

6 reasons not to have a plastic recycling facility on this site

D Porter

1. Environmental impacts

Water quality

Air quality

Traffic

Bio-diversity loss

Water

- The proposed area is in the Sydney Water Catchment supplying drinking water to the Highlands and to Greater Sydney via Wingecarribee River and Warragamba Dam
- Recently our drinking water has been found to contain “*forever*” chemicals and is below world standards for safe human consumption. Do we need to add more?
- What is the filtration system of the facility and how will it stop nano particles of plastic from entering streams and ground water?
- Plasrefine states ‘ it aims to treat its own wastewater’ and WSC have stated ‘they have water and waste water infrastructure gaps’

Air quality

- The trucks transporting to and from the facility will require the huge roller doors to be open and winds may carry micro-plastic to adjoining lands (residential and farming) and water supply.
- A growing body of evidence indicates that many terrestrial **plants** can potentially **take** up micro (**nano**)**plastics** via roots and translocate them to above-ground portions via the vascular system, primarily driven by the transpiration stream. Additionally, livestock can ingest these particles from their feed and transmit to humans.
- Studies have linked ingested plastic particles with impacts on cell function, chronic inflammation, and disruptions to the endocrine system.

Air (ctd)

- Plastic manufacturer relies on petrochemical products and the recycling of plastic resins releases these carcinogenic and other highly toxic substances into the air.
- Documented effects of exposure to these substances include **impairment of the nervous system, reproductive and developmental problems, asthma, cancers, leukemia, thyroid disorders and genetic impacts like low birth weight.**
- (references available on request)
- What are Plasrefine's proposed control measures for emissions – it states 'LOW', exactly what is 'LOW', should it not be 'NONE'.

Odours

- The process of breakdown of plastic for recycling creates odours.
- This will not only affect local residents but winds will carry the offensive smells further afield to Bowral, Berrima and beyond.
- Chemical additives in plastic are toxic environmental pollutants and scientifically proven to be harmful to human health.



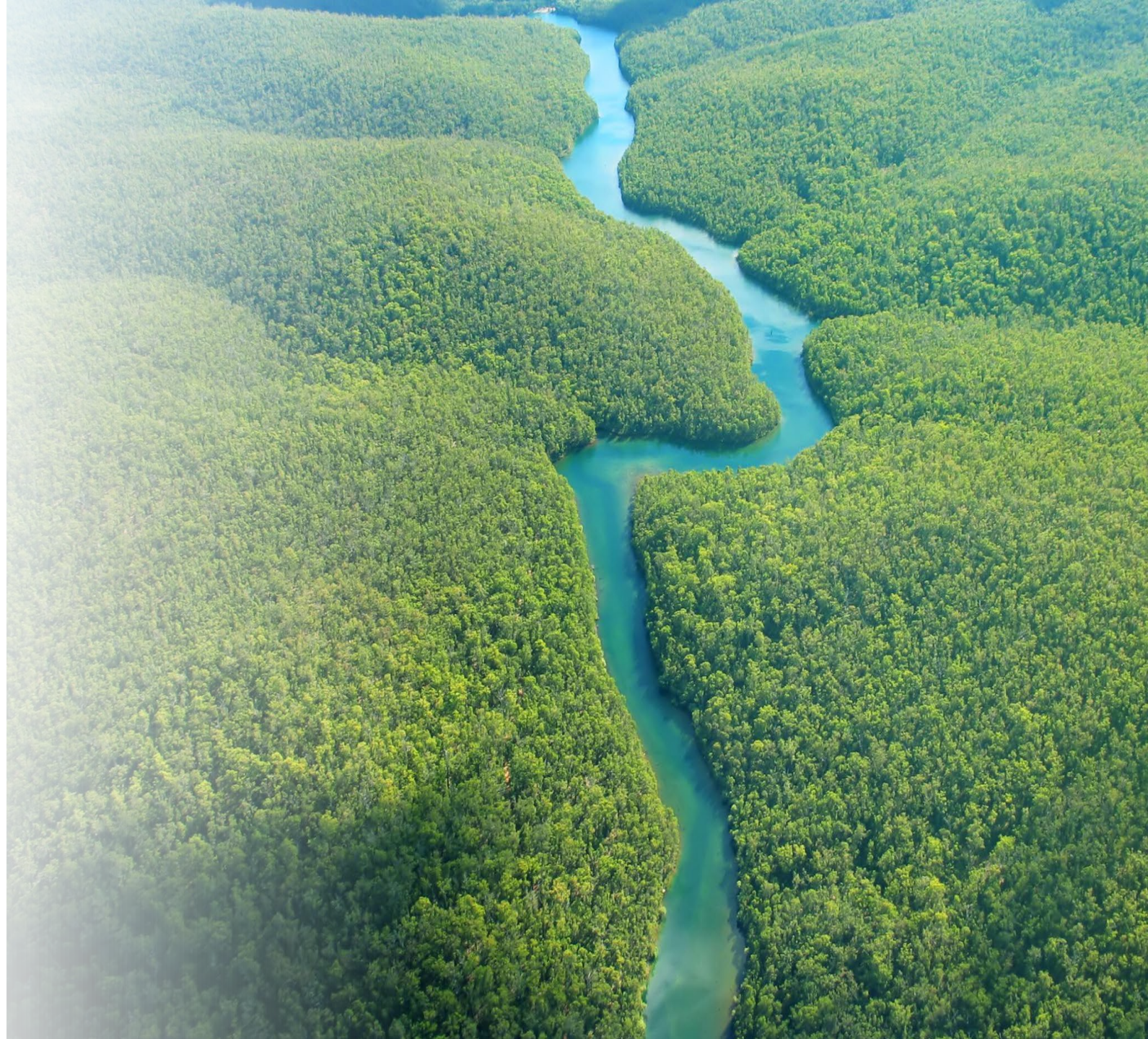
Traffic

- Operating 24/, trucks will generate additional heavy vehicle traffic, air pollution, noise pollution, increased fauna mortality, potential hazardous material accidents, traffic accidents and road degradation



Biodiversity Loss

- Wingecarribee River, streams and dams are home to platypus and other native endangered species. Degradation of freshwater habitats is a major threat to their survival.
[platypus: evolutionary history, biology, and an uncertain future | Journal of Mammalogy | Oxford Academic](#)
- [Southern Highlands Platypus Conservation Project | Wingecarribee Shire Council](#)
- [\(13\) Facebook](#)
- WSC's Conservation Project states that one of the biggest threats to the species is poor quality water and they are monitoring and collecting data to ensure we have a population in 100 years.
- Runoff from hard stand areas will increase water sedimentation and bank erosion diminishing habitat for platypus downstream.



Biodiversity Loss

Additionally, loss of fauna and flora during construction phase includes irreversible impacts due to the following:

Removal of habitat for Southern Myotis a species of vesper bat on the red list of the NSW threatened species

Removal of habitat for the Large Bent-winged Bat - listed as vulnerable

Removal of Mountain Grey Gums

Removal of tableland swamp meadows

Other direct and indirect impacts, due to vegetation removal, on birds, insects, frogs, reptiles koalas and kangaroos.

2. Psychological impacts and property devaluation

- The site will generate increased traffic, noise and light 24/7 impacting humans and fauna.
- Residents, particularly nearby, are adversely impacted by stress from living adjacent to an industrial site with decreased property values, this in turn has adverse effects on mental health. The proposed facility (8 acres) will be the size of 3 Bunnings stores and 3 levels high plus stacks.
- What is the proposed buffer zone between the residential area (a few hundred metres away) and the Garvan Institute next door and nearby grazing land.

3. Fire & Hazardous Materials

- The Moss Vale Fire Station is not manned and is run by volunteers. Southern Highlands has 4 fire trucks in total. HAZMAT trucks are located in Campbelltown and Shellharbour – 75 kms away
- The number of fires in plastic recycling plants in Australia between 2019 – 2022 is at least 18 and this is from around 26 recycling/reprocessing plants in total. All fires were fuelled by plastic waste releasing dioxins, benzene, hydrogen cyanide, chlorine, carbon monoxide and VOCs into the environment.
- How does Plasrefine propose to extinguish a fire with little resources at hand?
- These fires usually require 15+ trucks, HAZMAT trucks and 80+ fire fighters

4. Health Risks

- [Phthalates](#), [bisphenol A \(BPA\)](#), and [per- and polyfluoroalkyl substances \(PFAS\)](#) are common chemical additives in plastic that are known to harm human health and are linked with cancer and harm to reproductive systems.
- Exposure to toxins in plastic products emitted during disposal – can have particular and unique impacts on children, women, and pregnant and older people due to biological factors. Women exposed to endocrine disrupting chemicals, including BPA, are [at increased risk](#) of polycystic ovarian syndrome and recurrent miscarriages. Exposure to these chemicals prior to and during childbearing years can result in increased likelihood of [children being born with disabilities](#). Children, when exposed to the same levels of air pollution as adults, are at risk for more [acute health impacts](#) due to their rapid development. [Children](#) growing up in areas with high levels of industrial air pollution are likely to have reduced lung function. Exposure to chemicals may lead to harmful effects that do not appear until puberty or adulthood.
- While recycling is often portrayed as a positive, environmentally friendly practice, when plastic is recycled, **it releases pollutants and toxins into local environments, threatening the health of those working in and living nearby recycling facilities.**

Health risks (ctd)

- The recycling of plastic resins releases these carcinogenic compounds and other highly toxic substances into the air.
- Documented effects of exposure to these substances include **impairment of the nervous system, reproductive and developmental problems, cancers, leukemia, thyroid disorders and genetic impacts like low birth weight.**
 - [Microplastics found in bladder, kidney patients' urinary tracts spark fresh fears \(9news.com.au\)](#)
 - [Exposure to microplastics and human reproductive outcomes: A systematic review - Hunt - 2024 - BJOG: An International Journal of Obstetrics & Gynaecology - Wiley Online Library](#)
 - [The impact of microplastics on female reproduction and early life - PMC \(nih.gov\)](#)
 - [The hidden threat: Unraveling the impact of microplastics on reproductive health - ScienceDirect](#)
 - [Micro/Nanoplastic Exposure on Placental Health and Adverse Pregnancy Risks: Novel Assessment System Based upon Targeted Risk Assessment Environmental Chemicals Strategy \(mdpi.com\)](#)
 - [Uptake and Accumulation of Nano/Microplastics in Plants: A Critical Review - PMC \(nih.gov\)](#)

References

- [Dangerous chemicals found in recycled plastics, making them unsafe for use – experts explain the hazards \(theconversation.com\)](#)
- [Human health impacts of plastic exposure – an evolving evidence base | PHCC](#)
- [Plastic pollution: why is it a public health problem? - Daltry - 2021 - Australian and New Zealand Journal of Public Health - Wiley Online Library](#)
- [\(PDF\) Assessing the environmental and health impacts of plastic production and recycling \(researchgate.net\)](#)
- [Plastic recycling: A panacea or environmental pollution problem | npj Materials Sustainability \(nature.com\)](#)
- [The plastic health map: A systematic evidence map of human health studies on plastic-associated chemicals - ScienceDirect](#)
- [Insights into the potential carcinogenicity of micro- and nano-plastics - ScienceDirect](#)
- [Microplastics – A Growing Concern as Carcinogens in Cancer Etiology: Emphasis on Biochemical and Molecular Mechanisms | Cell Biochemistry and Biophysics \(springer.com\)](#)

5. Southern Highlands Innovation Park (SHIP)

- The Southern Highlands Innovation Park may find it difficult to attract biotechnology and research facilities – will they want to set up next to a large recycling facility?
- The master plan was to attract sustainable, innovative industries and for the precinct to become a major economic driver and employer for the Shire.
- Plasrefine is not in keeping with the master plan, being Heavy Industrial



6. Human Rights

- Australia is the only liberal democracy in the world that does not have a national act explaining what people's basic rights are and how they can be protected.
- The ACT was the first state/territory to introduce a Human Rights (Healthy Environment) Amendment Bill to the Legislative Assembly on 26 October 2023.
- In an Australian first, the Bill provides express statutory protection for the right to a clean, healthy and sustainable environment
- This law obligates the government to address harms and to fulfill the rights to health, clean air, safe water, non-toxic environments to live in and a healthy eco-system.
- A copy of the Bill and the Explanatory Statement is available at: https://www.legislation.act.gov.au/b/db_68569/

Alternatives

- Professor Veena at the Centre for Sustainable Materials Research and Technology (SMaRT) at the University of New South Wales, Sydney, is producing a new generation of green materials and products made entirely, or primarily, from waste.
- In 2021 Shoalhaven Council received a grant of \$500,000 from the Environment Trust to set up one of UNSW SMaRT MICROfactorie turning glass and textiles into green ceramics for benchtops.
- Other MICROfactories turn hard plastic into filament for 3D printer feedstock.
- We need reform, but, without creating a toxic environment. Each community needs to recycle their own waste.



NOT THE RIGHT SITE

- Clearly, production and use of plastics needs to be monitored and reduced, however, we do have the current problem of safe recycling and disposal to be considered. Setting up this facility so close to children and homes is outrageous. People move to the Southern Highlands for a safer, healthier environment and don't need this dumped on their doorstep.