ATTACHMENT 2A

**AGENCIES' CORRESPONDENCE (2016)** 



MID-WESTERN REGIONAL COUNCIL PO Box 156, MUDGEE NSW 2850 86 Market Street, Mudgee | 109 Herbert Street, Gulgong | 77 Louee Street, Rylstone T 1300 765 002 or 02 6378 2850 | F 02 6378 2815 E council@midwestern.nsw.gov.au

JR | A0420245

12 December 2016

Elle Donnelley NSW Department of Planning & Environment Sent via email: elle.donnelley@planning.nsw.gov.au]

Dear Elle

# SUBJECT: BOWDENS SILVER PROJECT REVISED SEARS

Thank you for the opportunity to provide input into the revised Secretary's Environment Assessment Requirements (SEARS) for the Bowdens Silver Project.

Mid-Western Regional Council has previously made submissions in relation to the SEARS for this project both in February 2013 and January 2015. A copy of these submissions is attached for your reference.

After reviewing the revised proposal dated November 2016, Council confirms that it does not have any additional matters to raise beyond those already identified in the submissions referred to above. In summary, the key issues to be addressed include:

- Proximity to Lue Village the village of Lue with over 100 residences is within 2.5km of the proposed open cut pit. The mitigation and/or management of any impacts relating to issues such as noise, air quality, traffic, local amenity etc. are critical to this community.
- 2. Water as water security is a high priority in this region, it is essential that the project identifies a sustainable water source which does not impact upon town water supplies and/or enforce restrictions on other agricultural users within the catchment area.
- 3. **Roads** the project will require upgrades to local roads (including construction of a new access road and relocation of Maloneys (Bara) Road) prior to construction commencement, and ongoing during the operational phase of the project. It is expected that these upgrades will be at the full cost to the proponent, and that the proponent will make an annual contribution to roads maintenance for the project life cycle based on projected traffic movements.

Looking after Our Community

If you wish to discuss this submission in further detail, please contact 02 6378 2850.

Yours faithfully, 6

JULIE ROBERTSON DIRECTOR DEVELOPMENT



PO BOX 156 MUDGEE NSW 2850

86 Market Street MUDGEE 109 Herbert Street GULGONG 77 Louee Street RYLSTONE

Ph: 1300 765 002 or (02) 6378 2850 Fax: (02) 6378 2815 email: council@midwestern.nsw.gov.au

15 January 2015

A0420245

Mr Kane Winwood NSW Planning & Environment GPO Box 39 SYDNEY NSW 2001

Dear Mr Winwood

# **BOWDENS SILVER PROJECT – REVISED SEARs**

I refer to the email dated 15 December 2014 inviting Council to provide comment on the proposed amended Secretary's Environmental Assessment Requirements (SEARs).

Council has reviewed the updated proposal and would like to add the following comments as an addendum to our original submission dated 14 February 2013:

- Council require the applicant to undertake a full assessment of the impacts on air quality from dust and particulate matter as a result of the project including monitoring of background lead levels to ensure that there are no adverse impacts on the Lue community and surrounding area. Council requests that consideration be given to the findings in Port Augusta where unexpected high lead levels were found locally and at sites remote from the mine site.
- Council reaffirms that it considers that water is a determining issue. To date the applicant
  has been unable to identify the exact amount of water required, the source of water and
  the proposed method of reticulation to the mine site. Council remains concerned regarding
  the potential impact on agricultural users and objects to any scheme that requires the
  transfer of water licences from below Burrendong Dam. Council requests that the
  assessment clearly identifies the source of water, amount and proposed reticulation.
- Council reaffirms its requirement that all road upgrades identified in the Preliminary Environmental Assessment be undertaken at full cost to the developer and that all upgrades are required as a condition of approval prior to the commencement of construction on the site. This includes the re-alignment and sealing of Maloneys (Bara) Road from the Lue Road intersection to the mine entrance.

Council reaffirms that it fully supports the response form the Lue Action Group and requests that their requirements be included in the SEARs. Should you have any queries in relation to this matter please contact Catherine Van Laeren on (02) 6378 2850.

Yours faithfully

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CATHERINE VAN LAEREN DIRECTOR - DEVELOPMENT



PO BOX 156 MUDGEE NSW 2850

86 Market Street MUDGEE 109 Herbert Street GULGONG 77 Louee Street RYLSTONE

Ph: 1300 765 002 or (02) 6378 2850 Fax: (02) 6378 2815 email: council@midwestern.nsw.gov.au

14 February 2013

(CVL) A0420245

NSW Department of Planning & Infrastructure GPO Box 39 SYDNEY NSW 2000

Attention: Mr Kane Winwood - Team Leader - Mining Projects

Dear Sir,

## PRELIMINARY RESPONSE TO DIRECTOR GENERAL'S REQUIREMENT BOWDENS SILVER PROJECT -

Thank you for the opportunity to provide a preliminary response to the Director General's Requirements for the Bowden's Silver Project. Council has reviewed Preliminary Environmental Assessment and Draft DGRs and would request that the following specific issues be included in the DGRs:

• Traffic movements

It is requested that a detailed analysis should be carried out of the impact of all traffic movements (type and frequency) that are anticipated for the whole of the period of the construction and operation of the project – this should include commuter traffic, transport of equipment and the transport of concentration. The analysis should include an assessment of the ability of all roads, intersection, culverts and bridges to cope with the additional traffic and the changing nature of the traffic. Should heavy haulage routes involve haulage through existing towns and villages than the analysis should include the assessment on traffic flow through those towns and villages and potential noise impacts. The study is to provide a detail safety audit and a schedule of works necessary to upgrade the road to ensure that current levels of services are maintained. All roads should be upgraded to comply with Austroad standards in accordance with the standard dictated by traffic volumes including consideration of heavy haulage.

In addition the proponent should address the likely impact and proposed procedures for the transportation of hazardous materials along the proposed haulage routes.

Council would suggest the proponent commence discussions with Council's Engineering Officers are soon as possible regarding all aspects of road works

#### Road Dilapidation Report

Council requests that an assessment of the condition of the road, that is a dilapidation report, is to take place prior to the commencement of construction and again at the completion of works. Weekly inspections of the roads will also be required, to ensure that any damage to the road is repaired immediately. Council will also be seeking assurances that any road damage that occurs as a result of increased vehicle movements associated with the construction will be funded by the developer and not by Council.

#### Road Upgrades

Council requires that all road upgrades required as indentified by the study be undertaken at the full cost to the developer and that all upgrades are required as a condition of approval prior to the commencement of any construction on site.

#### • Road Maintenance

Council requires that a full assessment of all haulage and commuter routes be undertaken to assess the lifecycle maintenance requirement of the routes and undertake a details schedule of works and schedule of costs. All works and costs are to be borne by the proponent.

Realignment of Maloneys Road (Bara) Road Council requires detailed consultation with Mid-Western Regional Council throughout the design of Maloneys Road including the selection of the new realignment. As this road will become a Mid-Western Council asset Council will require that the roadworks are undertaken by Mid-Western Regional Council at the full cost to the proponent.

Dust

Council notes that the Draft DGRs will require a quantative assessment of the potential impacts of dust. It is requested that the DGRs include specific reference to variable wind patterns, including seasonal wind patterns and the need for a detailed air dispersal model. Council also requires specific details on the specific dust suppression measures that will be in place during operations and also on the haulage routes.

#### Noise Impacts.

Council considers that the application of the Industrial Noise Policy is inappropriate in this environment due to the extremely low existing background noise levels. Council stresses that the baseline for the assessment of noise impacts should be less than that allowed by the Industrial Noise Policy having regard to the rural nature of the area. It is considered that having regard to the difficulty to meet acceptable noise levels during nighttime operation and the rural nature of the area that reconsideration should be given to the 24 hour operation of the site.

Council would also require a detailed Traffic Noise Assessment to be carried out on the proposed haulage routes to ascertain the level of impact associated off-site going to be generated as a result of the mining operations.

#### Complaints Register

Council requires details on how the company proposed to address and monitor all complaints associated with the operations of the mine.

#### Water

Council requests that a moratorium be placed on the sale of high security licenses to the Bowden's Silver Project until detailed assessment of the impact on other water users, such as agricultural users can be modeled and extensive consultation undertaken with existing users. Until such time as it can be demonstrated that the existing and future Water Sharing Plan for the Cudgegong River will provide sufficient protection for town water supplies it is consider irresponsible for further high security licenses to be sold that allow the transfer of water allocations within the catchment. It is considered imperative that the modeling, adjustment of the WSP and extensive consultation be undertaken prior to the sale of the water license.

Council considers that potential impact on water security for both agricultural users and town water supply is a determinative issue. It is considered that the cumulative impact of the establishment of mining projects within the catchment and their water demands needs to assessed. In addition, it is imperative that potential adverse impact on water allocations during periods of drought to other industries, agriculture and the town water supply be considered and that the cost of the development include the potential decline of agriculture and growth of other industries due to the restricted access to water. Council considers that it is critical that a diverse economic base be maintain in the region and the potential threat to that diversity should be fully assessed as part of this application.

It is noted that a *Human Health Risk Assessment* is a requirement of the Draft DGRs. Council would request that a particular focus be placed on the assessment on the impacts on dust on drinking water.

Visual Amenity

It is requested that the DGRs include an assessment of the lighting and light spillage on the rural character of the area and impact on the residential amenity of both the villages and surrounding properties.

Council will also require light shielding modeling carried out as part of the assessment to demonstrate the likely impacts of light onto the neighboring properties and Lue. Mechanisms on how to limit light shielding and the likely impacts it will have will also need to be demonstrated by the proponent.

#### Socio Economic Impacts

Council considers that the assumptions regarding available workforce within the supporting information is flawed and fails to take into account the cumulative impact of mining and wind farm projects within the region. Whilst it is acknowledged that some of the construction and operation workforce will be sourced locally it is considered that the majority will need to be imported. Council requests that the DGRs include the requirement for the proponent to identify the likely domicile for 90 % of the construction and operational workforce and undertake a full analysis of the impacts on housing, rental housing, infrastructure, traffic, health and other social impacts and provide realistic measure to mitigate those impacts. The literature review should have regard to the Local Service Assessment Report undertaken by Manidis Roberts on behalf of the DoPI in 2012. A copy is located on Council website at http://www.midwestern.nsw.gov.au/Economic-Development/Publications/. Upon the completion of the demand assessment for temporary accommodation should the project recognise a need for Temporary Workers Accommodation then reference should be made the Mid-Western Regional Comprehensive DCP.

Council is concerned regarding the ongoing viability of the village of Lue and the school. The village of Lue is a successful vibrant community and Council has witnessed the demise of other villages such as Wollar due the impacts of mining. It should be noted that demise of Wollar was not predicted in the EA prepared in support of the mine. Council considers that a full assessment should be made on the potential impacts on Lue with an investigation of student numbers and the potential threat to maintaining those numbers should families leave the village.

#### Agricultural Impact Analysis

While Council recogonises that the area may not be regarded as prime agricultural lands, Council would like to see the likely off-site impacts on adjoining agricultural lands that are likely to occur as a result of the mine. Council would also like to see what soil resources and land capabilities are likely to be altered.

#### • Environmental Offsets

In identifying proposed environmental offset the proponent should identify the proposed ongoing management program for the offsets including land tenure, Council does not support the conversion of environmental offsets to National Park or transfer to government ownership.

#### Voluntary Planning Agreement

To date no discussions have taken place regarding a Voluntary Planning Agreement (VPA) with Mid-Western Regional Council. -Council will be seeking an agreement to compensate for the additional demand on facilities and services provided by the Council. -It should be noted that Council expects that all road upgrades will be required as a condition of approval prior to the commencement of the construction on site rather than included in a VPA.

#### • Acid Forming Material

Council is concerned regarding the potential for acid forming material left in situ but exposed due to mining activities. Council requests that a complete assessment be undertaken and if necessary that a bond or guarantee be imposed to ensure the ongoing management of the site after the closure of the mine.

#### Fauna and Flora

Council would like to see details on proposed native fish waterway crossings that are likely to be obstructed and altered as a result of the proposal and any critical habitats likely to be affected by the proposal.

#### • Site Rehabilitation Works post Mine Life

Council would require information on the post mine life rehabilitation plans and proposed uses for the site. As part of this information Council would require quantified information on the lands capabilities post mine life.

#### Lue Action Group

Please find attached a response from the Lue Action Group. Council fully supports the requests included in their response for inclusion in the DGRs.

Council\_supports site specific Director General Requirements with regard to Major Projects.

Should you have any further enquiries in relation to this matter please contact Catherine Van Laeren on 02 6378 2850 during office hours.

Yours faithfully

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CATHERINE VAN LAEREN GROUP MANAGER – DEVELOPMENT & COMMUNITY SERVICES



OUT16/48752

Ms Elle Donnelley Resource Assessments NSW Department of Planning and Environment GPO Box 39 SYDNEY NSW 2001

Elle.donnelley@planning.nsw.gov.au

Dear Ms Donnelley

# Bowden Silver Project (SSD 5765) Request for Secretary's Environmental Assessment Requirements

I refer to your email of 29 November 2016 to the Department of Primary Industries (DPI) in respect to the above matter. Comment has been sought from relevant divisions of DPI. Views were also sought from NSW Department of Industry - Lands that are now a division of the broader Department and no longer within NSW DPI. Any further referrals to DPI can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

DPI has reviewed the request and the previously issued SEARs and provides the following recommendations:

- Specific Issues Land should include the following:
  - A requirement to complete an Agricultural Impact Statement in accordance with the <u>DPI Agricultural Impact Statement Technical Notes</u>.
  - An assessment of the pre mining (baseline) agricultural capability of the land to facilitate rehabilitation to pre-existing agricultural use at the close of the project. This should include monitoring programs to measure the return of land back to pre-existing condition.
- Specific Issues Biodiversity should include a requirement for an aquatic ecological environmental assessment that specifically addresses the impacts on aquatic ecology, loss of Key Fish Habitats, threatened species and proposed offsets. Information to assist the proponent in undertaking this assessment has been included at Attachment A.
- Specific Issues Water should also include the following:
  - Identify water demand, and determine whether an adequate and secure water supply is available for the project.
  - Identify water sources (surface and groundwater), water disposal / discharge methods and water storage structures in the form of a detailed and consolidated water balance.
  - An assessment against the <u>NSW Aquifer Interference Policy (2012)</u> using <u>DPI Water's assessment framework</u>.
  - Assessment of any potential cumulative impacts on water resources, and any proposed options to manage the cumulative impacts.

- References throughout the document to 'NOW' should be amended to DPI Water.
- Attachment 1 Environmental Planning Instruments, Policies, Guidelines & Plans should include the following:
  - o Biodiversity
    - Why Do Fish Need to Cross the Road? Fish Passage Requirements for Waterway Crossings (2003)
    - <u>Policy and Guidelines for Fish Habitat Conservation and Management (Update 2013)</u>
  - o Land
    - <u>Strategic Regional Landuse Policy (2012)</u>

Yours sincerely

Mitchell Isaacs Director, Planning Policy & Assessment Advice 12 December 2016

DPI appreciates your help to improve our advice to you. Please complete this three minute survey about the advice we have provided to you, here: https://goo.gl/o8TXWz

# Attachment A

# Bowden Silver Project (SSD 5765) Request for Secretary's Environmental Assessment Requirements Detailed comments – DPI Fisheries

# AQUATIC ECOLOGICAL ASSESSMENT

The aquatic ecological environmental assessment should include the following information;

- A recent aerial photograph (preferably colour), map or GIS of the locality which maps the key fish habitat of the development site, and the waterway classes as defined in Tables 1 and 2 of the Policy & Guidelines document above.
- Aerial extent of the key fish habitat types to be affected either directly or indirectly by the development or activity should be identified and shown on recent aerial photograph map or GIS.
- Description and quantification of aquatic and riparian vegetation should be presented and mapped. This should include an assessment of the extent and condition of riparian vegetation and the extent and condition of freshwater aquatic vegetation and the presence of significant habitat features (e.g. gravel beds, snags, reed beds, etc)
- Quantification of the extent of aquatic and riparian habitat removal or modification which will result from the proposed development, and impacts on fish passage.
- Determination of aquatic biodiversity offsets required (see NSW Biodiversity Offsets Policy for Major Projects, Fact Sheet: Aquatic Biodiversity) at <u>http://www.environment.nsw.gov.au/resources/biodiversity/14817aqoffs.pdf</u>.
- Targeted on-ground surveys for threatened species (see below)
- Detailed maps outlining the proposed realignment of new waterways within the project area.
- Detailed maps outlining compensatory habitats and significant habitat features that will be created to offset the loss of aquatic and riparian habitat.
- Detailed maps that outline and assess the geomorphic stability of the proposed realignments of the new waterways including re-creation of the sinuosity/complexity of the new waterways.
- Details of the location of all waterways crossings and construction designs, such as bridges or culverts, access tracks, gauging stations or water pipelines.
- Details of the location of all waterway realignments, including a detailed rehabilitation plan for the aquatic environment and the adjacent riparian zone, and a timetable for construction of the proposal with details of various phases of construction.
- Aspects of the management of the proposal, both during construction and after completion, which relate to impact minimisation e.g. Environment Management Plans. e.g. Monitoring geomorphic stability of the system and mitigation strategies in place to address any bed lowering, scouring or other impacts that arise as a result of the project. Monitoring of the water quality in receiving waters such as the diverted creeks, particularly during the construction phase, and also during the operational phase.

End Attachment A

OUT16/48775



Elle Donnelley Planner Resource Assessments Department of Planning & Environment GPO Box 39 SYDNEY NSW 2001

Elle.donnelley@planning.nsw.gov.au

Dear Elle

# Bowdens Silver Project: Request for input into revised SEARs (SSD 5765)

I refer to your email dated 29 November 2016 inviting the Division of Resources & Energy (the Division) to provide comments on the Bowdens Silver Project: Request for input into revised SEARs (SSD 5765).

The Division has reviewed and assessed the adequacy of information in relation to Bowdens Silver Project: Request for input into revised SEARs (SSD 5765) requested by the Department of Planning and Environment (DPE) and requires the following inclusions:

The Environmental Impact Statement (EIS) is to include a brief description of the geological setting of the deposit and specifically provide a description of the geology and mineralisation of the deposit itself.

This description should include detail about the shape, physical dimensions, mineralogy and ore mineral distribution for individual ore bodies/lenses, and in particular, a description of the mineralogy of the ore for all minerals present should be provided, including silver sulphosalts and mineralised sulphides. Appropriate figures and sections showing the distribution of the various styles of mineralisation, such as the upper silver-rich and deeper sulphide-lead-zinc zones should be included.

Supporting information including plans and cross-sections need to show the extent of the mineralised zones to be mined and those located adjacent/beneath planned mining voids from planned activities. Where this may impact on resource sterilisation, utilisation and planned final voids, information such as grade and width/tonnes needs to be included.

The proposed recovery processes and expected recoveries for silver, lead and zinc should also be outlined.

The EIS is to include whole rock, minor and trace element geochemistry of the ore, tailings and waste rock, with commentary on the management of this information in context of the environmental effects of the proposal.

Division of Resources and Energy PO Box 344 Hunter Region Mail Centre NSW 2310 516 High St Maitland NSW 2323 Tel: 02 4931 6666 Fax: 02 4931 6776 www.industry.nsw.gov.au ABN 72 189 919 072 The Division recommends that the standard mining development rehabilitation SEARS be applied to this project (attachment A).

Should you have any enquires regarding this matter please contact Steve Cozens, Senior Project Officer, Royalty & Advisory Services on 9842 8573.

Yours sincerely

Zane West Manager Royalties & Advisory Services

Encl. Attachment A



Environmental Sustainability Unit PO Box 344, Maitland NSW 2310 Tel: 4931 6605 Fax: 4931 6790

# ADVICE RESPONSE

## Mining Development Rehabilitation Standard SEARs

#### Post-mining land use

(a) Identification and assessment of post-mining land use options;

(b) Identification and justification of the preferred post-mining land use outcome(s), including a discussion of how the final land use(s) are aligned with relevant local and regional strategic land use objectives;

(c) Identification of how the rehabilitation of the project will relate to the rehabilitation strategies of neighbouring mines within the region, with a particular emphasis on the coordination of rehabilitation activities along common boundary areas;

#### **Rehabilitation objectives and domains**

(d) Inclusion of a set of project rehabilitation objectives and completion criteria that clearly define the outcomes required to achieve the post-mining land use for each domain. Completion criteria should be specific, measurable, achievable, realistic and time-bound. If necessary, objective criteria may be presented as ranges;

#### **Rehabilitation Methodology**

(e) Details regarding the rehabilitation methods for disturbed areas and expected time frames for each stage of the rehabilitation process;

(f) Mine layout and scheduling, including maximising opportunities for progressive final rehabilitation. The final rehabilitation schedule should be mapped against key production milestones (i.e. ROM tonnes) of the mine layout sequence before being translated to indicative timeframes throughout the mine life. The mine plan should maximise opportunities for progressive rehabilitation;

#### **Conceptual Final Landform Design**

(g) Inclusion of a drawing at an appropriate scale identifying key attributes of the final landform, including final landform contours and the location of the proposed final land use(s);

#### **Monitoring and Research**

(h) Outlining the monitoring programs that will be implemented to assess how rehabilitation is trending towards the nominated land use objectives and completion criteria;

(i) Details of the process for triggering intervention and adaptive management measures to address potential adverse results as well as continuously improve rehabilitation practices;

(j) Outlining any proposed rehabilitation research programs and trials, including their objectives. This should include details of how the outcomes of research are considered as part of the ongoing review and improvement of rehabilitation practices;

#### **Post-closure maintenance**

(k) Description of how post-rehabilitation areas will be actively managed and maintained in accordance with the intended land use(s) in order to demonstrate progress towards meeting the rehabilitation objectives and completion criteria in a timely manner;

#### Barriers or limitations to effective rehabilitation

(I) Identification and description of those aspects of the site or operations that may present barriers or limitations to effective rehabilitation, including:

(i) evaluation of the likely effectiveness of the proposed rehabilitation techniques against the rehabilitation objectives and completion criteria;

(ii) an assessment and life of mine management strategy of the potential for geochemical constraints to rehabilitation (e.g. acid rock drainage, spontaneous combustion etc.), particularly associated with the management of overburden/interburden and reject material;

(iii) the processes that will be implemented throughout the mine life to identify and appropriately manage geochemical risks that may affect the ability to achieve sustainable rehabilitation outcomes;

(iv) a life of mine tailings management strategy, which details measures to be implemented to avoid the exposure of tailings material that may cause environmental risk, as well as promote geotechnical stability of the rehabilitated landform; and

(v) existing and surrounding landforms (showing contours and slopes) and how similar characteristics can be incorporated into the post-mining final landform design. This should include an evaluation of how key geomorphological characteristics evident in stable landforms within the natural landscape can be adapted to the materials and other constraints associated with the site.

(m) Where a void is proposed to remain as part of the final landform, include:

(i) a constraints and opportunities analysis of final void options, including backfilling, to justify that the proposed design is the most feasible and environmentally sustainable option to minimise the sterilisation of land post-mining;

(ii) a preliminary geotechnical assessment to identify the likely long term stability risks associated with the proposed remaining high wall(s) and low wall(s) along with associated measures that will be required to minimise potential risks to public safety; and

(iii) outcomes of the surface and groundwater assessments in relation to the likely final water level in the void. This should include an assessment of the potential for fill and spill along with measures required be implemented to minimise associated impacts to the environment and downstream water users.

(n) Where the mine includes underground workings:

(i) determine (with reference to the groundwater assessment) the likelihood and associated impacts of groundwater accumulating and subsequently discharging (e.g. acid or neutral mine drainage) from the underground workings post cessation of mining; and

(ii) consideration of the likely controls required to either prevent or mitigate against these risks as part of the closure plan for the site.

(o) Consideration of the controls likely to be required to either prevent or mitigate against rehabilitation risks as part of the closure plan for the site;

(p) Where an ecological land use is proposed, demonstrate how the revegetation strategy (e.g. seed mix, habitat features, corridor width etc.) has been developed in consideration of the target vegetation community(s);

(q) Where the intended land use is agriculture, demonstrate that the landscape, vegetation and soil will be returned to a condition capable of supporting this; and

(r) Consider any relevant government policies1.

1 The following government policies should be considered when addressing rehabilitation issues:

• Mine Rehabilitation (Leading Practice Sustainable Development Program for the Mining Industry, 2006)

• Mine Closure and Completion (Leading Practice Sustainable Development Program for the Mining Industry, 2006)

Strategic Framework for Mine Closure (ANZMEC-MCA, 2000)



Your reference Our reference Contact

. : EF13/4940 & DOC16/604301-01 : Ms Sheridan Ledger (02) 6332 7608

Mrs Elle Donnelley Resource Assessments Department of Planning & Environment GPO Box 39 SYDNEY NSW 2001

13 December 2016

Dear Mrs Donnelley

# REQUEST FOR SEARS – ENVIRONMENT PROTECTION AUTHORITY BOWDENS SILVER PROJECT (SSD 5765)

I refer to your email of 29 November 2016 requesting the Environment Protection Authority (EPA) provide Secretary's Environmental Assessment Requirements (SEARs) for the proposed "Bowden's Silver Project" (SSD 5765) ("the Project").

The EPA understands that the application will be assessed by the Department of Planning and Environment (DPE) under Part 4 of the *Environmental Planning and Assessment Act 1979* as State Significant Development.

The EPA has considered the details provided regarding the Proposal, including the Preliminary Environmental Assessment (PEA) prepared by RW Corkery & Co, dated November 2016. The EPA considers the Project, if approved, would require licensing by the EPA.

The applicant should address the issues in **Attachments A** to this letter during the preparation of the Environmental Impact Statement (EIS) to adequately assess the environmental impacts of the proposal. In carrying out the assessment, the proponent should refer to the relevant guidelines as listed in **Attachment B** and any relevant industry codes of practice and best practice management guidelines.

The EPA requests that the applicant is provided with the EPA's assessment requirements and guidelines as set out in **Attachments A and B**. The EPA also requests that one (1) hard copy and an electronic copy of the EIS are provided for assessment. These documents should be mailed to the EPA's Central West (Bathurst) office PO Box 1388 BATHURST NSW 2795.

Should you have any enquiries regarding this matter, please contact Ms Sheridan Ledger at the Bathurst office of the EPA on (02) 6332 7608.

Yours sincerely

DARRYL CLIFT Head Central West Unit Environment Protection Authority

> PO Box 1388 Bathurst NSW 2795 Level 2, 203 – 209 Russell Street Bathurst NSW 2795 Tel: (02) 6332 7600 Fax: (02) 6332 7630 ABN 43 692 285 758 www.epa.nsw.gov.au

# Attachment A

# Bowden's Silver Project EPA Secretary's Environmental Assessment Requirements

## Licensing requirements

On the basis of the information submitted, the proposal is a scheduled activity, being "Mining for Minerals" under the *Protection of the Environment Operations Act 1997* (POEO Act) and if approval is granted, proponent will be required to submit a licence application to obtain an environment protection licence (EPL) from the EPA.

As such, the EIS should also address the requirements of Section 45 of the POEO Act determining the extent of each impact and providing sufficient information to enable the EPA to determine appropriate conditions for the licence.

# Environmental impacts of the project

The EIS must include a comprehensive description of the production processes, all discharges and emissions to the environment, an assessment of likely environmental impacts, particularly in relation to waste storages and include a detailed description of any proposed control measures.

The environmental sensitivity of the site and surrounds should be discussed. Details are required on the location of the proposed development, including the affected environment, to place the Project in its local and regional environmental context including surrounding landuses, land use zonings and most importantly potential sensitive receptors.

The EIS should describe mitigation and management options that will be used to prevent, control, abate or mitigate identified environmental impacts associated with the project and to reduce risks to human health and prevent the degradation of the environment. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.

The following environmental impacts of the project need to be assessed, quantified and reported on:

- Water
- Air
- Noise
- Waste, including waste storages
- Construction
- Soils
- Contaminated Land

The EIS should address the specific requirements outlined under each heading below and assess impacts in accordance with the relevant guidelines mentioned. A full list of these guidelines is at **Attachment B**.

## Description of proposal and premises

## The Proposal

The objectives of the Project should be clearly stated and refer to:

the size and type of the operation;

- the nature of the processes and the products, by-products and wastes produced;
- the use or disposal of products;
- the anticipated level of performance in meeting required environmental standards and cleaner production principles;
- the staging and timing of the proposal; and
- the Project's relationship to any other industry or facility.

# The Premises

The EIS will need to fully identify all of the processes and activities intended for the Project over the life of the development. This will include details of:

- the location of the proposed facility and details of the surrounding environment including the affected environment to place the Project in its local and regional environmental context. This should include surrounding land uses, planning zonings, potential sensitive receptors, catchments and adjoining sensitive areas, surface and sub-surface areas, features of conservation significance and environmental sensitivity (associated maps to be included);
- the proposed layout of the site (associated maps to be included);
- ownership details of any residence and/or land likely to be affected by the Project;
- maps/diagrams showing the location of residences and properties likely to be affected and other industrial developments, conservation areas, wetlands, etc in the locality that may be affected by the Project;
- all equipment proposed for use at the site;
- chemicals, including fuel, used on the site and proposed methods for their transportation, storage, use and emergency management;
- waste generation and disposal;
- methods to mitigate any expected environmental impacts of the development; and
- site rehabilitation following completion of the Project.

## Site Layout

The EIS should:

- 1. Provide maps, at an appropriate scale, which clearly identifies the proposed site layout relevant to environmental features such as drainage lines, terrain etc, over the life of the Project.
- 2. Provide maps which show land ownership information, the proposed site layout and impact assessment information at an appropriate scale.

# Assessment of the environmental impacts of the Project

The potential environmental impacts related to the following environmental issues need to be assessed, quantified and reported on. It should be noted that the following requirements apply to all aspects of the Project, which may include offsite works, including but not necessarily limited to, the relocation of infrastructure eg roads, railway crossings and lines, electricity transmission lines and services, and the establishment of access roads to the Project site.

## <u>Air Quality</u>

The goal should be to maintain existing rural air quality and protect sensitive receptors, both on and off site from adverse impacts of dust and odour and other relevant air pollutants. Background ambient air levels should be identified to inform the assessment.

Dust is of primary concern with potential emissions from general mining activities, onsite roads, conveyors, transfer points, loading facilities, coal stockpiles, overburden emplacements etc.

The EA should include a detailed air quality impact assessment (AQIA). The AQIA should:

- 1. Assess the risk associated with potential discharges of fugitive and point source emissions for <u>all</u> <u>stages</u> of the Project. Assessment of risk relates to environmental harm, risk to human heath and amenity.
- 2. Justify the level of assessment undertaken on the basis of risk factors, including but not limited to:
  - a. proposal location;
  - b. characteristics of the receiving environment; and
  - c. type and quantity of pollutants emitted.
- 3. Describe the receiving environment in detail. The Project must be contextualised within the receiving environment (local, regional and inter-regional as appropriate). The description must include but need not be limited to:
  - a. meteorology and climate a minimum of 12 months data obtained from the meteorological station located at the Project site must be provided;
  - b. topography;
  - c. surrounding land-use;
  - d. receptors; and
  - e. ambient air quality.
- 4. Include a detailed description of the Project. All processes that could result in air emissions must be identified and described. Sufficient detail to accurately communicate the characteristics and quantity of <u>all emissions</u> must be provided. Include a detailed process diagram/flowchart of the Project specifying all air inputs, air outputs and air discharge points.
- 5. Identification and location of all fixed and mobile sources of dust/air emissions from the development, including rehabilitation, needs to be provided. The location of all emission sources should be clearly marked on a plan for key years of the mine development. The EIS needs to identify all pollutants of concern and estimate emissions by quantity (and size of particles), source(s) and discharge point(s).

Note: emissions can be classed as either:

- a. point (eg emissions from stack or vent), or
- b. fugitive (from wind erosion, leakages or spillages, associated with loading or unloading, crushing/screening, conveyors, storage facilities, plant and yard operation, vehicle movements [dust from road, exhausts, loss from load], land clearing and construction works).
   Fugitive emissions include coal dust emissions and leaks and spills of coal during rail transport to port facilities (as influenced by management methods and procedures employed by the proposal).
- 6. Include air dispersion modelling where there is a risk of adverse air quality impacts, or where there is sufficient uncertainty to warrant a rigorous numerical impact assessment. Air dispersion modelling must be conducted in accordance with the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (2005). <u>http://www.environment.nsw.gov.au/resources/air/ammodelling05361.pdf</u>.

This assessment should include the following parameters:

- a. dust deposition;
- b. total suspended particles;
- c. PM<sub>10</sub> and PM<sub>2.5</sub> particulate matter.
- 7. Demonstrate the Project's ability to comply with the relevant regulatory framework, specifically the *Protection of the Environment Operations Act 1997* and the *Protection of the Environment Operations* (*Clean Air*) Regulation 2002.
- 8. Provide an assessment of the project in terms of the priorities and targets adopted under the NSW State Plan 2010 and its implementation plan Action for Air.
- 9. Detail air emission control techniques/practices that will be employed by the Project.
  - All emission control techniques/practices must be benchmarked against best practice process design and emission control. The Project must be assessed by applying the procedure outlined in in *Coal Mine Particulate Matter Control Best Practice - Site-specific determination guideline* (November 2011). http://www.environment.nsw.gov.au/resources/air/20110813coalmineparticulate.pdf
  - b. Nominated controls must be explicitly linked to calculated emission reductions adopted in the air guality impact assessment emissions inventory, with all assumptions documented and justified.
- 10. Detail emission control techniques/practices that will be employed by the proposal, including the development of real-time monitoring/management procedures, response (adverse weather) trigger levels and predictive meteorological monitoring/modelling for dust management.
- 11. Include a consideration of 'worst case' emission scenarios and impacts at proposed emission limits.
- 12. Account for cumulative impacts associated with existing emission sources as well as any currently approved developments linked to the receiving environment.

#### Noise and Vibration

Potential impacts on the noise amenity of the surrounding area should be assessed in accordance with the NSW Industrial Noise Policy (INP) and other relevant guidelines mentioned below, accounting for all noise sources associated with the Project. In particular, seasonality assessments are to be undertaken to assess the impact of temperature inversions and wind conditions.

A noise and vibration impact assessment for both construction and operational scenarios should be undertaken as part of the EIS. The assessment should consider the issues outlined below, and identify noise mitigation measures to be implemented to meet project specific noise levels developed for the Project. The EIS will need to assess all feasible and reasonable mitigation measures including an assessment of any residual impacts in accordance with section 8.2.1 of the INP.

The noise assessment must include (but not be limited to) an assessment of the C-weighted noise (low frequency) as well as A-weighted noise.

In relation to noise, the following matters should be addressed (where relevant) as part of the Environmental Assessment.

#### General

- 1. Construction noise associated with the proposed development should be assessed using the *Interim Construction Noise Guideline* (DECC, 2009). <u>http://www.environment.nsw.gov.au/noise/constructnoise.htm</u>
- 2. Operational noise from all industrial activities (including private haul roads and private railway lines) to be undertaken on the premises must be assessed in accordance with the guidelines contained in the *NSW Industrial Noise Policy* (EPA, 2000) and *Industrial Noise Policy Application Notes*. <u>http://www.environment.nsw.gov.au/noise/industrial.htm</u>
- 3. Vibration from all activities (including construction and operation) to be undertaken on the premises should be assessed using the guidelines contained in the *Assessing Vibration: a technical guideline* (DEC, 2006). <u>http://www.environment.nsw.gov.au/noise/vibrationguide.htm</u>
- 4. If blasting is required for any reasons during the construction or operational stage of the proposed development, blast impacts should be demonstrated to be capable of complying with the guidelines contained in Australian and New Zealand Environment Council Technical basis for guidelines to minimise annoyance due to blasting overpressure and ground vibration (ANZEC, 1990). http://www.environment.nsw.gov.au/noise/blasting.htm

#### Road

- 5. Noise on public roads from increased road traffic generated by land use developments should be assessed using the *NSW Road Noise Policy* (DECCW, 2011). <u>http://www.environment.nsw.gov.au/noise/traffic.htm</u>
- 6. Noise from new or upgraded public roads should be assessed using the *NSW Road Noise Policy* (DECCW, 2011). <u>http://www.environment.nsw.gov.au/noise/traffic.htm</u>

## Noise Monitoring

Describe the noise monitoring system in detail, including the development and implementation of a monitoring program that:

- uses a combination of predictive meteorological forecasting and real-time noise monitoring, supplemented with attended monitoring measures to evaluate the performance of the mine complex;
- adequately supports the proactive and reactive noise management system on site;
- includes a protocol for determining exceedances of the conditions imposed on the project;
- evaluates and reports on the effectiveness of the noise management system on site;
- provides for the annual validation of the noise model for the mine complex.

The EIS must describe the system that will be implemented to enable the community to access up-to-date information regarding any proposed blasting schedule.

#### <u>Waste</u>

The EIS should identify all wastes to be generated by all aspects of the Project and identify procedures for the handling and management of all wastes produced. The handling of rejects, tailings and overburden material are important aspects which must be assessed in detail.

The EIS should:

- 1. Identify, characterise and classify all waste that will be generated onsite through excavation, demolition or construction activities, including proposed quantities of the waste.
- Demonstrate how waste will be managed in accordance with the waste hierarchy, established under the <u>Waste Avoidance and Resource Recovery Act 2001</u>, which aims to that ensures that resource management options are considered against the following priorities:
  - Avoidance including action to reduce the amount of waste generated by households, industry and all levels of government
  - *Resource* recovery including reuse, recycling, reprocessing and energy recovery, consistent with the most efficient use of the recovered resources
  - *Disposal* including management of all disposal options in the most environmentally responsible manner.
  - Include a detailed plan for in-situ classification of waste material, including the sampling locations and sampling regime that will be employed to classify the waste, particularly with regards to the identification of contamination hotspots in accordance with the EPA's Waste Classification Guidelines.
  - Provide details of the quantity and type of both liquid and non-liquid waste generated, handled, processed or disposed of at the premises. Wastes must be classified according to the Waste Classification Guidelines (DECC 2008).
  - 5. Details of procedures for the assessment, handling, storage, transport and disposal of all hazardous waste used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.
  - 6. Identify, characterise and classify all waste that is proposed to be disposed of to an offsite location, including proposed quantities of the waste and the disposal locations for the waste. This includes waste that is intended for re-use or recycling. All waste must be classified in accordance with EPA's Waste Classification Guidelines.
  - 7. Provide, where relevant, the methods which will be utilised to ensure compliance with any approved Resource Recovery General Exemption for the offsite disposal of waste either generated onsite and disposed of offsite, or received from offsite and disposed of onsite. Resource Recovery General Exemptions may only be utilised where the waste is land applied for use as fuel of a waste material is a genuine, fit for purpose, reuse of the waste rather than another path to waste disposal.
  - 8. Identify the management and disposal of tailings including actions to prevent potential impacts to groundwater, surface water or any other environmental aspect which may occur as a result of the management technique utilised. The EIS must assess and commit to the implementation of all

feasible and reasonable measures to minimise seeps, leaching, and/or leaks from the tailings storages facilities into the surrounding environment. The EIS must also include details of a monitoring program which will be established to assess leaks and/or seepages from any tailings storage facility, including a leak detection system.

- 9. Assess the potential for acid mine drainage from acid forming materials and identify the management /mitigation measures which will utilised for any PAF material identified.
- 10. Provide details of how waste will be handled and managed onsite to minimise pollution, including:
- a) Stockpile location and management
  - Labelling of stockpiles for identification, ensuring that all waste is clearly identified and stockpiled separately from other types of material (especially the separation of any contaminated and non-contaminated waste).
  - Proposed height limits for all waste to reduce the potential for dust and spontaneous combustion.
  - Procedures for minimising the movement of waste around the site and double handling.
- b) Provide details of waste rock emplacement areas with particular attention to:
  - The quantity of waste rock likely to be generated;
  - Proposed strategies for the handling, reuse/recycling and disposal of waste rock; and
  - Designation of transport routes for the transport of waste rock.

## Chemicals and Hazardous Materials

The EIS should:

- 1. Provide details of the types and quantity of any chemical substances, including but not necessarily limited to, hydrocarbons (oils and fuels), hazardous or dangerous materials (eg explosives etc) to be used or stored onsite.
- 2. Provide details of procedures for the assessment, handling, storage, transport and disposal of all chemical substances, hazardous or dangerous materials used, stored, processed or disposed of at the site, in addition to the requirements for liquid and non-liquid wastes.
- 3. Outline pollution control measures relating to storage of wastes, materials, possibility of accidental spills (eg. Preparation of contingency plans), appropriate disposal methods and management of contaminated stormwater.

## <u>Soils</u>

The EIS should include:

1. An assessment of potential impacts on soil and land resources should be undertaken, being guided by *Soil and Landscape Issues in Environmental Impact Assessment* (DLWC 2000). The nature and extent of any significant impacts should be identified. Particular attention should be given to:

- Soil erosion and sediment transport in accordance with *Managing urban stormwater: soils and construction*, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008).
- Urban and regional salinity guidance given in the Local Government Salinity Initiative booklets which includes *Site Investigations for Urban Salinity* (DLWC, 2002).
- A description of the mitigation and management options that will be used to prevent, control, abate or minimise identified soil and land resource impacts associated with the project. This should include an assessment of the effectiveness and reliability of the measures and any residual impacts after these measures are implemented.
- 3. Where required, add any specific assessment requirements relevant to the Project.

# <u>Water</u>

The environmental outcomes of the Project in relation to water should be:

- There is no pollution of waters (including surface and groundwater); and
- Polluted water (including process/tailings waters, wash down waters, polluted stormwater or sewerage) is captured onsite and collected, treated and beneficially reused, where safe and practical to do so.

The EIS should document the measures that will achieve the above outcomes in the construction, operation and post operations phases of the project. Construction activities <u>will need to demonstrate best</u> practice sediment and erosion control and management in accordance with the reference document *Managing Urban Stormwater: Soils and Construction (NSW Landcom)*.

# The EIS should:

- 1. Describe existing surface and groundwater quality. An assessment needs to be undertaken for any water resource likely to be affected by the Project.
- 2. Describe any drainage lines, creeks lines etc that will be impacted by the Project.
- 3. Provide a water balance for the including water requirements (quantity, quality and source(s)) and proposed storm and wastewater disposal, including type, volumes, proposed treatment and management methods and re-use options.
- 4. Describe the Project including position of any intakes and discharges, volumes, water quality and frequency of all water discharges (e.g. surface water discharge to a river/creek, groundwater, irrigation of waste water etc).
- 5. Assess the nature and degree of impact that any proposed discharges may have on the receiving environment. Assessment for discharge to surface waters should be guided by *Using the ANZECC Guidelines and Water Quality Objectives in NSW* (DEC, 2006) using local Water Quality Objectives determined from the *NSW Water Quality and River Flow Objectives* (DEC, 2006). Demonstrate how the Project will be designed and operated to:
  - protect the Water Quality Objectives for receiving waters where they are currently being achieved; and
  - contribute towards achievement of the Water Quality Objectives over time where they are not currently being achieved.

- 6. Where the proponent intends to undertake the assessment using site-specific water quality trigger values, detail the water quality of a reference site that has been selected based on the site-specific considerations outlined in ANZECC (2000).
- 7. Identify potential impacts on watercourses and the management/mitigation measures that will be implemented where mining activities occur in proximity to or within a watercourse.
- 8. Identify whether any discharge, or the location of the Project, will cause erosion, siltation, destruction of riparian vegetation or a reduction in the stability of river banks or watercourses.
- 9. If the discharge requires treatment prior to disposal, any treatment measures should be described and the predicted water quality outcomes documented. Include a detailed process diagram/flowchart of the proposal specifying all water inputs, outputs and discharge points
- 10. Demonstrate that all practical options to avoid discharge have been investigated and implemented and outline measures that have been taken to reduce the pollutant load of the discharge so that the environmental impact is minimised where a discharge is necessary.
- 11. Describe how stormwater will be managed both during and after construction including a layout of the proposed stormwater system in accordance with *Managing Urban Stormwater, Soils and Construction Volume 1* (Landcom, 2004) and *Volumes 2A to 2E* (DECC, 2008), The EIS should:
  - Provide the proposed general location of all water management structures. These should be clearly indicated on appropriately scaled maps.
  - Demonstrate how clean, dirty and contaminated water will be managed (separated) on site throughout the life of the Project.
  - Provide detailed water management strategies for all disturbance areas including the management of channel and overland flows into and within the disturbance area.
  - Provide the proposed sizing of all water storage dams, sediment dams and other dams as required and justification for the sizing utilised.
  - Identify contingency measure which may be implemented during extreme rainfall events.
- 12. Where the management of sediment basins requires the use of flocculants, the EIS should include information about the type, toxicity and management of flocculants proposed to treat captured water before discharge.
- 13. Provide detailed water management strategies for all disturbance areas, paying particular attention to the waste rock emplacement areas and potential impacts on groundwater and offsite surface water resources including particular reference to the management of channel and overland flows into and within the disturbance area.
- 14. Determine and detail the tailings management and monitoring strategy and dam design to be implemented, including an assessment of the potential impacts of tailings storage on surface and groundwater resources, contingency plans in the event of a leak or seep, rehabilitation and the long term management and feasibility.
- 15. Provide plans for the proposed relocation/realignment of all creeks and/or drainage lines including design, timelines and completion criteria and sufficient evidence to demonstrate that the proposed plans are achievable, reasonable and feasible in the short and the long term.

- 16. State the Water Quality Objectives for the receiving waters relevant to the proposal. These refer to the community's agreed environmental values and human uses endorsed by the NSW Government as goals for ambient waters (<u>http://www.environment.nsw.gov.au/ieo/index.htm</u>). Where groundwater may be impacted the assessment should identify appropriate groundwater environmental values.
- 17. State the indicators and associated trigger values or criteria for the identified environmental values. This information should be sourced from the ANZECC (2000) Guidelines for Fresh and Marine Water Quality (<u>http://www.mincos.gov.au/publications/australian and new zealand guidelines for fresh and marin</u> e water guality).
- 18. State any locally specific objectives, criteria or targets which have been endorsed by the NSW Government.
- 19. Assess impacts on groundwater and groundwater dependent ecosystems. The assessment should be guided by the principles in *The NSW State Groundwater Policy Framework Document* (DLWC,1997). *Assessment and Management of Groundwater Contamination* (DEC, 2007) provides guidance on assessing and managing groundwater contamination. Assess impacts against relevant water quality guidelines for:
  - potentially impacted environmental values and beneficial uses using local Water Quality Objectives;
  - contamination, such as investigation levels specified in *National Environment Protection Measure Guideline on the Investigation Levels for Soil and Groundwater* (EPHC, 1999).
- 20. Provide plans for any proposed relocation/realignment of all creeks and/or drainage lines including design, timelines and completion criteria and sufficient evidence to demonstrate that the proposed plans are achievable/sustainable, reasonable and feasible in the short and the long term.
- 21. Assess any irrigation areas proposed for wastewaters produced in accordance with the EPA Guideline "The Use of Effluent by Irrigation".
- 22. Describe how predicted impacts on surface water, groundwater and aquatic ecosystems will be monitored and assessed over time, including monitoring locations, relevant parameters, and sampling frequency. The EIS should:
  - Include a Trigger Action Response Plan, or similar response management plan, to identify
    appropriate trigger values and criteria and provide appropriate response actions if impacts
    are identified through the monitoring program.
  - Identify the process for identifying any trends in the monitoring data obtained.

Note: Water quality monitoring should be undertaken in accordance with the *Approved Methods* for *the Sampling and Analysis of Water Pollutant in NSW* (DEC, 2004). *Groundwater Sampling and Analysis: Field Guide* (Geosciences Australia, 2009) provides guidance on the design of a groundwater sampling program.

#### Monitoring, Assurance and Reporting Programs

- 1. The EIS should include a detailed assessment of any noise, air quality, water quality or waste monitoring required during the construction phase and on-going operation of the facility to prevent or minimise any adverse environmental impacts from the development.
- 2. Appropriate baseline data requirements are to be identified as part of the EIS, to form the basis for baseline and ongoing monitoring of environmental parameters.

- 3. It must be demonstrated that the proposed methods for baseline and subsequent monitoring are scientifically robust and statistically sound.
- 4. The EIS must also identify and describe monitoring programs, compliance assurance programs and reporting requirements and arrangements that will demonstrate the effectiveness of proposed management measures in meeting applicable requirements.
- 5. The EIS must, in addition to outlining proposed programs, clearly identify what is to be monitored and audited and why. This should include identification of monitoring locations, parameters to be monitored, sample analysis methods, the level of reporting proposed. The EIS should also include information on frequency and type of audits proposed to assure compliance with applicable requirements,
- 6. The EIS should demonstrate monitoring and audit programs must be designed appropriately, according to best practice, to provide objective evidence regarding activities associated with the development and have regard to whether these activities are adversely impacting on the environment in the short, medium and/or long term.

#### Cumulative impacts

The EIS should provide an assessment of the cumulative impacts of the project during construction and operation of the proposal with regard to noise, air quality, water quality or waste Assessment of cumulative impacts must consider past, current and future activities in the area surrounding the project, impacts associated with internal components of this project (where relevant – e.g. a project involving construction throughout a precinct or similar), as well as the construction impacts of any projects recently completed.

# Attachment B

# **Guidance Material**

Title	Web address	
Relevant Legislation		
Contaminated Land Management Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+140+1 997+cd+0+N	
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1 979+cd+0+N	
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1 997+cd+0+N	
Water Management Act 2000	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+20 00+cd+0+N	
	Licensing	
Guide to Licensing	http://www.epa.nsw.gov.au/licensing/licenceguide.htm	
Air Issues		
Air Quality		
Approved methods for modelling and assessment of air pollutants in NSW (2005)	http://www.epa.nsw.gov.au/resources/air/ammodelling05361.pdf	
POEO (Clean Air) Regulation 2010	http://www.legislation.nsw.gov.au/#/view/regulation/2010/428	
Dust	No EPA specific guidance material exists for the control of dust from construction sites. Consideration should be given to the POEO Act and the Local Government Air Quality Toolkit (DECC, 2007), accessed via: <u>http://www.epa.nsw.gov.au/air/lgaqt.htm</u>	
Odour - Technical Framework - Assessment and Management of Odour from Stationary Sources in NSW (DEC, 2006	http://www.epa.nsw.gov.au/air/odour.htm	
	Noise and Vibration	
Interim Construction Noise Guideline (DECC, 2009)	http://www.epa.nsw.gov.au/resources/noise/09265cng.pdf	
Industrial Noise Policy and Application Notes	http://www.epa.nsw.gov.au/noise/industrial.htm	
Assessing Vibration: A technical Guideline (DECC, 2006)	http://www.epa.nsw.gov.au/resources/noise/vibrationguide0643.pd	
SA EPA Environmental Noise Guidelines (SA EPA, 2009)	http://www.epa.sa.gov.au/environmental_info/noise/wind_farms	
Technical Basis for Guidelines to Minimise Annoyance due to Blasting	http://www.epa.nsw.gov.au/resources/noise/ANZECBlasting.pdf	

Title	Web address	
Overpressure and Ground Vibration		
NSW Road Noise Policy	http://www.epa.nsw.gov.au/noise/traffic.htm	
Waste, Chemical	s and Hazardous Materials and Radiation	
Chemical and Fuel Storage		
Bunding and Spill Management	http://www.epa.nsw.gov.au/mao/bundingspill.htm	
Storage and Handling of Dangerous Goods – Code of Practice (WorkCover, 2005)	http://www.workcover.nsw.gov.au/formspublications/publications/ Documents/storage-handling-dangerous-goods-1354.pdf	
Waste		
Environmental Guidelines: Solid Waste Landfills (EPA 2016)	http://www.epa.nsw.gov.au/resources/waste/solid-waste-landfill- guidelines-160259.pdf	
Waste Classification Guidelines	http://www.epa.nsw.gov.au/wasteregulation/classify- guidelines.htm	
Resource Recovery Orders and Exemptions	http://www.epa.nsw.gov.au/wasteregulation/orders- exemptions.htm	
Soils		
Contaminated Sites Assessment and Remediation		
Managing land contamination: Planning Guidelines – SEPP 55 Remediation of Land	http://www.legislation.nsw.gov.au/#/view/EPI/1998/520	
Contaminated Sites Guidelines	http://www.epa.nsw.gov.au/clm/guidelines.htm	
Soils – general		
Soil Publications	http://www.environment.nsw.gov.au/soils/publications.htm	
Managing urban stormwater: soils and construction, vol. 1 (Landcom 2004) and vol. 2 (A. Installation of services; B Waste landfills; C. Unsealed roads; D. Main Roads; E. Mines and quarries) (DECC 2008)	Vol 1 - <u>http://www.environment.nsw.gov.au/resources/water/BlueBookVol</u> <u>1.pdf</u> Vol 2 - <u>http://www.environment.nsw.gov.au/stormwater/publications.htm</u>	
Water		
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm	
	http://www.environment.gov.au/water/publications/quality/pubs/nw gms-guidelines-4-vol1.pdf	
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	http://www.mincos.gov.au/publications/australian and new zeala nd guidelines for fresh and marine water quality	
	http://www.environment.gov.au/water/publications/quality/nwqms- guidelines-4-vol1.html	
	http://www.environment.gov.au/water/publications/quality/pubs/nw	

Title	Web address	
	gms-guidelines-4-vol1.pdf	
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approve dmethods-water.pdf	



Level 6, 10 Valentine Avenue Parramatta NSW 2150 Locked Bag 5020 Parramatta NSW 2124 DX 8225 PARRAMATTA Telephone: 61 2 9873 8500 Facsimile: 61 2 9873 8599 heritage@heritage.nsw.gov.au www.heritage.nsw.gov.au

File No: SF16/54269 Ref No: DOC16/604167

Elle Donnelley Planner, Resource Assessments Planning Services GPO BOX 39 SYDNEY NSW 2001

Sent by e-mail to: <u>elle.donnelley@planning.nsw.gov.au</u>

Dear Ms Donnelley

# Request for input into revised Secretary's Environmental Assessment Requirements (SEARs) for Bowden's Silver Project, near Lue, Mid-Western Regional Council LGA (SSD 5765)

Reference is made to your correspondence received on 29 November 2016 seeking input into the revised Secretary's Environmental Assessment Requirements (SEARs) from the Heritage Council of NSW (the Heritage Council) for the above proposal.

A revision of the SEARs is required because the project will not be able to meet the required two year timeframe for submission of the Environmental Impact Assessment and the ownership and project scope has changed from the original application. A review of the documentation associated with the request has been undertaken, in particular the:

 'Preliminary Environmental Assessment for Bowdens Silver Project (State Significant Development No. 5765)' prepared by R.W. Cokery & Co. Pty. Limited dated November 2016 (the Assessment).

The original SEARs issued in February 2015 indicate that a heritage assessment would be required. The Assessment has noted that within the indicative Mine Site, three European heritage features, comprising of two historic mine shafts and hut ruins are extant. However, no further assessment of these heritage items has been provided.

It is further noted that the Assessment has identified sites of Aboriginal archaeological significance based on previous cultural heritage surveys undertaken in 2003 and 2011. The surveys indicated that twenty five Aboriginal heritage sites were identified comprising of seventeen stone artefact scatters and eight isolated finds of stone artefacts. The assessment has indicated that additional investigation will be undertaken with a cultural heritage survey proposed within the area of the proposed access road and project related infrastructure that may be located to the northwest of the proposed open cut pit. The Assessment indicates that a detailed Cultural Heritage assessment of the entire proposed disturbance footprint will be undertaken and an assessment of significance of any identified objects assessed in accordance with the relevant guidelines.

The Heritage Division advises the Department of Planning and Environment that historic and archaeological heritage issues have not been adequately considered in the preparation of the Assessment for this project. Whilst the Assessment has identified the existence of the

abovementioned historic heritage items within the project area, an updated EIS should identify if these potential heritage items are likely to be affected. The following SEARs are recommended to ensure that heritage concerns are adequately addressed prior to project approval:

- 1. The EIS shall include a Heritage Impact Assessment (HIS) prepared in accordance with the guidelines in the NSW Heritage Manual that addresses the significance of, and provides an assessment of the impact on the heritage significance of heritage items on the development site and in the vicinity.
- 2. The EIS shall also a historical archaeological assessment prepared by a suitably qualified historical archaeologist in accordance with the Heritage Division, Office of Environment and Heritage Guidelines 'Assessing Significance for Historical Archaeological Sites and 'Relics' 2009. This assessment should identify what relics, if any, are likely to be present, assess their significance and consider the impacts from the proposal on this potential resource. Where harm is likely to occur, it is recommended that the significance of the relics be considered in determining an appropriate mitigation strategy. In the event that harm cannot be avoided in whole or part, an appropriate Research Design and Excavation Methodology should also be prepared to guide any proposed excavations.

If you have any questions regarding the above matter, please contact Anna Foroozani, Heritage Assessment Officer at the Heritage Division, Office of Environment and Heritage on telephone (02) 9985 6479 or at anna.foroozani@environment.nsw.gov.au.

Yours sincerely

Katrina Stankowski Acting Manager, Conservation Heritage Division Office of Environment & Heritage <u>As Delegate of the Heritage Council of NSW</u> 08/12/2016



Our Ref: DOC16/624453 Your Ref: SSD 5765

> Ms Elle Donnelley Planner Resource Assessments Department of Planning and Environment elle.donelley@planning.nsw.gov.au

Dear Ms Donnelley,

# Bowdens Silver Project SEARs – SSD 5765

I refer to your e-mail dated 29 November 2016 seeking input into the Department of Planning and Environment Secretary's Environmental Assessment Requirements (SEARs) for the preparation of an Environmental Impact Assessment (EIS) for the Bowdens Silver Project (SSD 5765).

OEH has considered your request and provides SEARs for the proposed development in **Attachments A, B** and **C** and guidance material in **Attachment D**.

OEH recommends the EIS needs to appropriately address the following:

- 1. Biodiversity and offsetting
- 2. Aboriginal cultural heritage
- 3. Historic heritage
- 4. Water and soils
- 5. Flooding

OEH notes that there are a number of Endangered Ecological Communities and threatened species potentially affected by the development, and that Aboriginal cultural heritage items may also be present. OEH recommends that the design of the mine avoids areas of native vegetation as much as possible.

Please note that the NSW Biodiversity Offsets Policy for Major Projects www.environment.nsw.gov.au/resources/biodiversity/140672biopolicy.pdf is now being implemented. The policy provides a standard method for assessing impacts of major projects on biodiversity and determining offsetting arrangements.

underpinned by the Framework for **Biodiversity** Assessment The policy is (FBA) http://www.environment.nsw.gov.au/resources/biodiversity/140675fba.pdf which contains the assessment methodology that is adopted by the policy to quantify and describe the impact assessment requirements and offset guidance that applies to Major Projects. The FBA must be used by a proponent to assess all biodiversity values on the development site.

If you have any questions regarding this matter further please contact David Geering on 02 6883 5335 or email david.geering@environment.nsw.gov.au.

Yours sincerely,

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STEVEN COX Senior Team Leader Planning North West Region

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Contact officer: DAVID GEERING 6883 5335

Attachment A - Environmental Assessment Requirements

Attachment B - Species/Populations/Ecological Communities which Require Further Consideration

Attachment C - Critically Endangered Entities Specifically Excluded From Requiring Further Consideration

Attachment D - Guidance Material

# Attachment A – Standard Environmental Assessment Requirements

Biodiversity			
1	Ri	ersity adjuarsity impacts related to the proposed Bowdens Silver Project are to be assessed and	
1.	dc	ocumented in accordance with the Framework for Biodiversity Assessment unless otherwise	
	ag	reed by OEH, by a person accredited in accordance with \$142B(1)(c) of the Threatened	
0	Sp	becies Conservation Act 1995.	
2.	Im	pacts on the species and ecological communities listed in Attachment B will require further	
	cc	insideration and provision of the information specified in s9.2 of the Framework for Biodiversity	
	As	sessment.	
ADC 2	orig ⊤⊦	Inal Cultural Heritage	
5.	w	the LIS must identify and describe the Aborginal cutural hemage values that exist across the	
	in	clude the need for surface survey and test excavation. The identification of cultural beritage	
		luce should be guided by the Guide to investigating assessing and reporting on Aberiginal	
	va	Ides should be guided by the Guide to investigating, assessing and reporting on Aboriginal	
		ditural Heritage in NSW (DECCW, 2011) and consultation with OEH regional officers.	
4.	VV	here Aboriginal cultural heritage values are identified, consultation with Aboriginal people must	
	be	e undertaken and documented in accordance with the Aboriginal cultural heritage consultation	
	re	quirements for proponents 2010 (DECCW). The significance of cultural heritage values for	
	At	poriginal people who have a cultural association with the land must be documented in the EIS.	
5.	Im	pacts on Aboriginal cultural heritage values are to be assessed and documented in the EIS.	
	The EIS must demonstrate attempts to avoid impact upon cultural heritage values and identify		
	any conservation outcomes. Where impacts are unavoidable, the EIS must outline measures		
	proposed to mitigate impacts. Any objects recorded as part of the assessment must be		
	dc	ocumented and notified to OEH.	
His	tori	c Heritage	
6.	T٢	ne EIS must provide a heritage assessment including but not limited to an assessment of	
	im	pacts to State and local heritage including conservation areas, natural heritage areas, places	
	of	Aboriginal heritage value, buildings, works, relics, gardens, landscapes, views, trees should be	
	as	sessed. Where impacts to State or locally significant heritage items are identified, the	
	as	sessment shall:	
	a.	outline the proposed mitigation and management measures (including measures to avoid	
		significant impacts and an evaluation of the effectiveness of the mitigation measures)	
		generally consistent with the NSW Heritage Manual (1996).	
	b.	be undertaken by a suitably gualified heritage consultant(s) (note: where archaeological	
		excavations are proposed the relevant consultant must meet the NSW Heritage Council's	
		Excavation Director criteria)	
	c	include a statement of heritage impact for all heritage items (including significance	
	υ.	assessment)	
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	đ.	consider impacts including, but not limited to, vibration, demolition, archaeological	
		disturbance, altered historical arrangements and access, landscape and vistas, and	
		architectural noise treatment (as relevant), and	

	e.	where potential archaeological impacts have been identified develop an appropriate		
		archaeological assessment methodology, including research design, to guide physical		
		archaeological test excavations (terrestrial and maritime as relevant) and include the results		
		of these test excavations.		
Wat	ter a	nd Soils		
7.	The	ne EIS must map the following features relevant to water and soils including:		
	a.	Acid sulfate soils (Class 1, 2, 3 or 4 on the Acid Sulfate Soil Planning Map).		
	b.	Rivers, streams, wetlands, estuaries (as described in Appendix 2 of the Framework for		
		Biodiversity Assessment).		
	с.	Groundwater.		
	d.	Groundwater dependent ecosystems.		
	e.	Proposed intake and discharge locations.		
8.	The	e EIS must describe background conditions for any water resource likely to be affected by the		
	dev	velopment, including:		
	a.	Existing surface and groundwater.		
	b.	Hydrology, including volume, frequency and quality of discharges at proposed intake and		
		discharge locations.		
	c.	Water Quality Objectives (as endorsed by the NSW Government		
		http://www.environment.nsw.gov.au/ieo/index.htm) including groundwater as appropriate that		
		represent the community's uses and values for the receiving waters.		
	d.	Indicators and trigger values/criteria for the environmental values identified at (c) in		
		accordance with the ANZECC (2000) Guidelines for Fresh and Marine Water Quality and/or		
		local objectives, criteria or targets endorsed by the NSW Government.		
9.	The	e EIS must assess the impacts of the development on water quality, including:		
	a.	The nature and degree of impact on receiving waters for both surface and groundwater,		
		demonstrating how the development protects the Water Quality Objectives where they are		
		currently being achieved, and contributes towards achievement of the Water Quality		
		Objectives over time where they are currently not being achieved. This should include an		
		assessment of the mitigating effects of proposed stormwater and wastewater management		
		during and after construction.		
	b.	Identification of proposed monitoring of water quality.		
10.	The	e EIS must assess the impact of the development on hydrology, including:		
	a.	Water balance including quantity, quality and source.		
	b.	Effects to downstream rivers, wetlands, estuaries, marine waters and floodplain areas.		
	c.	Effects to downstream water-dependent fauna and flora including groundwater dependent		
		ecosystems.		
	d.	Impacts to natural processes and functions within rivers, wetlands, estuaries and floodplains		
		that affect river system and landscape health such as nutrient flow, aquatic connectivity and		
		access to habitat for spawning and refuge (e.g. river benches).		
	e.	Changes to environmental water availability, both regulated/licensed and unregulated/rules-		
		based sources of such water.		

	f.	Mitigating effects of proposed stormwater and wastewater management during and after
		construction on hydrological attributes such as volumes, flow rates, management methods
		and re-use options.
	g.	Identification of proposed monitoring of hydrological attributes.
Floc	odin	g
11.	The	e EIS must map the following features relevant to flooding as described in the Floodplain
	Dev	velopment Manual 2005 (NSW Government 2005) including:
	a.	Flood prone land.
	b.	Flood planning area, the area below the flood planning level.
	C.	Hydraulic categorisation (floodways and flood storage areas).
12.	The	e EIS must describe flood assessment and modelling undertaken in determining the design
	floc	od levels for events, including a minimum of the 1 in 10 year, 1 in 100 year flood levels and the
	pro	bable maximum flood, or an equivalent extreme event.
13.	The	e EIS must model the effect of the proposed development (including fill) on the flood behaviour
	unc	der the following scenarios:
	a.	Current flood behaviour for a range of design events as identified in 11 above. This includes
		the 1 in 200 and 1 in 500 year flood events as proxies for assessing sensitivity to an increase
		in rainfall intensity of flood producing rainfall events due to climate change.
14.	Мо	delling in the EIS must consider and document:
	a.	The impact on existing flood behaviour for a full range of flood events including up to the
		probable maximum flood.
	b.	Impacts of the development on flood behaviour resulting in detrimental changes in potential
		flood affection of other developments or land. This may include redirection of flow, flow
		velocities, flood levels, hazards and hydraulic categories.
	c.	Relevant provisions of the NSW Floodplain Development Manual 2005.
15.	The	e EIS must assess the impacts on the proposed development on flood behaviour, including:
	a.	Whether there will be detrimental increases in the potential flood affectation of other
		properties, assets and infrastructure.
	b.	Consistency with Council floodplain risk management plans.
	c.	Compatibility with the flood hazard of the land.
	d.	Compatibility with the hydraulic functions of flow conveyance in floodways and storage in
		flood storage areas of the land.
	e.	Whether there will be adverse effect to beneficial inundation of the floodplain environment,
		on, adjacent to or downstream of the site.
	f.	Whether there will be direct or indirect increase in erosion, siltation, destruction of riparian
		vegetation or a reduction in the stability of river banks or watercourses.
	g.	Any impacts the development may have upon existing community emergency management
		arrangements for flooding. These matters are to be discussed with the SES and Council.
	h.	Whether the proposal incorporates specific measures to manage risk to life from flood.
		These matters are to be discussed with the SES and Council.
	i.	Emergency management, evacuation and access, and contingency measures for the
		development considering the full range or flood risk (based upon the probable maximum

flood or an equivalent extreme flood event). These matters are to be discussed with and have the support of Council and the SES.

j. Any impacts the development may have on the social and economic costs to the community as consequence of flooding.

# Attachment B – Species/Populations/Ecological Communities which Require Further Consideration

Table '

Class	Scientific Name	Common Name	NSW status	Comm. status
Aves	Anthochaera phrygia	Regent Honeyeater	Critically Endangered	Critically Endangered

# Attachment C – Critically Endangered Entities Specifically Excluded From Requiring Further Consideration\*

## Table 2

Class	Scientific Name	Common Name	NSW status	Comm. status
Aves	Lathamus discolor	Swift Parrot	Endangered	Critically Endangered
Community	White Box Yellow Box Blakely's Red Gum Woodland	White Box Yellow Box Blakely's Red Gum Woodland	Endangered	Critically Endangered
Flora	Prasophyllum sp. Wybong		Protected	Critically Endangered
Flora	Euphrasia arguta		Critically Endangered	Critically Endangered

\* Further information, as detailed in section 9.2.5.2 of the FBA, is not required for the excluded entities in Table 2. However, assessment of impacts and offset requirements must still be included in the biodiversity assessment report for these entities in accordance with the FBA.

# Attachment D – Guidance Material

Title	Web address	
	Relevant Legislation	
Coastal Protection Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+13+19 79+cd+0+N	
Commonwealth Environment Protection and Biodiversity Conservation Act 1999	http://www.austlii.edu.au/au/legis/cth/consol_act/epabca1999588/	
Environmental Planning and Assessment Act 1979	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+203+1 979+cd+0+N	
Fisheries Management Act 1994	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+38+19 94+cd+0+N	
Marine Parks Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+64+19 97+cd+0+N	
National Parks and Wildlife Act 1974	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+80+19 74+cd+0+N	
Protection of the Environment Operations Act 1997	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+156+1 997+cd+0+N	
Threatened Species Conservation Act 1995	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+101+1 995+cd+0+N	
Water Management Act 2000	http://www.legislation.nsw.gov.au/maintop/view/inforce/act+92+20 00+cd+0+N	
Wilderness Act 1987	http://www.legislation.nsw.gov.au/viewtop/inforce/act+196+1987+ FIRST+0+N	
	<u>Biodiversity</u>	
NSW Biodiversity Offsets Policy for Major Projects (OEH, 2013)	http://www.environment.nsw.gov.au/resources/biodiversity/14067 2biopolicy.pdf	
Framework for Biodiversity Assessment (OEH, 2013)	http://www.environment.nsw.gov.au/resources/biodiversity/14067 5fba.pdf	
Fisheries NSW policies and guidelines	http://www.dpi.nsw.gov.au/fisheries/habitat/publications/policies,- guidelines-and-manuals/fish-habitat-conservation	
List of national parks	http://www.environment.nsw.gov.au/NationalParks/parksearchato z.aspx	
Revocation, recategorisation and road adjustment policy (OEH, 2012)	http://www.environment.nsw.gov.au/policies/RevocationOfLandPolicy.htm	
Guidelines for developments adjoining land and water managed by the Department of Environment, Climate Change and Water (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/parks/policyRevoc ations.pdf	
Heritage		
The Burra Charter (The Australia ICOMOS charter for places of cultural significance)	http://australia.icomos.org/wp-content/uploads/The-Burra-Charter- 2013-Adopted-31.10.2013.pdf	
Statements of Heritage Impact 2002 (HO & DUAP)	http://www.environment.nsw.gov.au/resources/heritagebranch/heri tage/hmstatementsofhi.pdf	
NSW Heritage Manual (DUAP) (scroll through alphabetical list to 'N')	http://www.environment.nsw.gov.au/Heritage/publications/index.ht m#M-O	

Title	Web address
Ab	original Cultural Heritage
Aboriginal Cultural Heritage Consultation Requirements for Proponents (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/com mconsultation/09781ACHconsultreq.pdf
Code of Practice for the Archaeological Investigation of Aboriginal Objects in New South Wales (DECCW, 2010)	http://www.environment.nsw.gov.au/resources/cultureheritage/107 83FinalArchCoP.pdf
Guide to investigating, assessing and reporting on Aboriginal cultural heritage in NSW (OEH 2011)	http://www.environment.nsw.gov.au/resources/cultureheritage/201 10263ACHguide.pdf
Aboriginal Site Recording Form	http://www.environment.nsw.gov.au/resources/parks/SiteCardMain V1_1.pdf
Aboriginal Site Impact Recording Form	http://www.environment.nsw.gov.au/resources/cultureheritage/120 558asirf.pdf
Aboriginal Heritage Information Management System (AHIMS) Registrar	http://www.environment.nsw.gov.au/contact/AHIMSRegistrar.htm
Care Agreement Application form	http://www.environment.nsw.gov.au/resources/cultureheritage/201 10914TransferObject.pdf
	Water and Soils
Acid Sulphate Soils	
Acid Sulfate Soils Planning Maps via 'The NSW Natural Resource Atlas'	www.nratlas.nsw.gov.au/
Acid Sulfate Soils Manual (Stone et al. 1998)	Manual available for purchase from: http://www.landcom.com.au/whats-new/the-blue-book.aspx
	Chapters 1 and 2 are on DPI's Guidelines Register at:
	Chapter 1 Acid Sulfate Soils Planning Guidelines:
	OAcid%20Sulfate%20Soils%20Planning%20Guidelines.pdf
	Chapter 2 Acid Sulfate Soils Assessment Guidelines:
	http://www.planning.nsw.gov.au/rdaguidelines/documents/NSW%2 0Acid%20Sulfate%20Soils%20Assessment%20Guidelines.pdf
Acid Sulfate Soils Laboratory Methods Guidelines (Ahern et al. 2004)	http://www.advancedenvironmentalmanagement.com/Reports/Sav annah/Appendix%2015.pdf
	This replaces Chapter 4 of the Acid Sulfate Soils Manual above.
Flooding and Coastal Erosion	
Reforms to coastal erosion management	http://www.environment.nsw.gov.au/coasts/coastalerosionmgmt.ht m
Floodplain development manual	http://www.environment.nsw.gov.au/floodplains/manual.htm
Guidelines for Preparing Coastal Zone Management Plans	Guidelines for Preparing Coastal Zone Management Plans http://www.environment.nsw.gov.au/resources/coasts/130224CZM PGuide.pdf
NSW Climate Impact Profile	NSW Climate Impact Profile
Climate Change Impacts and Risk Management	Climate Change Impacts and Risk Management: A Guide for Business and Government, AGIC Guidelines for Climate Change Adaptation
Water	
Water Quality Objectives	http://www.environment.nsw.gov.au/ieo/index.htm

Title	Web address
ANZECC (2000) Guidelines for Fresh and Marine Water Quality	www.environment.gov.au/water/publications/quality/australian- and-new-zealand-guidelines-fresh-marine-water-quality-volume-1
Applying Goals for Ambient Water Quality Guidance for Operations Officers – Mixing Zones	http://deccnet/water/resources/AWQGuidance7.pdf
Approved Methods for the Sampling and Analysis of Water Pollutant in NSW (2004)	http://www.environment.nsw.gov.au/resources/legislation/approve dmethods-water.pdf



# 8 December 2016

SF2013/003834; WST13/00010/02

The Manager Resource Assessment Department of Planning & Environment GPO Box 39 SYDNEY NSW 2001

# **Attention: Ms Elle Donnelly**

Dear Ms Donnelly

# SSD5765: Bowdens Silver Project Request for updated Secretary's Environmental Assessment Requirements (SEARs)

Thank you for your email on 29 November 2016 seeking revised SEARs from Roads and Maritime Services for the Bowdens Silver Project. Reference is made to Roads and Maritime's previous submission dated 29 January 2013 providing Director General Requirements (now SEARs) for this proposal.

I note the applicant has modified the proposal by reducing the annual ore production rate from 4 million tonnes to 2 million tonnes per annum and increasing the life of the mine from 12 years to 17 years. The proposal will also now include a direct access from Lue Road.

Roads and Maritime's requirements provided in its submission dated 29 January 2013 stand and do not require any changes or amendments.

Please forward a copy of the updated SEARs to Roads and Maritime at the same time they are sent to the applicant. Should you require further information, please contact the undersigned on 02 6861 1681.

Yours faithfully

Andrew McIntyre Manager Land Use Assessment Western

**Roads and Maritime Services** 

51-55 Currajong Street Parkes NSW 2870 | PO Box 334 Parkes NSW 2870 DX 20256 |