Why Bowdens Silver Mine Proposal Would Fail in the US

A Lead Mine by Any Other Name: The Bowdens Silver Proposal, Community Resistance, and Why Australia Lacks the Protections that Have Stopped New Lead Mines in the United States

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*

Since 2016, Bowdens Silver Pty Ltd, a subsidiary of the Australian Securities Exchange (ASX)-listed Silver Mines Ltd, has been seeking approval to develop what it consistently describes as a silver mine at Lue, near Mudgee in the Central Tablelands of New South Wales (NSW). The framing is deliberate and, critics argue, deeply misleading. By tonnes of metal produced and by the weight of environmental risk, Bowdens would be a lead and zinc mine, and one of the largest new open-cut lead mines proposed in Australia in decades. The community of Lue and the surrounding Mudgee region has fought the proposal vigorously and with remarkable persistence. That fight has found a powerful parliamentary ally in the Greens spokesperson on mining in the NSW Parliament, Cate Faehrmann MLC. Yet despite that opposition, both the NSW and federal governments have, in their various ways, allowed the project to keep progressing toward approval.



2025 Volcano Art Prize (VAP) Entry, **Artist:** Khangai Davaasuren, **Title:** Australian Koala, **Lead-Safety Message:** They say that there are no Koalas in Lue because they [Bowdens Silver who've proposed a lead mine at Lue, near Mudgee, NSW Australia] want to destroy 400 hectares of prime Koala habitat [if the mine is approved/viable]. Tell that to this guy., **Description of Work:** Lead pencil drawing using a lead-free graphite pencil. Message from Mudgee Region Action Group FB page, 25th March 2025. https://volcanoartprize.com/portfolio-item/australian-koala/ [LID 28925]

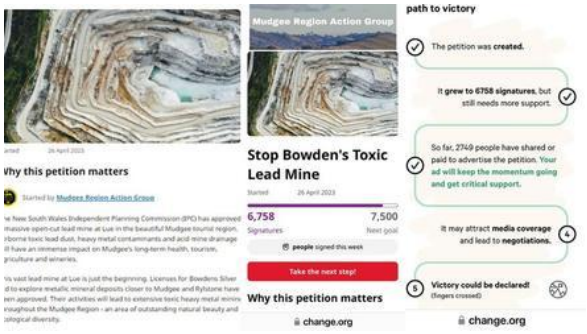
This article examines what Bowdens Silver is actually proposing, why the community opposes it, what governments have done (and not done), and how the entire Australian context compares with the United States, where a combination of tightened environmental law, the loss of domestic primary lead smelting capacity, hostile capital markets, and structural economic forces has meant that no new primary lead mine has been approved for decades, a contrast that illuminates just how much protection Australian communities are not receiving.

What Bowdens Silver is actually proposing

The Bowdens Silver deposit is located about 26 kilometres east of Mudgee and about 2 kilometres north of the village of Lue, in the Central Tablelands of NSW (NSW DPE 2022). The project has been owned since 2016 by Silver Mines Ltd, which is listed on the ASX (ASX: SVL).

The proposed mine is an open-cut operation. According to the Environmental Impact Statement (EIS) submitted to the NSW Department of Planning, Industry and Environment (now the NSW Department of Planning, Housing and Infrastructure, or DPHI), the ore body contains silver, lead and zinc (R.W. Corkery & Co. 2020). The company's own figures, as summarised in the Department's 2022 assessment report, indicate that the mine would produce about 95,000 tonnes of lead and 130,000 tonnes of zinc, but only about 66.3 million ounces (roughly 2,060 tonnes) of silver (NSW DPE 2022). By weight of metal produced, lead and zinc together outweigh silver by more than 100 to one, although the Department notes that silver is the metal with the highest economic value in the ore body.

The proposed mine would extract about 30 million tonnes of ore (up to 2 million tonnes a year) over about 16.5 years of mining and processing, within a total project life of about 23 years, producing a silver/lead concentrate and a zinc concentrate (NSW DPE 2022). The concentrates would be trucked in containers, via intermodal terminals at Parkes or Kelso (Bathurst) or directly to Port Botany, for export from Newcastle or Port Botany or for smelting at Port Pirie in South Australia (NSW DPE 2022). The Port Pirie smelter is operated by Nyrstar, whose operating business is wholly owned by the commodity trader Trafigura, and it is Australia's only lead refiner. Since August 2025 the Port Pirie and Hobart smelters have been kept running with $240 million in Commonwealth, South Australian and Tasmanian government support (Nyrstar 2026).



2023 Volcano Art Prize (VAP) Entry, **Artist:** Mudgee Region Action Group, **Title:** Stop Bowdens Toxic Lead Mine, **Lead-Safety Message:** It's time for you dear readers to take action and sign the petition at https://www.change.org/p/help-stop-bowden-s-toxic-lead-mine! This could be the first of many lead mine and lead mine expansions to be stopped by wonderful people like you who are creating a lead-safe world for our children!, **Description of Work:** Screenshots from Petition - Stop Bowden's Toxic Lead Mine - Change.org collaged together in PowerPoint., https://volcanoartprize.com/portfolio-item/stop-bowdens-toxic-lead-mine/ [LID 27704]

The open-cut nature of the proposed mine is significant. Open-cut lead-zinc mining generates very large volumes of waste rock and tailings, which can leach lead, zinc, and associated heavy metals into surface and groundwater over decades or centuries. The Lue site sits within a farming district known for merino wool, cattle, and viticulture (the Mudgee wine region begins nearby), and is within the upper catchment of the Cudgegong River, a tributary of the Macquarie River system, which is part of the Murray-Darling Basin.

Why calling it a 'silver mine' matters

The naming of the Bowdens project as a 'silver mine' is not a trivial matter of marketing. It has substantive regulatory and political consequences.

Under the NSW Mining Act 1992 and the Environmental Planning and Assessment Act 1979 (EP&A Act), the characterisation of a mine determines, in part, how it is assessed, what agency has primary jurisdiction, and how it is perceived by the public and by decision-

makers. 'Silver' carries no public health stigma. 'Lead' carries enormous public health stigma, and for good reason, given the well-documented history of lead contamination in Australian mining towns, most notably Broken Hill.

The characterisation also matters for community engagement. Members of the Lue community and surrounding districts who attended early public consultation sessions have reported being told they were being consulted about a silver mine. The dominant health risk from a silver mine is negligible compared to the dominant health risk from a lead mine, namely, the well-established pathway by which fine lead dust and lead-contaminated water enter human bodies, particularly the bodies of children, causing irreversible neurological damage at blood lead levels for which no safe level has been identified (CDC n.d.). The National Health and Medical Research Council (NHMRC) recommends that any blood lead level above 5 µg/dL be investigated and the source of exposure reduced (NHMRC 2015).

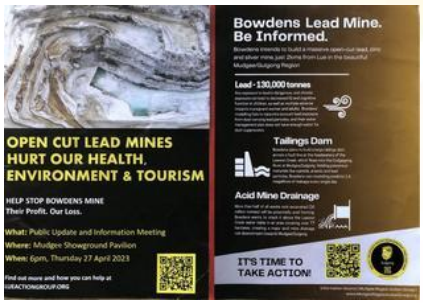
Elizabeth O'Brien of The LEAD Group Inc. and other lead health advocates have consistently argued that the project should be assessed, described, and debated as what it is: a lead mine. This is not a semantic preference. It is a public health imperative.

The community fights back: Lue and the lessons of Broken Hill

The community opposition to Bowdens Silver has been substantial, sustained and increasingly sophisticated. Local landholders, farmers, the Mudgee wine industry, tourism operators and environmental groups have organised through groups including the Lue Action Group, the Mudgee Region Action Group, the Mudgee Region Health Alliance, the Mudgee District Environment Group and the Bingman Catchment Landcare Group (which brought the successful court challenge), lodging hundreds of objections to the EIS and its various iterations, commissioning independent expert reports, and engaging media. At the Independent Planning Commission (IPC) in 2023, 53 per cent of the 1,916 submissions objected to the project.

The Broken Hill warning

The community's opposition is not abstract. Australians have only to look at Broken Hill, 900 kilometres to the west, to understand what more than a century of lead mining and smelting does to a community's health. Broken Hill is the birthplace of BHP, of the modern Australian union movement, and of some of the most comprehensive occupational health and safety reforms in Australian history. It is also a city with a documented legacy of elevated blood lead levels in children that has persisted for decades, contaminated residential soil across much of the city, and a population that has carried the neurological and health burden of that contamination across generations (Tariq 2026).



2023 Volcano Art Prize (VAP) Entry, **Artist:** Mudgee Region Action Group, **Title:** Stop Bowdens Lead Mine, **Lead-Safety Message:** Open cut lead mines hurt our health, environment and tourism. Help stop Bowdens mine. Bowdens intends to mine 130,000 tonnes of lead and build a large tailings dam across a fault line potentially creating a major acid mine drainage risk downstream. It's time to take action!, **Description of Work:** Scanned flyers collaged together in Powerpoint., https://volcanoartprize.com/portfolio-item/stop-bowdens-lead-mine/ [LID 27699]

NSW Health, through the Far West Local Health District, runs an ongoing blood lead screening program for Broken Hill children under five, while the NSW Environment Protection Authority (NSW EPA) runs the separate Broken Hill Environmental Lead Program on remediation. In 2025, 56 per cent of Aboriginal children and 28 per cent of non-Aboriginal children screened had blood lead levels above the 5 µg/dL national guideline (Far West and Western NSW LHD Public Health Unit 2026). Studies have repeatedly found elevated blood lead levels in Broken Hill children, with the contamination pathway being primarily ingestion of lead-contaminated household dust and soil, which in turn derives from historical and ongoing mining emissions that have deposited lead across the city (Dong, Taylor and Gulson 2020).

Port Pirie, South Australia, one of the possible destinations for the Bowdens concentrate, has its own and similarly troubling lead contamination history. Port Pirie children have long had among the highest blood lead levels in Australia; in 2025, 79.8 per cent of two-year-olds tested were above 5 µg/dL (SA Health 2026). The Nyrstar smelter (formerly owned by Zinifex, Pasminco and, from 1915, Broken Hill Associated Smelters) has been the subject of decades of regulatory action, community health programs and political controversy. The South Australian Environment Protection Authority has repeatedly recorded the smelter exceeding its licence limit for lead in air (SA EPA 2026; SA EPA n.d.). A major redevelopment, costing about $660 million and underwritten by the South Australian Government to the tune of $291 million, was undertaken from 2014 to convert the plant from a sinter-based primary lead smelter into an enclosed poly-metallic processing facility, promising dramatic reductions in lead emissions, but community health advocates and independent researchers have questioned whether the promised improvements have been fully realised (Taylor, Isley and Glover 2019; SA Health 2026).

Cate Faehrmann and the parliamentary campaign

The community's fight found a powerful parliamentary voice in Cate Faehrmann, the NSW Greens Member of the Legislative Council and the party's Mining Spokesperson. Faehrmann has been one of the most persistent and effective parliamentary critics of the Bowdens Silver proposal, and of the broader framework under which it has been assessed.

In the NSW Legislative Council, Faehrmann has raised the Bowdens proposal through questions to the Environment and Agriculture Ministers in November 2023 (Faehrmann 2023a; Faehrmann 2023b) and in an adjournment speech in March 2026 alleging that the

company lobbied the Government to change planning law after the Court of Appeal voided the mine's approval (Faehrmann 2026).

Faehrmann has challenged the framing of the project as a silver mine, telling the Legislative Council that Lue faces “a toxic lead mine” (Faehrmann 2023c). Speaking at the IPC's public hearing in October 2026, she described “glaring inadequacies” in Bowdens' human health risk assessment, which mentions Broken Hill only once, and said it would be “highly reckless and irresponsible to approve Bowdens open cut lead mine in Lue” (IPC 2026a).

At the same hearing, Faehrmann criticised the NSW planning framework for assessing the health impacts of lead mining proposals, pointing out that NSW has no legislated trigger value for lead in deposited dust (IPC 2026a).

Government responses: supporting the mine

Despite the volume and quality of community opposition, the overall trajectory of government decision-making, at both state and federal levels, has been toward facilitating the Bowdens project's progress rather than blocking it.

NSW state government

The NSW Department of Planning, Housing and Infrastructure (DPHI) has processed the Bowdens EIS through multiple rounds of submissions and responses. The IPC, which replaced the Planning Assessment Commission in 2018, approved the mine on 3 April 2023 after a public hearing in February 2023. On 16 August 2024 the NSW Court of Appeal declared that consent void (Bingman Catchment Landcare Group Inc v Bowdens Silver Pty Ltd [2024] NSWCA 205). The NSW Parliament then amended the planning Act, the Planning Secretary ruled on 23 May 2025 that the mine's transmission line was not part of the project, and on 15 September 2026 DPHI referred the project back to the IPC for re-determination (DPHI 2026). A new IPC panel held a public hearing on 14 to 16 October 2026, and written submissions closed on 11 November 2026 (IPC 2026b). The project has not been refused.

Successive NSW governments, Labor and Coalition alike, have treated the Bowdens project as a legitimate major development proposal proceeding through the normal statutory process. Neither the former Coalition government under Dominic Perrottet nor the current Labor government under Chris Minns has moved to stop the project on public health or environmental grounds, notwithstanding the volume of community opposition and the specific concerns raised by Faehrmann and others. After the Court of Appeal voided the consent, the Minns Government amended the Environmental Planning and Assessment Act 1979 (EP&A Act) in late 2024 to let the Planning Secretary decide whether off-site infrastructure forms part of a project, and the Secretary then ruled that Bowdens' transmission line did not (DPHI 2026). Faehrmann has told Parliament that freedom of information documents show the company lobbied for this change (Faehrmann 2026).

Mining lease applications are handled by NSW Resources, a division of the Department of Primary Industries and Regional Development (the Resources Regulator is the division's safety and compliance arm). Under section 4.42 of the EP&A Act, a mining lease for a State significant development must be granted substantially consistent with any development

consent, so the lease cannot be refused once planning consent is given. This reflects the dual-track nature of NSW mining approvals, under which a planning approval and a mining lease are separate instruments, a structure that community groups have criticised as creating regulatory and political momentum that makes ultimate refusal more difficult.

Federal government

At the federal level, the project (EPBC 2018/8372) was declared a controlled action under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) on 5 April 2019 because of its potential impact on listed threatened species and communities. It is being assessed by NSW under the bilateral agreement, with the final EPBC approval decision resting with the federal Environment Minister after NSW decides. The EPBC Act protects matters of national environmental significance, such as threatened species, migratory species and World Heritage areas, but it does not directly assess human health impacts from lead exposure, a significant gap that critics of the federal environmental assessment framework have highlighted.



2024 Volcano Art Prize (VAP) Entry, **Artist:** Jayne Bentivoglio, **Title:** Protesting against the Lead mine at Lue, **Lead-Safety Message:** My community has spent the last 12 years protesting against the proposed Bowden lead mine at Lue yet, as things stand, any new lead mine proposal on your home or farm or waterways is practically 100% likely to be approved no matter how unjustifiable the destruction of aboriginal heritage, water, wildlife, agriculture, tourism or cost of infrastructure and drain on non-renewable energy and dwindling clean water. Sign the Circular Economy for Lead petition at https://www.aph.gov.au/e-petitions/petition/EN6714 before it closes on Wed 04 Dec 2024 11:59 PM (AEDT) to keep lead safely in the ground, and start instead, collecting and recycling existing lead to meet future needs., **Description of Work:** Photo of protest in mid Oct 2024 with Mudgee Region Health Alliance and Mudgee Region Action Group and Sen Cate Faehrmann NSW Greens MLC., https://volcanoartprize.com/portfolio-item/protesting-against-the-lead-mine-at-lue/ [LID 28216]

The federal Labor government under Anthony Albanese, like the previous Coalition government, has not, to our knowledge, taken any steps specifically targeted at the Bowdens proposal beyond the standard EPBC assessment process. The reforms to the EPBC Act that followed the 2020 Samuel Review were finally passed as the Environment Protection Reform Act 2025, which received Royal Assent on 1 December 2025 and is commencing in stages through 2026, along with a new National Environmental Protection Agency from 1 July 2026 (Commonwealth of Australia 2025). They reform environmental assessment processes but do not create a specific requirement to assess lead contamination health risks.

The US contrast: why no new lead mine would get this far in America

To understand just how inadequate Australian protections are for communities facing new lead mine proposals, it is instructive to examine the United States, a country with its own deeply troubled lead mining history, but one where a convergence of regulatory, economic,

and financial forces has made new primary lead mining effectively impossible for the past two decades. The comparison is not flattering to Australia.

The lead air quality standard: a tenfold difference in ambition

The single most consequential regulatory difference is the ambient air quality standard for lead. In 2008, the US Environmental Protection Agency (EPA) revised its National Ambient Air Quality Standard (NAAQS) for lead from 1.5 micrograms per cubic metre (µg/m³), the standard that had been in place since 1978, to 0.15 µg/m³, a tenfold tightening (EPA 2008). This standard was retained after the next review in 2016 (EPA 2016).

Australia's national ambient air quality standard for lead, set by the National Environment Protection (Ambient Air Quality) Measure (AAQ NEPM) and administered through state and territory environment protection authorities, is 0.5 µg/m³ as an annual average (NEPC 2021). This is more than three times higher than the US standard, and averaged over a longer period. And unlike the US NAAQS, which is a legally enforceable federal standard backed by the Clean Air Act, Australia's AAQ NEPM standard has historically been more of an aspiration than a hard legal requirement, with enforcement left to state EPAs that have been slow to act against major industrial polluters.



2024 Volcano Art Prize (VAP) Entry, Artist: Phoenix Jewson, Age 5, Home-school, Title: Phoenix Makes a Volcano, Lead-Safety Message: No one can stop lead fumes spewing out of a volcano, but people who can vote, can sign Grandma Lead's Petition EN6714, Circular Economy for Lead. Then we might just be able to stop new lead mines sending Australian lead out in to the world. Please sign the petition at https://www.aph.gov.au/e-petitions/petition/EN6714 before it closes on Wed 04 Dec 2024 11:59 PM (AEDT)., Description of Work: Mummy and my magpie Chough helped me make a volcano out of clay, food dye, vinegar and bicarb soda while the video was recording on her iPhone and mummy edited it., https://volcanoartprize.com/portfolio-item/phoenix-makes-a-volcano/ [LID 28159]

The practical consequence is stark. In the US, the 0.15 µg/m³ standard means that any new lead mine or smelter must demonstrate it can operate without pushing local ambient lead concentrations above that threshold, and the modelling required to demonstrate compliance is stringent and publicly scrutinised. Facing Clean Air Act enforcement, Doe Run, owner of the only remaining US primary lead smelter at Herculaneum, Missouri, agreed in 2010 to shut it down by 31 December 2013 (EPA 2010). Without a domestic primary smelter, new US lead mines have no domestic outlet for their ore, a fatal commercial constraint. In Australia, Port Pirie's smelter continues to operate under conditions that would not be tolerated under US law.

Clean Water Act versus Australian water protection frameworks

The US Clean Water Act imposes rigorous permitting requirements on mine water discharge, including the requirement for a National Pollutant Discharge Elimination System (NPDES) permit, issued by the EPA or an authorised state, and technology-based effluent limits for lead from lead-zinc mines and mills under 40 CFR Part 440 Subpart J (EPA 2026). Any new lead mine must demonstrate that it can meet these limits.

In NSW, the Bowdens proposal sits within the upper Cudgegong River catchment, which flows into the Macquarie River and ultimately into the Murray-Darling Basin. The Murray-Darling Basin Plan sets water quality targets, including for heavy metals by reference to the ANZECC (2000) guidelines, but these are targets that agencies must "have regard to", not enforceable discharge limits of the kind written into US Clean Water Act permits (Commonwealth of Australia 2026). The NSW EPA can impose conditions through the Environment Protection Licence (EPL) process, but those conditions depend on what the licence sets and how vigorously it is enforced.

CERCLA, Superfund, and liability that makes investors think twice

Perhaps the most powerful deterrent to new lead mine investment in the US is the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), popularly known as Superfund. Under CERCLA, any company that contributed to contamination at a Superfund site, even if its operation was legal at the time, can be held jointly and severally liable for the entire cost of remediation where the harm caused by multiple parties cannot be separated (EPA n.d.). The US has numerous major lead mining Superfund sites, the Tar Creek site in Picher, Oklahoma; the Bunker Hill complex in Idaho's Coeur d'Alene basin; the Jasper County site in Missouri, where remediation costs have run to hundreds of millions of dollars and where responsible parties have been pursued through the courts for decades (EPA 2023a; EPA 2023b).

This liability regime fundamentally changes the risk calculus for investors. Any company proposing a new lead mine in the US knows that it is potentially assuming open-ended environmental liability that could exceed the value of the mine itself. No amount of insurance can fully cover CERCLA liability, and major institutional investors, who must account for this risk in their portfolio analysis, are accordingly unwilling to finance new primary lead mining.



2024 Volcano Art Prize (VAP) Entry, **Artist:** Elizabeth O'Brien, **Title:** Lue Water Protection Ceremony, **Lead-Safety Message:** Grandma Lead was inspired by this first nations protection of the waters ceremony at Lue, the site of Bowdens proposed lead mine on a very rainy day on 4th Oct 2023, to create the Petition EN6714 - Circular Economy for Lead to stop new lead mines being approved. Please Sign the petition at https://www.aph.gov.au/e-petitions/petition/EN6714 before it closes on Wed 04 Dec 2024 11:59 PM (AEDT)., **Description of Work:** Collage of selfie & iphone 13 photos from Lue, near Mudgee, NSW., https://volcanoartprize.com/portfolio-item/lue-water-protection-ceremony/ [LID 28183]

Australia has no equivalent of CERCLA. The contaminated land framework in NSW is primarily the Contaminated Land Management Act 1997, which gives the NSW EPA powers to require investigation and remediation of contaminated sites, but which does not impose the same strict, retroactive, joint-and-several liability that makes CERCLA so powerful a deterrent. At Broken Hill, more than a century of lead contamination is still being remediated with public money, with $4.2 million allocated to the NSW EPA's Broken Hill Environmental Lead Program for 2025 to 2027 (Faehrmann 2025).

ESG finance and the global capital market shift

The global shift toward Environmental, Social and Governance (ESG) investment criteria has made financing new lead mines in the United States more difficult. Project finance banks applying the Equator Principles must comply with the International Finance Corporation (IFC) Performance Standards, which impose requirements on pollution prevention and community health and safety (IFC 2012).

The Bowdens Silver project has been able to attract and retain investor support, at least from its ASX-listed parent, Silver Mines Ltd, in part because Australian capital markets and Australian regulatory frameworks do not impose equivalent ESG constraints. The ASX Corporate Governance Council's Principles and Recommendations (4th edition, 2019) ask listed entities to disclose any material exposure to environmental or social risks and how they manage them (Recommendation 7.4), but these are "if not, why not" disclosure principles, not rules (ASX Corporate Governance Council 2019), and the ASX has no mechanism to refuse or delist a company on the grounds that its proposed mine would contaminate a regional community with lead.

This reflects a broader asymmetry: Australian institutional investors, superannuation funds and banks have been slow to adopt hard exclusions around lead mining. Some Australian super funds apply ESG screens, but we found none that explicitly excludes lead mining, and the framework remains voluntary and inconsistent.

The Port Pirie factor: a smelter that keeps the lead economy alive

The most fundamental structural difference between the US and Australian contexts is the continued existence of the Port Pirie lead smelter in South Australia. When Doe Run shut down the Herculaneum, Missouri smelter at the end of 2013, the last US primary lead smelter, it severed the domestic supply chain that any new US lead mine would depend on (EPA 2010). Without a domestic smelter, new US lead mines have no economically viable domestic outlet for their concentrate.



2023 Volcano Art Prize (VAP) Entry, **Artist:** The LEAD Group, **Title:** Orange Mudgee Mine News, **Lead-Safety Message:** ABC News reporters Joanna Woodburn and Micaela Hambrett have done an awesome job in 2023 reporting on acid mine drainage from the former Sunny Corner mine, lead contamination and potential future lead hazards from Cadia Lead Mine near Orange, and the proposed Bowdens Silver Mine at Mudgee., **Description of Work:** Collaged screenshots from four ABC News articles covering lead mining concerns in NSW, including reports on export risks, community anxiety, parliamentary inquiry integrity issues, and mining health impact warnings., https://volcanoartprize.com/portfolio-item/orange-mudgee-mine-news/ [LID 27705]

Port Pirie changes the Australian equation entirely. A new mine at Lue could truck containerised concentrate via intermodal terminals at Parkes or Kelso to Port Pirie, completing a supply chain that already exists and that the Port Pirie smelter's operator, Nyrstar (owned by Trafigura), has a commercial interest in keeping supplied with fresh ore

concentrate. The Bowdens assessment documents list Port Pirie as one of three possible destinations for the concentrate, alongside Newcastle and Port Botany (NSW DPE 2022).

Port Pirie's continued operation is thus not merely a fact about South Australian industry. It is a structural enabler of new lead mining proposals in eastern Australia in a way that has no US equivalent. The smelter's existence means that the economic case for Bowdens, while tight, is at least arguable, whereas in the US, the equivalent economic case collapsed with the Herculaneum closure.

This creates a disturbing circularity. Port Pirie needs ore to process; Bowdens would provide ore; therefore Bowdens has a commercial rationale. But Port Pirie has itself been a source of severe lead contamination in the Port Pirie community for over a century (Baghurst et al 1992; SA Health 2026). The supply chain that makes Bowdens commercially viable is itself a public health problem of the first order. The question that governments and regulators have consistently failed to ask with sufficient rigour is: why should Australia facilitate new lead mining in order to feed a smelter whose continued operation is itself an ongoing public health burden?

Legislative and regulatory gaps: what Australia needs but does not have

The comparison with the US reveals several specific legislative and regulatory gaps in the Australian framework that, if addressed, would substantially reduce the likelihood of a proposal like Bowdens Silver being approved:

A tightened national ambient air quality standard for lead

Australia should revise its AAQ NEPM lead standard from 0.5 µg/m³ to at least 0.15 µg/m³, consistent with the US standard and with the scientific evidence on lead toxicity, which, as the US Centers for Disease Control and Prevention (CDC) states, has identified no safe blood lead level in children (CDC n.d.), and with the NHMRC's recommendation that any blood lead level above 5 µg/dL be investigated (NHMRC 2015). A standard set at 0.15 µg/m³ and backed by genuine enforcement mechanisms would make the Bowdens proposal, and the continued operation of Port Pirie at its current emission levels, legally untenable.

A national lead contamination liability regime

Australia needs a CERCLA-equivalent: a national framework that imposes strict, retroactive, joint-and-several liability on the operators of lead mines and smelters for the full cost of contamination remediation, including health costs borne by affected communities. Such a framework would fundamentally change the risk calculus for investors and lenders financing lead mining proposals, as it has in the United States.

Integration of health risk assessment into environmental assessment

The NSW EP&A Act and the federal EPBC Act assessment processes do not adequately integrate quantitative health risk assessment, particularly for lead exposure pathways

affecting children, into the environmental impact assessment process. A reformed framework would require any new lead mine EIS to include an independent, peer-reviewed child blood lead level modelling study for surrounding communities, using recognised pharmacokinetic models (such as the Integrated Exposure Uptake Biokinetic (IEUBK) model that the US EPA uses) (EPA 2021), and would require that the modelled outcomes meet a specified health standard before planning approval could be granted.

Addressing the 'silver mine' framing in regulatory guidance

The NSW DPHI and the federal DCCEEW should issue regulatory guidance making clear that mining proposals are to be assessed and described according to their primary metal by economic value and by public health risk, not by the metal that the proponent finds most commercially convenient to name. A mine that produces more lead than silver, and whose primary environmental and public health risk arises from lead, is a lead mine. Calling it a silver mine for assessment purposes is not just inaccurate; it is a public health risk.

Conclusion: two countries, two outcomes

The story of Bowdens Silver is, at its core, a story about regulatory arbitrage, about a mining proposal that would almost certainly not be approvable in the United States being pursued in Australia because Australian law, Australian institutions, and Australian capital markets are less protective of community health than their US equivalents.



2023 Volcano Art Prize (VAP) Entry, **Artist:** Elizabeth O'Brien, **Title:** Stop New NSW Lead Mines, **Lead-Safety Message:** I have a vision that the 2023 NSW Parliamentary Inquiry into whether the NSW regulatory framework for heavy metals and critical minerals mining is fit for purpose, will not only stop Bowdens and other proposed lead mines, but will find that no new lead mines in NSW can be justified! Let's use recycled lead (eg using government rebates to remove and recycle lead roof flashing so lead-safe rainwater can be collected) instead for our renewable energy projects!, **Description of Work:** Powerpoint collage of screenshots from Communities anxious as NSW government spruiks mining, The 7.30 Report, 20 Sept 2023, ABC TV (on Youtube), https://volcanoartprize.com/portfolio-item/stop-new-nsw-lead-mines/ [LID 27682]

This is not a comfortable conclusion for Australians who like to think of our environmental and public health standards as world-class. In the specific domain of lead mining regulation, they are not. The US tenfold tightening of the lead air quality standard; the closure of the last primary smelter; the CERCLA liability framework; the ESG capital market shift; and the decade-long permitting gauntlet have together created a regulatory and economic environment in which new primary lead mining is essentially impossible. None of these protections, in equivalent form, exist in Australia.

The community of Lue and the Mudgee region, Cate Faehrmann and the NSW Greens, The LEAD Group Inc., and the many organisations and individuals who have fought the Bowdens Silver proposal deserve better than the protection they are currently being offered. They deserve a regulatory framework that names the risk accurately, assesses it rigorously, and holds those who would create it fully liable for the consequences. Until that framework exists, proposals like Bowdens Silver will continue to advance, and communities will continue to

fight the battles that stronger law should be fighting for them.

References

ASX Corporate Governance Council (2019) Corporate Governance Principles and Recommendations, 4th edn, ASX, Sydney, https://www.asx.com.au/content/dam/asx/about/corporate-governance-council/cgc-principles-and-recommendations-fourth-edn.pdf [LID 30114]

Baghurst, P A; McMichael, A J; Wigg, N R; Vimpani, G V; Robertson, E F; Roberts, R J; and Tong, S L (1992) Environmental exposure to lead and children's intelligence at the age of seven years: the Port Pirie Cohort Study, New England Journal of Medicine, 327(18): 1279-1284, https://doi.org/10.1056/NEJM199210293271805 [LID 3641]

Bingman Catchment Landcare Group Incorporated v Bowdens Silver Pty Ltd [2024] NSWCA 205 (16 August 2024), https://www.austlii.edu.au/cgi-bin/viewdoc/au/cases/nsw/NSWCA/2024/205.html [LID 30083]

CDC (Centers for Disease Control and Prevention) (n.d.) About Childhood Lead Poisoning Prevention, CDC, accessed 17 November 2026, https://www.cdc.gov/lead-prevention/about/index.html [LID 30115]

Commonwealth of Australia (2025) Environment Protection Reform Act 2025 (Cth), Federal Register of Legislation, https://www.legislation.gov.au/C2025A00068/asmade/text [LID 30116]

Commonwealth of Australia (2026) Basin Plan 2012 (Cth), compilation no. 11, 1 July 2026, F2026C00862, Federal Register of Legislation, https://www.legislation.gov.au/F2012L02240/latest/text [LID 30117]

Dong, C; Taylor, M P; and Gulson, B (2020) A 25-year record of childhood blood lead exposure and its relationship to environmental sources, Environmental Research, 186: 109357, https://doi.org/10.1016/j.envres.2020.109357 [LID 22505]

DPHI (NSW Department of Planning, Housing and Infrastructure) (2026) Bowdens Silver Project (SSD-5765): Supplementary Advice to the Independent Planning Commission, 15 September 2026, https://www.ipcn.nsw.gov.au/sites/default/files/2026-09/Supplementary%20Advice%20redacted.pdf [LID 30080]

EPA (U.S. Environmental Protection Agency) (2008) National Ambient Air Quality Standards for Lead; Final Rule, Federal Register, Vol. 73, No. 219, 12 November 2008, https://www.federalregister.gov/documents/2008/11/12/E8-25654/national-ambient-air-quality-standards-for-lead [LID 11377]

EPA (U.S. Environmental Protection Agency) (2010) Doe Run Resources Corporation Settlement, https://www.epa.gov/enforcement/doe-run-resources-corporation-settlement [LID 30118]

EPA (U.S. Environmental Protection Agency) (2016) Review of the National Ambient Air Quality Standards for Lead; Final Action, Federal Register, 18 October 2016, 81 FR 71906, https://www.federalregister.gov/documents/2016/10/18/2016-23153/review-of-the-national-ambient-air-quality-standards-for-lead [LID 30119]

EPA (U.S. Environmental Protection Agency) (2021) Integrated Exposure Uptake Biokinetic Model for Lead in Children, Windows version (IEUBKwin v2), https://www.epa.gov/superfund/lead-superfund-sites-software-and-users-manuals [LID 30120]

EPA (U.S. Environmental Protection Agency) (2023a) Superfund Site: Tar Creek, Ottawa County,

Oklahoma, EPA Superfund Program, https://www.epa.gov/superfund/tar-creek [LID 30121]

EPA (U.S. Environmental Protection Agency) (2023b) Superfund Site: Bunker Hill Mining and Metallurgical Complex, Idaho, EPA Superfund Program, https://www.epa.gov/superfund/bunker-hill [LID 30122]

EPA (U.S. Environmental Protection Agency) (2026) 40 CFR Part 440 Subpart J: Copper, Lead, Zinc, Gold, Silver, and Molybdenum Ores Subcategory, Electronic Code of Federal Regulations, https://www.ecfr.gov/current/title-40/chapter-I/subchapter-N/part-440/subpart-J [LID 30123]

EPA (U.S. Environmental Protection Agency) (n.d.) Superfund Liability, accessed 17 November 2026, https://www.epa.gov/enforcement/superfund-liability [LID 30124]

Faehrmann, C (2023a) Questions Without Notice: Bowdens Silver Project, NSW Legislative Council Hansard, 21 November 2023, https://api.parliament.nsw.gov.au/api/hansard/search/daily/fragment/HANSARD-1820781676-93943 [30125]

Faehrmann, C (2023b) Questions Without Notice: Bowdens Silver Project, NSW Legislative Council Hansard, 23 November 2023, pp 13-14, https://api.parliament.nsw.gov.au/api/hansard/search/daily/pdf/HANSARD-1820781676-94173 [LID 30126]

Faehrmann, C (2023c) Questions Without Notice: Take Note: Bowdens Silver Project, NSW Legislative Council Hansard, 21 November 2023, https://api.parliament.nsw.gov.au/api/hansard/search/daily/fragment/HANSARD-1820781676-93964 [LID 30127]

Faehrmann, C (2025) Questions Without Notice: Broken Hill Lead Contamination, NSW Legislative Council Hansard, 18 November 2025, https://api.parliament.nsw.gov.au/api/hansard/search/daily/fragment/HANSARD-1820781676-102066 [LID 30128]

Faehrmann, C (2026) Adjournment: Bowdens Silver Project, NSW Legislative Council Hansard, 25 March 2026, https://api.parliament.nsw.gov.au/api/hansard/search/daily/fragment/HANSARD-1820781676-103549 [LID 30129]

Far West and Western NSW LHD Public Health Unit (2026) Lead Program Annual Report 2025: Broken Hill children less than 5 years old, NSW Ministry of Health, https://www.nsw.gov.au/sites/default/files/noindex/2026-07/lead-program-annual-report-2025-accessible.pdf [LID 30130]

IFC (International Finance Corporation) (2012) IFC Performance Standards on Environmental and Social Sustainability, International Finance Corporation, World Bank Group, 1 January 2012, https://www.ifc.org/en/insights-reports/2012/ifc-performance-standards [LID 30132]

IPC (Independent Planning Commission NSW) (2026a) Transcript of Public Hearing (Day 1): Bowdens Silver Mine (SSD-5765), 14 October 2026, https://www.ipcn.nsw.gov.au/sites/default/files/2026-10/Bowdens%20Silver%20Public%20Hearing%20Day%201%20Transcript%20.pdf [LID 29967]

IPC (Independent Planning Commission NSW) (2026b) Factsheet: Bowdens Silver determination process (SSD-5765), last updated 13 October 2026, https://www.ipcn.nsw.gov.au/sites/default/files/2026-09/Factsheet%20Bowdens%20Silver.pdf [LID 30133]

NEPC (National Environment Protection Council) (2021) National Environment Protection (Ambient Air Quality) Measure, compilation no. 3, 18 May 2021, F2021C00475, Federal Register of Legislation, https://www.legislation.gov.au/F2007B01142/latest/text [LID 30134]

NHMRC (National Health and Medical Research Council) (2015) NHMRC Statement: Evidence on the Effects of Lead on Human Health, ref. EH58, NHMRC, Canberra, https://www.nhmrc.gov.au/sites/default/files/documents/reports/statement-lead-human-health-eh58.pdf [LID 18097]

NSW DPE (NSW Department of Planning and Environment) (2022) Bowdens Silver Project: State Significant Development Assessment (SSD 5765), Assessment Report, December 2022, NSW Government, https://www.planningportal.nsw.gov.au/major-projects/projects/bowdens-silver [LID 30135]

Nyrstar (2026) Next phase of transitionary funding for Nyrstar's Australian metals modernisation agreed, media release, 10 June 2026, https://www.nyrstar.com/resource-center/press-releases/next-phase-of-transitionary-funding-for-nyrstars-australian-metals-modernisation-agreed [LID 30136]

R.W. Corkery & Co. (2020) Bowdens Silver Project Environmental Impact Statement, State Significant Development No. 5765, prepared for Bowdens Silver Pty Limited, NSW Department of Planning, Industry and Environment, https://www.planningportal.nsw.gov.au/major-projects/projects/bowdens-silver [LID 30137]

SA EPA (South Australia Environment Protection Authority) (2026) Port Pirie Nyrstar Smelter: Environment Protection Licence, SA EPA, updated 1 May 2026, https://www.epa.sa.gov.au/public_register/search-public-register [LID 28584]

SA EPA (South Australia Environment Protection Authority) (n.d.) Nyrstar Port Pirie, SA EPA, accessed 17 November 2026, https://www.epa.sa.gov.au/community/stay-informed/nyrstar-port-pirie [LID 30138]

SA Health (2026) Port Pirie Lead Levels 2025 Annual Report, media release, 20 February 2026, https://www.sahealth.sa.gov.au/wps/wcm/connect/public+content/sa+health+internet/about+us/news+and+media/all+media+releases/port+pirie+lead+levels+2025+annual+report [LID 29127]

Tariq, S (2026) Broken Hill mother exposed to lead as a child fights same battle with her children, ABC News, 11 July 2026, https://www.abc.net.au/news/2026-07-11/aboriginal-children-broken-hill-lead-exposure-blood-levels/106898130 [LID 29666]

Taylor, M P; Isley, C F; and Glover, J (2019) Prevalence of childhood lead poisoning and respiratory disease associated with lead smelter emissions, Environment International, 127: 340-352, https://doi.org/10.1016/j.envint.2019.01.062 [LID 26254]