

Bowdens Silver Project

IPC Hearing

15 to 17 February 2023



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Good morning Commissioners and thank you for the opportunity to present to you today.

Firstly I'd like to start by paying my respects to the Wiradjuri people who are the traditional custodians of the land upon which we are meeting and on which the Bowdens Silver Project would be located and acknowledge their elders past, present and emerging. RWC works on numerous projects throughout NSW and Australia and respect the advice and involvement of all Aboriginal community members on the lands in which we work. In particular, we have appreciated the involvement of First Nations peoples in this Project including in consultation, archaeological survey and in providing comments on the assessments completed. We are confident that this involvement and cooperation will continue if the Project is approved.

The Bowdens Silver Project would be a greenfield mine, meaning that it brings with it change to the local area and communities. These changes are inevitable with these types of projects and mean that mining activities would be seen and heard for the first time which often results in amenity and social impacts. The type of mine proposed would also involve a number of activities that are not familiar to the local community and represent a source of fear and anxiety. I refer to tailings and waste rock management in particular here. These are activities that are well understood in the mining industry and undertaken in day to day operations.

Today I am going to briefly discuss some of the key matters raised in submissions presented to the IPC to date. I expect some of these matters will be discussed further in coming days.

DPE Peer Review of AMD Risk

Recommendations of Earth Systems on the Project (Paragraph 151 of the DPE Assessment Report)

- Undertake additional static geochemical test work for the northern section of the main open cut pit to better understand the AMD risk classification.
- Adopt a sulphur cutoff value of 0.2 wt.%S for the remainder of the open cut pit during the initial stages of mining, with transition to the adopted cutoff value (0.3wt.%S) if supported by more detailed static geochemical analysis during mining.
- Undertake additional kinetic geochemical test work to better understand acid generation rates, lag time and longevity.
- Update the waste rock dump design as required, based on the additional test work, to demonstrate that AMD and water quality objectives are achieved.
- Undertake further assessment of potential seepage of NAF waste rock associated with the construction of the southern barrier in Blackmans Gully.
- Prepare and implement a comprehensive site-wide AMD Management Plan.



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The identification and management of Acid Mine Drainage risks have been raised as a key issue and were the subject of disagreement between experts commissioned by Bowdens Silver and the expert commissioned by DPE to review the Project.

Importantly, it should be made clear that the identification and management of AMD risks occurs at most metalliferous mines. Identification through geochemical testing informs risk management but this process continues throughout mine development. The controls and management measures are commonly applied and well understood. It is in the interests of Bowdens Silver to manage these risks as failing to do so would impact the long-term future of the development and result in significant financial and reputational damage. This is not a mine being developed 50 years ago. Modern mine development in Australia is informed by rigorous analysis and technical assessments and is strictly regulated with bonds in place to ensure financial commitments to rehabilitation. I will briefly run through the comments from the DPE peer reviewer at Earth Systems to discuss the nature of the professional disagreement for the benefit of those present today.

Earth Systems recommended that additional static geochemical analysis be undertaken in the northern section of the open cut pit as the material classification strategy for this section is differentiated by the presence of minerals that would neutralise acid generation and therefore results in it being considered Non-Acid Forming. The sampling

completed for the EIS was targeted at decision making for the Project. Ultimately the waste classification strategy was informed by a detailed understanding of the geological setting, direct mineralogical observations, geochemical testing and new technology that was used to scan elemental distribution. Graeme Campbell and Associate and Bowdens Silver are also aware of mining processes which influence how the material would be mined, handled and stored. Importantly, all of the data collected by Bowdens Silver supports the proposed classification strategy. Earth Systems took a more conservative view and sought a broader sampling approach to rule out unexpected outcomes. While there is disagreement on the need for this, Bowdens Silver has accepted the recommendation of Earth Systems on this matter.

Earth Systems also recommended a more conservative 0.2% Total Sulphur cut-off for acid forming material in the remainder of the open cut until a 0.3% Total Sulphur cut-off has been justified. Bowdens Silver has accepted this approach, noting that the majority of material outside of the northern section that is clearly above or below this boundary and accepting this strategy this would not influence Project outcomes.

Kinetic leaching tests investigate acid and other pollutant generation over time. A number of these tests have already been undertaken for the Project and were targeted to specific sections of the open cut pit to address uncertainties in the material classification. Earth Systems recommended a more conservative approach which has also been accepted by Bowdens Silver. The kinetic leach samples undertaken to date demonstrated that acid generation in the waste rock stabilises relatively quickly and remained stable for the duration of testing which was 12 months for most samples with some up to three years. While additional testing would rule out unexpected outcomes, the expectation is that it would produce consistent results with those found to date.

In summary on the testing done to date.....targeted geochemical testing has been completed and more will follow over the life of the Project. Some of the static geochemical samples in the northern section of the open cut pit indicate weak acid generation despite total sulphur being below the 0.3% cut off and this has been questioned by Earth Systems. The kinetic leaching tests completed to date indicate acid generation stabilises relatively quickly which supports using the material in construction. Kinetic leaching tests that would be commissioned will directly address the relatively small area where there is uncertainty in the static sampling outcomes. However, it should be noted that static sampling focuses on a snapshot within a limited area and mining occurs over metres of rock at a time. So the mixing that occurs during mining and then the handling of the material and its placement all support further acid neutralisation. The combined qualifications and experience of Graeme Campbell and Associates, Okane Consultants and Bowdens Silver support the classification strategy. Regardless of this, it has been agreed that the work needed to satisfy Earth Systems would be completed.

Earth Systems also recommended review of the design of the WRE once the additional sampling was complete. Bowdens Silver commissioned Advisian to complete a preliminary design of the Waste Rock Emplacement and the approach has been peer reviewed by OKane Consultants. The preliminary design of the proposed capping and lining of the TSF and WRE is considered to be consistent with best practice and meets current Australian and international guidance for the management of PAF material. It is also best practice to trial, test and refine closure strategies with these procedures described in the AMD Management Plan and the Rehabilitation Management Plan for the Project. So review of the waste rock emplacement design will occur throughout the life of the Project.

Earth Systems noted that NAF waste rock sourced from the northern section of the open cut pit and intended for use in construction of the Southern Barrier may be a potential source of Neutral Mine Drainage due to the presence of high levels of manganese in some samples. Bowdens Silver identified this risk in the EIS documentation and noted that management strategies would be refined to ensure that any source of NMD would be encapsulated. This would not effect Bowdens Silver's ability to construct the Southern Barrier but would be a management task.

Finally, Bowdens Silver has agreed that all of the additional work recommended by Earth Systems would inform an AMD Management Plan and this plan would guide waste rock classification, handling and placement. The Plan would be subject to continual review and updated as a result of field trials and ongoing testing consistent with modern mining practices.

Acid Mine Drainage Risk

The management of AMD risks are a common component of best practice in mining and a focus for regulators

- Bowdens Silver has accepted a condition of consent requiring a Materials Classification Verification Program prior to mining commencing.
- Two important aspects to consider with regards to AMD risk.
 - Is there sufficient material to meet the Project's construction and rehabilitation requirements?
 - Is the proposed management of AMD sufficient to reduce risk and avoid impacts?
- Bowdens Silver has commissioned O'Kane Consulting to oversee the program of further testing and validation. Recent sampling intended to satisfy the outstanding concerns support the approach proposed.



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As the Commission is aware, Bowdens Silver has accepted a condition of consent requiring a Materials Classification Verification Program to be undertaken prior to mining commencing. This condition and the program it describes was included by DPE to ensure a conservative outcome for AMD risks and their management. Bowdens Silver remains confident that the approach proposed would be justified and accepted by DPE and its experts following the additional program of sampling and analysis.

There are two important aspects relevant to AMD that have been considered by the Company and its consultants. The first is whether there is sufficient material available to construct site components and to undertake rehabilitation. Review of the waste classification strategy in response to the peer review comments identified 5% more material than previously expected would be NAF and available for construction. Should a 0.2% Total Sulphur cut-off be applied in the AMD Management Plan, it has been identified that this approach would see a reduction in the NAF materials balance by only 1% and would not materially affect construction and rehabilitation activities. Importantly there are contingencies available to address shortfalls should they arise. The conditions proposed by DPE are noted as being conservative and make it clear that Bowdens

Silver must verify the materials balance to the satisfaction of DPE prior to commencing mining.

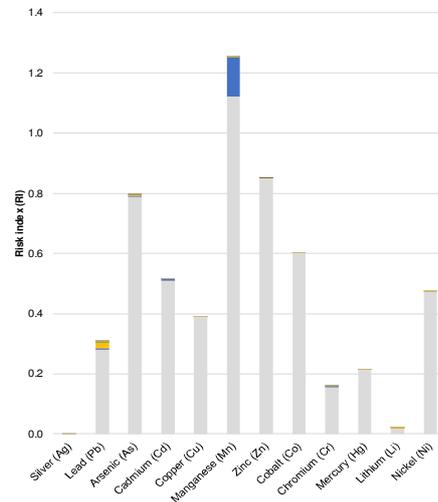
The second aspect is whether the proposed management of AMD risks is sufficient. Bowdens Silver sought expert advice from Advisian in designing the WRE and capping concepts for the WRE and TSF. OKane Consultants were commissioned to review the approach in response to the Earth Systems comments. In particular, OKane Consultants pointed to the importance of procedure in managing AMD risks during mine development. For example, the proposed approach to development of the WRE in 2m thick layers for each 10m lift would result in compaction of each layer that would mitigate gas transport by reducing pore space, this is particularly relevant for oxygen ingress and possible AMD generation. This approach is consistent with best practice as are the store and release covers proposed for the WRE and TSF which have been approved at numerous mining operations within NSW and in Australia.

OKane Consultants are also currently overseeing a program of further testing and verification. Initial results have been presented to the Commission and support the approach taken to date. Following an approval of the Project, a detailed Materials Characterisation Verification Program would be developed in consultation with DPE and its experts. As previously noted, this would inform an AMD Management Plan that would be implemented over the life of the Project and be subject to regular review and update.

Human Health Risks

Comprehensive assessment has concluded that the Project presents no health risk issues to the local community.

Independent and DPE commissioned peer reviewers agreed with the conclusions of assessment.



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Risks to human health from exposure to lead have been identified as a key community concern from the commencement of mine planning and EIS preparation. A comprehensive human health risk assessment has concluded that the Project presents no health risk issues to the local community.

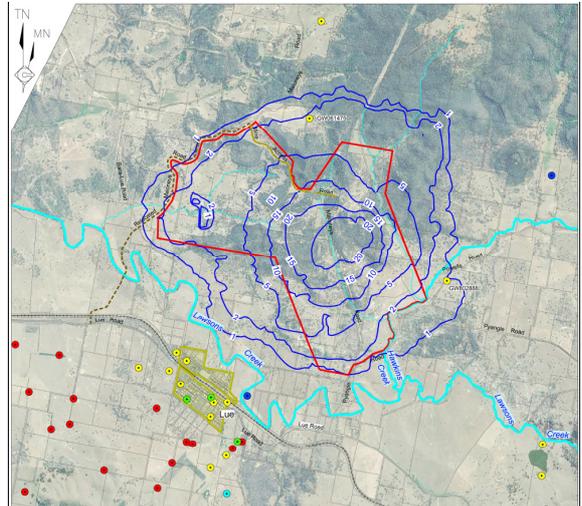
The outcomes of this assessment have been supported by two independent peer reviews and most importantly DPE.

Key to this assessment, the consultants at EnRiskS considered a Risk Index, which represents the scale of risk where 1 represents the level at which health risks would be expected. The Project would result in only marginal incremental change to the Risk Index for existing exposures for most metals and importantly for lead.

Water Resources

It is acknowledged that the community has experienced drought and flooding rains in the past 5 years.

- Site water balance modelling tested reliability over 130-years of historical climate conditions including higher peaks and lower droughts.
- The proposed Integrated Water Management and Supply Strategy would result in only minor changes to water availability (streamflow and groundwater).
- Water quality would remain consistent with existing conditions.
- Worst-case water supply reliability would meet 94.5% of production demand and 99.5% of dust suppression demand.



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It is acknowledged that the community has experienced drought and flooding rains in the past 5 years. In addition, Bowdens Silver has amended the Project to remove an external water supply and would now apply a strategy that relies only on on-site sources. This has created some unease in the community.

A key objective in developing the Mine's Integrated Water Management and Supply Strategy has been to minimise local impacts and ensure water availability and water quality outcomes are not exacerbated. To support this, site water balance modelling tested water supply reliability and expected conditions over 130-years of historical climate conditions including higher peaks and worse droughts.

As a result, the proposed Integrated Water Management and Supply Strategy would result in negligible changes to water availability in terms of streamflow and groundwater. Impacts would be limited to 2 additional days of no-flow conditions (less than 1ML/day) under extreme conditions, a relatively small reduction in groundwater baseflow to nearby creeks, minor reductions to streamflow and possible drawdown impacts at one registered groundwater bore.

Our assessments have also predicted that water quality would remain consistent with existing conditions.

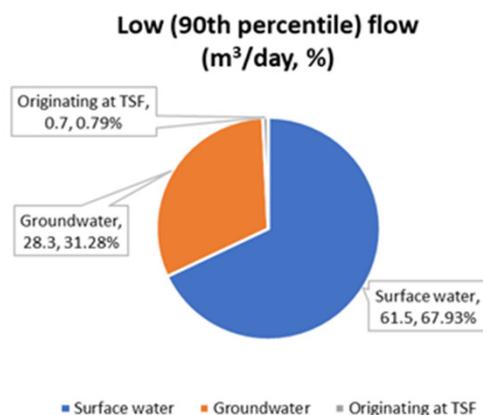
In terms of water supply to the Mine, the worst-case water supply reliability would meet 94.5% of production demand and 99.5% of dust suppression demand.

In the context of droughts and flooding rains, these outcomes have been difficult for some in the community to accept, but in most cases once the time was taken to discuss the outcomes it has generally been agreed that during dry times everyone is limited and in wet times everyone is trying to manage, however the Mine would not substantially exacerbate the wet and dry experiences for the community.

TSF Seepage Risk

Community concerns regarding seepage impacts to Lawsons Creek

- Preliminary design shown in EIS meets NSW EPA criteria.
- Bowdens Silver has voluntarily adopted additional seepage mitigation.
- Mixing and dilution modelling identifies no adverse impact of TSF seepage on beneficial uses of Lawsons Creek.



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Seepage from the TSF has also been identified as a key management risk.

The preliminary design of the TSF included an estimate of 94.6ML/yr of seepage. This is the total from the floor of the entire structure not in a concentrated point. The NSW EPA reviewed the original approach to lining the TSF and confirmed that the proposed compacted clay liner would meet its permeability requirements for this type of structure.

Bowdens Silver has now committed to apply a bituminous geomembrane to the entire TSF impoundment or to the extent of the decant pond depending on the outcomes of detailed design. Following additional assessment we have confirmed that the seepage from the structure would be reduced through this additional mitigation to 16.2ML/yr. Solute transport modelling has indicated a peak of 0.26ML/yr of seepage would enter Lawsons Creek. This may be compared to assessed no flow conditions in the creek of less than 1ML/day and would represent 0.79% of total daily flow during low flow periods. This would greatly reduce seepage risks. Mitigation such as water reclaimed using the paste thickener plant would also improve these outcomes.

Modelling of water quality risks has identified no adverse impact of TSF seepage to beneficial water uses of Lawsons Creek.

Local Amenity and Social Impacts

It is acknowledged that there would be impacts to amenity felt by the local community.

- Mining or traffic noise would be heard occasionally but not at levels that are considered intrusive.
- Dust would be generated but there would be no exceedances of relevant air quality criteria at any sensitive receivers.
- Views from three privately-owned residences remain possible at certain stages of development and from certain stretches of road. The 500kV transmission line would be moved to a location visible at some residences but within Lue.
- There would be traffic generated by the Mine, predominantly buses and light vehicles transporting personnel. In Lue village there would be a 10% increase to existing traffic.

Both positive and negative social outcomes are expected but the local and regional community are largely supportive of the Project.

Impacts to way of life and sense of place cannot be avoided but it is hoped that in the medium to long term the whole community will experience the benefits.



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As noted previously, any greenfield mining site will result in changes that impact local amenity and may also have social impacts. It has been acknowledged that impacts to amenity would be experienced by the community. Bowdens Silver has undertaken comprehensive assessments of potential impacts to local amenity and has proposed mitigation, management and monitoring of these that is consistent with best practice.

In summary,

- Mining or traffic noise would be heard occasionally but generally not at levels that are considered intrusive.
- Dust would be generated but there would be no exceedances of relevant air quality criteria at any sensitive receivers.
- Views from three privately-owned residences remain possible at certain stages of development and from certain stretches of road. The 500kV transmission line would be moved to a location visible at some residences but not within Lue.
- There would be traffic generated by the Mine, predominantly buses and light vehicles transporting personnel. In Lue village there would be a 10%

increase to existing traffic.

Landowners predicted to experience noise-related exceedances have been approached regarding mitigation options in accordance with the Voluntary Land Acquisition and Mitigation Policy as well as outside of these requirements. Importantly, the exceedance outcomes requiring mitigation are predicted during site establishment and construction and not during operations.

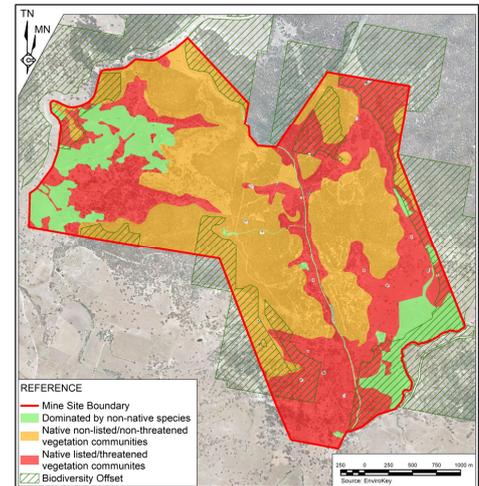
Blake has discussed engagement with the community and social impacts.

Biodiversity

The Mine Site was designed with an understanding of biodiversity constraints and an objective to avoid impacts as much as possible.

Detailed assessment has considered the known and potential presence of vegetation and threatened flora and fauna.

With the proposed biodiversity offsetting strategy, residual biodiversity impacts are considered acceptable.



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In relation to residual biodiversity impacts, it is important to note that the Mine Site was designed with an understanding of biodiversity constraints and an objective to avoid impacts as much as possible. This is now required under NSW legislation and guidelines, however Bowdens Silver used a traffic light model of mapped vegetation communities to identify high priority areas to avoid where possible. This was principally focused on Box Gum Woodland.

Detailed assessment has considered the known and potential presence of vegetation and threatened flora and fauna. A range of species were assessed, the key ones being the Regent Honeyeater and Box Gum Woodland.

Although impacts were identified as being significant without mitigation, the proposed biodiversity offsetting strategy would see vegetation and important habitat conserved in perpetuity at a scale that is commensurate with the proposed impact.

Biodiversity offsetting would involve on-site and local conservation as well as other

opportunities in the region. In closing, with the proposed biodiversity offsetting strategy, the residual biodiversity impacts are considered acceptable.

Thank You



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