



ALEX SICARI

OBJECT

Submission ID: e29

Organisation: N/A	Key issues: N/A
Location: N/A	
Attachment: <i>Attached overleaf</i>	

Submission date: 11/25/2024 5:05:00 PM

See attached

OBJECTION SUBMISSION: PROPOSED MOSS VALE PLASTIC RECYCLING AND REPROCESSING FACILITY (SSD-9409987)

25 November 2024

The author of this submission is a qualified architect (Bach. Architecture, University of Sydney) and property economist (Bach. Property Economics, University of Technology, Sydney) with over 18 years infrastructure and property industry experience.

This submission covers the critical issues in the following sections:

- A. There are significant and critical shortcomings in the Application and the Department's Assessment; and**
- B. The Application and Assessment do not address or mitigate the risks and potential damaging impacts specific to plastic recycling and reprocessing.**

Fundamentally, if this proposal was approved, this facility would leak thousands of tonnes of micro, nano plastic and forever chemicals either operationally and/or in the likely event of a fire.

Due to the location of the subject site, these harmful chemicals would fall onto the nearby community, onto food-producing land and into major drinking water catchment areas. This puts Sydney's drinking water supplies at risk.

These risks are not adequately addressed and are not mitigated by the proposal, the assessment nor the conditions of consent.

Due to these unmitigated risks, the Application should be refused.

A. Shortcomings of the Application and the Departments Assessment:

1. Site suitability – proposed use is prohibited use under the LEP

The proposal includes the storing of plastic, plastic recycling and plastic re-processing. The recycling and reprocessing activities are hazardous by virtue of the highly flammable plastic materials being handled and processed within the facility. Re-processing is a form of manufacturing, and selling of plastic (recycled or otherwise) is an industry.

Under the Wingecaribee LEP, the site is zoned **E4 General Industrial**. Within this zone, *Heavy Industrial Storage Establishments* and *Industries* are prohibited uses.

Under the WLEP, the definitions of these uses are below.

heavy industrial storage establishment means a building or place used for the storage of goods, materials, plant or machinery for commercial purposes and that requires separation from other development because of the nature of the processes involved, or the goods, materials, plant or machinery stored, and includes any of the following—

- (a) a hazardous storage establishment,
- (b) a liquid fuel depot,
- (c) an offensive storage establishment.

and "Industries" is not defined, however "Industry" is defined as follows:

industry means any of the following—

- (a) general industry,
 - (b) heavy industry,
 - (c) light industry,
- but does not include—
- (d) rural industry, or
 - (e) extractive industry, or
 - (f) mining.

The proposed plastic recycling facility includes:

- a) the storage of materials for commercial purposes;
- b) hazardous storage in the form of the highly flammable materials being stored; and
- c) a form of general or heavy industry; and

Therefore, the proposed use is prohibited under the LEP.

The Websters definition of **Offensive** is *(adjective) Causing displeasure or some degree of anger; displeasing*. Judging by the outcry of many thousands in the local community against this Application, the proposed use could also fit the definition of an offensive storage establishment.

2. Section 4.15 EP&A

Section 4.15 identifies the evaluation process for determining development applications. Section 4.15(1) of the EP&A Act identifies the matters a determining authority is to take into consideration in determining a development application. Section 4.15(1)(b) requires the consideration of:

(b) the likely impacts of that development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality,

Critical to the ability of the relevant consent authority to consider likely impacts of the development is that the likely impacts are adequately presented in the provided EIS and supporting documentation.

The Department's evaluation of the proposal against section 4.15 of the Act is inadequate in relation to the proposal's impacts, the public interest and particularly site suitability.

The DPHI assessment Report does not include adequate assessment of health risks and environmental impacts – which are critical issues.

3. BushFire Hazard and Risk

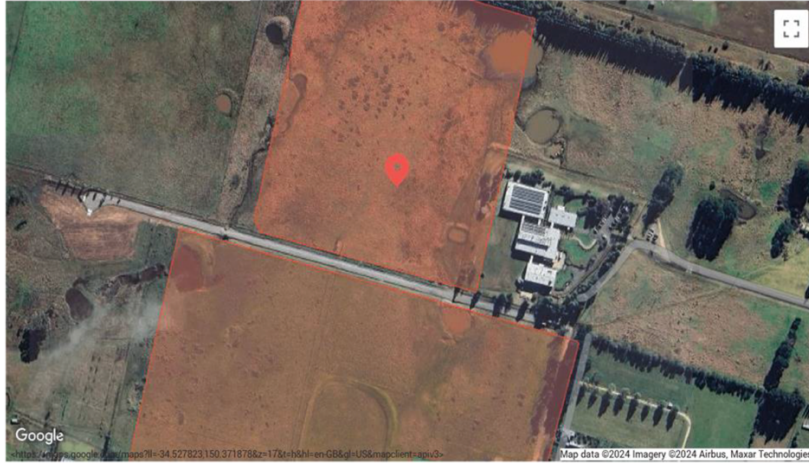
The Proposal and assessment ignores the fact that the subject site is located on bushfire prone land. This could be due to the Wingecaribee LEP being outdated with regard to its bushfire mapping.

An RFS search of the subject site confirms that the subject site is Bushfire Affected. See below.

Check if you're in bush fire prone land

This tool is best viewed on a desktop web browser.

Your Property 74-76 Beaconsfield Road Moss Vale, NSW 2577



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



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

<https://www.rfs.nsw.gov.au/plan-and-prepare/building-in-a-bush-fire-area/planning-for-bush-fire-protection/bush-fire-prone-land/check-bfpl>

The proposal does not adequately address the bushfire risk. A thorough Bushfire Assessment and Management Strategy is required under the Act.

4. Plastic Fire Hazard and Impact

A plastic-specific fire impact assessment is required. The application and assessment is inadequate in this regard.

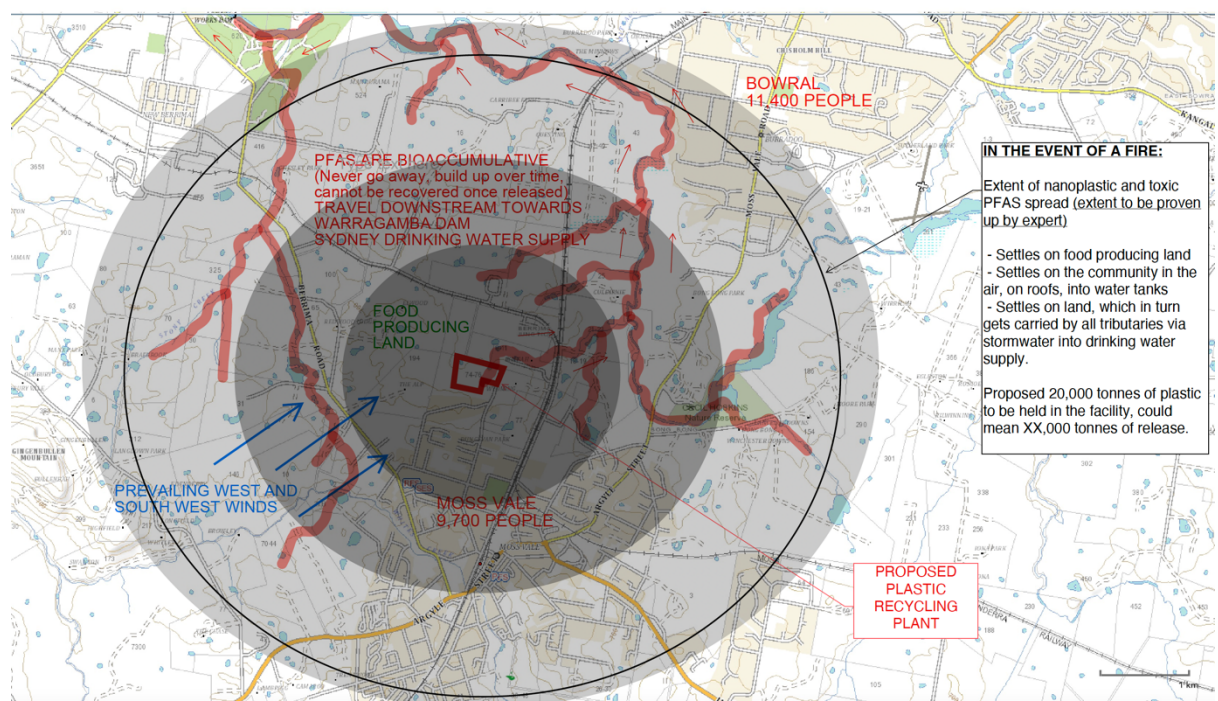
Plastic recycling facilities such as the proposed commonly catch fire. This is due to the flammability of plastics being stored and processed in such facilities and the relatively easy occurrence of lithium batteries being incorrectly thrown into recycling bins. Lithium batteries ignite and commonly cause such fires. Examples of recycling facility fires are shown below.



This proposal includes the storage of up to 20,000 tonnes of plastic at any one time. Given the scale of this facility - the local fire services have indicated that they are not equipped to deal with a fire of this scale. In the event of a fire, the impacts will be catastrophic, with tens of thousands of tonnes of toxic and forever chemicals released into the atmosphere and surrounding areas.

Prevailing winds are from the west and south-west, meaning smoke will be pushed to the east over Moss Vale and Bowral, and potentially into other water supplies such as cataract and avon dams.

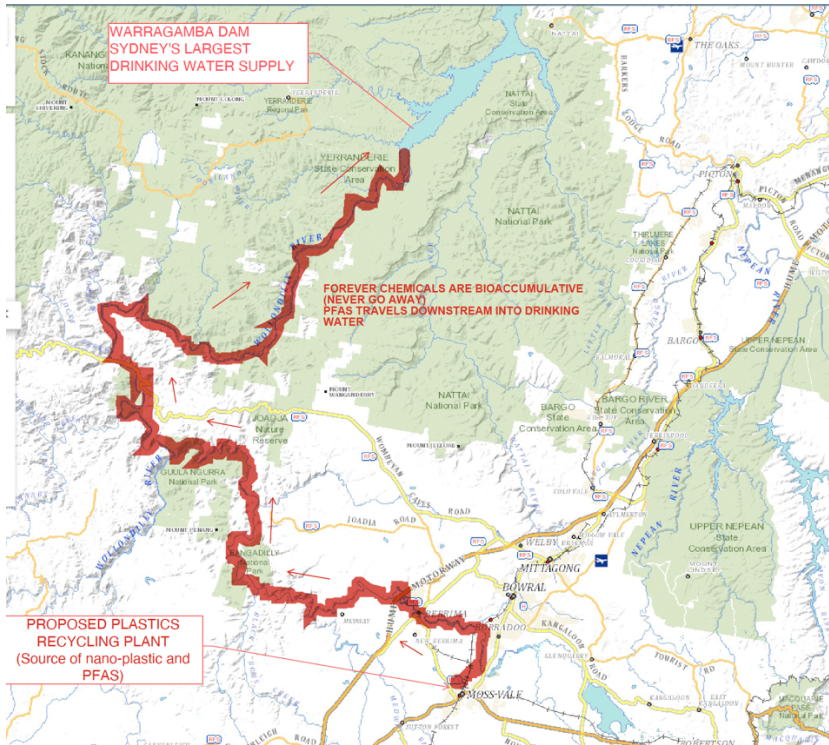
The smoke will include forever chemicals which are bio accumulative. Once released, these chemicals cannot be recovered and will remain in the environment and water supply until consumed by humans or wildlife.



The grey circle is a conservative estimate of smoke plume from a a major fire from the subject site. The red highlights illustrate location of the waterway.

Included within the affected area are the local residents, their rainwater tanks, food producing land and waterways that ultimately feed into the Warragamba Dam.

Subject to prevailing west and south-westerly winds, the toxic chemicals could easily be blown into Avon and Cataract Dams, further exasperating the contamination of Sydney's drinking water.



The map above shows the subject site being located within a flood impacted water catchment area, with water flowing downstream along the Wingecarribee and Wollondilly Rivers, to Warragamba Dam.













5. Orderly Development

The Southern Highlands Innovation Park (SHIP) is a regionally significant employment precinct comprising some 1,053 hectares of industrial zoned land between Moss Vale and Berrima. This precinct provides a unique opportunity to attract sustainable and innovative industries and become a major employer and economic driver for the Shire and the broader region.

The Structure Plan provides the key structuring moves for the Southern Highlands Innovation Park. This provides a high level structure identifying proposed industries and character areas, key existing and new roads, and approach to landscape and views.

The structure plan is further detailed through the master plan (See chapter 4).

Key features of the structure plan

-  Upgrade and reinforce the key vehicle movements within the precinct
-  Deliver new road infrastructure
-  Provide green landscape setbacks and buffers between adjacent lots and land uses
-  Activity node at the southern entry point into the SHIP with easy access to Moss Vale
-  Consider areas of high environmental value/constraints
-  Celebrate the vast landscape views from along Berrima Road and Collins/Douglas Road
-  Protect and celebrate views towards the elevated topography
-  Create defined and memorable gateways into the precinct
-  Activity Node/Creative Hub at southeastern interface with Moss Vale centre
-  Agribusiness/Agri-Innovation Precinct
-  Heavy Industry and Construction Precinct focused around Boral Cement Works
-  Research, Training and Advanced Manufacturing Precinct

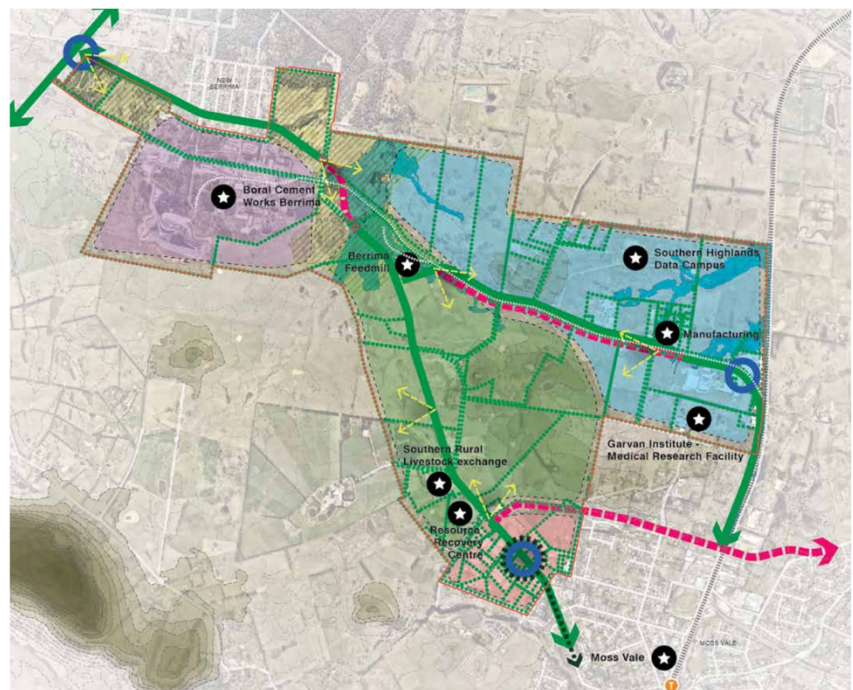


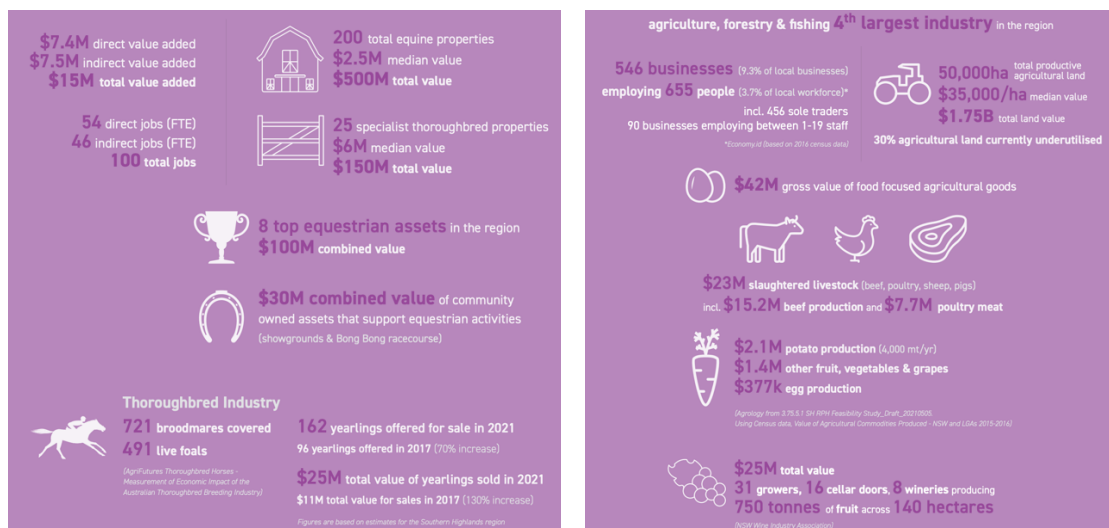
Figure 15. Structure Plan

The proposal is inconsistent with the strategic objectives for the site contained within the SHIP, and it will restrict future employment generating development within the Southern Highlands Innovation Park, therefore it does not promote the orderly development of the land as required under the Act.

The Proposal and its assessment is inadequate in relation to this Proposal's impacts to the adjacent residential community, as there is no buffer proposed to ameliorate its impacts.

6. Health and Economic Impact Assessment – Equine and Food Producing Land

The *Southern Highlands Destination Strategy 2020-2030* identifies Agribusiness and Equine as significant industries within the Shire, with a focus on increasing overall economic value and job creation. Equine and food-producing land is a critical part of the Southern Highlands economy. Extracts from the study below.



Within the application and its assessment, there is no consideration of the health or economic impact on food production on agricultural land surrounding the site. If contaminated by micro, nano plastic and forever chemical pollution, this land will become unusable, and in fact dangerous for food production.

7. Traffic and the Impacts of Trucks on Roads

The Traffic Impact Assessment has not adequately considered the cumulative impact of traffic volumes. The TIA and assessment has not satisfactorily demonstrated that the proposed development will not adversely impact the efficient operation of the road system.

Additionally, dust, noise impact and taxpayer costs of rectifying truck damage to roads is completely ignored.

8. Applicants Operating Model – Lack of Detail and Critical Assessment

The operational model proposed by the applicant is not adequately assessed. Specifically, in relation to the lack of relevant track record, proposed atypical mixing of plastic streams (which is not market best practice) and the control of micro, nano plastic and forever chemical pollution. This is unacceptable considering the magnitude of risk and consequence. Rigorous assessment is required.

9. Environmentally Sustainable Development

The assessment contains no detailed analysis of ESD principles as required under the Act.

B. Research into Plastic Recycling Facilities

Notwithstanding the inadequacies of the Department's assessment – emerging research and science is highlighting the dangers associated with plastic recycling.

Current planning controls and operating standards may not adequately mitigate the risks associated with the release of harmful nano-chemicals being released from this facility.

Recent research confirms that micro, nano plastic and forever chemical pollution occurs in a number of ways:

1. Air control units in smoke stacks do not capture all micro and nano plastics that escape via exhaust fumes. The EIS' 5% leakage and GHD's suggestion for neighbours to limit their time outdoors to avoid fumes is completely unacceptable.
2. The subject site is flood impacted. Stormwater runoff will capture micro, nano plastic and forever chemicals, carrying them downstream into the Wingecaribee and Wollondilly Rivers and ultimately into the Warragamba Dam – a major Sydney drinking water supply.
3. Waste water from the site will contain thousands of tonnes of micro, nano plastic and forever chemicals. This waste water makes its way into treatment facilities where it is not appropriately contained.
4. In the event of a fire, the location of the facility will ensure a health and environmental catastrophe. Many tens of thousands of tonnes of burnt micro, nano plastic and forever chemicals will be released onto the community, onto farmland and into drinking water.

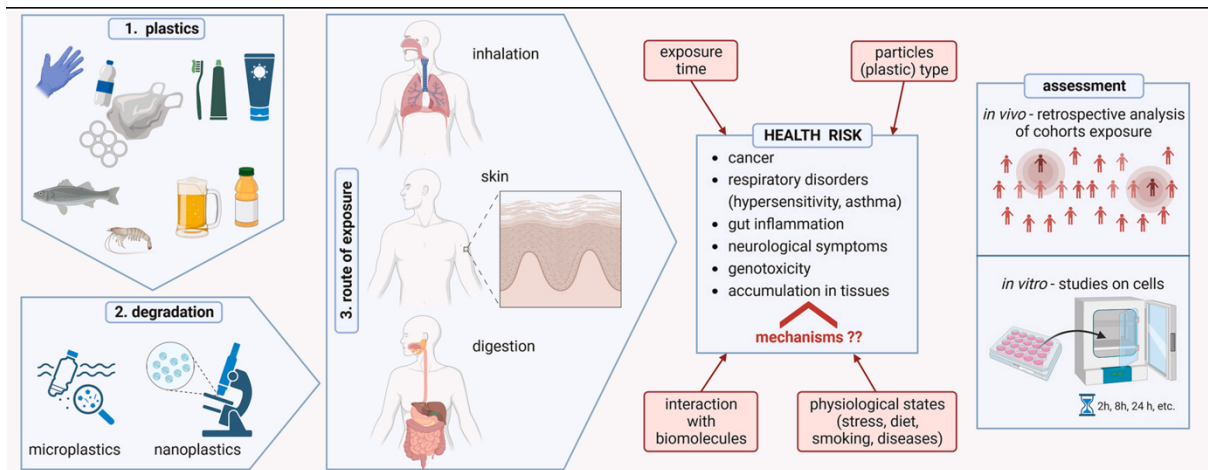
UK recycling facility creating microplastic pollution study (Brown, 2023): confirmed that up to 13% of total plastic processed can be leaked via waste water in similar facilities overseas (not including stormwater and in airborne gases).

In this instance, 13% of 120,000 reflects over 15,000 tonnes of harmful chemicals per annum. In the same study, even after applying market best practice, 6% leakage was recorded. This 'best practice' scenario would equate to 7,200 tonnes leaked per annum.

Even if a hypothetical 1% leakage was to be applied, this would represent 1,200 tonnes per annum and 54,000 tonnes in this buildings design life. The impacts of such leakage is not adequately assessed and the risks not mitigated.

The potential impact of nano- and microplastics on human health: Understanding human health risks Study (2024) has linked these chemicals with health risks such as heart attack, stroke, infertility, disease and cancer. Exposure to nano- and microplastics in humans potentially leads to serious health issues, including various cancers, respiratory disorders, and inflammatory bowel disease.

In vitro studies show nano- and microplastics induce apoptosis and cytotoxic effects, with cell damage influenced by particle characteristics like type, size, and charge.



Graphical extract from the study above: illustrating how micro and nano plastics are impacting human life.

Conclusion

To conclude:

- The Department’s assessment lacks the degree of robustness and detailed assessment warranted by a proposal of this nature, magnitude and consequence.
- Many thousands of tonnes of micro, nano plastic and forever chemicals will be released during this facility’s operation and/or in the event of a fire (which is probably given the flammability of the materials stored and processed).
- Once released, these forever chemicals cannot be recovered from the environment or the drinking water catchment.
- The risks associated with micro, nano plastic and forever chemicals being found within humans is emerging and alarming. All measures should be taken to locate this type of facility well away from the community, food producing land and drinking water.
- Sydney’s drinking water supply is too precious to risk contamination by this proposal.

These risks are not adequately addressed and are not mitigated by the proposal, the assessment nor the conditions of consent.

Due to these unmitigated risks, the Proposal should be refused.

References:

UK recycling facility creating microplastic pollution study (Brown, 2023):

<https://www.sciencedirect.com/science/article/pii/S2772416623000803#:~:text=Plastic%20Recycling%20Facilities%20may%20be,microplastic%20particles%20from%20facilities%20discharge>

Guardian article about this study: <https://www.theguardian.com/environment/2023/may/23/recycling-can-release-huge-quantities-of-microplastics-study-finds>)

Australian study into recycling causing microplastic pollution (Hai,

2023): <https://www.sciencedirect.com/science/article/pii/S0048969723047150>

Plastic bottle recycling causes microplastic pollution - tiny particles least likely to be captured (Guo,

2022): <https://www.sciencedirect.com/science/article/abs/pii/S0048969722031357>

Mechanical plastic recycling causes microplastic pollution (Suzuki,

2022): <https://www.sciencedirect.com/science/article/abs/pii/S0269749122003281>

Australia Institute Report re ineffectiveness and hazardous nature of plastic recycling

(2024): <https://australiainstitute.org.au/wp-content/uploads/2024/01/P1482-Plastic-Waste-in-Australia-Web.pdf>

California sues Exxon for deceiving public on plastic recyclability (Sept

2024): <https://oag.ca.gov/news/press-releases/attorney-general-bonta-sues-exxonmobil-deceiving-public-recyclability-plastic> ("ExxonMobil falsely promoted all plastic as recyclable, when in fact the vast majority of plastic products are not and likely cannot be recycled, either technically or economically")

Judith Enck - leading US Professor on failure of plastics

recycling: <https://findingmastery.com/podcasts/judith-enck/>

Recycling plants spew a staggering amount of microplastics

article: <https://www.popsci.com/environment/recycling-plant-microplastics/>

Chemical Recycling: A Dangerous Deception Report

(2023): https://static1.squarespace.com/static/5eda91260bbb7e7a4bf528d8/t/655791f76ad9bb07d10e1290/1700237880522/10-30-23_Chemical-Recycling-Report_web.pdf

Why plastic is building up at recycling centers and catching fire, ABC

<https://abcnews.go.com/Technology/plastic-building-recycling-centers-catching-fire/story?id=89125707>

Hume Recycling Factory Fire Caused By Lithium Battery

https://www.cmtedd.act.gov.au/open_government/inform/act_government_media_releases/chris-steel-mla-media-releases/2023/investigation-released-into-fire-at-hume-recycling-facility

The potential impact of nano- and microplastics on human health: Understanding human health risks

<https://www.sciencedirect.com/science/article/pii/S0013935124004390#:~:text=Exposure%20to%20nanoparticles%20and%20microplastics,disorders%20and%20inflammatory%20bowel%20disease.>