no buffer zone. The hazardous chemicals stored on site would accelerate the fire and add to the toxic smoke cocktail blanketing the whole of Moss Vale and beyond. The second largest plastic recycling factory in the southern hemisphere, and the Southern Highlands doesn't stand a chance against the inevitable fire catastrophe. How many lives lost is too many? How much permanent damage done to health and the environment is acceptable?

And what is used by firefighters to try to extinguish this type of huge scale catastrophic fires?  
**PFAS Firefighting foam.**

[According to the EPA](#), The Protection of the Environment Operations (General) Regulation 2022 (the Regulation) bans and restricts the use of PFAS firefighting foam in NSW to reduce its impact on the environment, ***while still allowing its use for preventing or fighting catastrophic fires by relevant authorities and exempt entities***. The Regulation limits the list of 'relevant authorities' to Transport for NSW, fire brigades, rural fire brigades, community fire units and the Port Authority of NSW (section 146). The operational needs of these organisations require continuing access to PFAS firefighting foams to ***respond to high intensity 'catastrophic fires' involving combustible accelerants***. Combustible accelerants - Like thousands of tonnes of Plastic? Hazardous Chemicals? How about both!

This means that *when* a catastrophic fire occurs at Plasrefine, not only would it mean toxic chemicals and microplastics would be spewed into the environment impacting the direct local community for generations, but to add insult to injury - hundreds if not thousands of litres of

PFAS firefighting foam would be added to that toxic mix - and would then flow straight into the drinking water of 6 million people via the riparian zones.

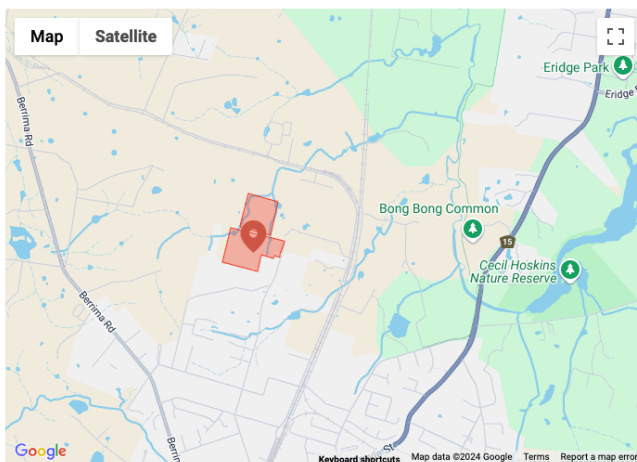
Finally, on Day 3 of the public meetings, David Gamble insisted that this site is not in Bushfire prone land. I think you'll find if you visit the [RFS website](#) to use their tool to 'check if you're in bushfire prone land', and type in the address in question - it will tell you it is in fact, within a designated bush fire prone land (see screenshot below). The fact I am not an expert in planning or fire or developments, and it took me 2 minutes and a quick google search to find this information makes me confident to state that the lack of due diligence performed by GHD, but more importantly by the DPHI is an absolute disgrace. The fact that the DPHI had months to review this proposal and seemed to not even be able to do the bare minimum, and have seemingly blindly recommended this proposal to be approved is spectacularly negligent and I truly believe that there should be an investigation performed on the department and the employees involved in reviewing this submission.

#### Check if you're in bush fire prone land

You can check here if your land is in a bush fire prone area.

- › Enter your address including house number, street and suburb or town. Select your address from the drop down options provided.
- › Check the map has correctly located your property. If not drag and drop the red marker on to your property.
- › Click the 'Get Results' button to see if you're in a designated bush fire prone area.
- › You should consider seeking expert advice before commencing any development.

#### Your Property



#### Your search result

You have conducted a search of the online bush fire prone land tool for the land in the map above. This search result is valid for the date the search was conducted. If you have any questions about the Bush Fire Prone Land Tool please contact [bushfireprone.mapping@rfs.nsw.gov.au](mailto:bushfireprone.mapping@rfs.nsw.gov.au)



The parcel of land you have selected is within a designated bush fire prone area.

Additionally, there is no evidence of the broadened scope and application regarding the additional special hazards in fire management for plastics recycling facilities that has been requested by Fire & Rescue NSW since 2022.

A 40mx70m building fire in Picton took 4 hours, many tens of firefighters, and the HAZMAT crew to bring under control. The size of that fire is miniscule in comparison to the 8 acres of building Plasrefine site. Also of huge concern to the community is the fact that for large scale Plastic fires, water is not sufficient to extinguish plastic infernos, and toxic PFOA fire fighting foam is required. This compounds again the health concerns related to PFOA/PFAS impacts on human health, by adding more toxic materials to the area and then the risks of it escaping into the Wingecarribee River via the 2 riparian zones on the site and contaminating the river and the Warragamba Dam.

The risk is totally unacceptable and the community finds it frankly diabolical that the State Government recommended this proposal for approval, on these grounds alone, let alone all of our other MANY and Various concerns and issues with suitability of the site.

Once again, The proposed site has absolutely No buffer zone surrounding it - appropriate sites like Parkes and Albury have at least 2 km buffer between the site and residential homes.

## **7. Impact on Garvan Institute**

Most of us have been impacted or know someone who has been impacted by a variety of diseases like cancer, asthma, heart disease, diabetes, mental illness and obesity. Due to this it would be remiss of me if I did not Briefly touch on the devastating impact Plasrefine would have on the critical medical research & mice breeding facility, the Garvan institute, should it be approved. The work being done at this facility is quite literally life saving and most/if not all medical breakthroughs that have been achieved in recent times has the quality of the work being done at this internationally recognised institute and the quality of the mice being bred here. Recently the construction of a local road's vibrations caused the deaths of all of the mice embryos, imagine the impact of the construction and ongoing operation of Plasrefine on the delicate mice breeding program.

The mice are extremely sensitive to noise, vibration and pollutants, none of which they would be able to escape given their **proximity** to this 24/7 heavy industrial facility, with heavy machinery crushing, pounding, grinding constantly; noise and light pollution 24/7, and ongoing exposure to toxic chemicals and microplastics. The Garvan Institute's entire prestige, quality of their mice product, and ability to continue to enable and support the life saving work hinges on this proposal being rejected.

Garvan has requested as part of their submission compensation for reputational damage and loss of revenue, but **what is the broader cost to the Australian public?** No further medical breakthroughs, significant delays in life saving treatments and clinical trials, inconclusive study or medical trial results as the mice were not pristine specimens to begin with due to their exposure to Plasrefine and the impacts it has on them. Imagine it is your loved ones waiting on the outcome of breakthrough medical research that is undermined or ceased due to either the scarcity or quality of the mice needed to complete the research. The impact it would have on Australian and international medical research is that it would change all the variables in the medical equations, creating unknowns and setting medical research back 100 years. We cannot jeopardise the amazing and life saving work that this facility does but putting a hazardous industry waste facility 30 metres away from it.

## **8. Impact on Endangered Wildlife and Native Flora and Fauna**

Platypus numbers are in decline, and they are now threatened with extinction. The Wingecarribee river is a known and protected habitat of Platypus in the shire. Over the past 30 years their habitat has shrunk by at least 22%, or about 200,000 km<sup>2</sup>, which is an area almost three times the size of Tasmania. Land-clearing, dams, Clearing of riparian habitat for urbanisation and agriculture, Poor water quality caused by urban and agricultural runoff, drought, bushfires and climate change — all impacts of human activity — are destroying critical habitat, leaving them with nowhere to go. To survive, platypuses need a safe habitat to call home. Their habitat in Wingecarribee shire is absolutely in danger as is the platypus population if this proposal is approved. The proposal absolutely threatens the local platypus especially due to water pollution due to the waste water run off, polluting and destroying the riparian zones on the site, and then releasing toxic effluent into the Wingecarribee river.

Even without any existing plastic recycling facility in the region, a recent study as reported by ABC (source below), found that PFOAs and PFAS was detected in the bodies of Platypus residing in the Wingecarribee river which is not a known PFOS hotspot. "This tells us that PFOS contamination is already far more widespread than what we know" a researcher was quoted. We cannot allow their habitat to be decimated and their population become extinct by the impact the proposed facility would have on the Wingecarribee river.

It is also worth noting that the Wingecarribee Shire Council has the Southern Highlands Platypus Conservation Project which will be totally undermined if Plasrefine is approved.

<https://www.abc.net.au/news/2024-08-20/australia-forever-chemicals-pfas-drinking-water-plant/104244072>

There are Riparian Zones and wildlife corridors that exist on the site - these are a link of wildlife habitat, generally native vegetation, which joins two or more larger areas of similar wildlife habitat. Corridors are critical for the maintenance of ecological processes including allowing for the movement of animals and the continuation of viable populations.

By providing landscape connections between larger areas of habitat, corridors enable migration, colonisation and interbreeding of plants and animals. These would be decimated and demolished by the 8 acre factory facility proposed for the site.

The endangered Glossy Black Cockatoo has returned to Beaconsfield road and has made the area and trees on the proposed site their habitat. This habitat will be removed and the endangered species will be endangered if this project goes ahead.

Additionally, Plasrefine are proposing the removal of 9 endangered Eucalyptus Macarthurii ( Endangered Ecological Community) under the guise they are in poor condition (they are healthy) - located in the council land they propose to build a road to access their site. There are native wildlife that live in and below these gumtrees, who's habitat would be destroyed by their removal.

Page 7-7 of the proposal details the use of turpentine in the washing of the plastic during the process. 20 cubic metres of concentration solution (additionally tea tree oil and other essential oils ) will be stored at any time on the side. The proposal states the concentration is 300ml /per 20 000 litres of turpentine. This is a highly flammable material before diluting ( see MSDS link above) & the community is concerned it will end up in the sewer and our waterways and harm/kill our wildlife as well as impact water and soil quality

<https://www.solvents.net.au/index.htm/files/Mineral%20Turpentine.pdf?fbclid=IwY2xjawGF4ptleHRuA2FlbQlxMQABHbJbhZGZKs3EL2zz9eIDWZC6S2gTzJWRHagAoE-McNvs9z4gr6Jr NoySw aem XP9sKwIHgpaCqlmdYgQ35w>

## **9. Impact on Local Economy & Future of the Highlands**

All of our major industries that support our local economy will be negatively affected if this proposal is approved:

### **Agriculture Industry**

Our agricultural industry will be negatively impact due to the risk of and realised contamination of livestock and crop with toxic PFAS, chemicals and microplastics from the plant being spread across farmland and paddocks in the region via air pollution being spread by winds across the shire, and by contaminants in the water supply used for livestock and irrigation. No consumer will want to consume contaminated products. PFOAs/PFAS that hitch a ride on microplastics are forever chemicals - once the land is tainted it is impossible to reverse, and will take lifetimes to break down. The risk to one of our largest industries is far too large.

### **Viticulture Industry**

The Southern Highlands is a well known wine region, with many local wine growers and producers. These crops will be equally impacted by the risk of and realised contamination of the vines and fruit with toxic PFAS, chemicals and microplastics from the plant being spread across vineyards in the region via air pollution being spread by winds across the shire, and by contaminants in the water supply used for irrigation. No consumer or reseller will want to purchase or supply contaminated products. PFOAs/PFAS are forever chemicals - once the land is tainted it is impossible to reverse, and will take lifetimes to break down.

### **Tourism Industry**

The Southern Highlands attracts a huge amount of tourists from Sydney and Canberra and beyond, who are drawn by the beautiful nature, wildlife, national parks and waterfalls, country lifestyle, quaint historic towns, rolling green hills, farms, wineries, the fresh clean air, outdoor events and concerts (Tulip Time, A Day on the Green) and a range of wonderful eateries and boutique retailers. The vast majority of the business in the Southern Highlands are small businesses, employing locals and are kept afloat by our vibrant and successful tourism industry. What happens to the tourism industry in the Southern Highlands when the air is no longer clean? When the farms have to close because their land and livestock/produce are contaminated? When the vineyards cant produce wines due to PFAS contamination? Our economy will be decimated as our 3 largest industries will all be severely negatively impacted by fallout from Plasrefine.

### **Real Estate industry**

If Plasrefine is approved the entirety of Wingecarribee shire councils property and land values will diminish significantly - if the land is polluted with microplastics and forever chemicals that take generations to break down, our land and properties will no longer be an attractive proposition or investment for those who might have previously been interested in moving to our Shire. This catastrophic impact to our currently very healthy real estate industry is totally unacceptable to the residents of Wingecarribee Shire.



If this proposal is approved, the Southern Highlands community demands that the state government and Plasrefine must engage in a land buy back scheme at a premium price, for all of the land in the Southern Highlands. I'm not sure if the state government is aware of the property values in the Highlands, but the \$88m in taxpayer dollars would only buy back one street in Burradoo (where house values are \$5M+).

### **Undermining of the future economy of the Southern Highlands**

The Wingecarribee Shire Council's Strategic vision and plan for the future of the Highlands via the SHIP is applauded and welcomed by the community. The site of this proposed facility is located within the parameters of the SHIP - the Southern Highlands Innovation Park. This strategic planning masterplan from Wingecarribee Council was zoned general industry, and is designed and designated for and to attract sensitive and innovative businesses to invest in the area and occupy the SHIP - the aim is to attract similar businesses to Plasrefine's closest neighbour, Garvan Institute (medical research facility).

The aim of the SHIP is to attract sensitive biotech industry, tech start ups and agribusinesses to develop and flourish in the highlands. This would see a huge boost to the local economy, attracting highly skilled and highly paid workers to the area, and also will help to retain the youth of the southern highlands, who would have otherwise left to go to the cities for the type of highly paid, attractive, innovative and exciting work that will be available from the businesses occupying the SHIP. It is intended to revolutionise the area, bring innovative and new kinds of exciting work and revenue opportunities to the region, and become a regional innovation hub - somewhere not seen anywhere else in NSW.

Instead, if Plasrefine is approved, none of these sensitive businesses will want to set up next to this heavy/hazardous industry, operating 24/7 365, with so much heavy vehicle movement, and toxic air and water pollution. It will totally undermine the strategic plan of the SHIP and it will have a devastating impact on the current & future economy of the Shire. The Plasrefine facility promises 150 jobs once building is completed, but these are not highly skilled or highly paid jobs, and they would be at the cost of thousands of highly paid research, development, technology and innovation jobs in the SHIP precinct that will not happen as the precinct will no longer be able to attract that type of industry. And worse - like will attract like, the SHIP will sink, and more toxic and heavy industrial waste facilities will move into Moss Vale, as they are they only facilities who would tolerate close proximity to Plasrefine. And there is the final nail in the Southern Highlands economy and future vision's coffin.

The NSW State Government will have wasted the \$250,000 grant it recently awarded to the Wingecarribee shire council to develop the SHIP strategic masterplan, and it will cost NSW the

opportunity to support and grow a truly unique regional area - offering idyllic country lifestyle coupled with innovative and lucrative business opportunities.

## **10. Cost of an unforeseen significant event**

The community is extremely concerned by the lack of community engagement and consideration to local insights regarding the site and its specific ecological and natural risk exposures. This site as previously mentioned sits in a swampy riparian corridor, that after heavy rainfall (of which there has been a lot in recent years), is prone to rapid and significant water flow running through the site (you have seen footage of this during Vanessa Harcourt's presentation), as well as flooding. It is also extremely prone to very high winds (having experienced a tornado in 2022), as well as persistent heavy fog. The site is situated in bush fire prone land (as covered above), and the Wingecarribee shire was significantly impacted by the Black Summer bushfires of 2019/2020, Moss Vale being surrounded in all directions by catastrophic fires in Bundanoon, Bargo/Hill Top. Wingecarribee natural disasters statistics place our shire in the top affected council areas in NSW for natural disasters in the last 5 years from record breaking drought, the Black Summer bushfires, and multiple significant flood events in 2022/2023. We can expect this trend to continue due to climate change. This puts the risk of unforeseen natural disasters as very high for this facility on this site - and unacceptably high risk due to the hazardous nature of the materials and chemicals being stored and processed within. What if a bushfire moved at tremendous pace and overcame the plant in a matter of minutes? The excess feedstock and accelerant would create a disaster of catastrophic proportions. What if a storm event led to extreme winds that damaged the roof of the facility or the roller doors? Or extreme rainfall caused a flooding event that overcame the water treatment plant and washed microplastics and hazardous chemicals into the waterways and drinking water via stormwater and the riparian zones? The site's proximity makes it totally inappropriate from a risk perspective, and demonstrates improper hazard planning.

But natural disasters aren't the only unforeseen significant event that could affect Plasrefine. Potential man-made disasters are even more likely, including the failure of or lack of efficacy of the filtration system(s) (Air and water), or a catastrophic fire beginning within the facility. Both of these I have addressed previously so I will not labour these points again.

## **11. Impact on housing and young families and undermining the future of the demographics of the highlands**

In the Urban Ethos Social Impact Statement, the claim is that this is a stagnant and ageing community - This couldn't be further from the truth. Since 2020, the impacts of COVID, working from home flexibility, & surging Sydney house prices have caused a huge migration of young families to the Southern Highlands, and particularly to the more affordable town of Moss Vale. I myself made this move with my husband, to be able to realise the dream of owning our own home, of having space, and fresh clean country air, and a beautiful environment to start our family in. Moss Vale is thriving, young and vibrant, slowly gentrifying with new cool cafes, boutiques and bars opening. The local daycares all have 18 month waitlists as a minimum (I know because I have only just secured a spot for my son after putting our name down when I was 12 weeks pregnant, and he is now 13 months old). Moss Vale is growing and bursting at the seams.

Australia has a housing supply crisis and a housing affordability crisis. The NSW state government is under significant pressure to relieve the burden on young people and families in NSW to provide affordable housing options. Moss Vale is a commutable distance to Sydney, and offers the promise of more affordable housing, with additional developments in progress (Ashbourne Estate). But all of this is jeopardised because of the Plasrefine proposal. No-one wants to put down roots in a beautiful country town, full of fresh air, and clean water and soil, to have a dirty toxic plastic recycling factory (the 2nd largest in the southern hemisphere) plonked in the middle of it, ruining all we value and cherish about this place. I have heard anecdotally that many prospective buyers in these Moss Vale developments have withdrawn their interest until a decision is made on Plasrefine, and that they have stated that they will not proceed if it is approved.

And honestly I don't blame them. I love Moss Vale, I've happily put down roots here, I love the community here, I would love to raise my family here - but not if Plasrefine is approved. I will not stay here, at the cost of my children's health. Children and young people are disproportionately affected by chemical and toxin exposure due to their small and rapidly growing bodies. Microplastics have already been found in human placentas, brains and newborns. This community does not want to be Guinea pigs for what happens to the human body when exposed to hazardous and unknown chemicals used in the recycling process. The children of the southern highlands have no say or consent in this process and they will be the ones to inherit the land and who's health and future will be most impacted. The known and growing evidence base around the dangers of plastics (and the chemicals used in its production and recycling) to human health - particularly for pregnant women and children. Many of my

fellow community members have expertly and eloquently elaborated on the health risks and fertility impacts that this facility could have on our children and future generations, so I will defer back to their submissions to further emphasise my point.

If this facility is approved my husband and I will be listing our beautiful home that we love so much, and moving away from the area. And we are not the only ones. Every single mum in my local mother's group has said they will do the same thing. Every single young family I have spoken to has said they will also be forced to leave the highlands for the sake of their children's health and their family's future and well being. But who will buy our houses? Who would want to live beside a toxic plastic recycling plant. What financial impact will that have on my family? On all of the young families who are left with no choice but to leave at huge financial cost? And Where will we go? There is no affordable housing anywhere anymore.

We don't want to be a news article or a grim statistic. No-one wants to live 200m from a plastic recycling facility, and have their children playing in microplastics and toxic chemicals all day. Noone wants our beautiful town and outdoor lifestyle changed forever by this facility. Noone wants the devastating health impacts. The legacy it will leave is a dark one. No youth left in the southern highlands, and everyone who can leave, will leave. Then fast forward 10 years - Who will look after the older generation? And no young people to pay taxes and work in the businesses, no wealth coming to the area, only leaving it - the economy of the southern highlands will nose dive. It's already impacting our real estate market, on the mere threat that Plasrefine *could* be approved.

Plasrefine has no and never will have social licence in this community, no one would willingly want to work in such a toxic, harmful facility, and its impact has been nothing but extremely negative since the day those unmarked letters arrived in Moss Vale residents letterboxes on Christmas Eve 2020.

The site's proximity to residences, waterways, key riparian zones, schools, childcares, outdoor recreation areas and wildlife habitats make it unacceptable, inappropriate and unsuitable for a facility of this nature. I urge you commissioners to please hear the community's concerns, please see the clear inadequacies in GHD and Plasrefine's proposal, and please point out the negligence and lack of due diligence in DPHI's assessment report and recommendations and please reject this proposal.

Thank you  
Sincerely,  
Ursula O'Dwyer