

BOWDENS **SILVER**



Bowdens Silver Project **RESPONSE TO SUBMISSIONS**

AUGUST 2021



R.W. CORKERY & CO. PTY. LIMITED
GEOLOGICAL AND ENVIRONMENTAL CONSULTANTS



Bowdens Silver is pleased to inform the community of another milestone for the Bowdens Silver Project with the recent lodgement of its Submissions Report to the NSW Department of Planning, Industry and Environment (DPIE).

During the public exhibition of the Bowdens Silver Environmental Impact Statement (EIS), all members of the public were invited to make submissions to DPIE that objected, supported or commented on the Project. In addition, Mid-Western Regional Council and relevant NSW Government agencies reviewed the documents and provided advice or requests for information on the Project. The Submissions Report presents comprehensive responses from the Company to the submissions and advice received by DPIE.

The Project generated significant interest in the community with a total of 1,909 submissions received from organisations and the general public. Overall, the submissions expressed resounding support with 79% of all submissions in favour of the Project. Bowdens Silver is not aware of a proposed mining project in recent times that has received this level of support. We thank the community for getting behind this important development.

The review of the matters raised in the technical assessment comments provided by NSW Government agencies and from organisations and the general public has led to further clarification and refinement of the various assessments for the Project. **However, there were no changes to the overall conclusions of the assessments.** This supports the comprehensive nature of assessment to date. Something we are immensely proud of.

Project Amendment

An Amendment Report has also been submitted to the NSW Government with the Project now incorporating the proposed re-alignment of the 500kV power transmission line that traverses the Mine Site. Environmental assessment for this amendment was previously undertaken as part of the EIS so the potential impacts of this activity are well understood.



Key Project Outcomes



The Project presents no health risk of concern to the local community.



The proposed design and management of the Tailings Storage Facility exceeds the Environment Protection Authority's criteria and requirements.



The Project has been designed to ensure the efficient development of the Mine but is also considerate of the likely experience of the local community and the predicted short term and longer-term environmental outcomes.



The Project would have substantial economic benefits for the local, regional and NSW communities which would support the regional economy, especially in the Lue, Kandos, and Rylstone localities.



The Project would operate in accordance with the legislation, policies and guidelines developed to ensure responsible environmental practices for development.



Bowdens Silver has made a range of clear commitments to the public that would be given legal force by way of conditions of a development consent.



The legacy of the Project has been considered with regards to the rehabilitation and final land use options and mechanisms to preserve the existing character of Lue, while providing sufficient economic stimulus to ensure its sustainability.



The expansion of the existing Community Investment Program will ensure benefits of the Project are distributed equitably.



Bowdens Silver considers that the Project would be of sufficient scale to provide a boost to the local economy but not cause substantial adverse environmental or social impacts.



The Facts

1,909

Community Submissions
WERE SUBMITTED on the Project

✓ 1,504 (79%)

Community Submissions
SUPPORT the Project

✗ 387 (20%)

Community Submissions
OBJECT to the Project



Overwhelming support for the Project in the regional community, in NSW and nationally.



Submissions from Lue were roughly equally split (52% object, 46% support).



The most frequently identified matters in all submissions referred to the benefits of employment and workplace training that the Project would provide (905 submissions) and direct reference to the economic benefit to the local community (342 submissions).



The most frequently identified matters in objections to the Project related to water resources, human health and the proximity to Lue.

Key Matters Raised in Submissions

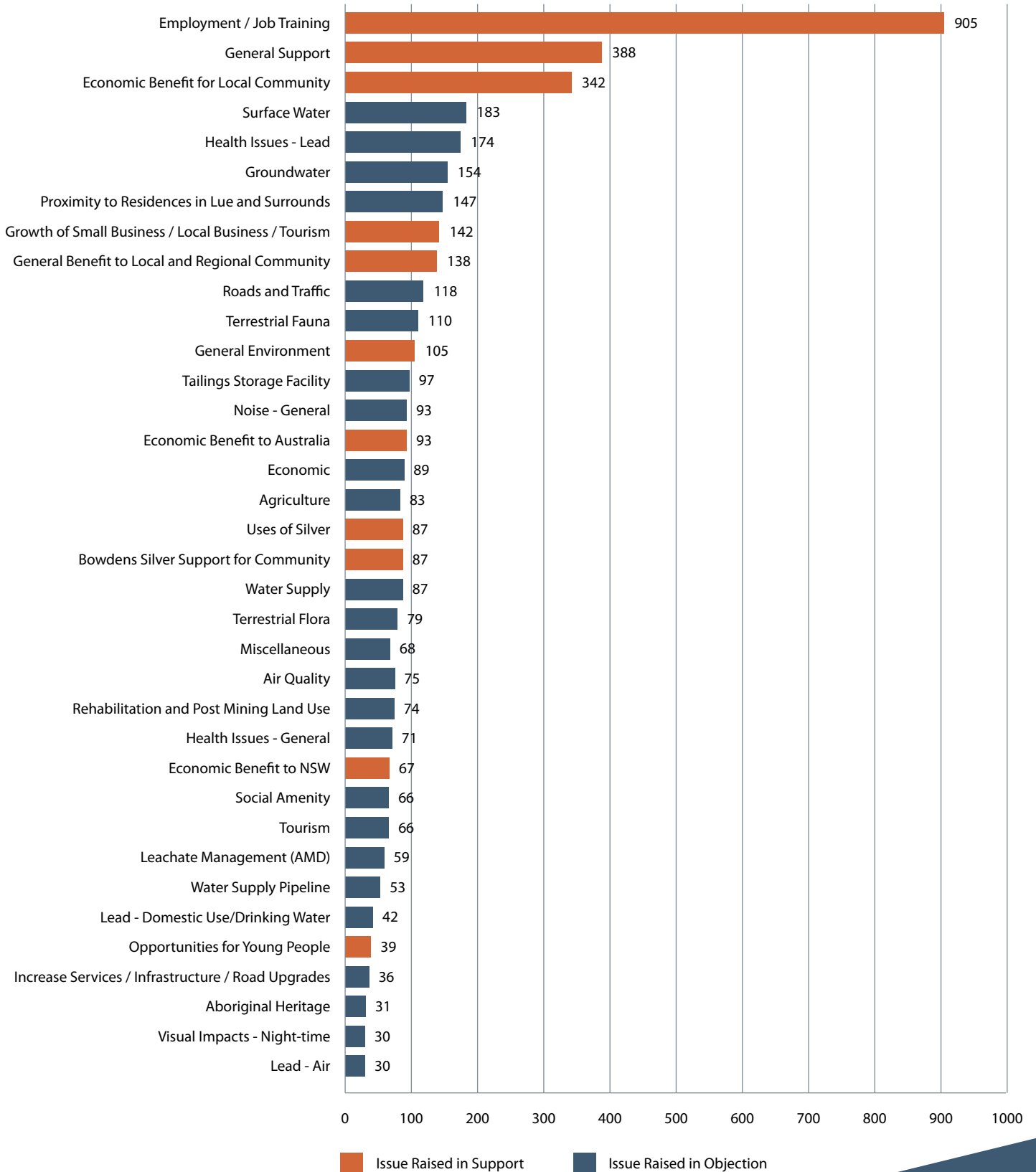
Proximity to Lue Residences

The concern of some residents within the Lue community regarding proximity to mining has been acknowledged from the commencement of investigations and planning for the Project. The Mine Site is located approximately 2km north of the boundary of the village of Lue. Regardless of any formal boundaries, the technical assessment of potential environmental impacts has focussed on privately-owned residences within Lue and the surrounding rural area.

A comprehensive range of design controls have been proposed taking into account the proximity to Lue and feedback from residents. In addition, the proximity to Lue would remain a factor in planning for the rigour of operational monitoring programs including real-time air quality and noise monitoring.

The distance between operations and residences cannot be considered simply 'as the crow flies'. The local and regional topography, local climate conditions, local geology and current use of land are all important in considering potential risks and assessing impacts.

Frequency of Matters Raised in Submissions



Key Outcomes of the Assessment of Proximity to Private Landowners.

- No operations would be visible from residences or from within the village of Lue due to the substantial intervening topography. Some private properties surrounding the village would have distant views of Project components and the Project would be visible from some places on the local road network.
- No intrusive noise impacts are predicted within the village of Lue, however, some exceedances of noise level assessment criteria are predicted at a small number of rural residences outside the village boundary. These predictions are being considered in accordance with the NSW Voluntary Land Acquisition and Mitigation Policy (VLAMP) with relevant information and offers of mitigation provided to the affected landowners.
- Traffic generation is not predicted to impact amenity within Lue village. The majority of traffic travelling to and from the Mine Site would be comprised of light vehicles and buses.
- No occupants of residences within Lue or surrounds are predicted to:
 - experience a reduction to supply of groundwater or surface water due to the Project;
 - experience a reduction in water quality such that water sources are no longer suitable for current uses due to the Project;
 - be exposed to metals or other contaminants that would result in health risk issues of concern;
 - be exposed to particulate matter (dust) that exceeds air quality criteria;
 - be exposed to airborne metal concentrations (including lead) that exceed the relevant guidance levels;

- be exposed to respirable crystalline silica concentrations that exceed the relevant guidance levels;
- be exposed to hydrogen cyanide concentrations that exceed the relevant guidance levels; or
- be exposed to significant lighting impacts (including sky glow).

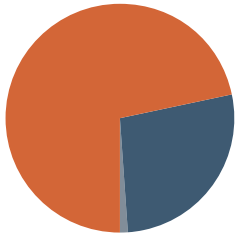
Many submissions were received that noted the likely benefits of the Project's proximity to Lue including the following.

- The expanded Community Investment Program that would focus on benefits to Lue and surrounding areas. This would be consistent with the positive outcomes of Bowdens Silver's current involvement with the community.
- The local procurement strategy for employment and suppliers to the Mine Site that would benefit local residents.
- Ongoing engagement with local businesses and the Lue Public School and volunteering with local service providers.
- It is anticipated that the Project would attract people to move into the area and workers with family would become part of the community. The Company already leases land to local families and would continue to do so.

These benefits are directly intended to ensure that the Project has overall positive effects on the character and sustainability of Lue.

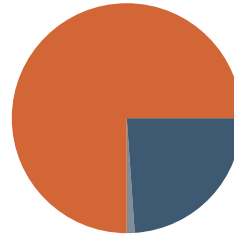


Proportion of Support, Opposition and Comment in Non-Government Submissions



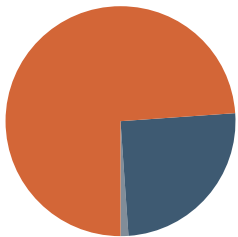
All Responses - 1909

Support: 1504 (79%)
Object: 387 (20%)
Comment: 18 (1%)



NSW Responses - 1517

Support: 1139 (75%)
Object: 363 (24%)
Comment: 15 (1%)



Mid-Western Regional LGA Responses - 925

Support: 683 (74%)
Object: 230 (25%)
Comment: 12 (1%)

Note: Individual and Organised Submitters are combined in these charts.



Tailings Storage Facility & Seepage Mitigation

In response to both Government and community submissions, Bowdens Silver has commissioned a more detailed assessment of risks associated with construction and development of the Tailings Storage Facility (TSF). This included the proposed seepage mitigation measures included in the design of the TSF.

Firstly, information was provided to the Environment Protection Authority (EPA) to demonstrate that the conceptual design of the TSF seepage mitigation met the EPA's criteria. The EPA criteria are best practice design principles to limit seepage. The EPA accepted the proposed TSF seepage mitigation and requested that development consent include conditions requiring their implementation.

Following this, Bowdens commissioned technical consultants to undertake additional assessments to increase understanding of risks associated with the TSF. These included:

- refined groundwater modelling in the vicinity of the TSF;
- solute transport modelling of seepage pathways; and
- mixing and dilution modelling along seepage pathways.

These assessments identified that an increase to the extent of the Bituminous Geomembrane (BGM) liner, beyond the extent of the conceptual design would further reduce predicted seepage.

Following approval of the Project and prior to any construction, the TSF would be the subject of further rigorous assessment to inform detailed engineering design. Bowdens Silver envisages this assessment would confirm the extent of the BGM liner to ensure downstream water quality would be maintained. Therefore, whilst the extent of the BGM may vary as a result of detailed design, the potential impacts would be unchanged. The updated conceptual design of the TSF (overleaf) presents the changes to the BGM liner extent compared to that presented in the EIS.

The additional assessments adopted a highly conservative (i.e. worst case) approach to fully quantify risks. The seepage assessment identified that, even with the adoption of worst case conditions, the groundwater setting and Lawsons Creek would not be impaired and existing or future use of these water resources would be maintained, as defined by published water quality guidelines.

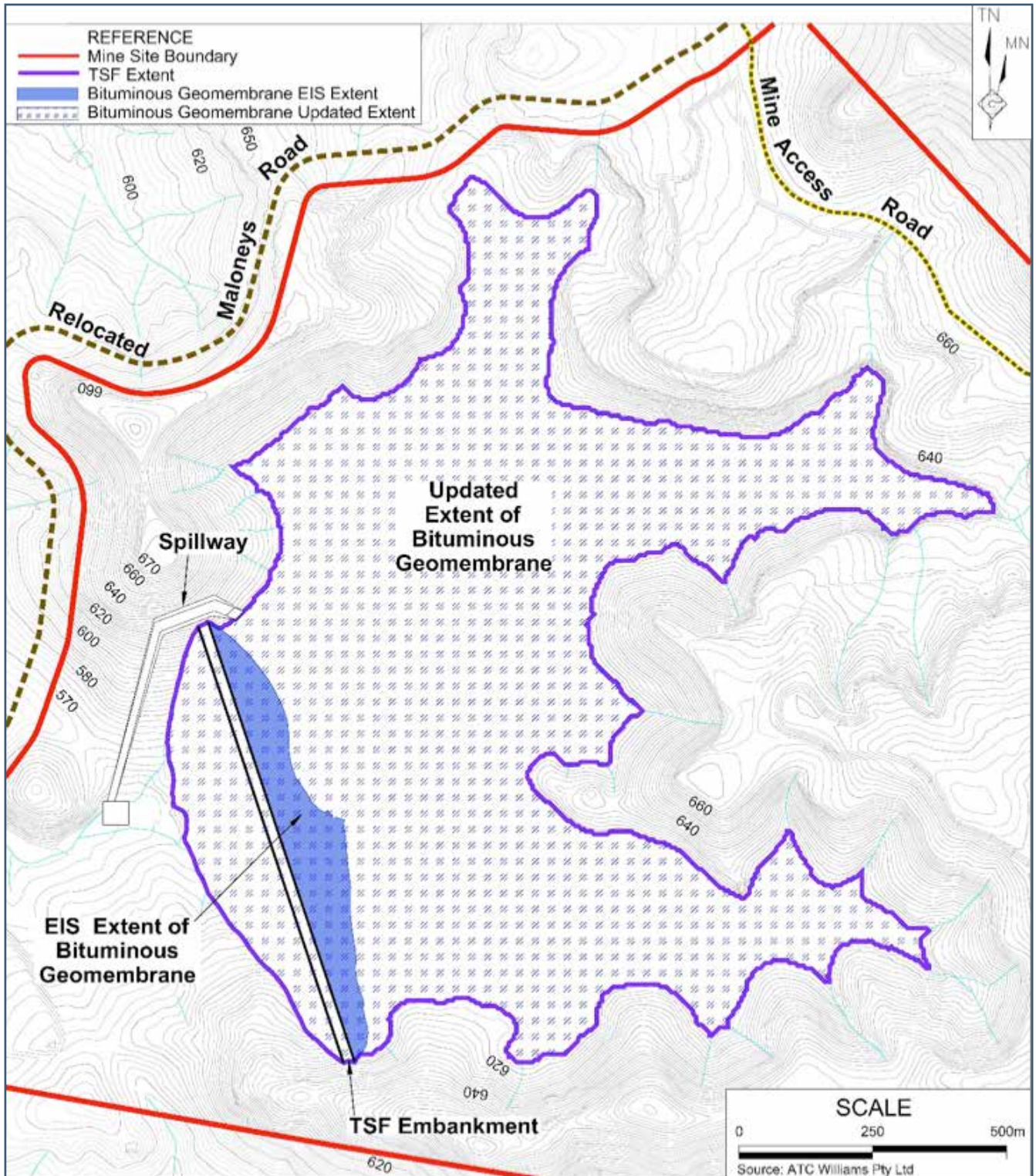
Any future refinement of the TSF design elements would ensure the assessed seepage outcomes (or better) are achieved prior to construction. This process would confirm the optimal seepage mitigation configuration to achieve best practice TSF design, thus limiting potential impacts to surface water and groundwater resources from seepage.

Furthermore, in addition to the seepage mitigation measures, a detailed suite of management and monitoring measures would be incorporated into the design, construction and operation of the TSF. The effectiveness of all measures would be routinely assessed using data collected from a comprehensive groundwater monitoring program. This program would build upon the substantial data and network already developed by Bowdens.

It is acknowledged that the TSF is perceived as a risk by many members of the community, particularly those living in Lue. However, it is considered that the conservative (i.e. worst case) assessments undertaken to date present sufficient detail to permit approval for the Project. This design would be subject to further rigorous engineering assessments and testing to ensure it meets all relevant dam safety standards.



Updated Tailings Storage Facility Layout





Groundwater

The Groundwater Assessment for the Project was supported by a numerical groundwater model to predict the potential impacts from the open-cut pit development on groundwater resources. Technical review by the Department of Planning, Industry and Environment - Water (DPIE Water) and an independent peer review identified this modelling as being “fit for purpose”. There have now been two independent peer reviews and one detailed technical assessment of the Project’s Groundwater Assessment, with all agreeing on the robust nature of assessment.

Key Groundwater Assessment Outcomes

- The conceptualisation and modelling of the local and regional hydrogeological systems is supported by robust and site specific data (e.g. geology, water levels, flow, groundwater quality and hydraulic parameters).
- The numerical groundwater model developed to predict potential groundwater impacts, including inflow volumes, water level drawdown and final void behaviour is fit for purpose.
- The Project would not significantly reduce access to, or availability for groundwater users including dependent ecosystems.
- The Project would not alter the beneficial use category of groundwater or surface water resources.
- None of the proposed dams, including the TSF, leachate management dam or processing area dams, nor the Waste Rock Emplacement (WRE) would alter the beneficial uses of groundwater resources.
- Bowdens Silver has secured water access licences to meet the maximum predicted groundwater inflows, during both operations and post closure.
- When assessed against the NSW Aquifer Interference Policy, the predicted impacts meet Level 1 Minimal Impact Considerations and are thus acceptable and permissible.

Surface Water

The potential for impacts to Hawkins Creek and Lawsons Creek has been a key focus of Bowdens Silver. The comprehensive assessment of potential surface water impacts covered a range of matters, many of which were raised in submissions on the Project.

The assessment presented in the EIS utilised site-specific data, best practice methods and modelling approaches to characterise and predict the response of the local and regional surface water system to the Project. The peer-reviewed assessment confirmed that the Project would not increase the risk of flooding on neighbouring landowners. The Project does not pose a risk to water quality as detailed modelling demonstrated the proposed water management system is effective at capturing, retaining and managing runoff from areas disturbed by Project-related activities. Whilst the Surface Water Assessment predicted the Project would marginally reduce downstream flows via the capture and retention of runoff during operations, most of this reduction would be reversed post-closure as rehabilitated catchments are allowed to discharge. Any reduced flow in Hawkins Creek or Lawsons Creek would not increase overall demand on these key water resources as all Project-related runoff capture is accounted for using the rights and entitlements available to all water users.

Key Surface Water Assessment Outcomes

- The Project would not increase demand on available water resources and would not significantly reduce access to, or availability for downstream water users.
- The Project is legally entitled to water resources greater than those predicted to be captured by the Project.
- The modelling for the Project identifies that the water management system, including the TSF, leachate management dam, processing area dams, and WRE can retain all runoff.
- The Project would not significantly impact downstream water quality.
- The Project would not lead to flooding of neighbouring properties.
- The proposed monitoring, reporting and auditing commitments and requirements for the Project would ensure that management is scrutinised and regulated throughout the Project life.



Human Health

A number of submissions expressed concerns regarding physical and mental health risks associated with potential and perceived risks of the Project. Health risks associated with lead exposure were of particular concern. These concerns were identified in community consultation for the Project prior to completion of the EIS assessment and the expectations of the local community are well understood.

A comprehensive Human Health Risk Assessment (HHRA) has been undertaken that considered potential impacts on community health in relation to the predicted/assessed changes in air quality, water (both surface water and groundwater) and noise. An updated version of the HHRA has been prepared which clarifies and expands on matters raised during the submissions process. Importantly, the outcomes of the HHRA remain consistent with those originally presented, i.e. the Project presents no health risk issues to the local community.

Mental health matters, principally stress and anxiety, have also been raised by the community and addressed within the EIS and Social Impact Assessment. Notwithstanding, an extensive range of both proactive and reactive/adaptive management measures are proposed for the Project to minimise the potential for unexpected impacts to both physical and mental health.

Key Human Health Assessment Outcomes

- The Project presents no health risk issues to the local community.
- Radioactive components of minerals would not be liberated by the proposed operations to interact within the environment.
- The predicted concentrations for both respirable crystalline silica and cyanide are significantly below the respective health guidelines with the HHRA concluding that there are no health risk issues in relation to community exposures.
- Both positive and negative mental health outcomes have been identified in submissions. Management measures are proposed to ensure that the community is accurately informed of Project progress and availability of support for health services that would be provided through Bowdens Silver's Community Investment Program.
- It has been reaffirmed that an extensive range of monitoring is proposed and would commence at the beginning of operations to demonstrate compliance with the relevant criteria and guidelines.



Lead

In addition to concerns about air quality and human health risks more generally, there were a number of submissions that referred specifically to the potential health impacts from lead exposure, principally from dust emissions. This matter was considered in a detailed assessment of metal concentrations in particulate matter as part of the Air Quality Assessment (AQA) and then further as part of the HHRA, which considered lead exposure from multiple exposure pathways.

The outcomes of the HHRA are that the Project would make a negligible contribution to overall exposures to the assessed metals including lead. Importantly, the detailed technical assessment concluded that there would be no health risk issues relevant to the Project for any members of the community, including children and sensitive individuals. Regardless of this conclusion, a comprehensive monitoring program has been proposed so that this may be demonstrated in practice.

The key issues in relation to lead are as follows:

- It is inappropriate and misleading to compare the Project to current and historical operations at Broken Hill and Mt Isa. Furthermore, the Project does not include on site smelting or other high temperature processes that would volatilise the metals present in the ore.
- The HHRA has adopted a blood lead criteria of 3.5µg/dL which is lower than the National Health and Medical Research Council guidance of 5µg/dL and is therefore even more stringent than is required in Australia.
- The HHRA has utilised a range of worst-case assumptions, including use of the highest predicted metal concentrations at a surrounding receiver and applying this for the entire community over the life of the Project and, for relevant exposures, well beyond the life of the Project.
- The adopted baseline levels have been reviewed and continue to be considered appropriate. These levels have been, in part, based on an extensive baseline monitoring program completed as part of the assessment.
- A program of monitoring would commence at the beginning of operations to demonstrate compliance with the relevant criteria and guidelines.

Biodiversity

Bowdens Silver has continued its comprehensive approach to assessment of the Project with ongoing and additional ecological survey and assessment since public exhibition of the EIS. The comprehensive ecological survey and assessment completed to date has been further updated and has been complemented by two further assessments.

Field survey and assessment of the Small Purple-pea (*Swainsona recta*) and Silky Swainsona-pea (*Swainsona sericea*) were undertaken after Bowdens' environmental staff identified several *Swainsona recta* individuals within Bowdens Silver-owned land.

In addition, an assessment of the impacts of the 2019/2020 bush fires on Matters of National Environmental Significance has been prepared to consider the possible ramifications of this significant event.

In addition, the matters raised in submissions concerning terrestrial and aquatic flora and fauna have been reviewed by Bowdens Silver and its consultants. It is acknowledged that there would be residual impacts to biodiversity as a result of the Project. Bowdens Silver has designed and planned the Project to avoid biodiversity impacts as much as practically possible. Residual impacts would be offset in accordance with the relevant NSW legislation and guidelines to assure that the clearing of all native vegetation for the Project is properly accounted for. The biodiversity offsetting obligations for the Project are achievable and would ensure that substantial area of native vegetation would be preserved in perpetuity to account for the impacts proposed.

Key Biodiversity Assessment Outcomes

- The Project would result in the removal of approximately 381.7ha of native vegetation of variable condition.
- This vegetation has the potential to be habitat for a range of native fauna including threatened species. However, the Project is not expected to result in significant impacts upon migratory or threatened species assuming the implementation of the range of on-site mitigation measures and the proposed biodiversity offsetting strategy.
- The biodiversity offset strategy would incorporate both ecosystem and species credits that would be offset in accordance with the relevant NSW government legislation and policies.
- The Project would result in the disturbance of approximately 180ha of Box Gum Woodland with approximately 88ha (48%) of this assessed clearing comprising only derived grassland and not trees and shrubs which have already been cleared by past agricultural activities. The impacts to Box Gum Woodland that could not be avoided are proposed to be offset with 11,179 ecosystem credits associated with Box-Gum Woodland assessed as part of the proposed biodiversity offset strategy.
- No Regent Honeyeater individuals were recorded within the Study Area despite comprehensive surveys. However, it is considered probable that the species is or may have been present in the past. As a result, assessment has concluded that potential impact to this species would need to be offset.
- Extensive field survey for Koala involving 137 scat and sign searches confirm that there is no sign of

current or previous occupancy. However, there have been local sightings by Bowdens personnel and the local community that support the recognition that the highest quality vegetation as potential Koala habitat. Therefore, although there have been limited signs of Koala habitation, the assessment has concluded the potential for habitation and would offset impacts appropriately. This precautionary and conservative approach to assessment is intended to ensure that any possible impact to Koala is accounted for.

- Vegetation clearing that includes areas of habitat for *Swainsona recta* and *Swainsona sericea* is not considered a significant impact to these flora species, however species credits for these species have been incorporated into the biodiversity offsetting obligations for the Project.
- Whilst the 2019/20 bush fires may in some cases result in increased reliance upon habitat within the Mine Site and proposed Biodiversity Offset Area, it has been concluded that the increased significance of the habitat within these areas would reduce over time. As the Project would not commence until at least 2022, a significant degree of vegetative recovery is expected by the time vegetation clearing is required.
- Given the design of the Project and the mitigation measures to be adopted, adverse impacts on the aquatic environment would be unlikely. The Project is expected to have limited impact to aquatic ecology in the context of the local and regional area within which comparable habitat is highly abundant.



Social Impacts

The level of support or objection and the matters raised in community submissions has been consistent with the matters identified in community engagement to inform the Social Impact Assessment for the Project.

Consistent with the feedback received through engagement processes, the principal issues raised in submissions related to change that might affect the local sense of community and sense of place, health and wellbeing and social amenity.

Social impacts may be experienced across a broad range of subject fields and may also result from an individual's personal appreciation of matters that have been the subject of assessment, such as biodiversity or traffic generation. It is acknowledged that any changes associated with the Project may have a social impact.

Equal consideration should be given to submissions that comment on the social benefits of the Project including employment opportunities, maintaining sustainable communities and the ongoing resilience of these communities. Many submissions supported the Project because of these projected benefits.

It is acknowledged that by proposing the Project and having to undertake a lengthy assessment, there have been social impacts. These include some level of stress and anxiety as well as changes to community cohesion where supporters or objectors may not publicly agree. It is expected that once the Project has been determined these impacts would be largely resolved. However, should the Project be approved, ongoing meaningful engagement throughout the Project life is proposed to ensure that mitigation programs are refined over time to minimise negative effects and ensure the benefits of the Project are distributed as equitably as possible.

Next Steps

Bowdens Silver will be reviewing and responding to matters raised in public submissions concerning the proposed realignment of the existing 500kV transmission line. There are also a range of matters that we are continuing to investigate in order to inform the NSW Government assessment of the Project. These include providing a definitive statement on the water supply for the Project, finalising the alignment and assessment for the water supply pipeline corridor and continuing to engage with local landowners on matters that affect them. We will update the community on these matters as they are finalised.

While the response from public organisations and individuals was overwhelmingly supportive, 387 submissions opposed the Project. As a result, the Project will be assessed by DPIE and a recommendation provided with formal referral to the Independent Planning Commission (IPC) for determination. The IPC will be the consent authority for the Project.

The completion of the Submissions Report now moves the Project into a new phase of the approvals process. DPIE will complete its assessment of the Project which will then be referred to the IPC for Project determination.

Bowdens Silver is committed to continuing to share information on the Project throughout this process and encourages interested community members to get in touch or seek information on the company website www.bowdenssilver.com.au



Environmental Impact Assessment Phase

Social Impact Assessment Activities and Outputs

SCOPING

Preliminary social & environmental assessment studies commence

Lodgement of Preliminary Environmental Assessment (PEA) to the Department

Department issues project-specific Secretary Environmental Assessment Requirements (SEARs)

Engagement with local landholders and key stakeholders

EIS PREPARATION

Refinement of mine plans and preparation of assessment studies listed on the previous page

Lodgement of Development Application supported by the EIS including a SIA

Preparation of Social Impact Assessment

PUBLIC EXHIBITION

Department places EIS on public exhibition

RESPONDING TO SUBMISSIONS

Preparation of Submissions Report that explains how submissions have been addressed

ASSESSMENT

WE ARE HERE

Department assesses the Project and provides its findings to the consent authority

DETERMINATION

Consent Authority decides whether to approve or refuse the Project, including conditions of consent if approved

POST APPROVAL

Department regulates Project to ensure compliance with the conditions of consent

Implementation of mitigation & enhancement measures & monitoring & management framework

Need more information?

For more information visit www.bowdenssilver.com.au or please contact our Community Liaison Officer, Blake Hjorth.

Blake Hjorth
Community Liaison Officer
Bowdens Silver

e: blakehjorth@bowdenssilver.com.au
t: (02) 6373 6420
a: 68 Maloneys Road, LUE NSW 2850

BOWDENS **SILVER**

68 Maloneys Road, LUE NSW 2850
P.O. Box 1115, MUDGEES NSW 2850

Ph. +61 (02) 6373 6420
E: information@bowdenssilver.com.au

www.bowdenssilver.com.au



R.W. CORKERY & CO. PTY. LIMITED
GEOLOGICAL AND ENVIRONMENTAL CONSULTANTS

Brooklyn
Level 1, 12 Dangar Road
PO Box 239
BROOKLYN NSW 2083

Ph. (02) 9985 8511
E. brooklyn@rwcorkery.com

www.rwcorkery.com.au