



MINING, EXPLORATION & GEOSCIENCE ADVICE RESPONSE

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Dear Rose-Anne

Project: Bowdens Silver Project
Stage: Advice on Environmental Impact Statement
Development Application: SSD-5765

I refer to your correspondence dated 2 June 2020 inviting Regional NSW – Mining Exploration & Geoscience (MEG) to provide comments on the Bowdens Silver Project (the Project or Bowdens Project) Environmental Impact Statement (EIS). The EIS was submitted by R. W. Corkery & Co. Pty Limited on behalf of Bowdens Silver Pty Limited (Bowdens Silver or the Proponent).

The relevant units internal to MEG have been consulted in generating this advice. The Department of Planning, Industry and Environment and the Proponent should be aware that matters concerning subsidence, subsidence management, mine operator, safety, rehabilitation and environmental impacts of final landform design are not assessed by MEG and separate advice should be sought from the Resources Regulator.

Advice overview

MEG has concluded that the Bowdens Project will:

- produce the following ore and products;
 - approximately 29.9 million tonnes (Mt) of ore from the deposit
 - ore to be processed on-site producing approximately 310,000 tonnes (t) of mineral concentrates throughout the Life-of-Mine (LOM).
- ensure an appropriate return to the NSW Government including;
 - \$2 to 5 million royalties (current dollars) annually
 - \$1.7 billion total revenue (current dollars).
- generate ongoing and initial capital investment in the order of A\$250 million.
- provide employment for a workforce of up to a maximum 320 full-time equivalent (FTE) personnel during construction and 210 FTE personnel during operations.
- include a LOM of approximately 23 years comprising the site establishment and construction stage, mining and processing operations.

Resource and Economic Assessment

Bowdens Silver proposes to develop and operate an open cut silver mine approximately 26 kilometres east of Mudgee within the Mid-Western Regional Local Government Area of NSW. The mine site would be located approximately two to three kilometres northeast of Lue on Bowdens Silver owned land, land under option to purchase or land the subject of agreements with Bowdens Silver.

The majority of the Project's silver-lead-zinc mineralisation lies within the Rylstone Volcanics which comprise mainly of rhyolitic ignimbrites, tuffs and volcanic breccias, which are partially overlain by a thin screen of Permian Snapper Point Formation in parts of the proposed open pit. The natural surface is undulating while the top of mineralisation extends from near surface to about 30 metres with a base of around 180 metres from the surface. The deposit is a tabular body around 500 metres by 750 metres, gently folded into a broad flat east-west anticline that plunges at low angles to the north and is suitable to extraction by open cut mining.

The principal products to be produced from the Bowdens Project would include a silver/lead concentrate and a zinc concentrate (with a small content of silver). Bowdens Silver plan to extract and process up to 2 million tonnes per annum through open cut mining to produce 20,000 to 30,000 tonnes of mineral concentrate per annum during the 16.5 years mine life.

It is noted that the optimised open pit shell used as the basis for design excludes from the production profile approximately 98 Mt of ore. Optimisation of the pit design may be revisited in the future with a change in metal prices.

The Proponent has completed resource and reserve estimations for the Project in accordance with the Australasian Code for Reporting of Exploration Results, Mineral Resources and Ore Reserves (the JORC code). The JORC Code is an industry-standard professional code of practice that sets minimum standards for public reporting of mineral exploration results, mineral resources and ore reserves. Reserves are the economically mineable portion of a resource. A JORC compliant reserves report assists in independently assessing the commercial viability of the Bowdens Project and the proposed mining method.

Many factors constrain the mine plan and extraction methodology and therefore the resource recovery of the Project. The options were assessed according to mine design, engineering feasibility, economic feasibility and the balance provided for appropriate environmental and social outcomes. Bowdens Silver considered various mining options, with the mine layout chosen based primarily on the optimal geotechnical orientation of pit walls, favourable geological features, minimising environmental constraints, and maximising commercial viability and pit optimisation.

In view of the constraints outlined in the Proponent's EIS and based on the information currently available, MEG considers the Project satisfies section 3A objects of the *Mining Act 1992* and the requirements of clause 15 of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007. The Bowdens Project represents an efficient development and utilisation of mineral resources which will foster significant social and economic benefits.

MEG is satisfied that, should the operational outcomes be achievable, the proposed mine design and mining method submissions adequately recover mineral resources and will provide an appropriate return to the state.

The resource utilisation, recovery and economic benefits assessment undertaken by MEG is addressed in Attachment A.

The requirement for a mining authorisation and royalty liability

The requirement for a mining lease

The Project is located within the existing title area of Exploration Licence 5920 (Act 1992) (EL 5920) and Exploration Licence 6354 (Act 1992) (Group one minerals) as shown in Attachments B and C.

The Bowdens Project is also partially overlain by a portion of Authorisation 286 (Act 1973) (Auth 286) for coal held by the Secretary of Regional NSW. MEG directs the Proponent to section 59 of the *Mining Act 1992* (the Act) Restrictions on the grant of mining leases; Land subject to exploration licence.

Section 59 states:

(1) If an application for a mining lease is lodged in respect of land that is subject wholly or partly to one or more exploration licences (other than exploration licences that include any mineral or minerals in respect of which the mining lease is sought), the decision-maker must cause notice of the application to be served on the holder of every such exploration licence.

(2) The holder of an exploration licence served with such a notice may object to the granting of the mining lease by lodging with the Secretary, on or before the date specified in the notice, a written notice stating the grounds of the objection.

(3) Any such objection is to be taken into consideration by the Minister when determining the application.

(4) This section does not apply to an application that is made with the written consent of the holder of every exploration licence over the land concerned.

(5) A written consent given under this section is irrevocable.

It should be noted that the portion of Auth 286 that intersects EL 5920 is currently subject to an application for part cancellation and is under assessment by MEG.

MEG notes that the Bowdens Project, as it currently stands, is sitting immediately to the southwest of the 'Hawkins' potential area for release of coal exploration under the Strategic Release Framework and confirms that the Project sits outside the boundary of the potential release area.

As Silver, Lead and Zinc are prescribed minerals under the Act, the Proponent must obtain the appropriate mining title(s), such as a mining lease, from MEG allowing for mineral extraction over the project area.

Additional ancillary mining activities

For ancillary mining activities, a proponent holding a mining lease granted in respect of mineral/s may, in accordance with the lease conditions, carry out any ancillary mining activity on that land (see definition of ancillary mining activity in clause 7 of the Mining Regulations 2016).

There is a subset of ancillary mining activity that the legislation defines as 'designated ancillary mining activity' (defined in section 6(6) of the Act).

A proponent seeking to undertake designated ancillary mining activity on land inside the mining area must ensure that the mining lease granted in respect of mineral/s contains a condition allowing undertaking of this designated ancillary mining activity (Section 6(1) of the Act).

A proponent seeking to undertake a designated ancillary mining activity outside a mining area, but in the immediate vicinity of and that directly facilitates the mining lease in respect of mineral(s), must apply for one of the following:

- A separate mining lease for the designated ancillary mining activity which authorises the carrying out of the activity. (This provides the holder with the right to access the mining area to undertake the ancillary mining activity, however, does not provide the holder with the right to mine).
- A condition on an existing mining lease that regulates the carrying out of the designated ancillary mining activity in an off-title area. (See section 6(2) of the Act). The ancillary mining

activity condition will include the survey plan of the designated ancillary mining activity area on which the designated ancillary mining activity is (or is proposed to be) located.

Ancillary mining activities that are not defined as 'designated AMAs' may be undertaken without an authorisation under the Act. However, for operational or strategic reasons, proponents may still wish to apply for an appropriate authorisation for these activities.

Royalty Liability

The holder of a mining lease is also liable to pay a royalty for both publicly and privately-owned minerals (refer to section 282-285 of the Act).

Application of section 65 of the *Mining Act 1992* – development consents under the *Environmental Planning and Assessment Act 1979*

A development application under the *Environmental Planning and Assessment Act 1979* must be approved before a mining lease can be granted. A mining lease will only be granted for activities specified in the development consent.

Section 65 states:

The Minister must not grant a mining lease over land if development consent is required for activities to be carried out under the lease unless an appropriate development consent is in force in respect of the carrying out of those activities on the land.

Biodiversity offset assessment

MEG requests that Bowdens Silver consider potential resource sterilisation in relation to any offsite biodiversity offset areas or any supplementary biodiversity offset measures. MEG requests that both the Geological Survey of NSW – Land Use Assessment team and holders of existing mining and exploration authorities that could be potentially affected by planned biodiversity offsets be consulted. This will ensure there is no consequent reduction in access to prospective land for mineral exploration or potential for the sterilisation of mineral and extractive resources.

Summary of review

MEG has determined that should the project be approved, efficient and optimised resource outcomes can be achieved, and any identified risks or opportunities can be effectively regulated through the conditions of mining authorities issued under the *Mining Act 1992*.

MEG requests to review the draft conditions of approval before finalisation and any granting of development consent.

For further enquiries and advice concerning this matter, please contact Adam W. Banister, Senior Advisor, Assessment Coordination Unit – Resource Assessments on 02 4063 6534 or assessment.coordination@planning.nsw.gov.au.

Yours sincerely



Stephen Wills
Executive Director Resource Operations
Mining, Exploration & Geoscience
Regional NSW
30 July 2020

Encl.

Attachment A – Bowdens Silver Project (SSD-5765) - Resource & Economic Assessment (DOC20/216474)
Attachment B – Bowdens Silver Project (SSD-5765) - diagram – overview (DOC20/602265)
Attachment C – Bowdens Silver Project (SSD-5765) - diagram – exploration (DOC20/602263)