

Submission
No 19

**INQUIRY INTO CURRENT AND POTENTIAL IMPACTS OF
GOLD, SILVER, LEAD AND ZINC MINING ON HUMAN
HEALTH, LAND, AIR AND WATER QUALITY IN NEW
SOUTH WALES**

Organisation: Name suppressed

Date Received: 28 August 2023

Partially
Confidential

This report relates to the NSW Parliament inquiry. Terms of Reference e), h), i) and a) are relevant.

Field Development Planning (FDP) shares hydrogeological knowledge. FDP's staff have reviewed information provided by regulatory agencies and Bowdens since 2017. Several reports are referenced in this summary.

The effectiveness of the current regulatory framework to consider project SSD-5765 is significantly diminished by the time taken for EIS preparation (FDP, Aug 2021). Bowden's responses to concerns raised by regulatory agencies updated only small sections of the EIS. Resulting inconsistencies challenged regulators to consider both what was being presented for approval and how this infrastructure would adequately protect the community and the environment.

Fundamental matters raised in 2020 have still not been addressed (FDP Feb 2023 pp. 47-48, 53-57 and FDP, Aug 2021 pp7-11). LAG (2020a) provides recommendations where the response to the SEARS might be improved.

The issue of inconsistencies is compounded by the heavily conditional Determination granted in 2023. It obliges future regulators to safely manage risks without public scrutiny, yet there is presently insufficient data for a robust Trigger Action Response Plan or Water Management Plan required under the framework. An example of an inconsistency is the lack of hydrogeological investigations between Lue village and the site. LAG (2020) shows a misrepresentation of Bowden's water quality analysis. The MODFLOW groundwater modelling did not model the likely movement or attenuation of acid and heavy metals as they leave the site.

- The mass/year of contaminants within this possible water supply that may possibly be concentrated by reverse osmosis treatment and sent to the TSF is not provided and thus not assessed.
- Modelling of the nature, mass or attenuation of contaminants leaching from the TSF or WRE to the south and west of the Mine Site after 100 years has not been presented.

DPIE's groundwater expert also noted that the numerical groundwater simulation model did not consider contamination of local waterbodies nor dependent ecosystem health.

A second matter relating to the regulatory framework is that very few of the Recommendations provided by EPA and DPIE/NRAR were resolved pre-Determination. Neither entitlements to the maximum required water supply from Groundwater Sources, nor alternatives were obtained. FDP's conceptual diagrams (15 Feb 2023 p.16) indicate the potential for pit dewatering from Year 4 to drain surrounding catchments and also for indefinite contaminant seepage on abandonment.

A third matter is the lack of any risk assessment following recognised guidelines. A peer reviewed AS/NZS ISO 31000:2009 Risk Assessment would enable source-pathway-receptors to clearly conceptualise the problems.

- i) Significant or unique endemic species in groundwater dependent ecosystems are not presented for consideration
- ii) 106 licensed and unregistered bore users within 10 km do not have an activity-pathway-likelihood-consequence risk assessment (FDP Feb 2023 p.57)

This risk assessment was also recommended by the DPIE expert (FDP Feb 2023).

Previous report highlight the groundwater issues facing this proposal. This project approval pathway is an opportunity to demonstrate leading practice in project approvals and demonstrate alignment with WaterNSW strategy and principles for sustainable development.