Sept 30th 2026 LEAD Group objection to Bowdens lead mine

By Elizabeth O'Brien, Lead Scientist and Lead Advisor, orchestrated by Ian Smith, Systems Analyst, using OpenClaw on top of Claude AI and Ollama local AI models where possible, on solar-powered infrastructure. © The LEAD Group Inc. November 2026

The LEAD Group Inc's Objection to the Bowdens Silver Project (SSD-5765), by Elizabeth O'Brien, Lead Scientist and Lead Advisor, with assistance from Ian Smith, Systems Analyst using OpenClaw AI. The full Submission is at https://www.ipcn.nsw.gov.au/sites/default/files/webform/make_a_submission_bowdens_silver/81836/The%20LEAD%20Group%20Inc%27s%20Objection%20to%20Bowdens%20Silver%20SSD-5765%20Submission%20to%20IPC%2020260930.pdf *[LID 29961] and the audio transcript of the Oct 15 2026 Presentation of this Submission is at* https://www.ipcn.nsw.gov.au/sites/default/files/2026-10/Public%20Hearing%20Day%202%20Transcript.pdf *[LID 29968]*

The LEAD Group Inc objects to the Bowdens Silver Project in its entirety and asks the Commission to REFUSE the application, on grounds of human health, water resources, biodiversity, Aboriginal cultural heritage, greenhouse gas emissions, economics, social impacts, rehabilitation and, above all, the lack of demonstrated need for a new lead, zinc or silver mine and the failure of the Australian and NSW regulatory framework relied upon to protect the community from the toxic metal lead.

Who we are and why we object

The LEAD Group Inc has worked since 1991 to manage and eliminate lead exposure and contamination in Australia and internationally. We run a global lead information service, sell LEAD Group Kits, provide free Kits for Indigenous Australians, run the Volcano Art Prize and the world's largest publicly-accessible lead library, and publish LEAD Action News. We created the Model National Lead Safety Policy (LEAD Group 2023a), part of the Lead Knowledge Library of our partner UNICEF's Partnership for a Lead-Free Future (PLF), despite and because of Australia being the world's largest lead exporter.



UNICEF's Partnership for a Lead-Free Future envisions a world where every child grows up free from lead exposure (UNICEF n.d.)

The LEAD Group seeks to stop all new lead being mined in order to give the world a chance of achieving global lead-safety by 2041. I have been particularly motivated by the knowledge that throughout my entire life of 70 years, all the lead in all the leaded fuel in all the world was mined in Australia. We continue to work with multiple NGOs to ban leaded AvGas globally, very likely still all made with Australian-mined lead.

We object because the project is, in substance, a new open-cut lead and zinc mine; because there is no demonstrated need for it when the same and greater quantities of lead, zinc and silver can be recovered from products and wastes we already have; because its public and occupational health risks, above all from lead, are unacceptable and cannot be managed by the very agencies whose competence the previous IPC approval relied upon; because its environmental, water, biodiversity, greenhouse and cultural-heritage impacts are severe and in places irreversible; and because the assessment process itself is not fit for purpose. I beg the Panel to consider: is adding more Australian lead for the world to mismanage worth the short-term profits to mining company shareholders and NSW and Australian governments? We request this Panel not to approve an extra 95,000 tonnes of lead being added to communities already living in poverty around the world, when the lead they're already exposed to is likely Australian exported. As UNICEF's explainer concludes: prevention is the best cure (UNICEF n.d.).



A boy dismantles used lead-acid batteries. Photo from UNICEF's Explainer: 7 Things to Know about Lead Exposure (UNICEF n.d.)

Estimates of lead's harm just keep growing

Whenever the harm from lead is re-measured, it is found to be larger than previously estimated. In 2011, Tsai and Hatfield put the global benefit of phasing out leaded fuel alone at US$2.45 trillion a year, 4.27% of global GDP (Tsai and Hatfield 2011). In 2013 the World Health Organization (WHO) estimated 143,000 deaths per year from lead poisoning (UPI 2013). By 2015 the International Society for Environmental Epidemiology put it at 674,000 deaths annually (ISEE 2015); in 2016 Dr Perry Gottesfeld reported 853,000 deaths annually from lead, versus 852,000 for all other occupational risk factors combined (Gottesfeld 2016).

Lanphear et al (2018) found that in the United States alone, low-level lead exposure causes an estimated 412,000 deaths a year, roughly ten times more than previously thought, with no safe threshold found. The most comprehensive estimate yet found that in 2019 lead exposure caused about 5.5 million adult cardiovascular deaths worldwide and cost children under five 765 million IQ points, at a global economic cost of US$6.0 trillion, about 7% of global GDP (Larsen and Sánchez-Triana 2023). In one decade, the best published estimate of lead's annual global death toll grew from 143,000 to 5.5 million.

The 2026 state of knowledge is starker still: Pure Earth's President wrote that "lead poisoning causes more deaths annually than all natural disasters, active wars, traffic accidents, HIV, and malaria combined", and the Director of UNICEF's PLF Secretariat wrote to Partners that lead poisoning is the world's most widespread environmental health threat to children, affecting over 4 in 10 children in low- and middle-income countries: "No other single hazard impairs so many children, so silently, so invisibly and so irreversibly" (LEAD Group 2026b). A decision-maker in 2026 cannot assume, as decision-makers in every previous decade wrongly assumed, that current estimates of lead's harm are the ceiling. They have only ever been the floor (Figure 1).

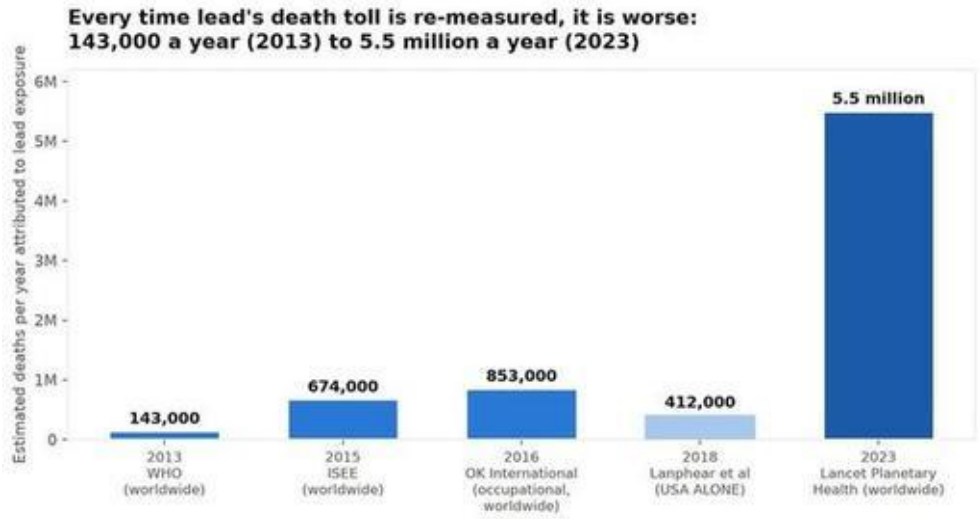


Figure 1: Published estimates of deaths attributed to lead exposure, 2013-2023. The 2018 estimate is for the United States alone (UPI 2013; ISEE 2015; Gottesfeld 2016; Lanphear et al 2018; Larsen and Sánchez-Triana 2023)

A lead mine, not a silver mine

The project is marketed as a "silver mine", but silver is a tiny fraction of an ore body dominated by lead and zinc. The Department of Planning and Environment's own Assessment Report records a product stream of approximately 60% zinc concentrate and 40% silver/lead concentrate by weight: over the life of the mine, roughly 95,000 tonnes of lead and 130,000 tonnes of zinc against about 2,060 tonnes of silver (DPE 2022). By weight the operation is roughly 99% base metal, and lead alone outweighs silver by around 40 to one (Figure 2). "Silver" carries no public-health stigma; "lead" carries an enormous and well-

earned one. We ask the Commission to assess this application for what it is: a toxic lead and other heavy metals mine proposal (LEAD Group 2023b).

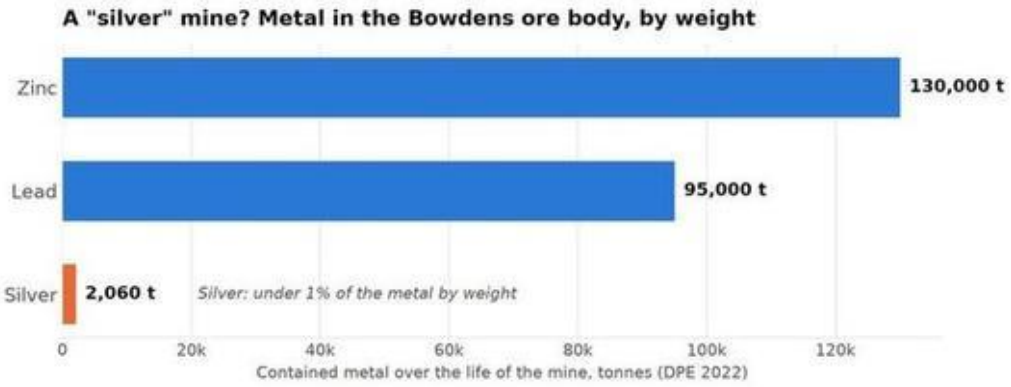


Figure 2: Contained metal in the Bowdens ore body over the life of the mine, by weight (DPE 2022)

Nor is lead the end of it. The proponent's own Feasibility Study records that "arsenic, antimony and fluorine were determined to be at levels in the silver/lead concentrate that would likely trigger penalties from smelters" (Silver Mines Limited 2018b). Yet antimony is not among the twelve metals the Human Health Risk Assessment considered, and the word "antimony" does not appear once in the Department's entire December 2022 Assessment Report (DPE 2022). Neither NSW Health nor the NSW Environment Protection Authority (EPA) identified this. Two agencies that did not notice that a penalty-level toxic metal in the product concentrate was missing from the health assessment cannot credibly assure this Commission that the mine's risks are "able to be managed". The Commission is being asked to assess a cleaner mine than the one actually proposed.

There is no need for this mine: the circular economy

The threshold question for any new mine is need. There is none here. Lead is close to 100% recyclable and lead batteries are the most-recycled consumer product in the world; secondary lead already supplies the majority of global demand (International Lead Association 2023). In Australia, roughly 137,000 tonnes of used lead-acid batteries arise as waste each year and about 98-99% are recycled, carrying on the order of 80,000-90,000 tonnes of lead a year (DCCEEW 2020). The Bowdens mine would produce roughly 3,200 tonnes of lead a year. Australia's existing used-battery lead stream is more than ten times the mine's lead output, before counting lead in roof flashing, radiation shielding, solder, ammunition, pewter and brass. We do not need to dig up more lead; we need to collect and recycle the lead we already have (O'Brien 2024; LEAD Group 2023b).

Silver likewise: 197.6 million ounces (about 6,145 tonnes) of silver was recycled worldwide in 2025 alone, the highest level in 13 years (Silver Institute and Metals Focus 2026), while Bowdens would recover about 1,650 tonnes over its entire 16-year life (Stockhead 2024). The world already recycles a whole Bowdens' worth of silver roughly every four months. End-of-life solar panels carry silver at grades comparable to high-grade ore, with new Australian technology recovering 97-100% of it (University of Newcastle 2025), and Australia's

cumulative solar-panel waste to 2050 carries an estimated 600-1,500 tonnes of recoverable silver (Tan, Deng and Egan 2023): a second Bowdens, sitting in our own waste stream (Figure 3).

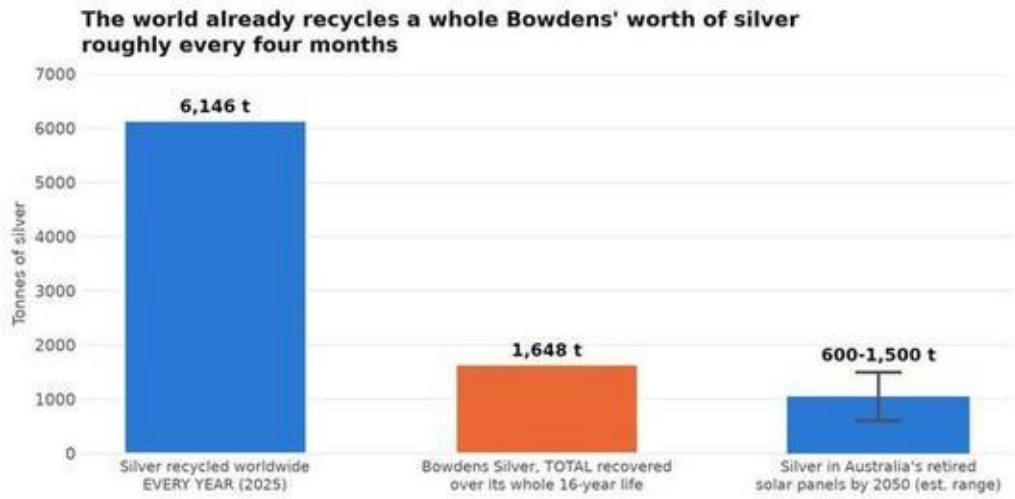


Figure 3: Silver recycled globally each year, against Bowdens' total lifetime recovered silver and the estimated silver in Australia's retired solar panels to 2050 (Silver Institute and Metals Focus 2026; Stockhead 2024; Tan, Deng and Egan 2023; University of Newcastle 2025)

The lead hazard cannot be managed

There is no established safe level of lead exposure apart from zero (WHO 2026). Australia's leading lead-contamination researcher, Professor Mark Taylor, advised the Commission that "no existing, large, multi-element mining operation, which processes lead can demonstrate an absence of off-site impacts" and that "elevated blood leads around lead mines and processing facilities are always present… even after operations have ceased", because of the pollution halos seen at Broken Hill, Mount Isa and Port Pirie (Taylor 2023; Taylor et al 2020). Toxicologist Dr Barry Noller advised that lead exposure is under-estimated where only PM10 and PM2.5 are assessed, because that omits the coarser fallout dust that children ingest, and that drought reduces the water available for dust suppression and increases dust-borne lead (Noller 2023). Lead concentrate would be trucked by B-double, up to around 18 loads a week, to Newcastle, Port Botany or the Port Pirie smelter (DPE 2022), extending the lead footprint along transport corridors, and agricultural producers raised contamination of livestock, olives and wine (Southan 2023).

Broken Hill is the proof the regulators cannot protect children

The previous Panel approved the project in part on "the absence of any outstanding concerns regarding health impacts from NSW Health or the NSW Environment Protection Authority that are unable to be managed" (IPC 2023). Broken Hill is NSW's 140-year-long "controlled" experiment in regulating an active lead mine beside a community, and it refutes that reliance. After decades of oversight and millions of taxpayer dollars, the 2024 Broken Hill Lead Surveillance Program found about 35% of all children aged 1-5, and 68% of Aboriginal

children, still had blood lead above the national 5 µg/dL action level (NHMRC 2015; Far West Local Health District 2025). Peer-reviewed research shows contemporary mine emissions, not merely legacy contamination, independently drive children's blood lead (Dong, Taylor and Zahran 2019).

And lead's harm does not cease on a child's sixth birthday. Lead absorbed over a lifetime is stored in bones and teeth and re-mobilised into the bloodstream by pregnancy, lactation, menopause and age-related bone loss, doing fresh damage each time (Gulson et al 1998; ATSDR 2020). Adults with blood lead of just 6.7 µg/dL were at 37% greater risk of premature death from any cause and 70% greater risk of cardiovascular death than adults at 1 µg/dL; in Professor Bruce Lanphear's words, "There's no safe threshold" (Lanphear et al 2018; Choong 2020). Yet only pregnant women and pre-school children are ever included in Broken Hill community blood lead surveys.

Worse, the competence and good faith of the regulator itself are in question. The NSW EPA commissioned an expert report on environmental lead risks at Broken Hill, received it in December 2019, and did not release it until October 2023 (EPA 2025). Internal emails revealed staff proposing to "quietly load it onto the LeadSmart website and not tell anyone", and the delay has been described as a cover-up. Most relevant of all to this application: the EPA's own internal concern was that "history may repeat itself" near the proposed Bowdens mine (Woodburn and Ormonde 2025). If NSW Health and the EPA cannot protect the children of Broken Hill, there is no basis to believe they will protect the children of Lue.

A process that is not fit for purpose

The LEAD Group's 2023 Parliamentary submission argued that capture by mining interests of regulatory and political processes voids the fitness for purpose of the mine approvals process, and that the EIS has become a tick-the-box exercise "bought and paid for by mining interests", with Bowdens the case in point (LEAD Group 2023b). The Lue Action Group's independent experts found the application deficient against the Secretary's Environmental Assessment Requirements: on human health and acid drainage the project is "not approval-ready" (Noller 2023); on surface water the IPC "does not have sufficient information to make an informed decision" (Baguley 2023); on hydrogeology the proponent "has insufficient water supply approvals" (Flavel 2023). Dr Amanda Cohn's dissenting statement on the Parliamentary inquiry found the majority's conclusions contradicted the evidence (Cohn 2023). And the original consent was declared void by the NSW Court of Appeal in August 2024 because the Commission had failed to consider the mine's own transmission line (IPC 2026). A process that approves a mine while overlooking how it will be powered is not one whose health and environmental findings should be given the benefit of the doubt.

Environmental impacts

The project would emit approximately 1.42 million tonnes of CO2-equivalent over its life as assessed (DPE 2022), at a time when NSW and Australia are committed to deep and rapid emissions reduction. It would store about 30 million tonnes of tailings behind a 56-metre-

high embankment (Silver Mines Limited 2018b) in the upper catchment of Walkers Creek, draining through Lawsons Creek into the Cudgegong and Macquarie Rivers, the headwaters of part of the Murray-Darling Basin (DPE 2022). More than 23 million of the 46.3 million tonnes of waste rock is potentially acid-forming; Dr Noller warned that acid mine drainage reaching Lawsons Creek "may lead to damage to the isolated aquatic ecosystems beyond the point of restoration" and that the final pit void may require "continuous water treatment into the future" (Noller 2023): a perpetual liability with no responsible party once the mine closes. The mine would demand 1,092 to 1,303 megalitres of water a year in a drought-prone catchment, clear roughly 381 hectares of native vegetation including around 180 hectares of endangered Box-Gum Woodland, and directly impact 25 Aboriginal cultural heritage sites, including two scarred trees (DPE 2022): irreplaceable heritage erased for a mine that is not needed.

The overseas comparison

The largest comparable analogue in the United States is the Red Dog zinc-lead-silver mine in Alaska: fugitive dust from concentrate haulage contaminated soil, water and vegetation with lead and cadmium for kilometres beside its road, and the facility has repeatedly topped the US Toxics Release Inventory (Nobel 2018). Even a well-resourced, closely monitored operation under better legislation could not keep lead on-site. More broadly, the US has for two decades effectively been unable to approve a new primary lead mine, because of an ambient air-lead standard more than three times tighter than Australia's (0.15 versus 0.5 µg/m³, averaged over three months rather than a year) (US EPA 2016; NEPC n.d.), strict retrospective Superfund liability, and the closure of the last US primary lead smelter in 2013. The Bowdens proposal is possible here precisely because Australian law is less protective of community health than its US equivalent.

Port Pirie, the proponent's own named likely destination for the Bowdens silver/lead concentrate (Silver Mines Limited 2018b), survives only on public money, most recently a $135 million federal-state bailout (ABC News 2025), and SA Health's 2025 analysis records that 59.2% of tested children under five exceeded the 5 µg/dL national investigation level, the worst result in a decade, with the average Port Pirie two-year-old carrying more lead today than in 2016 (SA Health 2026). A peer-reviewed assessment of the public health education material used in Australia's three lead towns found it "normalised environmental lead" (Sullivan and Green 2016). Wherever Australia hosts a lead industry, governments manage the community's expectations instead of the industry's emissions. That is the lead economy Bowdens would feed.

What we asked the Commission to do

The LEAD Group asks the Commission to refuse the application outright. If, contrary to this submission, it is minded to approve, the full submission sets out minimum conditions, while stressing that even all of them together cannot make a new lead mine safe or necessary: prove-no-harm-first via independent child blood-lead modelling on validated local baseline

data before any approval; a hard, enforceable ambient air-lead limit of 0.15 µg/m³ at the nearest residences with automatic suspension on exceedance; independent baseline and ongoing monitoring of dust, soil, water, eggs and blood lead (to a detection limit no higher than 0.2 µg/dL) for all residents within 30 km, funded by the proponent, with automatic suspension on any statistically significant off-site increase; monitoring by Total Suspended Particulates and fallout dust, not PM10 alone; full product stewardship, with the proponent funding collection and recycling of a weight of lead at least equal to the mine's output; strict retrospective remediation liability backed by funds held independently in perpetuity; tailings engineered to the probable maximum flood and relocated out of the agricultural water catchment; no disturbance of any Aboriginal site without the free, prior and informed consent of Traditional Owners; all vehicles and motors electric, with entirely renewable electricity; and all monitoring and compliance assessed by experts appointed independently of the proponent (LEAD Group 2023b; Taylor et al 2020; Noller 2023).

Conclusion

The Bowdens Silver Project is a new lead and zinc mine dressed up as a silver mine. It is not needed: Australia already holds, in its used batteries and other lead products, more than ten times the lead this mine would produce, and silver and zinc likewise. Its lead-health risk is unacceptable and, as Broken Hill proves beyond argument, cannot be managed by the NSW agencies the previous approval relied upon, one of which suppressed its own lead report while fearing this very precedent. The process that approved it once has already been found wanting by the courts. We must prioritise the health of the many above continuing profits for the few, as without our health, we've got nothing.

As Elizabeth O'Brien put it to the Panel at the public hearing on 15 October 2026: "I would actually like to add one last question for the panel. Wouldn't you have a duty of care to refuse this mine, because of the predictable liability for the NSW Government in perpetuity?"

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