

#### **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.





### **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.

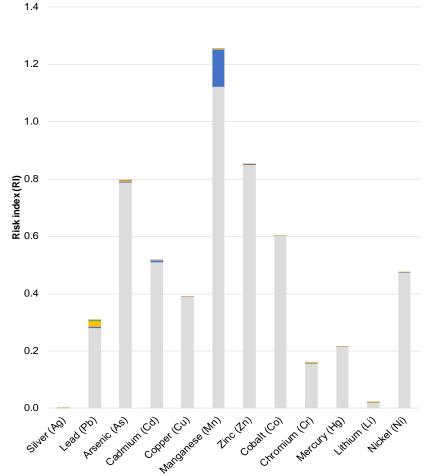




#### **Human Health Risks**

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.



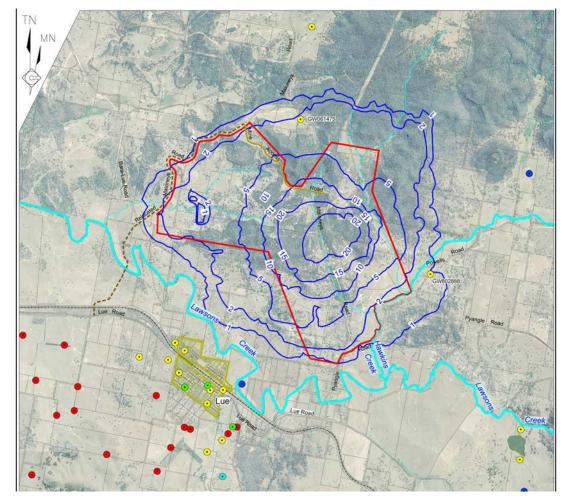




#### **Water Resources**

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.



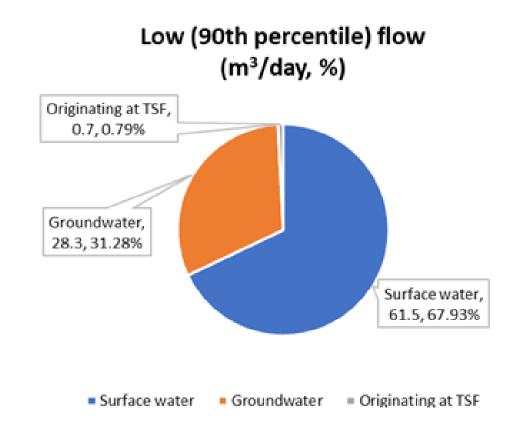




## TSF Seepage Risk

#### 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.







### **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.





# **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.

