BOWDENS SILVER

AMENDMENT SUBMISSIONS REPORT

State Significant Development No. 5765

March 2022

Prepared by: R.W. CORKERY & CO. PTY. LIMITED

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Bowdens Silver Project

Amendment Submissions Report

State Significant Development No. 5765

Prepared for:

Bowdens Silver Pty Limited
ABN: 37 009 250 051

Sydney Office
Level 11, 52 Phillip Street
SYDNEY NSW 2000

Telephone: (02) 8316 3997
Facsimile: (02) 8316 3999
Email: information@bowdenssilver.com.au

Operations Office
68 Maloneys Road
LUE NSW 2850
P.O. Box 1115
MUDGEE NSW 2850

Telephone: (02) 6373 6420

A Silver Mines Limited company

Prepared by:

R.W. Corkery & Co. Pty. Limited
Geological & Environmental Consultants
ABN: 31 002 033 712

Telephone: (02) 9985 8511
Email: admin@rwcorkery.com

Ref No. 429/38

March 2022

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ACRONYMS

AHCHA	Aboriginal and Historical Cultural Heritage Assessment
AHIMS	Aboriginal Heritage Information Management System
AQA	Air Quality Assessment
BAR	Biodiversity Assessment Report
DECC	Department of Environment, Climate Change
DECCW	Department of Environment, Climate Change and Water
DFAT	Department of Foreign Affairs and Trade
DPIE	Department of Planning, Industry and Environment
EIS	Environmental Impact Statement
EPA	Environment Protection Authority
EP&A Act	*Environment Planning and Assessment Act 1979*
FBA	Framework for Biodiversity Assessment
GHD	GHD Pty Ltd
HHRA	Human Health Risk Assessment
ICNIRP	International Commission on Non-Ionizing Radiation Protection
JHR	John Holland Rail
LAG	Lue Action Group
LGA	Local Government Area
MDB	Sydney Basin Murray Darling Basin
MWRC	Mid-Western Regional Council
NPW Act	*National Parks and Wildlife Act* 1974
NRAR	Natural Resources Access Regulator
OSOM	Oversize Overmass
PAF	potentially acid forming
Q&A	question and answer

RLA	Richard Lamb and Associates
RtS	Response to Submissions
RSE	Road Safety Audit
RWC	R.W. Corkery & Co. Pty Limited
SEARs	Secretary's Environmental Assessment Requirements
SLR	SLR Consulting Australia Pty Ltd
SWL	sound power level
TfNSW	Transport for NSW
TMP	Traffic Management Plan
TSF	Tailings Storage Facility
TTPP	The Transport Planning Partnership Pty Ltd
US	United States
WAL	Water Access Licence
WRE	waste rock emplacement

EXECUTIVE SUMMARY

Introduction

This document has been compiled to provide a response to the key matters raised in public and Government agency submissions lodged with the Department of Planning, Industry and Environment (DPIE) during and following the public exhibition of the *Amendment Report* for the Bowdens Silver Project (hereafter referred to as the "Project"). The *Amendment Report* describes the inclusion of the proposed re-alignment of a 500kV power transmission line in the Project. This document also incorporates additional information sought by Government agencies following their review of the *Submissions Report* and some additional responses to matters raised in submissions that did not relate to the 500kV power transmission line. The *Amendment Report* was publicly exhibited from 20 July 2021 to 16 August 2021.

Submissions Review

A total of 129 submissions were received by DPIE following public exhibition of the *Amendment Report* for the Project. The public submissions may be separated into the following general categories.

- Supporting public submissions – 10 individual submissions from members of the general public supporting the Project.
- Opposing public submissions – 105 individual submissions from members of the general public opposing the Project.
- Organisation submission – 10 submissions from organisations opposing the Project.

Over the same period, 8 Government agencies provided feedback on the broader Project following review of the *Amendment Report* and *Submissions Report* for the Project.

Of the 105 individual public submissions received that objected to the Project, 43 were provided by residents of Lue and surrounds (41% of individual public submissions)[1]. This proportion of public submissions reflects the local nature of potential impacts associated with the re-alignment of the 500kV power transmission line.

Actions Taken Since Exhibition of the Amendment Report

Since the *Submissions Report* and *Amendment Report* were submitted, Bowdens Silver has continued to review the Project in response to the matters raised in submissions and consider opportunities to refine and improve environmental outcomes. Two key refinements to the Project have occurred since that time.

1. Bowdens Silver has decided to remove the water supply pipeline from the Project and has developed an integrated water supply and management strategy that relies on sources of water within the Mine Site and enhanced management of water to reduce demand and optimise water reuse.

[1] "Lue and surrounds" has been defined as residents of Lue, Breakfast Creek, Bara, Camboon, Havilah, Hayes Gap, Monivae and Pyangle.

Given the water supply pipeline was a substantial component of the Project presented in the EIS, a formal amendment to the Project is proposed and a *Water Supply Amendment Report* has been prepared to describe the change to the Project and present the updated water supply and management arrangements. This document will be submitted concurrently with the *Amendment Submissions Report*.

2. Bowdens Silver has committed to a further refinement to the 500kV power transmission line alignment to avoid and/or mitigate visual amenity impacts for some private landowners.

Bowdens Silver commissioned GHD Pty Ltd (GHD) to review and undertake modelling of the proposed 500kV power transmission line alignment to assess if alternative alignments may be feasible and provide a better outcome in terms of visual amenity for landholders to the west of the Mine Site. GHD prepared the *Bowdens Silver Mine Existing TransGrid 500kV Transmission Line – Realignment Option Study* GHD (2022) and undertook extensive modelling using PLS-CADD software designed for modelling powerline alignments and completed a visual analysis of the modelled options with the outcomes of assessment presented in **Table ES-1**

Table ES-1
500kV Power Transmission Line Alignment Options Review

Page 1 of 2

Assessment Criteria	EIS/Amendment Alignment	Proposed Alignment	Comments
Re-alignment route length	Deviation route length is approximately 3.5km	Deviation route length is approximately 2.7km	The EIS Alignment length is greater than the new alignment and would require two additional structures along the route.
Proximity to surrounding residences	The shortest distance to privately-owned residential property is approximately 1.4km (R35).	The shortest distance to privately-owned residential property is approximately 1.5km (R35).	The EIS Alignment is closer to residential properties than the Proposed Alignment.
Terrain profile as seen from surrounding residences	Structure views are possible when viewing from private properties.	Structure views are possible when viewing from private properties though views are mitigated by distance.	Some structures appear hidden behind terrain peaks on the EIS alignment route in southern sections, especially from property 35. However, in these locations the Proposed Alignment would not change from existing tower locations and therefore existing impacts would not change or towers would remain obscured. In general, the EIS Alignment is more visually prominent that the Proposed Alignment.
Proximity to mine layout area	Shortest distance to mine layout area is approximately 350m.	Shortest distance to mine layout area is approximately 300m.	The Proposed Alignment is located closer to the mine layout area than the EIS Alignment. Both options satisfy the required safety clearances.

Table ES-1 (Cont'd)
500kV Power Transmission Line Alignment Options Review

Assessment Criteria	EIS/Amendment Alignment	Proposed Alignment	Comments
Impact on existing structure duty	There is a deviation angle created at the start of the re-alignment and then again at the structure where the alignment joins to the existing alignment. This requires upgrade to the existing tower to accommodate the angle of deviation.	Compared to the existing alignment, the Proposed Alignment would reduce the deviation angle at the structure where the deviation will begin. (northern end). However, a deviation angle will be created as the line joins back at the existing structure on the southern side.	Both options would reduce the existing deviation angle at the existing structure located to the north. Where the re-located line joins with existing alignment to the south, new deviation angles would be created and the existing structure duty is to be assessed for the new deviation angles. The adjacent span lengths in both options are similar at the existing structure located north.
Terrain profile	The shortest and longest span lengths are 227m and 475m respectively.	The shortest and longest span lengths are 310m and 490m respectively.	There is no significant difference in the terrain profiles. The shorter spans in the EIS Alignment are a result of two additional deviation angles.
Source: After GHD (2022) – Section 10			

Based on the conclusions presented in **Table ES-1**¸ the new alignment is preferred based on the following factors.

- The number of transmission towers to be relocated is reduced.
- The Proposed Alignment is located at a greater distance from surrounding residences compared with the EIS/Amendment Alignment, as assessed in the EIS and *Amendment Report*.
- There is an overall reduced visual impact from the Proposed Alignment.

At the completion of the alignment modelling by GHD, Richard Lamb and Associates (RLA) was commissioned to review the visual amenity outcomes of the new alignment and respond to matters raised in community submissions relating to visual amenity. That assessment presents a detailed visual analysis including cross-sections from four private residences (R35, R36A, R37 and R87 and).

In summary, RLA made the following general conclusions.

- The visual impacts of the re-alignment would be mitigated by the proposed final alignment presented by GHD (2022).
- The alignment proposed in GHD (2022) provides for improved visual amenity outcomes compared to that presented in the EIS and *Amendment Report*. This is due principally to the distance of the towers from vantage points at private properties.
- The potential visibility of the re-aligned 500kV power transmission line would be greater than the existing alignment at properties located to the west of the proposed alignment.

- The visibility of the towers and the land that may be cleared for an easement for the power line would remain low or negligible.
- The character and quality of the visual landscape for private properties would not significantly change.
- Views of the 500kV power transmission line and towers may be possible within Lue, however, these would be largely screened by existing vegetation and infrastructure. The character and quality of the visual landscape within the village of Lue would not significantly change.
- The extent of the visual impact as assessed in the EIS remains valid, if not improved. The assessment of visual impact has not been underestimated.

Responses to the Matters Raised in Submissions

The public submissions relating to the re-alignment of the 500kV power transmission line fell into several general categories.

- Queries regarding the chosen alignment and the need for an amendment.
- Construction related impacts including traffic generation, noise and dust and the management of erosion and sediment during works, as well as the potential impacts to biodiversity and Aboriginal heritage values.
- Operational impacts of the re-alignment including health risks, noise and vibration, risks to aircraft and telecommunications and the management of rehabilitation.
- Visual impacts associated with a change in view of the existing alignment or views of electricity transmission infrastructure where there previously was none.

Submissions from some community members queried why the 500kV power transmission line re-alignment was not included in the EIS and how the pole locations were selected for the proposed work. The alignment for the 500kV power transmission line presented in the *Amendment Report* was selected following an initial feasibility review by Bowdens Silver's technical advisers. In summary, following consultation with TransGrid, Bowdens Silver were provided the following advice: "*there is no engineering reason for the line realignment to be unfeasible and that network outages, constructability and design can all be managed*". It was originally proposed that the re-alignment of the 500kV power transmission line would be the subject of a separate development application made directly to the relevant energy authority. However, following review of the EIS for the Project, TransGrid requested that the re-alignment activities be assessed and approved under the broader Project.

Although planned to be the subject of a separate development application, the re-alignment of the 500kV power transmission line was thoroughly assessed within other assessments undertaken for the EIS. This was done to ensure efficiency in the assessment process and so that cumulative impacts would be understood. This included assessment of the potential risks to biodiversity and Aboriginal cultural heritage values of the land on which the new power line would be located. It remains the case that these impacts are considered acceptable and would be managed through on-site practices. Similarly, impacts associated with construction activities including noise generation, planning for erosion and sediment controls, dust generation and traffic have all been considered alongside other mining-related environmental impacts and are considered acceptable.

A range of concerns were raised regarding impacts once the line was operating in a new location including:

- risks to aircraft in the area;
- electric and magnetic fields;
- noise and vibration generated by the powerlines; and
- interruption of other communications (telecommunications and UHF, VHF, TV and radio reception.

While the re-alignment of the 500kV power transmission line represents a change to the current configuration, the operational risks would remain largely consistent with the existing 500kV power transmission line infrastructure which is considered acceptable and has not resulting in complaints or any of the expected outcomes identified in submissions.

The feedback provided to Bowdens Silver in its consultation during the preparation of the EIS and in response to the *Amendment Report* is acknowledged and the concerns of those landowners with direct views is noted. It has never been disputed that the re-aligned 500kV power transmission line would be visible from private properties or that the existing views of the infrastructure from local roads and private residences would change and some towers would become more visually apparent.

In response to these comments, Bowdens Silver commissioned GHD to review the alignment assessed in the EIS and presented in the *Amendment Report* and model alternatives that may mitigate visual impacts. Richard Lamb and Associates was then commissioned to review the alternative alignment identified by GHD. The key conclusions in this process have been that the character and quality of the visual landscape for private properties would not significantly change and that the extent of the visual impact as assessed in the EIS remains valid, and has been improved.

The matters raised in feedback from NSW Government agencies varied depending on the regulatory responsibility of the agency. The advice included a number of recommendations as well as requests for information. In summary, the following additional assessment or Project refinement has occurred as a result of the review.

- In response to recommendations from the **Biodiversity, Conservation and Science Directorate of DPIE (BCS)** the biodiversity offsetting outcomes of the Project have been refined for the Koala, Regent Honeyeater and Large-eared Pied Bat to ensure that offsetting accounts for habitat impacts regardless of the survey outcomes for those species. This approach accounts for the limitations inherent in any survey methodology. Further discussion on measures to avoid and mitigate vegetation clearing prior to establishing offsetting has been provided to demonstrate the measures taken by Bowden Silver to limit biodiversity impacts. Finally, an updated Biodiversity Offset Strategy has been prepared to reflect changes to the biodiversity-related residual impacts of the Project that have changed during the development assessment process.
- **DPIE Water and the Natural Resources Access Regulator (NRAR)** provided several comments relating to both surface water and groundwater related impacts. Review of the matters raised has resulted in refinement of the bridge structure to be

built to cross Lawsons Creek for the relocated Maloneys Road, clarification of water access licence requirements and the entitlements held by Bowdens Silver to demonstrate that more than sufficient entitlement is held to account for water use requirements and further discussion of post-closure changes to water stored in the open cut pit void.

- Advice from **Heritage NSW** commented on the proposed process for salvage and curation of Aboriginal sites that would be directly impacted by the Project. Through further consultation with Heritage NSW, an Indigenous Technical Heritage Mentorship Program has now been developed and advice on the program provided to all Aboriginal stakeholders for the Project for further input. The program would partner a Project archaeologist and an elder in the community with one or two Aboriginal youths with an interest in learning the process of Aboriginal object recording, collection, analysis and curation.
- The comments received from **Mid-Western Regional Council** (Council) related to matters previously identified that Council did not believe were adequately addressed in the *Submissions Report*. Further consultation was undertaken with Council coincident with discussion on a Planning Agreement. The matters raised related predominantly to traffic matters for the local community which Bowdens Silver would manage over the life of the Project under a Driver's Code of Conduct and Traffic Management Plan. Bowdens Silver reiterated the Project needed to commence construction activities in the Mine Site at the same time as construction of the relocated Maloneys Road. The road network upgrades offered by Bowdens Silver demonstrate its commitment to ensure that traffic-related risks are avoided and/or managed over the life of the Project. Council reiterated community concerns regarding health risks, however it is noted the community expectations in this regard are not consistent with the outcomes of assessment and independent peer review commissioned by DPIE that supported the conclusions of the Human Health Risk Assessment for the Project (EnRiskS, 2021).
- The **Resources Regulator** has identified a range of matters pertaining to rehabilitation and the final land use of the Mine Site. These matters would be resolved closer to closure or during preparation of a Rehabilitation Management Plan for the Project. Bowdens Silver has clarified that the final rehabilitated TSF would be used for only minor grazing to help manage fuel loads in the revegetated landscape. Grazing of the landscape would not be the main land use in this location.
- Bowdens Silver reiterated its commitment to operate in accordance with a Driver's Code of Conduct and Traffic Management Plan in response to recommendations provided by **Transport for NSW (TfNSW)**. It has also been confirmed that blast-related impacts are not anticipated to occur at publicly owned rail infrastructure and approval from John Holland Rail would not be required for any blasting operations.
- The recommendations provided by the **Environment Protection Authority (EPA)** are largely supported, with Bowdens Silver noting that requests relating to stabilisation of landforms (rehabilitation) would be presented in a Rehabilitation

Management Plan for the Project and not in an Air Quality Management Plan regardless of the benefits to dust generation. The Rehabilitation Management Plan would establish targets and performance criteria that would have the same outcomes without the need for duplication of management guidance.

A range of matters were also raised by community members that had not previously been addressed or were determined to warrant a response. These included the perceived failures of the planning process (a matter for DPIE, but not agreed), comparisons to Kandos Cement (also not agreed), queries regarding Bowdens Silver as a Company (principally relating to the engagement between Council and Bowdens Silver on a Planning Agreement), further discussion of anticipated social impacts and matters relating to the water supply pipeline. Each of these matters has been considered and addressed though did not warrant changes to the Project or the assessment outcomes.

Conclusion

An application to amend the Bowdens Silver Project has been made to incorporate the proposed re-alignment of the 500kV power transmission line that currently traverses the Mine Site. The re-alignment is not new, was presented to the community, Government and other stakeholders during consultation and has been subject to technical assessment. In response to community feedback, Bowdens Silver has proposed a new alignment for the 500kV power transmission line with a lower overall visual impact.

It is acknowledged that this component of the Project would result in a change in visual outlook for some residents of Lue. However, it is not agreed that this change would be visible from all properties in Lue as expected by some members of the community. The extent of the visual impact as assessed in the EIS remains valid, has not been underestimated and the character and quality of the visual landscape in the village of Lue would not significantly change as a result of the proposed re-location. Power transmission towers and other power-related infrastructure are a common feature of the regional landscape. Regardless, Bowdens Silver has mitigated visual impacts by proposing an alternative alignment that moves the structures closer to the proposed mining activities than was originally planned. This alignment also permits a minor reduction to the vegetation clearing requirements of this component of the Project.

The proposed re-alignment may also be considered in light of the intended purpose, that is, to provide access to a strategically significant resource. This in turn would enable the efficient development of a mine that would provide substantial royalties to the NSW Government and would support and enhance local employment and business for the life of the Project and most likely beyond. The benefits of the Project are clearly demonstrated in the support that has been provided from many groups in the past. This in turn supports the re-alignment of the 500kV power transmission line as a component of the Project.

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1. INTRODUCTION

1.1 SCOPE

This document has been compiled to provide a response to the key matters raised in public and Government agency submissions lodged with the Department of Planning, Industry and Environment (DPIE) during and following the public exhibition period for the *Amendment Report* for the Bowdens Silver Project (hereafter referred to as the "Project") proposed by Bowdens Silver Pty Limited (hereafter referred to as "Bowdens Silver"). This document also incorporates responses to additional information sought by Government agencies following their review of the *Submissions Report* and some additional responses to matters raised in submissions that did not relate to the 500kV power transmission line.[2]

The *Amendment Report* presented only the proposed amendment to the Project relating to the proposed re-alignment of the 500kV power transmission line in the development application for the Project. All other matters relating to the environmental, social and economic outcomes of the Project are presented in the *Environmental Impact Statement* (EIS) and *Submissions Report* for the Project.[3] The *Amendment Report* was publicly exhibited from 20 July 2021 to 16 August 2021 and submissions received during that period were collated by DPIE and provided to Bowdens Silver for review and response. The submissions from public organisations and individuals relating to the proposed re-alignment of the 500kV power transmission line mainly expressed opposition to the amendment or to the Project itself (105 or 91% of submissions objected).

This document provides an analysis of the submissions received relating to the proposed amendment, a summary of actions taken since the public exhibition of the Amendment Report and a review of the matters raised. This is followed by a review of the matters raised in Government agency submissions relating to the broader Project and the proposed amendment. The document concludes with an updated evaluation of the Project's merits that reflect all additional matters addressed in this document. A total of 2 appendices are provided including a Register of Submitters and summary of the matters raised within the submissions (**Appendix 1**).

This document should be read in conjunction with the *Water Supply Amendment Report* that relates to the proposed removal of the water supply pipeline for the Project and the replacement of this water source with an integrated water supply and management strategy that relies only on water sources located within the Mine Site. That document is being submitted concurrently with this report and there may be a cross-over of assessment outcomes or reference to information contained in technical assessment.

1.2 PROJECT DOCUMENTATION

The following subsection presents a summary of the documents that have been submitted to DPIE regarding the Project since 2016, their purpose and a brief summary of the information that they contain. This is intended to provide clarity for the community when reviewing this document and identifying the information, assessment and discussions presented in each document.

[2] For clarity, this report is titled "*Amendment Submissions Report*" in order to clearly distinguish it from the *Submissions Report* for the Project.

[3] The EIS, *Amendment Report* and *Submissions Report* are available from the Company website (https://bowdenssilver.com.au/) and the Major Projects Portal webpage for the Project (https://mpweb.planningportal.nsw.gov.au/major-projects/project/9641)

Each of these documents are available from the NSW Major Project Portal webpage for the Project[4].

1. *Preliminary Environmental Assessment for the Bowdens Silver Project – November 2016.*

   This document is referred to as the *Preliminary Environmental Assessment.* This document provides a preliminary overview of the Project as originally envisaged in 2016 and presents the initial outcomes of mineral exploration, environmental assessment and the intended approach to environmental assessment for the Project for presentation in the EIS. Preliminary Environmental Assessments are now referred to by DPIE as Scoping Reports. The *Preliminary Environmental Assessment* was intended to assist the NSW Government in setting the Secretary's Environmental Assessment Requirements for the EIS for the Project (the SEARs) and to provide initial formal advice about the Project to all stakeholders including the community.

2. *Scoping Report for the Water Supply Pipeline for the Bowdens Silver Project – April 2019.*

   This document is referred to as the *Scoping Report*. This *Scoping Report* provides a preliminary overview of the intended construction and use of a water supply pipeline for the Project from the Ulan Coalfields. The report provided an update on the proposed Project to inform an update to the SEARs and to update stakeholders on the intended inclusion of this infrastructure within the Project. It presented the initial location of the water supply pipeline, outcomes of initial environmental assessments and the intended approach to environmental assessment.

3. *Environmental Impact Statement for the Bowdens Silver Project – May 2020.*

   This document is referred to as the *Environmental Impact Statement* (EIS). The EIS is the major supporting documentation for the development application and presents a complete description of the Project, the strategic, environmental and statutory context for the proposal and a thorough review of the outcomes of the range of environmental assessments. A summary of the management and mitigation measures that would be implemented during the construction and operation of the Project is also provided. The EIS concluded with a justification and evaluation of the Project in relation to the relevant legislative requirements in NSW, the principles of Environmentally Sustainable Development and the outcomes of all assessments. The EIS is supported by the *Specialist Consultant Studies Compendium* which presents the detailed technical environmental, economic and social assessments undertaken for the Project as required by the *Environmental Planning & Assessment Act 1979*, the *Environmental Planning & Assessment Regulation 2000* and the SEARs.

4. *Submissions Report for the Bowdens Silver Project – June 2021.*

   This document is referred to as the *Submissions Report*. This report responds to the matters raised in the Government agency, organisation and public submissions received during the public exhibition of the EIS and *Specialist Consultant Studies*

[4] https://mpweb.planningportal.nsw.gov.au/major-projects/project/9641

Compendium. The *Submissions Report* presents the outcomes of additional environmental, economic and social assessment undertaken in response to the submissions, presents a comprehensive response to the matters raised in the submissions and further evaluates the Project on the basis of the information presented.

5. *Amendment Report for the Bowdens Silver Project – July 2021.*

   This document is referred to as the *Amendment Report*. During the review of Government agency submissions, it was identified that the relevant regulatory authority for the 500kV power transmission line that traverses the Mine Site (TransGrid) had expressed a preference that the re-alignment of the line be included within the development application for the broader Project. This required an amendment to the Project to incorporate this aspect within the Project as presented for approval under State Significant Development Application 5765. The *Amendment Report* presented the context and assessment of the proposed re-alignment of the 500kV power transmission line. An amended Project Description was included as an Appendix to the *Amendment Report* to clearly describe the Project, as amended.

   Development applications in NSW may be amended at any time prior to determination with the agreement of the consent authority. This is permitted so that minor changes to development may occur without the need to repeat the entire EIS process. An Amendment Report is required to clearly describe what aspects are proposed to be amended.

6. *Amendment Submissions Report for the Bowdens Silver Project – March 2022* (this document).

   This document is referred to as the *Amendment Submissions Report*. During the public exhibition of the *Amendment Report* from 20 July 2021 to 16 August 2021, Government agencies, organisations and public stakeholders were invited to provide submissions commenting on the proposed amendment to the Project, i.e. regarding the re-alignment of the 500kV power transmission line. This document provides a response to matters raised in submissions received during this period. In addition, the *Amendment Submissions Report* also incorporates additional information sought by some Government agencies following their review of the *Submissions Report* dated June 2021. The *Amendment Submissions Report* also includes responses to other matters raised in submissions that are not related to the 500kV power transmission line. The document concludes with a further evaluation of the Project in light of the information presented in the *Amendment Submissions Report*.

7. *Water Supply Amendment Report for the Bowdens Silver Project – March 2022*

   This document is referred to as the *Water Supply Amendment Report* and will be submitted concurrently with the *Amendment Submissions Report*. As Bowdens Silver has decided to defer the option to use a pipeline to supply water to the Mine Site, this aspect of the Project must be formally removed from the development application. Bowdens Silver has presented this update to the Project as an

amendment and presented the context and environmental outcomes of the removal of the proposed water supply pipeline in a *Water Supply Amendment Report*. This report includes an amended Project Description that removes the water supply pipeline and incorporates minor infrastructure intended to replace the function of the water supply pipeline. The *Water Supply Amendment Report* concludes with an evaluation of the Project in light of the information presented in the *Water Supply Amendment Report*.

1.3 BOWDENS SILVER'S ENGAGEMENT AND CONSULTATION

While Bowdens Silver moves through the assessment and development processes, community consultation has been and will continue to be a key aspect of the assessment and ultimate determination of the Project. Bowdens Silver understands that ongoing and transparent consultation with all stakeholders is vital in gaining and maintaining a social licence to operate the proposed mine.

A comprehensive range of stakeholders has been consulted to ensure that there has been a broad approach to ensuring that all differing views and feedback on the Project could be heard and considered. These include the Project's immediate neighbours, local landholders and residents in the locality of the Mine Site and water supply pipeline, special interest groups, indigenous groups and representatives, local businesses and local business chambers, service providers, local schools and education providers, local and State Government agencies and members of the public.

A suite of different engagement techniques has been utilised which have incorporated personal meetings, newsletters and project information sheets, community open days, the creation of a Company and Project website, presentations to interested stakeholders and groups, a Community Consultative Committee, face to face and telephone interviews, public information displays and a continued "open door" policy for interested parties to seek information about the Project from the Bowdens Silver team based at the local Lue office. Bowdens Silver also maintains a comprehensive question and answer (Q&A) portal on its website. The results of the consultation with all relevant stakeholders and the varying engagement techniques have enabled Bowdens Silver to gain great insights into local matters of importance and feed that information into the overall Project design and proposed operations.

During preparation of the *Amendment Submissions Report*, Bowdens Silver and its consultants have consulted with relevant Government agencies to discuss the matters raised in submissions and the information required by these agencies to complete the assessment of the Project. Consultation was undertaken with BCD, DPIE Water, Heritage NSW, Mid-Western Regional Council, NRAR, and TfNSW.

The consultation methods and engagement described above would be a continuing theme for Bowdens Silver during its operations. Additionally, Bowdens Silver remains committed to providing a range of sponsorship opportunities to support the local communities that focus on overarching themes of community, education, arts and culture, sport, health and safety.

Bowdens Silver has implemented and would continue to fund a Community Investment Program that provides funding for a range of community-led initiatives, organisations, events and schools. This program is a key component of Bowdens Silver's commitment to being a member of the local community.

Bowdens Silver recognises the importance of establishing a relationship of mutual trust with the community that would be achieved through accountability and transparency and meaningful engagement throughout the Project life, as well as monitoring of the environmental and social outcomes, with results made available to the public.

1.4 DOCUMENT FORMAT

This report has been compiled in seven sections with two appendices.

Section 1: introduces the report and presents an overview of Project documentation and Bowdens Silver's approach to engagement.

Section 2: provides an analysis of the submissions received from Government agencies and from organisations and individuals in the community who either support or oppose the proposed amendment or the Project in general.

Section 3: describes a range of actions that have been undertaken either directly arising from the content of some of the submissions or as a result of ongoing routine tasks undertaken for the Project.

Section 4: provides a comprehensive set of responses to the matters raised by organisations/individuals.

Section 5: provides a comprehensive set of responses to the matters raised by Government agencies regarding the *Amendment Report* or *Submissions Report*.

Section 6: provides responses to public comments on the *Submissions Report*.

Section 7: provides an updated evaluation of the Project taking all received submissions into account.

A set of appendices is provided to support the report, including the following.

Appendix 1: Register of Submitters

Appendix 2: Updated Summary of Environmental Management and Monitoring Measures

2. ANALYSIS OF SUBMISSIONS

2.1 GENERAL REVIEW OF SUBMISSIONS

Appendix 1 presents a Register of Submitters including a review of the matters raised and where each has been addressed in this document.

A total of 129 submissions were received by DPIE following public exhibition of the *Amendment Report* for the Project. The public submissions may be separated into the following general categories.

- Supporting public submissions – 10 individual submissions from members of the general public supporting the Project.
- Opposing public submissions – 105 individual submissions from members of the general public opposing the Project.
- Organisation submission – 10 submissions from organisations opposing the Project.

Of the public and organisation submissions received that objected to the Project, 27 submissions did not mention the *Amendment Report* but focused on the Project more generally. Notably, one individual provided 16 submissions on separate topics relating to the Project. Similarly, the supporting submissions focused on support for the Project in general and did not focus on the *Amendment Report*.

Over the same period, 8 Government agencies provided feedback on the broader Project following review of the *Amendment Report* and *Submissions Report* for the Project. Of these, only two commented on the *Amendment Report* (the Resources Regulator and Heritage NSW), though it is noted that the majority of Government agency submissions addressed the Project generally with regards to the matters relevant to the administrative functions of each agency.

Of the 105 individual public submissions received that objected to the Project, 43 were provided by residents of Lue and surrounds (41% of individual public submissions)[5]. This proportion of public submissions reflects the local nature of potential impacts associated with the re-alignment of the 500kV power transmission line.

2.2 500KV POWER TRANSMISSION LINE

Figure 2.1 presents a summary of the matters raised in submissions that commented on the *Amendment Report*. The most commonly raised matter was the change to visual amenity, followed by biodiversity. Construction-related impacts were also common including direct disturbance-related impacts (biodiversity and Aboriginal heritage) and construction operational impacts (traffic, noise and air quality). Some submissions questioned the need and legitimacy of an amendment to the Project.

Government agency submissions that commented on the *Amendment Report* supported the conclusions of assessment that related to the administrative responsibility of that agency.

[5] "Lue and surrounds" has been defined as residents of Lue, Breakfast Creek, Bara, Camboon, Havilah, Hayes Gap, Monivae and Pyangle.

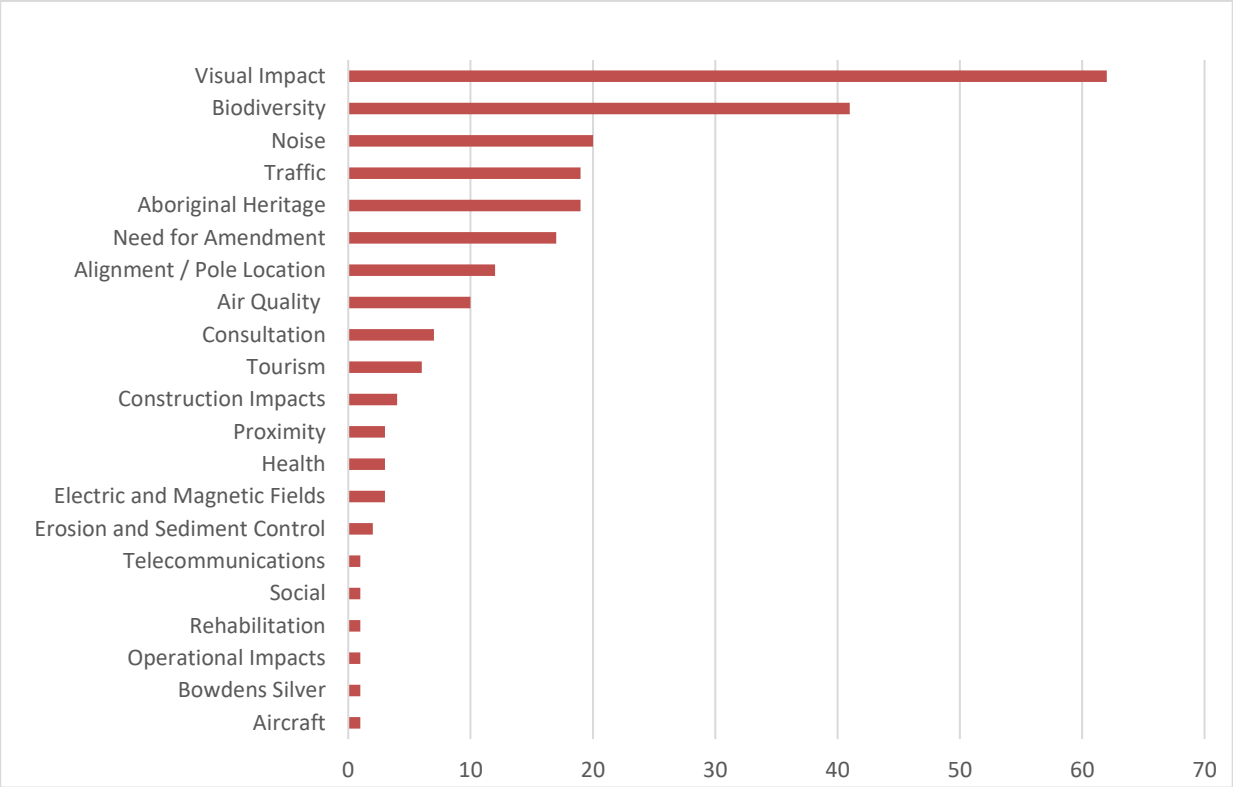

Figure 2.1 Matters Raised in Submissions Objecting to the Amendment

2.3 COMMENTS ON THE SUBMISSIONS REPORT

As noted above, several Government agencies provided additional comments on a range of matters relating to the Project, generally in response to the relevant content within the *Submissions Report*, and these comments have been considered and a response provided in Section 5.

While many of the submissions received from the general public and organisations raised matters in response to the contents of the *Submissions Report*, the majority of these matters have previously been addressed in the *Submissions Report*. Several matters relating to the Project were raised that require further response and these have been addressed in Section 6. Any matters not relevant to the *Amendment Report* or that are not addressed in Section 6 are considered to have been satisfactorily addressed in the *Submissions Report*.

3. ACTIONS TAKEN SINCE EXHIBITION

3.1 INTRODUCTION

Since the *Submissions Report* and *Amendment Report* were submitted, Bowdens Silver has continued to review the Project in response to the matters raised in submissions and consider opportunities to refine and improve environmental outcomes. Two key refinements to the Project have occurred since that time.

1. Bowdens Silver has decided to remove the water supply pipeline from the Project and has developed an integrated water supply and management strategy that relies on sources of water within the Mine Site and enhanced management of water to reduce demand and optimise water reuse.

   Given the water supply pipeline was a substantial component of the Project presented in the EIS, a formal amendment to the Project is proposed and a *Water Supply Amendment Report* has been prepared to describe the change to the Project and present the updated water supply and management arrangements. This document will be submitted concurrently with the *Amendment Submissions Report*.

2. Bowdens Silver has committed to a further refinement to the 500kV power transmission line alignment to avoid and/or mitigate visual amenity impacts for some private landowners.

   A brief summary of the further refinement to the 500kV power transmission line is discussed in the following subsections. The outcomes of the technical assessment that supported this refinement is also presented.

The removal of the water supply pipeline and the further refinement of the 500kV power transmission line alignment necessitated an update to the *Biodiversity Assessment Report* (EnviroKey, 2022) and the *Biodiversity Offset Strategy* (Niche, 2022). Given that the major amendment to the outcomes of the *Biodiversity Assessment Report* resulted from the removal of the water supply pipeline and corresponding amendments to on-site facilities, the *Biodiversity Assessment Report* and *Biodiversity Offset Strategy* are presented in the *Water Supply Amendment Report*.

Bowdens Silver also commissioned a review and modelling of the 500kV power transmission line alignment to assess if alternative alignments may be feasible and provide a better outcome in terms of visual amenity. The updated alignment and an assessment of the visual impacts of this change are also presented in the *Water Supply Amendment Report*. The associated technical reports including the *Existing TransGrid 500kV Transmission Line Realignment Option Study* (GHD, 2022) and the *Response to Submission from Lue Action Group on Visual Impacts* (RLA, 2022) are included as appendices to the *Water Supply Amendment Report*.

3.2 500KV POWER TRANSMISSION LINE

The principal issue raised in response to the *Amendment Report* and the proposed re-alignment of the 500kV power transmission line was the visibility of the proposed alignment and in particular transmission towers supporting the power lines. Bowdens Silver commissioned GHD Pty Ltd (GHD) to review and undertake modelling of the alignment to assess if alternative alignments may be feasible and provide a better outcome in terms of visual amenity for

landholders to the west of the Mine Site. GHD prepared the *Bowdens Silver Mine Existing TransGrid 500kV Transmission Line – Realignment Option Study* (hereafter referred to as GHD 2022). As this report models and assesses a new alignment for the 500kV power transmission line, the alternative alignment considered by GHD (2022) is presented in the *Water Supply Amendment Report* and GHD (2022) is reproduced as Appendix 7 of that report. GHD (2022) undertook extensive modelling using PLS-CADD software designed for modelling powerline alignments and completed a visual analysis of the modelled options. GHD modelled potential alignment options spaced from 250m to the west of the open cut pit to the alignment presented in the EIS and *Amendment Report*. Options were spaced by 50m and modelling of tower locations and transmission lines undertaken.

The GHD modelling considered the following factors.

- The impact on structural loading at proposed structure locations.
- Structural loading impacts at existing tower locations from a re-alignment.
- Conductor clearances required for new tower structures.
- The visual impact from properties located outside the Mine Site boundary

This modelling took into account the results of the vibration analysis undertaken by SLR Consulting in the *Noise and Vibration Assessment* for the Project that found that a safe offset distance of 201m was required for infrastructure in proximity to the open cut pit (and subject to blast events).

An alignment located at least 300m from the open cut pit was selected as this location was considered to provide a safe offset distance from mining activities while also improving visual amenity outcomes for landowners to the west and southwest of the Mine Site. The alignment also considers the risk of sterilising potential resource in the vicinity of the open cut. The alignment presented in the EIS and *Amendment Report* was compared to the selected alignment in relation to design parameters and visibility. A summary of this review is presented in **Table 3.1** and the alignment now proposed is presented in **Figure 3.1**. The review of the 500kV power transmission line options refers to the following.

- The Existing Alignment is that currently in place across the proposed Mine Site.
- The EIS/Amendment Alignment is that which is proposed in the EIS and *Amendment Report*.
- The Proposed Alignment is that proposed by GHD (2022).

Table 3.1
500kV Power Transmission Line Alignment Options Review

Page 1 of 2

Assessment Criteria	EIS/Amendment Alignment	Proposed Alignment	Comments
Re-alignment route length	Deviation route length is approximately 3.5km	Deviation route length is approximately 2.7km	The EIS Alignment length is greater than the new alignment and would require two additional structures along the route.
Proximity to surrounding residences	The shortest distance to privately-owned residential property is approximately 1.4km (R35).	The shortest distance to privately-owned residential property is approximately 1.5km (R35).	The EIS Alignment is closer to residential properties than the Proposed Alignment.

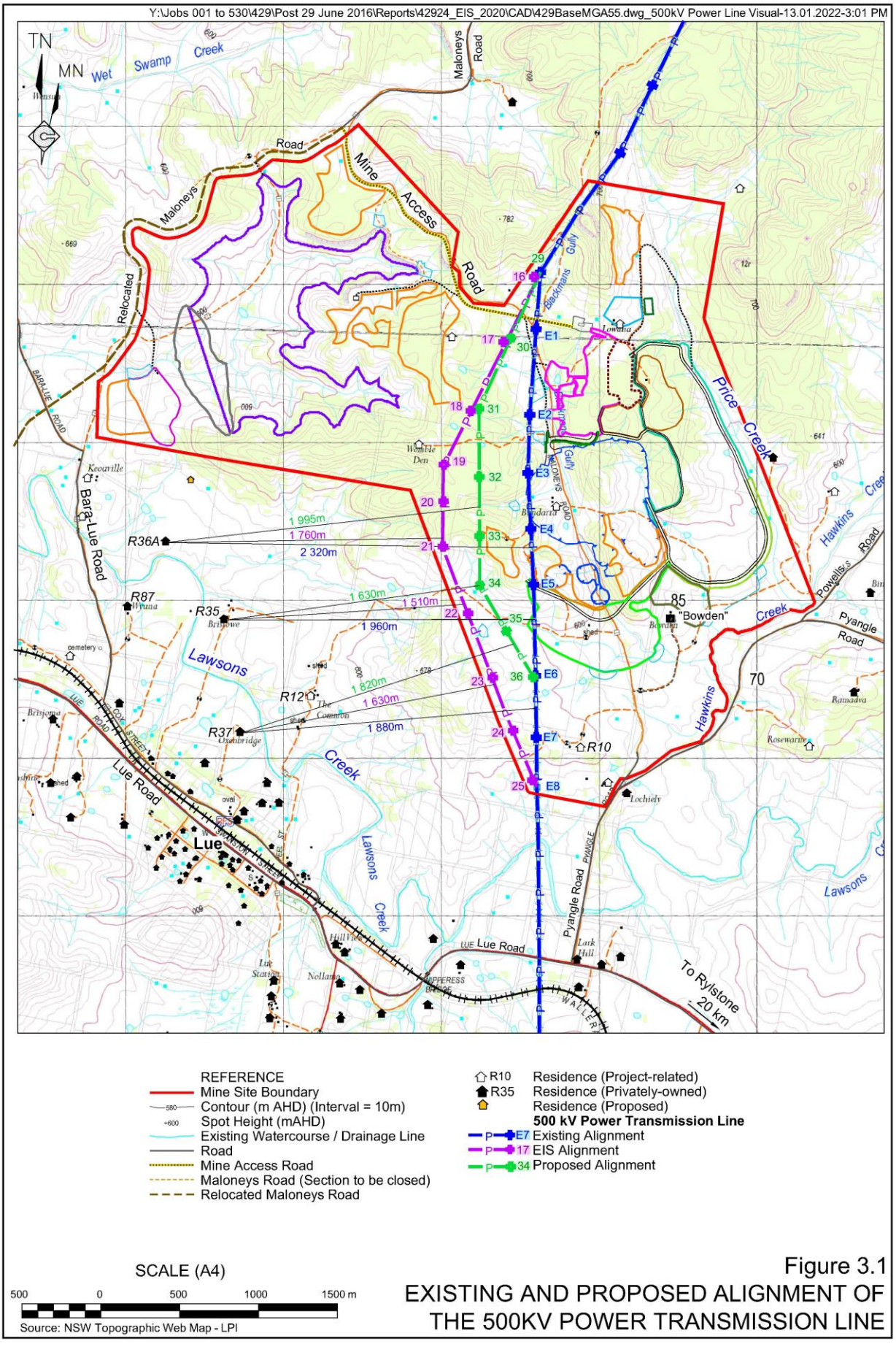

Figure 3.1
EXISTING AND PROPOSED ALIGNMENT OF THE 500KV POWER TRANSMISSION LINE

Table 3.1 (Cont'd)
500kV Power Transmission Line Alignment Options Review

Assessment Criteria	EIS/Amendment Alignment	Proposed Alignment	Comments
Terrain profile as seen from surrounding residences	Structure views are possible when viewing from private properties.	Structure views are possible when viewing from private properties though views are mitigated by distance.	Some structures appear hidden behind terrain peaks on the EIS alignment route in southern sections, especially from property 35. However, in these locations the Proposed Alignment would not change from existing tower locations and therefore existing impacts would not change or towers would remain obscured. In general, the EIS Alignment is more visually prominent that the Proposed Alignment.
Proximity to mine layout area	Shortest distance to mine layout area is approximately 350m.	Shortest distance to mine layout area is approximately 300m.	The Proposed Alignment is located closer to the mine layout area than the EIS Alignment. Both options satisfy the required safety clearances.
Impact on existing structure duty	There is a deviation angle created at the start of the re-alignment and then again at the structure where the alignment joins to the existing alignment. This requires upgrade to the existing tower to accommodate the angle of deviation.	Compared to the existing alignment, the Proposed Alignment would reduce the deviation angle at the structure where the deviation will begin. (northern end). However, a deviation angle will be created as the line joins back at the existing structure on the southern side.	Both options would reduce the existing deviation angle at the existing structure located to the north. Where the re-located line joins with existing alignment to the south, new deviation angles would be created and the existing structure duty is to be assessed for the new deviation angles. The adjacent span lengths in both options are similar at the existing structure located north.
Terrain profile	The shortest and longest span lengths are 227m and 475m respectively.	The shortest and longest span lengths are 310m and 490m respectively.	There is no significant difference in the terrain profiles. The shorter spans in the EIS Alignment are a result of two additional deviation angles.

Source: After GHD (2022) – Section 10

Based on the conclusions presented in GHD (2022) and summarised in **Table 3.1**, the new alignment is preferred based on the following factors.

- The number of transmission towers to be relocated is reduced.
- The Proposed Alignment is located at a greater distance from surrounding residences compared with the EIS Alignment, as presented in the EIS and *Amendment Report*.
- The EIS Alignment is more visually prominent and there is an overall reduced visual impact from the Proposed Alignment.

At the completion of the alignment modelling by GHD, Richard Lamb and Associates (RLA) was commissioned to review the visual amenity outcomes of the new alignment and respond to matters raised in community submissions relating to visual amenity. This included a response to the assessment commissioned by the Lue Action Group (LAG). That assessment is presented as

Appendix 8 of the *Water Supply Amendment Report* and presents a detailed visual analysis including cross-sections from four private residences (R35, R36A, R37 and R87). In summary, RLA (2022) made the following general conclusions.

- The visual impacts of the re-alignment would be mitigated by the proposed final alignment presented by GHD (2022).
- The alignment proposed in GHD (2022) provides for improved visual amenity outcomes compared to that presented in the EIS and Amendment Report. This is due principally to the distance of the towers from vantage points at private properties.
- The potential visibility of the re-aligned 500kV power transmission line would be greater than the existing alignment at properties located to the west of the proposed alignment.
- The visibility of the towers and the land that may be cleared for an easement for the power line would remain low or negligible.
- The character and quality of the visual landscape for private properties would not significantly change.
- Views of the 500kV power transmission line and towers may be possible within Lue, however, these would be largely screened by existing vegetation and infrastructure. The character and quality of the visual landscape within the village of Lue would not significantly change.
- The extent of the visual impact as assessed in the EIS remains valid, if not improved. The assessment of visual impact has not been underestimated.

4. RESPONSES TO MATTERS RAISED IN SUBMISSIONS

4.1 INTRODUCTION

This section provides a response to the public and organisation submissions received following the exhibition of the *Amendment Report*. The following public submissions were received in relation to the Project.

- Supporting submissions – 10 individual submissions from members of the general public supporting the Project.
- Opposing submissions – 105 individual submissions from members of the general public and organisations opposing the Project.

In order to limit repetition and allow the matters raised in the submissions to be adequately and efficiently addressed, each submission was reviewed, and the matters raised were categorised. **Appendix 1** provides a register of submitters and summary of the matters raised in each submission.

The following subsections provide representative comments from a range of submissions for each issue raised and a consolidated response to that issue. The representative comment(s) have been chosen to highlight the matter identified and it is noted that these may not be the only feedback received in submissions that comment on a specific matter.

4.2 ALIGNMENT/POLE LOCATION

Representative Comment(s)

The exact location of the realignment of line (sic) *has not been determined. The three stages of investigation by Transgrid have not been attended. How can a decision on this amendment be made until investigations are complete?*

Lyn Coombe of Lue, NSW (Submission SE-26069245)

It appears that Bowdens are seeking approval of the realignment based on plans they have sourced/commissioned. There are no plans/designs or firm approvals by TransGrid, the operator/manager of the powerline. As such, it is entirely possible the realignment can attain approval, yet, when it comes time for actual design and construction, be somewhat different to what was approved.

Paul Evans of Totnes Valley, NSW (Submission SE-25859961)

The transmission Line is simply a drawing on a map, it has not been surveyed or planned or costed or been discussed in depth with Transgrid. What would be the result if Transgrid surveyed the proposed route and found that it was an unsuitable location for a transmission line?

B Wannan of Lue, NSW (Submission SE-26260720)

C. So far a consultant has completed an estimate on where the towers go, how long the construction will take and with that all the noise, vibration, traffic, dust and visual issues that go with the construction design.

Should the design become more complex or difficult than the current estimates, what happens to all the noise parameters, dust calculations, visual amenities problems?

Name Withheld of Lue, NSW (Submission SE-26181720)

Response

TransGrid's advice regarding the proposed re-alignment of the 500kV power transmission line is presented in Section 4.5.7. In summary, TransGrid has advised Bowdens Silver "*there is no engineering reason for the line realignment to be unfeasible and that network outages, constructability and design can all be managed*".

4.3 NEED FOR AMENDMENT

Representative Comment(s)

Why was the realignment of the Transgrid 500kv power line not included under the Part 4 application in the first place? The EIS, as placed on public exhibition in July 2020 was deficient. Why was there an amendment to the project before the release of the assessment report by Department of Planning, Industry and Environment ? I do not feel assured that due process has been managed well.

Margaret McDonald of Dubbo, NSW (Submission SE-25448534)

I object to the whole process of an amendment being added even before the Department has released an assessment report. This should have formed part of the original submission and been properly considered in the EIS.

Name Withheld of Clandulla, NSW (Submission SE-26140744)

The proponent should resubmit an EIS for the Bowdens Project which includes the newly located powerlines, the new line through Camboon and Pyangle, and the water pipeline. This is the only way the full impact of the Bowdens Project can be adequately assessed.

Maureen Boller of Lue, NSW (Submission SE-26140879)

Response

The need for the amendment to the Project is detailed in Section 1.3 of the *Amendment Report*. In summary, at the time when the *Environmental Impact Statement* (EIS) for the Project was finalised, it was proposed that the re-alignment of the TransGrid 500kV power transmission line that crosses the proposed Mine Site would be the subject of a separate application under Part 5 of the EP&A Act. It was intended that the application would rely upon the assessment presented in the EIS to justify the application and therefore the environmental impacts of the re-alignment were comprehensively assessed as a component of the Mine Site and the outcomes presented in the EIS for the entire Project. In its submission on the application (provided as Appendix 3 in the *Amendment Report*), TransGrid notes the following.

> *"TransGrid will not be seeking any approval for the existing transmission line relocation or new power supply (132kV transmission line) under Part 5 of the EP&A Act. It is the responsibility of the proponent to ensure that all works associated with the project, including relocation of the transmission lines and grid connection works, are included in the development approval for the overall Silver Mine project."*

Therefore, at TransGrid's request, the Project has been amended to incorporate the proposed re-alignment. The need for the amendment was discussed with and supported by DPIE.

Bowdens Silver notes that the environmental impacts associated with the proposed re-alignment of the 500kV power transmission line that traverses the Mine Site were incorporated within the technical assessments undertaken and presented with the EIS for the Project. Additionally, these impacts were re-assessed and discussed in detail in the *Amendment Report.*

Based on the above, Bowdens Silver rejects the notion that the environmental impacts associated with the proposed re-alignment of the 500kV power transmission line have not been properly considered.

The *Environmental Planning and Regulation 2000* explicitly permits the amendment of State significant development applications prior to determination (see Clause 55AA of the Regulation). This provides applicants with the opportunity to amend development applications to improve environmental and planning outcomes without the need to repeat the EIS process. Bowdens Silver has made it very clear what aspects of the Project are being amended and updating the 'Project Description' to provide a detailed description of the Project, as proposed. It is appreciated that some community members have found the planning and approvals process difficult to follow in places. Bowdens Silver has continued to consult with community members on changes to the Project and provided recorded presentations summarising the changes on its website. In addition, Bowdens Silver has an open door policy to community engagement and encourages any community members with queries to contact the Company's Community Liaison Officer.

4.4 CONSTRUCTION-RELATED IMPACTS

4.4.1 Aboriginal Heritage

Representative Comment(s)

Rock Shelter with Hand stencils - not located throughout a survey, this site must be found, There must be no impacts to this site at all.

Wellington Valley Wiradjuri Aboriginal Corporation of Orange, NSW (Submission SE-26204612)

A significant Cultural Rock Shelter with Hand stencils - has not been located throughout a survey. This site must be found, There must be no impacts to this site at a1l.

Dr Judy Smith and Dr Peter Smith of Blaxland, NSW (Submission SE-26176584)

It is unsatisfactory that the rock shelter with hand stencils has not been located. It is essential that this site is located and protected.

Lyn Coombe of Lue, NSW (Submission SE-26069245)

Response

It should be noted that the Proposed Alignment of the 500kV power transmission line as assessed in GHD (2022) and shown in **Figure 3.1** would avoid direct impacts to AHIMS site number 36-6-004 and all other known Aboriginal heritage sites. This notwithstanding, Section 5.5.1.1 of the *Aboriginal and Historical Cultural Heritage Assessment* (AHCHA) prepared by Landskape (2020) to support the EIS for the Project states the following.

> "*There is a shelter with human hand stencil art (AHIMS site number 36-6-0004) recorded as being present on Bingman Ridge which overlooks Lawsons Creek in the southwestern section of the Mine Site in the vicinity of the proposed re-aligned 500kV power transmission line.*
>
> *The shelter is a literature reference from 1899 and was recorded as occurring "half way between Mudgee and Rylstone". The site coordinates are listed as "guessed very general location" on the AHIMS register and could not be re-identified during this or previous assessments (Appleton, 1996; Maynard, 1998).*"

On this basis, it is considered highly unlikely that AHIMS site number 36-6-004 is located at the location recorded within the AHIMS database. Despite survey efforts on numerous occasions this site has not been located.

Bowdens Silver notes that Aboriginal sites and objects are protected from harm by Section 86 of the *National Parks and Wildlife Act 1974* (NPW Act). Therefore, it would be an offence to knowingly destroy an Aboriginal site. Additionally, Bowdens Silver recognises the high cultural significance for the Aboriginal community of any disturbance of land and acknowledges the need for ongoing management to limit the risk of inadvertent impacts to matters of Aboriginal cultural heritage significance.

Should AHIMS site number 36-6-004 (or any unanticipated Aboriginal object) be identified during the proposed re-alignment of the 500kV power transmission line, Bowdens Silver commits to implementation of the following actions.

1. No further earth disturbing works would be undertaken in the vicinity of the suspected item of Aboriginal heritage significance until the area has been assessed.
2. A buffer of 20m x 20m (or 1m beyond the known extent of the site if the site is larger than 20 x 20m) would be established around the suspected item of Aboriginal heritage significance. No unauthorised entry or earth disturbance would be allowed with this buffer zone until the area has been assessed.
3. A qualified archaeologist or Heritage NSW would be contacted to make an assessment of the discovery and prepare an assessment report, including recommended mitigation measures. The draft report would then be provided to Heritage NSW and the DPIE as well as representatives of the local Aboriginal community (including registered Aboriginal stakeholders) by way of consultation in accordance with the requirements of Stage 4 of *Aboriginal cultural heritage consultation requirements for proponents – April 2010* (or subsequent versions).

Representative Comment(s)

4 The impact on Aboriginal cultural heritage has not been adequately assessed. There are important rock shelters in the area, some of which contain rock art, that have not been identified, while the importance of those that have been identified have been classified as 'low'. This

judgement is disputed by local indigenous people who place a high value on their cultural heritage. There needs to be consultation with the local knowledge holders to determine the impact of the power line realignment on cultural sites, artefacts and songlines.

Hilary Crawford of Rylstone, NSW (Submission SE-26226356)

The ridgeline to be used for the powerline is a significant feature of the landscape. It can be seen from much of the district and is of great importance to the Wiradjuri people. The landscape is integral to their Traditional Pathways. A full heritage and occupation study must be undertaken with appropriate representation from the Aboriginal community. Removal of the vegetation would impact their connection to the land. We-are-diminished by such action.

Rosemary Hadaway of Budgee Budgee, NSW (Submission SE-25589214)

Response

Potential impacts on unexpected or unidentified Aboriginal objects including AHIMS site number 36-6-004 are discussed above.

A comprehensive outline of the process used to identify Aboriginal stakeholders for the AHCHA is described in detail in Section 2 of Landskape (2020) and Section 4.14.4 of the EIS. The registration and notification of Aboriginal stakeholders and their involvement in the assessment process was undertaken in accordance with the *Aboriginal Cultural Heritage Consultation Requirements for Proponents* (DECCW, 2010).

The Heritage NSW submission to the EIS (dated 23 July 2020) stated: "*HNSW is particularly satisfied with the Aboriginal consultation…*".

Bowdens Silver is therefore confident that Aboriginal community feedback has been comprehensively considered in planning for the Project.

Bowdens Silver notes the importance of the ridgelines to the Wiradjuri people, however, Section 3.2 of Landskape (2020) identifies that the crests of hills and ridges in the vicinity of the Mine Site have been impacted and modified by historical pastoral clearing following European settlement in the second half of the nineteenth century and later for construction of existing roads. Any further disturbance required for the proposed re-alignment of the 500kV power transmission line would be undertaken in such a manner to avoid unnecessary disturbance, therefore avoiding any further diminution of the cultural or aesthetic value of the landscape.

4.4.2 Biodiversity

Representative Comment(s)

The proposed powerline will require destruction of a large area of box gum woodland, a threatened ecological community. The woodland provides significant tree canopy and tree hollows which are important habitat and support threatened species

Rylstone District Environment Society Inc of Rylstone, NSW
(Submission SE-26209253)

I am also deeply concerned about the planned removal of 12.6 ha of beautiful unspoiled native vegetation from under the footprint of the power lines, which I understand would cause loss of already threatened Box Gums and would further damage the ecological landscape.

Phillip Cameron of St Ives, NSW (Submission SE-26269242)

The line requires clearing of 12.6ha of native vegetation, of which 6.52 ha is a Threatened Ecological Community, Box Gum Woodland. Hollow bearing trees will be destroyed. These trees are habitat for Barking Owls, Great Broad Nosed Bats and Koalas that live in this area. Greater study should be carried out on the effect such a clearing will have on these animals.

Sarah Inglis of Havilah, NSW (Submission SE-26109828)

Moving the power towers will result in further clearing of the remnant vegetation with a large majority of this Box Gum Grassy Woodland, a nationally threatened plant community. There has also been Swainsona recta identified on the mine site. With no information available in Bowdens document it is hard to judge what damage could occur to this threatened species, and possibly many others that have not been identified on the site.

Bruce Christie of Monivae, NSW (Submission SE-26151961)

Response

The impacts associated with the proposed disturbance within the 500kV power transmission line re-alignment corridor were assessed as part of the overall impacts associated with the Project and presented within Section 4.10.6 of the EIS, Section 6.2.3 of the *Amendment Report* and Section 7 of the updated *Biodiversity Assessment Report* (BAR) (EnviroKey, 2022). The overall impacts of land disturbance for the Project on the identified Box-Gum Woodland are assessed in Annexure 6 of the BAR (EnviroKey, 2022). This includes consideration of the amount of disturbance of this ecological community including the areas comprising only derived grassland.

EnviroKey (2022) concluded that, "*in the absence of any mitigation measures and biodiversity offsets"* there would be a significant impact on Box-Gum Woodland, however, EnviroKey (2022) also notes that all reasonable attempts have been made to avoid impacts to Box-Gum Woodland, through a substantial planning and design phase and that a series of detailed mitigation measures are also proposed to minimise potential impacts to Box-Gum Woodland. These mitigation measures are detailed in Section 6 of the BAR.

It is noted that disturbance of the vegetation within the re-aligned corridor is included as part of the biodiversity offset calculations undertaken for the Project. This is consistent with the Biodiversity Offset Scheme because although some vegetation would remain in the transmission line corridor, canopy species would need to be removed, with only groundcover and shrub species left undisturbed. As such, disturbance associated with transmission line re-alignment are accounted for.

Finally, it should be noted that the Proposed Alignment for the 500kV power transmission line represents a minor reduction to the area required for vegetation clearing within the Mine Site. The Proposed Alignment is slightly shorter than that originally proposed in the EIS and *Amendment Report*.

Based on these comprehensive assessments, Bowdens Silver contends that biodiversity impacts have been appropriately considered in planning for the Project. Bowdens Silver notes that whilst the Project would result in residual impacts to native flora and fauna, it is not expected to result in significant impacts upon migratory or threatened species, assuming the implementation of the range of on-site mitigation measures and the proposed Biodiversity Offset Strategy.

4.4.3 Erosion and Sediment Control

Representative Comment(s)

The route suggested is elevated, the soil on the ridge line is poor and shallow and sensitive to erosion. The amendment suggests that the clearing will be revegetated with suitable ground cover, the nature of the soil will make that difficult if not impossible.

Sarah Inglis of Havilah, NSW (Submission SE-26109828)

Response

A detailed discussion of the soils and land capability of the land within the Mine Site is presented in Section 4.16 of the EIS.

While the soils underlying the area of the proposed re-alignment of the 500kV power transmission line are considered to be constrained by possible high erosion hazards under cropping or where there is low surface cover and salinity in localised areas in drainage depressions, soil health and structure would be maintained through the use of the comprehensive management and mitigation measures detailed in Section 4.13.4 of the EIS.

Additionally, when planning for activities associated with the re-alignment works, Bowdens Silver has committed to the preparation and implementation of a Construction Management Plan that includes measures to ensure the following.

- The preference to minimise the area of disturbance for lattice tower construction, where possible.
- The storage and use in rehabilitation of stripped topsoils.
- The short term erosion and sediment controls that would be implemented to manage sedimentation and erosion risks. These are likely to include standard measures such as sediment fencing and temporary bunding and drainage, as necessary.

As discussed in Section 5.24.12 of the *Submissions Report*, no substantial earthworks would commence until all required erosion and sediment controls, constructed in accordance with relevant design guidance (e.g. Managing Urban Stormwater: Soils and Construction, Volume 1, 4th eds. (Landcom, 2004)) are in place.

4.4.4 Noise and Dust

Representative Comment(s)

LAG maintain significant reservations relating to the extended impacts on the village of Lue and its surrounding residential areas as a result of the proposed construction works. It would appear that Bowdens are seeking concessions permitted as under the Construction Noise at Year 3 of the Project Operations for a duration of 6 to 10 months which would appear inconsistent with the Construction Works provided for within the Interim Construction Noise Guideline.

Name Withheld of Lue, NSW (Submission SE-25897728)

6. Timing. The powerline relocation has been slated to be completed in year 3 of the project.

What if the construction company are not ready for whatever reason and the project is delayed?

What if the approved project design cannot be built inside the 6 to 10 months that has been suggested in the amendment document or the project is slowed due to weather?

Do the noise, dust, vibration parameters for this project fall under Construction or Operational guidelines?

If construction (sic) *then the mining company can make as much noise as they want for as long as they want until this project is complete. Who sets the time frame for cutting off the construction period and returning to operational mining parameters?*

Name Withheld of Lue, NSW (Submission SE-26181720)

During construction, I am concerned about the increase in traffic and noise in Lue and on Lue Road. This is not acceptable as it will go for up to 10 months, six days a week. Lue will become unbearable.

Sarah Inglis of Havilah, NSW (Submission SE-26109828)

Response

Assessment of the noise impacts associated with the proposed re-alignment works are presented in Table 6.1 and Section 6.4 of the *Amendment Report* and Section 8 of the *Noise and Vibration Assessment* (SLR, 2020) prepared for the EIS for the Project. Noise generation during the construction of the 500kV power transmission line was assessed against the Project Noise Trigger Levels for the Project which relate to operational noise impacts and not construction noise. The Construction Noise Management Levels for the Project were 5dB(A) higher than the Project Noise Trigger Levels (45dB(A)) and therefore Project Noise Trigger Levels is a more conservative criteria.

Given the linear nature of the construction and dismantling works, the potential noise impacts from this activity at any one residence would be limited to an approximate 1 to 2 month period and would be intermittent during that period. It is therefore considered appropriate that this noise generation is treated as construction noise for the purpose of management and mitigation. Noise generation would therefore be managed in accordance with the EPA's *Interim Construction Noise Guideline.* That is:

- a Construction Noise Management Plan would be prepared for the Project and include management and mitigation of noise generation during the relocation and construction of the 500kV power transmission line;
- community notification and consultation would be undertaken to inform the community of the intended timing for the works; and
- where noise levels are predicted to exceed operational noise limits (moderate or significant exceedances of Project Noise Trigger Levels), a negotiated agreement has been discussed with affected residents.

It is noted that any noise impacts as a result of mining operations and not associated with the proposed re-alignment works would not be included under management described in the Construction Noise Management Plan and Bowdens Silver rejects the notion that it "*can make as much noise as they want as long as they want until the Project is complete*".

No changes to the proposed mitigation and management measures would occur in the event that commencement of the proposed re-alignment works is delayed past Year 3 of the Project. This is because these measures would directly apply to the construction activities and not relate to the time of their implementation. Should unforeseen circumstances cause completion of construction activities to be extended further than the nominated period (6 to 10 months), mitigation measures would be maintained as long as needed and the community will be informed of unexpected delays. In fact, a longer construction period would reduce the level of noise at each location given that the necessary works would occur over a longer period rather than a shorter more intense campaign.

Should noise generation impact nearby residents, it would be relatively simple to differentiate works for the 500kV power transmission line construction or other operational activities based on an understanding of the location and time/date of the noise generation. With this understanding, Bowdens Silver would be able to investigate noise complaints and determine the cause and any measures that may be implemented to reduce the likelihood of re-occurrence.

Increases in traffic on Lue Road as a result of the proposed re-alignment works are discussed in Section 4.4.6.

4.4.5 Traffic and Transport

Representative Comment(s)

I object to the relocation of the 500kv transmission power line to west of its present location for the following reasons:

The proposal to divert traffic during construction onto Cox st (sic) for undetermined time frame will create excessive noise and dust as well as restricting my access to my property

Name Withheld of Lue, NSW (Submission SE-25897728)

7. Lue village traffic. There seems to be a view that any amount of an increase in traffic through the village is acceptable. As the machinery list of equipment is flawed then one can only assume that the rest of the transport list is at a minimum to allow for minimal traffic numbers. An assumption has been made that only a small proportion of the transport and delivery trucks will travel from the east (Rylstone end) and not the west (Mudgee) end of Lue rd. If this assumption is incorrect then the village traffic numbers are incorrect.

Name Withheld of Lue, NSW (Submission SE-26181720)

Response

In relation to the proposed re-alignment of the 500kV power transmission line, as identified in Section 2.4 of the *Amendment Report*, all re-alignment works-related heavy vehicles and 12 of the 15 re-alignment works related light vehicles are anticipated to travel to and from the Mine Site via Lue Road (west of the relocated Maloneys Road) and the relocated Maloneys Road. An estimated three light vehicles would originate from the east and travel through Lue via Lue Road and the relocated Maloneys Road.

As identified in Section 4.12.4.1 of the EIS, Bowdens Silver has committed to develop and implement a Traffic Management Plan which would apply to all light and heavy vehicles operated on the public road network by employees or contractors engaged by Bowdens Silver. All truck drivers would be required to operate in accordance with a Driver's Code of Conduct which includes a condition regarding the use of nominated transportation routes at all times.

It is assumed that comments relating to construction-related traffic refer to the construction works for the relocated Maloneys Road and not the re-alignment of the 500kV power transmission line. It is acknowledged that traffic associated with construction works for the relocated Maloneys Road may access the works site via Bara-Lue Road. However, the use of this road would be limited to a few vehicles or occur for a limited time. These activities would not generate excessive noise or dust and would not restrict access to any properties fronting onto the public road network.

4.4.6 Rehabilitation

Representative Comment(s)

The same can be said for the roads if they have to be rehabbed or maintained forever to allow access for Transgrid in the future. Has this really been allowed for in the calculations for the powerline project? Have the rehab contractors/employees been accounted for in regards to traffic, employee numbers, equipment and all the parameters of noise etc that go along with this?

Name Withheld of Lue, NSW (Submission SE-26181720)

Response

As identified in Section 2.8 of the *Amendment Report*, the rehabilitation objective of the proposed re-alignment of the 500kV power transmission line would be to establish a suitable groundcover utilising species from the seedbank contained within previously cleared vegetation stockpiles. This would be subject to final inspection of the site by TransGrid at completion, who may request additional ground cover removal in the interest of maintaining a minimal rigour of vegetation growth.

As identified in Section 2.16 of the EIS, rehabilitation activities within the Mine Site would be planned and undertaken in accordance with a Rehabilitation Management Plan to be submitted to the Resources Regulator and approved following the grant of development consent and grant of the mining lease for the Project, and prior to the commencement of any mining-related activities within the Mine Site. The Rehabilitation Management Plan would also address all rehabilitation-related requirements nominated in the development consent for the Project, including rehabilitation objectives associated with the proposed re-alignment of the 500kV power transmission line.

4.5 OPERATIONAL IMPACTS

4.5.1 General

Representative Comment(s)

How is it intended that the Transmission Line will be protected from mining operations, blasting and vibration, low level noise, construction traffic, acid damage and other operational hazards.

B Wannan of Lue, NSW (Submission SE-26260720)

Response

Re-alignment of the 500kV power transmission line has been proposed specifically to avoid impacts to the line from mining operations. Section 10.4 and Table 54 of *Noise and Vibration Assessment* for the Project (SLR, 2020) found that a safe offset distance of 201m was required for infrastructure in proximity to the open cut pit (and subject to blast events). An offset distance of 300m is proposed to ensure that there is sufficient distance from blasting activities to limit to potential for impacts. Further to this, the blast impact assessment undertaken by SLR (2020) considers that blasting and vibration is not expected to damage any privately-owned property or infrastructure. Regardless, Bowdens Silver has committed to developing and implementing a Blast Management Plan for the life of the Project which would ensure minimisation of vibration and potential blast emission impacts particularly on power transmission infrastructure.

As identified in Section 4.7.4.4 of the EIS, all potentially acid forming (PAF) waste rock extracted from the open cut pits would be stored within the Waste Rock Emplacement (WRE), a facility which has been designed with a HDPE basal liner and a series of independent cells to assist in management of leachate that would be generated by interaction of rainfall upon emplaced PAF waste rock. Considering the above, there would be no risk whatsoever of acid damage to the 500kV power transmission line at any stage of the Project.

There would be no risks or impacts to the 500kV power transmission line from low level noise or construction traffic.

4.5.2 Aircraft

Representative Comment(s)

There are also no assessments made about aircraft. Lue Station regularly uses aircraft for spreading of fertilizer. These aircraft must often travel in large circles of many kilometres to gain enough elevation to spread the fertilizer on the higher peaks of the property. The 500KV line presented a considerable concern to our business initially. There has been no assessment made on the impacts to neighbouring landholder fertilizer spreading programs as a result of the realignment.

Tom Combes of Lue, NSW (Submission SE-26255508)

Response

It is accepted that the proposed re-alignment of the 500kV power transmission line would result in minor changes to the height of towers above the surrounding landscape required for the transmission line. It is considered highly unlikely that any impacts or risks to aircraft spreading fertilizer would be greater than the risks and impacts posed by the towers in their present configurations.

4.5.3 Electric and Magnetic Fields

Representative Comment(s)

Studies using magnetic field strength as an exposure measure have found that exposures greater than the range of 0.3 to 0.4 ÂµT lead to a doubling risk of leukemia, with very little risk below this level. This exposure range is approximately equal to a distance of 60 m within a high-voltage power line of 500 kV.9 Nov 2008

My Daughter, her husband and my grandchildren are living in their home very close to the proposed power line and of such high voltage this will be of great concern for their health

I object to a power line of this voltage being build (sic) *anywhere near residential homes*

Joan Goldsmith of Maroochydore, QLD (Submission SE-25972237)

Response

As identified in Section 6.8.2 of the *Amendment Report*, the proposed re-aligned 500kV power transmission line would be constructed in accordance with the *Guidelines for Limiting Exposure to Electromagnetic Fields* (ICNIRP, 2020). This guideline is intended to establish guidelines to limit exposure to electric and magnetic fields and protect humans from adverse health effects. The concern raised by the submitter is noted as being referenced in epidemiological studies in the ICNIRP (2020) guidelines (see page 830), however it notes this is related to "*everyday chronic low-intensity power frequency magnetic field exposure*". This kind of exposure is not likely to occur to any employees or the local community as a result of proximity to the proposed realignment of a section of the 500kV power transmission line.

As identified in the *Bowdens Silver Mine Existing TransGrid 500kV Transmission Line – Realignment Option Study* prepared by GHD (2022), the closest privately-owned residence would be located approximately 1.6km from the re-aligned transmission line. The claims presented in the submission regarding exposure to magnetic fields associated with 500kV power transmission lines are noted as being largely limited to an exposure range of 60m, which is much closer than the alignment that is proposed.

In addition, there are power transmission lines in the locality that cover many kilometres and there has been no evidence presented of impact to private property owners since their construction.

On the basis of the above, Bowdens Silver considers that the risks to public health and safety associated with electric and magnetic fields are negligible.

4.5.4 Noise and Vibration

Representative Comment(s)

I object to the relocation of the 500kv transmission power line to west (sic) *of its present location for the following reasons:*

the noise from 500kv power lines humming, this low tone noise has documented detrimental effects on health

Name Withheld of Lue, NSW (Submission SE-25897728)

5. Noise. Has any consideration been made for the increased noise that the towers will add to the noise base line?

Name Withheld of Lue, NSW (Submission SE-26181720)

Response

The proposed realignment of the 500kV power transmission line would relocate the existing line to the west by up to approximately 300m. Therefore, any noise generated by lines that is commonly referred to as an audible hum would not change but be moved in the landscape. Given

the separation distance to the closest privately-owned residence is at least 1.6km, it is unlikely that low levels of noise generated through power transmission would be audible at privately-owned residences. It is notable that the existing transmission line alignment is currently closer to properties than 1.6km (R10 and R39 at approximately 260m) and no adverse effects have been reported.

Representative Comment(s)

With regards to other impacts from the move of the 500kv line do not (sic) *believe the tables of construction equipment are accurate. There are no concrete trucks for example. These towers will need concrete footings. If the vehicle tables are incorrect, the expected noise from the vehicles will have been assessed incorrectly and therefore the noise tables will be incorrect.*

Tom Combes of Lue, NSW (Submission SE-26255508)

Response

An amended table presenting the 500kV power transmission line re-alignment and equipment fleet is provided in **Table 4.1**. It is acknowledged that concrete delivery would be required for the construction of tower foundations. However, concrete agitators would not be present for the duration of construction activities as they are considered supply vehicles. That is, their use and possible impact is short-term and would not occur at the same time as other equipment that are assessed.

Table 4.1
500kV Power Transmission Line Re-alignment and Equipment Fleet

Type	No.	Model	Function
Bulldozer	1	D9R	Vegetation clearing, track construction
Excavator	2	325 FL	Vegetation clearing, preparation of tower footings, loading haul trucks
Mulching Unit	1	272 D2	Mulching vegetation
Articulated Heavy Vehicle	5	Semi-trailer	Delivery (and removal) of tower components
Articulated Haul Truck	2	38t	Transportation of excess excavated material
Crane	2	Up to 250t all terrain	Erection and dismantling towers and stringing power lines
Franna Cranes	2	Up to 25 tonne	Foundations, erection and dismantling towers and stringing power lines
Elevated Work Platform	3	70m 8X8 truck units	Stringing power lines
Soilmac Drill Rigs	2	SR 30-60 size	Foundation works
Pozitrack	2		Access and foundation works
4WD & Light Vehicles	15	Various	Personnel/delivery of tools
Concrete Agitator	1	CLCMT-8 or equivalent	Pouring of concrete footings
Source: Zinfra Pty Ltd			
	Amendment to **Table 6** in SLR (2020)		

The average sound power level (SWL) for a Concrete Agitator is approximately 111dB $L_{A(eq(15\ mins))}$[6]. As identified in Tables 5.13 and 5.14 in the *Submissions Report*, the Mulching Unit is expected to have a SWL of 115dB $L_{A(eq(15\ mins))}$). Considering that the Mulching Unit and Concrete Agitator would not be operating concurrently, and that the Mulching Unit's higher SWL has been accounted for in the noise impact assessment, any noise impacts resulting from Concrete Agitator operations would be expected to be less than the impacts associated with the Mulching Unit.

Based on the above, Bowdens Silver contends that noise impacts associated with Concrete Agitator operations would result in no changes to the predicted construction noise impacts.

4.5.5 Telecommunications

Representative Comment(s)

Another impact that I notice is absent is impacts on telecommunications. I could not find any studies on impacts to telecommunication signals. The towers will rise above 700m and will be right above the village of Lue. There has not been any assessment made on impacts to UHF, VHF, TV, Radio, Phone coverage etc. These communications form an integral part of Emergency Services in Lue. They are also important for normal living in Lue. Radio, TV and phone coverage is already quite poor.

Tom Combes of Lue, NSW (Submission SE-26255508)

Response

During consultation undertaken in preparation of the Project Feasibility Study detailed in Section 1.5.6 of the EIS, TransGrid advised Bowdens Silver in written correspondence dated 23 August 2017 that "*there is no engineering reason for the line realignment to be unfeasible and that network outages, constructability and design can all be managed*". This advice was reiterated in Section 2.1 of the *Amendment Report*.

Regardless, there is no evidence that the transmission towers would influence communications whether they be UHF, VHF, TV, radio or phone coverage as they are lattice structures and not solid in the same way that placing a high rise building in these locations may influence telecommunications. The towers would not be right above Lue as expected in the submission. Review of the tower locations indicates they would be largely hidden by existing vegetation and building and would be difficult to see within Lue.

4.6 TOURISM AND SMALL BUSINESSES

Representative Comment(s)

Tourist s who visit our Cellar Door love the landscape driving from Mudgee to Monivae to visit the Rylstone Olive Press and always comment on the beautiful landscape. Well, that will change, there will be Transmission lines and B double trucks lining the road, removing the aesthetics of the landscape.

Jane Bentivoglio of Monivae, NSW (Submission SE-26254222)

[6] Based on the outcome of other noise impact assessments that measured sound power levels for concrete agitators.

The proposed realignment will have a huge negative impact on the visual amenity of the region which is a major tourist destination. This has not been addressed.

Name Withheld of Clandulla, NSW (Submission SE-26140744)

Response

Potential impacts upon tourism are discussed in Section 5.27 of the *Submissions Report*. In summary, given the Mine Site would not be visible from Lue and noise levels within Lue are predicted to remain below relevant noise criteria even under adverse meteorological conditions, it is not anticipated that the Project would result in any significant adverse impact on tourism. Furthermore, Bowdens Silver has committed to expansion of the existing Community Investment Program following an approval of the Project. Potential projects identified through engagement undertaken during the *Social Impact Assessment* include investment in heritage and tourism through funding of events, programs and further development of the heritage trail through the region.

The views of the power transmission line have been considered by Richard Lamb and Associates and it is noted that the character and quality of the visual landscape for private properties would not significantly change. The relocated power transmission line would not impact tourism in the region.

Ms Bentivoglio's claim of "B double trucks lining the road" is exaggerated and incorrect. It is also noted that the majority of additional traffic would be light vehicles rather than trucks. Unlike bulk commodity operations such as coal mines and quarries, the ore concentrate that would be produced represents a low volume of material. During operations, it is expected that the Project would generate approximately 10 heavy vehicle (truck) movements and 16 bus movements per day on Lue Road west of Lue. Based on traffic surveys in 2017, Lue Road west of Lue currently has a total daily traffic level of 877 vehicles of which 125 are heavy vehicles (trucks). Based on these survey results, an additional 10 trucks per day is not considered a significant increase and would therefore not "remove the aesthetics of the landscape".

Considering the above, Bowdens Silver considers that the Project would not substantially change the nature of the traffic environment on Lue Road and therefore the drive from Mudgee to Monivae.

4.7 VISUAL IMPACTS

Representative Comment(s)

The Amendment as submitted by Bowdens (July 2021) indicates that Visual Impacts from the realignment will be insignificant.

"The 500kV transmission line is a substantial item of infrastructure in the landscape east of Lue and its slight re-alignment and construction of new towers would not change the overall character of the transmission line when viewed from Lue and surrounds." (RW Corkery, July 2021).

In what appears to be a significant discrepancy within their conclusions, Engeny determined that the Visual Impact from the realignment to be extremely significant to the Village of Lue and its surrounding areas.

"Based on this analysis it is expected that approximately 50% of the proposed re-aligned power transmission line will be clearly visible from the vast majority if not all receivers in the Lue Village and surrounding area. This represents a significant change the (sic) *viewshed characteristics for the Lue Village and surrounding receivers, compared to the current situation."*

Whilst the review undertaken by Engeny is focused primarily on the 500kV Transmission line infrastructure, i.e., towers and lines, an increased visual impact affectation area would be anticipated with consideration to the 70m clearing easement required to provide for the realignment.

Lue Action Group (Submission SE-26501897)

I believe the amendment clearly underplays the visual impact of the proposed realignment. Most residences in the village will have their views impacted by position of at least two towers (based on commentary in the amendment, i assume them to be P3 and P4), some residences on the Southern limits of the village, with their elevation, may see P2 and possibly P1. The impact is varied, due to screening by trees, however, it should be noted that the realignment will be permanent, mature trees cannot be regarded as permanent screening.

Paul Evans of Totnes Valley, NSW (Submission SE-25859961)

Response

As noted in Section 3.2, Bowdens Silver commissioned the following specialist consultants to consider the alignment and visual impact of the proposed re-aligned 500kV power transmission line.

- GHD was commissioned to technically assess the proposed alignment and has prepared a report titled *Bowdens Silver Mine Existing TransGrid 500kV Transmission Line – Realignment Option Study* which is presented as Appendix 7 of the *Water Supply Amendment Report***.** This modelling was undertaken in order to consider the benefits of an alternative alignment in response to community feedback. The results present an alignment for the 500kV power transmission line that seeks to better balance safe distances from mining operations with the visual amenity of the community.
- Richard Lamb and Associates (RLA) was commissioned to respond to the comments presented in the reporting prepared by Engeny and included in the Lue Action Group submission. RLA also reviewed the GHD alignment modelling with respect to visual outcomes. The RLA *Response to Submission from Lue Action Group on Visual Impacts* is hereafter referred to as RLA (2022) and is presented as Appendix 8 of the *Water Supply Amendment Report* .

It has never been disputed that the re-aligned 500kV power transmission line would be visible from private properties or that the existing views of the infrastructure from local roads and private residences would change and some towers would become more visually apparent. The *Visibility Assessment* that accompanied the EIS (RLA, 2020) assessed this change in terms of the character and quality of the visual landscape and not simply whether it might be seen. It was concluded that the 500kV power transmission line is part of the current landscape and that power lines are a common feature in rural landscapes. The assessment concluded that the character and quality of the visual landscape would not change significantly.

The feedback provided to Bowdens Silver in its consultation during the preparation of the EIS and in response to the *Amendment Report* is acknowledged and the concerns of those landowners with direct views is noted. This feedback has been considered by GHD in its review of the alignment. However, the claim that 50% of the proposed re-aligned power transmission line would be clearly visible from all receivers in the village of Lue and surrounding area is incorrect. This is due to the presence of tree and infrastructure screening which was not included in the assessment commissioned by LAG.

As noted in RLA (2022), the methodology used by Engeny in preparation of its assessment (Radial Analysis graphics) results in unjustified generalisations about the likely visibility and visual impacts of the proposed re-alignment. RLA (2022) notes that while use of Radial Analysis graphics is commonplace in infrastructure projects such as wind farms and is therefore considered a valid method of analysis, Radial Analysis graphics only assess topography and do not account for the presence of intervening objects such as vegetation. It not only ignores the potential of vegetation to act as a visual screen, but also the foreground characteristics which may act as visual screening, such as in Lue village where views are blocked substantially by buildings. This was identified in Section 11 of the *Visibility Assessment* (RLA, 2020) and is relevant for views from Martin Street, Swanston Street and Harpur Street as presented in the LAG submission. The comment that visual screening by mature vegetation cannot be considered permanent is assumed to consider the possibility of vegetation being cleared. While some mature trees may disappear over time, it is not expected that large areas of vegetation would be removed. Regardless, it is considered that the presence of power infrastructure is consistent with the visual character of the area and the quality of views generally and this conclusion would not change with the removal of vegetation.

In addition, as noted by RLA (2022), the Radial Analysis graphics represent the theoretical visibility of the highest possible point of the 500kV transmission towers, whereas individual tower heights would be determined by factors such as intervening topography and variable distances between tower locations. Consideration of these factors results in a smaller Zone of Visual Influence and therefore a lower visual impact.

Finally, the claim that the clearing of vegetation associated with the 70m easement required for the re-aligned transmission power line would result in an increased visual affectation area is also incorrect. As shown in the visual analysis presented in Figure A to Figure I of RLA (2022), the views that are claimed to be affected are perpendicular to the alignment. Therefore, the clearing would not be visible or have any significant impact upon visual character, quality, or the visibility of the transmission towers. Furthermore, the land beneath the transmission towers is highly varied in topography and is at a higher elevation than the village of Lue where it would be re-aligned. As identified above, there is significant visual screening by existing vegetation and infrastructure within the village of Lue. Therefore, as the majority of the transmission towers would not be visible, the land beneath the 500kV transmission towers would not be visible for similar reasons.

In conclusion, the following general assessment outcomes have been confirmed through the modelling and assessment undertaken by GHD (2022) and RLA (2022).

- The alignment proposed in GHD (2022) provides for improved visual amenity outcomes compared to that presented in the EIS and *Amendment Report*. This is due principally to the distance of the towers from vantage points at private properties.
- The 500kV power transmission line would be moved closer to some private residences and become more visually apparent at some properties.

- The visibility of the towers and the land that may be cleared for an easement for the power line would remain low or negligible. The Proposed Alignment further mitigates visual impacts compared to the alignment discussed in the EIS and *Amendment Report*.
- The character and quality of the visual landscape for private properties would not significantly change.
- Views of the 500kV power transmission line and towers may be possible within Lue, however, it would be largely screened by existing vegetation and infrastructure. The character and quality of the visual landscape in the village of Lue would not significantly change.
- The extent of the visual impact as assessed in the EIS remains valid, and has been improved. The assessment of visual impact has not been underestimated.

Representative Comment(s)

I am concerned about the impact from moving the powerline will have on view (sic) *of the surrounding land. The Lue valley has a beautiful picturesque landscape, which will be ruined by the propositions* [sic] *of this mining project.*

Charles Combes of Lue, NSW (Submission SE-25643740)

Response

As identified above, the change to views of the 500kV power transmission line is not disputed. However, RLA (2022) considers that the character and quality of the visual landscape would not significantly change. This is due to the presence of the 500kV power transmission line in existing views and the presence of electricity transmission infrastructure in the rural landscape generally.

Bowdens Silver has taken into consideration the feedback from the community such as this submission and commissioned GHD (2022) to review the alignment to determine if similar safety outcomes for the re-alignment might be achieved, while improving the outlook for private landowners.

Representative Comment(s)

The new transmission lines would be moved around half a kilometre closer to our property and would pollute and spoil our currently unspoilt view. At any time of the day, I enjoy looking at the ridgeline view of the hills adjacent to our beautiful farm across our pristine creek, this would be sullied forever.

Phillip Cameron of St Ives, NSW (Submission SE-26269242)

Response

As identified in **Figure 3.1** and described in detail in GHD (2022), the new proposed alignment of the 500kV power transmission line results in the lines being moved approximately 300m to the west of mining infrastructure, not 500m as originally proposed.

The visual analysis undertaken by RLA (2022) includes a cross-section analysis of the views from the Cameron property. It indicates that there are currently views of the transmission towers from this property (see Figure A and Figure I in RLA, 2022). It a noted that the towers would be

moved closer to the property than their current alignment, however the character and quality of the visual landscape would not be expected to significantly change. Regardless, it is accepted that the impact to visual amenity is relative to the viewers' appreciation of the landscape. Bowdens Silver has avoided and mitigated visual amenity impacts to the greatest extent possible through revising the alignment in response to the modelling outcomes presented in GHD (2022) and considers that the change in view would not be substantial as is suggested by Mr Cameron.

Representative Comment(s)

The proposed design route for the realignment of the 500KV line is over Bingman Hill. The power line will be placed directly in my view and will form the skyline.

Tom Combes of Lue, NSW (Submission SE-26255508)

There are many homes and thousands of acres of beautiful countryside, farmland and bushland that will have a view of the towers and powerlines. They will overwhelm the village and be visible from almost every home and property.

B Wannan of Lue, NSW (Submission SE-26260720)

Response

As noted in Section 6.7.3 of the *Amendment Report*, the 500kV power transmission line is already considered a substantial item of infrastructure in the landscape east of Lue and visible from many private properties. It is also not agreed that the presence of the re-aligned 500kV power transmission line would overwhelm the village of Lue, nor would the infrastructure be visible from every home and property. However, it is acknowledged that proposed changes to the local environment caused by the re-aligned 500kV power transmission line may be experienced by some residents.

In response to comments such as these, Bowdens Silver has avoided and mitigated possible impacts to the greatest extent possible by revising the alignment in response to the modelling outcomes presented in GHD (2022).

Representative Comment(s)

There is no map or photomontage showing the proposed height of the new Transmission Line above the skyline or the view from the homes in Dungaree, a locality which is incidentaly (sic) *not marked on any map. There is no sight line drawn from the Lue Hotel or from any home in the village.*

Name Withheld of Lue, NSW (Submission SE-26263713)

Response

It is not reasonable to assess views of the Mine Site or associated infrastructure from every viewpoint or private residence. However, Bowdens Silver produced a 3D interactive model of the Mine Site that included the 500kV power transmission line alignment proposed in the EIS and *Amendment Report*. RLA considered views of the Mine Site in the *Visibility Assessment* for the Project and from this assessment developed an understanding of the most likely effected views. Dungaree is located approximately 20km to the southeast of the Mine Site. Generally, it

is concluded that the proposed re-alignment of the 500kV power transmission line would move the infrastructure further away from views from the southeast (looking to the northwest) and therefore views from Dungaree may be considered improved.

RLA (2022) has further considered possible views from the village of Lue and provided photo views of the local areas (available from the Google Street Maps technology). It is clear from these images that intervening infrastructure and vegetation limit possible views from Lue including the Lue Hotel and private properties.

4.8 CONSULTATION

Representative Comment(s)

There has been little to no consultation with anyone in regard to the realignment and the effects of visual amenity, construction noise, as well as the scarring due to clearing of a 50-70metre wide easement.

Paul Evans of Totnes Valley, NSW (Submission SE-25859961)

Further to this, consultation over the realignment of the 500KV line has been almost non-existent. I have never been approached by the Company about the realignment. I even sit on the CCC and have heard little about it. My friends and neighbours in Lue have heard nothing about it. If it not for the Lue Action Group nobody would know. If it was going to impact me and my business, why was I not consulted?

Tom Combes of Lue, NSW (Submission SE-26255508)

Response

As identified in Section 5 of the *Amendment Report*, the proposed re-alignment of the 500kV power transmission line has always been a component of the Project and was discussed in all relevant specialist consultant reports, the EIS and during consultation for the Project undertaken for the *Social Impact Assessment* presented as Volume 6 Part 17 of the *Specialist Consultant Studies Compendium*. The proposed re-alignment of the transmission towers was also raised in a number of submissions on the Project and discussed in Section 5.29 of the *Submissions Report.* It is therefore considered that the community have been made aware of the intention to re-align this infrastructure and the environmental impacts associated with the process. Additionally, it is noted that the proposed re-aligned transmission line is presented in an Interactive 3D Model of the Mine Site available on Bowdens Silver's website.

Based on the above, Bowdens Silver rejects the notions that "*there has been little to no consultation with anyone*" and that "*if it were not for the Lue Action Group nobody would know*".

5. RESPONSE TO GOVERNMENT AGENCIES

5.1 INTRODUCTION

The following subsections present a response to the matters raised in feedback received from various Government agencies following review of the *Submissions Report* for the Project. Where feedback acknowledged acceptance of the outcomes of the assessment(s), no further commentary has been provided.

It is noted that both the Resources Regulator and Heritage NSW reviewed and responded to the *Amendment Report*, however in both cases the outcomes of assessment for the re-alignment of the 500kV power transmission line were supported by these agencies.

5.2 DPIE – BIODIVERSITY, CONSERVATION AND SCIENCE DIRECTORATE

Recommendation

The Koala species polygon should include all woodland vegetation communities associated with Koalas in NSW BioNet that contain mature trees.

If the woodland vegetation communities are not included in the species polygon, additional survey effort must be conducted in accordance with a methodology approved by BCS.

Response

Bowdens Silver has always acknowledged that the Mine Site is potential Koala habitat. This has been based on the advice of EnviroKey and other consultants that have undertaken ecological surveys of the land during development of the EIS (not specifically for Koala). Bowdens Silver personnel have also been aware of local Koala sightings and identified Koala within land owned by the Company as a result of regular environmental monitoring programs and phone calls received from community members reporting Koala sightings to the Company.

This notwithstanding, the EnviroKey surveys of the Mine Site and surrounds (the Study Area) did not identify any Koala. The Koala surveys included transects and additional scat and sign searches including the following.

- 4 to 9 December 2016 – 33 scat and sign searches.
- 30 January to 3 February 2017 – 19 scat and sign searches.
- 13 to 16 November 2017 – 26 scat and sign searches.
- 29 January to 3 February 2019 – 25 scat and sign searches.
- 3 to 7 April 2019 – 34 scat and sign searches.

EnviroKey considers the surveys undertaken were comprehensive and provide an excellent understanding of likely Koala presence. Regardless, any survey method has its limitations which are acknowledged in Section 2.3.11 of the BAR with regards to the likelihood of identifying every example of flora or fauna in a given area.

Based on these surveys, anecdotal sightings and the nature of vegetation mapped on the Mine Site, it considered most likely that Koala transit the Mine Site using it on a transient basis to disperse to areas of higher quality Koala habitat. This use of the Mine Site may have been persistent over time, meaning it may have occurred across generations of Koala. It is also accepted that the vegetation within the Mine Site may at some point in the future be relied upon by Koalas to a greater extent than it is now, though there is no clear indication that this is the case. The impacts of bushfires in the Summer of 2019/2020 are also acknowledged and were the subject of a separate report prepared by Niche Environment and Heritage (2021) and presented in the *Submissions Report* for the Project.

In order to provide certainty to BCD and the local community, Bowdens Silver has requested that EnviroKey extend the Koala species polygon to include all vegetation communities associated with Koala as identified by the NSW BioNET Threatened Biodiversity Data Collection. As a result of this change, the species polygon for the Koala now covers an area of 381.17ha which is the full extent of vegetation clearing for the Project. Species credits requiring offset for the Koala now reflect the assumed potential habitat area with 9 910 species credits for the Koala requiring offset for the Project. This has changed from the previous estimate requirement of 2 629 species credits (an almost three-fold increase in offset requirement). It should be noted that this outcome is not representative of an increase to predicted impacts, rather it is a change to the accounting for predicted impacts. It remains the conclusion of EnviroKey that the Project does not risk significant impact to the Koala.

The updated Koala species polygon is presented in Map 22 of the BAR (page 9a-81) and updated offsetting obligations are presented in Section 7.5 of the BAR (see Appendix 5 of the *Water Supply Amendment Report*).

Recommendation

All woodland habitat, including CW 111 and CW 112 be included in the calculation of Regent Honeyeater species credits.

Response

It is noted that similar to the matters addressed for the Koala, comments from BCD relating to the Regent Honeyeater do not relate to the presence of the species but to the manner of accounting for potential habitat within the BAR and the calculated offset requirements of the Project. Despite comprehensive surveys, the Regent Honeyeater was not identified within the Mine Site or along the previously proposed path of the water supply pipeline to the north and northeast of the Mine Site. EnviroKey assessed the likelihood of the species being present and noted that the Study Area is located between two key areas identified in the National Recovery Plan for the species[7].

- The Mudgee-Wollar key area.
- The Capertee Valley breeding area.

It is notable that the formerly proposed water supply pipeline would have been located in the Mudgee-Wollar key area. This impact is no longer proposed under the Project as proposed. Removal of the water supply pipeline is discussed in the *Water Supply Amendment Report*.

[7] National Recovery Plan for the Regent Honeyeater (Anthochaera phrygia) – Commonwealth of Australia 2016

EnviroKey considered it was reasonable to expect that the Study Area (and any native vegetation in the Lue district) could contain important habitat for Regent Honeyeater. This is due to the rarity of the species, presence of suitable habitat, previous records and its location relative to key areas.

The BCD comments note that the presence of mature trees in woodland habitat areas mapped as Biometric Vegetation Type CW111 (Rough-Barked Apple – red gum – Yellow Box woodland on alluvial clay to loam soils on valley flats in the northern NSW South Western Slopes Bioregion and Brigalow Belt South Bioregion) or CW112 (Blakely's Red Gum – Yellow Box grassy tall woodland of the NSW South Western Slopes Bioregion) is indicative of potential use and therefore habitat.

Biometric Vegetation Type CW111 and CW112 were previously excluded from the species polygon for the Regent Honeyeater as it was predominantly cleared of canopy vegetation due to previous grazing practices. Paddock trees remain in these areas. While the paddock trees may be used as foraging habitat, the cleared land would not and therefore were not considered as habitat that was required to be offset. Consultation with BCD on this matter identified that only habitat that may be mapped as derived native grassland may be excluded from offsetting requirements for this species. This is regardless of the existing availability of habitat.

In order to provide confidence to BCD and the community, Bowdens Silver has instructed EnviroKey to extend the species polygon for the Regent Honeyeater to include all vegetation communities associated with the species. The Regent Honeyeater species polygon has been modified to include all vegetation communities associated with the species as identified by the BioNET Threatened Biodiversity Data Collection, including CW111 and CW112. As a result of this change, the species polygon for the Regent Honeyeater now covers an area of 381.17ha, which is the full extent of vegetation clearing for the Project. Species credits requiring offset for the Regent Honeyeater now reflect the assumed potential habitat area with 29 350 species credits for the Regent Honeyeater requiring offset for the Project. This has changed from the previous estimate requirement of 29 035 species credits (an increase of 1.1%).

The updated Regent Honeyeater species polygon is presented in Map 21 of the BAR (Page 9a-80) and updated offsetting obligations presented in Section 7.5 of the BAR (see Appendix 5 of the *Water Supply Amendment Report*).

Recommendation

Species polygons for Large-eared Pied Bat be developed that include all impacted PCTs associated with the species.

Species credits for Large-eared Pied Bat should be calculated and offset.

Response

Survey results presented in Section 5.3 and Section 5.4.3 of the BAR describe the difference in outcomes relating to the treatment of this species as an ecosystem credit species or as a species credit species under the relevant assessment methodology. While the species was identified in survey using echolocation call recording, no breeding habitat was identified. Under the Framework for Biodiversity Assessment (FBA), breeding habitat included land containing escarpments, cliffs, caves, deep crevices, old mine shafts or tunnels. The BAR for the Project is applying the FBA as the assessment was commenced and largely completed under that

assessment regime[8]. This approach has been accepted by BCS and DPIE. Regardless, it is noted that treatment of this species has been adjusted over time and it is relevant to now consider this species differently.

Following consultation with BCS on this matter it is agreed that the species has been identified foraging on the Mine Site and there is also potential breeding habitat in the vicinity of the Mine Site. Therefore, this species should be considered a species credit species for the purpose of calculating the offsetting requirements of the Project.

A Large-eared Pied Bat species polygon has been created to include all associated vegetation communities as identified by BioNET Threatened Biodiversity Data Collection within a 2km radius of the cliff lines identified on Map 17 of the BAR (see Appendix 5 of the *Water Supply Amendment Report*). The species polygon for the Large-eared Pied Bat covers an area of 337.80ha. A total of 4 391 species credits are now required to offset impacts to potential habitat for the Large-eared Pied Bat for the Project.

Recommendation

Explanation be provided regarding changes in ecosystem credit calculations for impacted vegetation types.

Response

This comment relates to variations in ecosystem credit outcomes for vegetation that has seemingly not changed substantially in terms of areas to be disturbed between versions of the reporting on terrestrial ecology assessment outcomes. EnviroKey is not able to explain the variations in credit outcomes as a result of updates to the Project design and therefore extent of vegetation clearing. However, it is noted that the change between the original BAR that accompanied the EIS (2020) and an updated report presented with the *Submissions Report* (May 2021) included the requested change to the assessment of impacts associated with the water supply pipeline so that it be considered linear infrastructure. Both the updated BAR submitted with the *Submissions Report* (May 2021) and the most recent BAR presented in Appendix 5 of the *Water Supply Amendment Report* have reflected updates to vegetation clearing as a result of Project refinement to respond to Government agency and community submissions and requests.

The BAR that is presented in Appendix 5 of the *Water Supply Amendment Report* reflects the output of the BBAM-C following the most recent refinements to the Project. It is considered the most accurate and up to date analysis of offsetting requirements for the Project. Additional consultation with BCS may be required if there are outstanding concerns on this matter.

Recommendation

DPIE note the requirement to offset species credits for Silky Swainson-Pea and Small Purple-Pea.

Mitigation measures such as seed collection and propagation be explored for Silky Swainson-Pea and Small Purple-Pea.

[8] In accordance with the SEARs provided by DPIE (Appendix 2 of the EIS), the Project is a "pending or interim planning application" under the *Biodiversity Conservation (Savings and Transitional) Regulation 2017* and the environmental assessment may be undertaken under former legislation including the *Threatened Species Conservation Act 1995* and former Section 5A of the EP&A Act.

Response

Bowdens Silver has approached BCS to apply for licences for seed collection for these species. As a threatened species, the collection of seed must be approved under a licence. Once approved, Bowdens Silver would commence seed collection and propagation of the species. This species would be added to the overall list of native plants for which Bowdens Silver has been collecting seed within its landholdings. Some seed would be stored in appropriate conditions for future propagation.

Climate conditions in 2021 were excellent for this species and Bowdens personnel report that flowering plants are still evident at the Mine Site and adjacent properties.

In November 2021, AREA Environmental undertook further field survey for these species, focussed on areas for a potential Biodiversity Stewardship Site. The survey identified the following in land to the east of the Mine Site.

- Two known occurrences of *Swainsona recta* were confirmed, one with eight plants, the other with two. The number of resident individuals were consistent with pre-drought populations.
- Previously unrecorded populations of *Swainsona recta* were recorded in the proposed biodiversity offset area, one comprising of one plant, another of three resident individuals and another of about 50 (an important population).

One of the patches identified contains a significant population of Small Purple-Pea (*Swainsona Recta*) and the likely offsetting of this land would provide a beneficial conservation outcome for this threatened plant.

Recommendation

Measures that have been taken to avoid impacts on biodiversity should be clearly explained in the BAR. Changes to mine layout or the pipeline route that have been made to avoid impacts should be described and mapped.

Response

The examples referred to in Section 5.26.7 of the *Submissions Report* were specific examples of changes to the Mine Site layout that were influenced by a preference to avoid vegetation clearing. It is considered that they remain relevant to consideration of Bowdens Silver's efforts in this regard.

The traffic light model prepared by EnviroKey is presented as Map 24 of the BAR (see Appendix 5 of the *Water Supply Amendment Report*) and is reproduced in **Figure 5.1**. As noted in Section 6.1 of the BAR, the model was intended to provide the following guidance to Mine Site planning and design.

- Red – presence of native vegetation that qualifies as a critically endangered ecological community under the schedules of the NSW *Biodiversity Conservation Act 2016* or the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth).
- Orange – presence of native vegetation that does not qualify as above.
- Green – presence of vegetation that is dominated by introduced flora species.

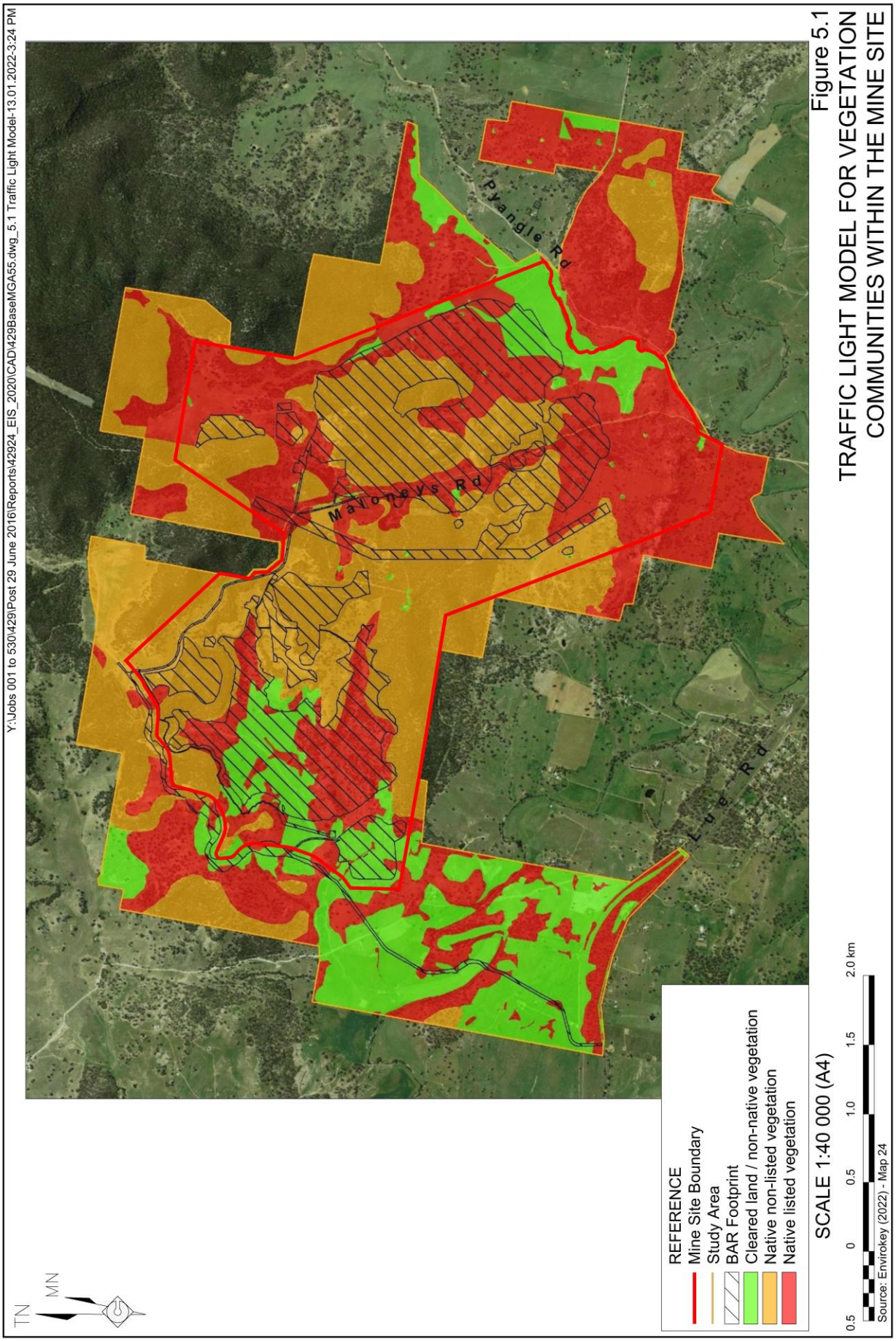

Figure 5.1
TRAFFIC LIGHT MODEL FOR VEGETATION COMMUNITIES WITHIN THE MINE SITE

Given the previous work completed on the Mine Site on behalf of Kingsgate, this information was already available when Mine planning and design was occurring for the Bowdens Silver Project. Therefore, it is not a matter of areas where designs were changed in response to vegetation survey outcomes, but rather that infrastructure was not placed in those locations in the first place.

The traffic light model has continued to be used as the Project has been refined to guide any proposed changes to the Mine Site including the recent refinement that added water storage dams and relocated Mine Site infrastructure. Similar to the approach taken for the original Mine design it was the traffic light model that informed where dams and other infrastructure should not be located.

Recent review of the Mine Site layout in response to the realignment of the 500kV power transmission line and the removal of the water supply pipeline and its replacement with on-site infrastructure was informed by the traffic-light model. However, it was also informed by a preference for a compact Mine Site at which potential indirect impacts may also be avoided. This involved placing dams or soil stockpiles in locations between other Mine Site features such as in the vicinity of the satellite open cut pits. The permitted removal of vegetation clearing in some areas and use of areas that were more likely to be subject to indirect impacts due to their proximity to other mining-related infrastructure.

Finally, the decision to remove the water supply pipeline from the Project was informed by the known impact to vegetation required for that infrastructure. The environmental impacts associated with vegetation and habitat removal for that infrastructure were substantial and would now be avoided. For example, the removal of this infrastructure has removed possible impacts to the Ausfeld's Wattle which was identified as a 'Red Flag' in the previous assessment outcomes. There are no longer impacts to this species associated with the Project.

Recommendation

An assessment be conducted focussing on vibration impacts on nearby cliff lines.

Response

Section 7.4.9 of the BAR has been amended to include discussion of this matter (see Appendix 5 of the *Water Supply Amendment Report*). Potential risks to geological structures from vibration were assessed in the *Noise and Vibration Assessment* prepared by SLR Consulting (2020) with outcomes presented in Section 10.1.7 and 10.4 of that report. SLR Consulting notes that there are no regulatory criteria nominated in Australia for the assessment of damage to geological structures from vibration. However, the assessment refers to research undertaken by the United States (US) Army Corps of Engineers into the effects of large surface blasts on the dynamic stability of unlined tunnels of various diameters in sandstone and granite (Blast Vibration Monitoring and Control (Dowding, 1985)). The results of that research indicated that intermittent rock fall or observable damage was not observed until vibration levels exceeded 460mm/s. To be conservative, SLR Consulting adopted a safe blast design vibration criterion of 250mm/s as being applicable to geological structures. The assessment concluded that a safe working distance of 73m should be established for geological structures from the open cut pit (where blasting would occur). This is much less than the 2km distance to cliff lines and structures that have been identified around the Mine Site and therefore the risk of indirect impact to these structures is considered to be low.

Recommendation

An updated biodiversity offset strategy be prepared once biodiversity credit liabilities are finalised.

Any consent condition that relates to the quantum of offsets to be retired should refer to the relevant submitted and approved BioBanking credit report.

Please note also that once the BioBanking credits have been finalised, these will need to be converted to biodiversity credits through an assessment of reasonable equivalence.

Response

An updated *Biodiversity Offset Strategy* has been prepared by Niche Environment and Heritage and is provided as Appendix 6 of the *Water Supply Amendment Report*. The offsetting strategy remains largely the same as that presented within the EIS, as follows.

- It is proposed that the required offsets would be met in a staged manner that reflects the progressive clearing of vegetation for the Project.
- Bowdens Silver's first preference is to establish or facilitate the establishment of Biodiversity Offset Sites using Biodiversity Stewardship Agreements on Company-owned or private land, where agreed with the landowner.
- Where necessary, any residual offset requirements would be satisfied by purchasing available credits from the market, through payment into the NSW Biodiversity Conservation Trust, or other supplementary measures, subject to agreement.

Bowdens Silver remains confident that the assessed biodiversity offsetting requirements of the Project are accurate and acceptable to the Company as a commitment to account for biodiversity impacts that were not able to be avoided through mine design and planning.

5.3 DPIE WATER AND NATURAL RESOURCES ACCESS REGULATOR

Recommendation

Finalise agreements with external water supply providers to ensure adequate water supply can be made available when required. It is recommended this include consideration of options if the project approvals for these mines lapse during the life of this project.

Response

Since public exhibition of the EIS, Bowdens Silver has been investigating a range of measures to reduce Project-related water demand, increase the Project's capacity to recover, recycle, store and re-use process water and stormwater. Concurrent with this optimisation process, Bowdens Silver has continued its assessment of groundwater resources in the vicinity of the Mine Site as a water source for the Project. These investigations have resulted in Bowdens Silver developing and adopting an integrated water management and supply strategy that includes advanced dewatering of the proposed open cut pit via production bores to secure a long-term water supply for the Project.

Bowdens Silver therefore proposes to amend the Project to remove the proposed water supply pipeline as a component of the Project. The amendment to the Project would be made in accordance with Clause 55(AA) of the *Environmental Planning and Assessment Regulation 2000.* It should be noted that DPIE, MWRC, the Project Community Consultative Committee and the broader community have been consulted on this matter.

As a result, Bowdens Silver no longer requires the agreement of a third party to secure the Project's water supply.

Recommendation

Provide further detail on the proposed sources and volumes of water to reduce the time for the pit lake to reach equilibrium after mine closure. The ability to obtain any water entitlements should be demonstrated.

Response

The *Surface Water Assessment* for the Project has been updated to incorporate the outcomes of assessment relating to the proposed amendment identified above (see Appendix 3 of the *Water Supply Amendment Report*). This updated assessment considers inflow volumes, water sources and rates of fill to reach final void pit lake equilibrium. It is noted that final void filling would be a combination of surface water and groundwater inflows with the requisite volumes entirely dependent on precedent conditions at the time of filling.

However, in addition to its basic landholder (harvestable) rights entitlement of 180.6ML, Bowdens Silver holds the following volumetric entitlements under water access licences.

- 194ML from the Sydney Basin Murray Darling Basin Groundwater Source that is managed under the Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources Order, 2020.
- 1 480ML from the Lachlan Fold Belt Murray Darling Basin Groundwater Source - (Other) Management Zone Source that is managed under the Water Sharing Plan for the NSW Murray Darling Basin Fractured Rock Groundwater Sources Order, 2020.
- 139ML from the Lawsons Creek Water Source - (Other) Management Zone that is managed under the Water Sharing Plan for the Macquarie Bogan Unregulated and Alluvial Water Source 2012.

Bowdens Silver has also been notified of the successful purchase of an additional 200ML groundwater use entitlements within the Sydney Basin Groundwater Source of the Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources Order 2020. These entitlements are more than sufficient to account for the maximum predicted licensing requirements. At the time of mine closure, when void filling would commence, the full volumes identified above would not be required to account for operational "take" from the various water sources identified.

Recommendation

A Water Management Plan should be developed to address construction and operation stages of the project. Key elements will include a Sediment and Erosion Control Plan, Site Water Balance, Monitoring and Reporting and a Contingency Response Plan.

Response

If the Project is approved, a Water Management Plan would be prepared in consultation with DPIE, DPIE Water and the NSW EPA for the Project's site establishment and construction stage, as well as the operational stage. This plan would include all requisite erosion and sediment control plans, site water balance information, monitoring, reporting and contingency response plans and would require approval from the relevant agencies prior to commencement of activities associated with the relevant stage.

Recommendation

The proponent should develop a water balance to measure actual water take from surface and groundwater sources, this should include accurate metering where possible. The water balance should be used in ongoing reviews of actual versus modelled water take and impact predictions. This will be a key component to confirm impact predictions, the adequacy of mitigating measures and compliance for water take.

Response

The approved Water Management Plan would include measures for the monitoring, measuring and recording of all water taken during operations, irrespective of source (i.e. harvestable rights dam, open cut pit or TSF). All collected data would be utilised to inform regular updates to surface water and groundwater models, an assessment against predictions and the continuous improvement of operations (if needed). The results of these assessments would be provided in the Annual Reviews that are an anticipated requirement of development consent for the Project.

Recommendation

The proponent must ensure sufficient water entitlement is held in a water access licence/s to account for the maximum predicted take for each water source prior to take occurring.

Response

As noted above, Bowdens Silver holds the following entitlements to water resources.

- 194ML from the Sydney Basin Murray Darling Basin (MDB) Groundwater Source that is managed under the Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources Order, 2020.
- 1 480ML from the Lachlan Fold Belt Murray Darling Basin Groundwater Source - (Other) Management Zone Source that is managed under the Water Sharing Plan for the NSW Murray Darling Basin Fractured Rock Groundwater Sources Order, 2020.
- 137ML from the Lawsons Creek Water Source - (Other) Management Zone that is managed under the Water Sharing Plan for the Macquarie Bogan Unregulated and Alluvial Water Source 2012.

These entitlements generally account for the predicted peak requirements that are not concurrent and with most occurring towards the end of mining operations.

Recommendation

The proponent must obtain relevant authorisations to change the Water Access Licences proposed to account for water take by the project to nominate the project site prior to the water take occurring.

Response

Bowdens Silver would meet all its requirements under the *Water Management Act 2000* with respect to water access licensing. It is noted however that, as the Project is classed as State Significant Development, under section 4.41 of the *Environmental Planning and Assessment Act 1979*, Bowdens Silver is not required to obtain the following *Water Management Act 2000* approvals.

- A section 89 water use approval.
- A section 90 water management work approval.

Bowdens Silver notes that a section 91 activity approval would be required to account for the open cut pit development that constitutes aquifer interference.

Recommendation

The proponent should be aware of the rules of the relevant water sharing plans and how they may impact the project and ability to trade or take water.

Response

As noted above, Bowdens Silver holds a number of water access licenses to fulfil its obligations under NSW policy settings and is conscious of all aspects relating to each.

Recommendation

The proposed box culvert crossing of Lawsons Creek should be redesigned to a bridge structure. This is to ensure consistency with the Guidelines for Controlled Activities on Waterfront Land (NRAR 2018).

Response

Following public exhibition of the EIS and consultation with NSW Government agencies (DPIE Water and NRAR), Bowdens Silver has adopted a bridge crossing of the relocated Maloneys Road over Lawsons Creek. Full details of the crossing would be established during detailed design however, the following key design features have been accepted by these agencies.

- A road crest level of 531m AHD (i.e. above the existing 5% (1 in 20) AEP flood level)
- A 1 m thick bridge deck
- Two 30m deck spans

- One central pier, 1.2m thick
- A road width of 7m
- 1m high rails
- An approach road embankment (cut and fill) slope of 1V:3H
- Reinforced concrete box culverts on the northern approach road (one bank with 2 barrels and one single barrel, all barrels would be 0.9m high by 1.2m wide)

The road crest level would have a minimum height of 1.3m above the bankfull discharge water level of the Lawsons Creek main channel (529.7m AHD at 430m^3/second).

Bowdens Silver notes the proposed bridge crossing would significantly reduce the frequency of overtopping when compared to the existing low-level crossing of Lawsons Creek and represents improved access for all landowners currently using Bara-Lue Road.

5.4 HERITAGE NSW

Comment(s)

HNSW do not agree that the proposed approach provided in the RTS, involving the RAPs in the salvage and management of artefacts, carries the same intent as our recommendation. The RTS refers to the conventional approaches used in managing heritage in post approved projects. Whilst HNSW accepts the proposed management recommendations, our aim is to extend the activity to develop skills for interested parties willing to learn other methods for identifying, analyzing and managing their heritage. HNSW believes this skill set is transferable to future projects whereby Aboriginal perspectives on ACH assessment data can be better balanced and grounded with scientific approaches.

Response

It is acknowledged that the intent of the program as described in the *Submissions Report* may not have been fully descriptive. However, it was the intention of Bowdens Silver to incorporate a description of the intended program in a Heritage Management Plan for the Project that would be prepared following an approval of the Project. In order to remove any doubt, the following provides a brief description of the proposed Indigenous Technical Heritage Mentorship Program that would be implemented through a Heritage Management Plan for the Project. It is noted that the Aboriginal object recording, collection, analysis and curation process would occur prior to any disturbance for mining.

1. Bowdens Silver would partner with the Wiradjuri Traditional Owners and professional archaeologists to foster an Indigenous Technical Heritage Mentorship Program.
2. The program would pair one or two younger (35 years and under) Wiradjuri people with one or two mentoring Wiradjuri Elders and archaeologists.
3. Skills developed would be shaped by the interest of the mentee and could include excavation techniques, artefact documentation, lithic analysis, archival cataloguing, geoarchaeology and landscape contextual recording.

4. Potential participants would be identified through consultation with Registered Aboriginal Stakeholders, Wiradjuri Traditional Owners and through an advertised request for expressions of interest.
5. The program would require mentees to submit a short proposal to Bowdens Silver outlining their interests in cultural heritage management and archaeology. Selection of up to two candidates would be by the mentoring Wiradjuri Elders involved with the project and Bowdens Silver's project archaeologist in consultation with Bowdens Silver.
6. The program would require a mentee to make a time-commitment for the duration of field recording, collection, excavation, laboratory analysis and archival storage processes required to salvage Aboriginal cultural heritage sites identified within the proposed disturbance areas of the Project.
7. Mentoring may include outdoor and indoor activities, web chats, phone calls, emails, or in-person meetings.
8. Mentees would be remunerated at an agreed daily/hourly rate.

Mentees and mentors would benefit from exchanging information and being exposed to new ideas and ways of thinking. Bowdens Silver hopes this program can expand each participant's knowledge and be the catalyst for longer-term relationships and career opportunities. A method of formal recognition of mentee participation would be developed in consultation with the mentoring Wiradjuri Elders and Bowdens Silver's project archaeologist.

Bowdens Silver has received preliminary support for this program from Heritage NSW and the Aboriginal community. However, consultation with Registered Aboriginal Parties and Native Title Claimants is ongoing and may result in changes to the program to suit those who would be involved.

Bowdens Silver is comfortable that the Indigenous Technical Heritage Mentorship Program will be included in a Heritage Management Plan for the Project which would be a condition of development consent for the Project. It is however noted that finding participants is likely but not guaranteed and therefore any conditions of consent referring to the Project should be drafted to be mindful that participants cannot be forced to attend. Details of this program may vary between now and its implementation. However, it is considered that the above summary (or similar) presents sufficient detail for the purpose of conditions of development consent relating to the management of heritage matters for the Project.

5.5 MID-WESTERN REGIONAL COUNCIL

Several comments provided by Mid-Western Regional Council (MWRC) related to the construction and use of the water supply pipeline. A virtual teleconference was held with MWRC personnel on 2 December 2021 and it was agreed that these comments do not require further response. The following presents a summary and review of the remaining comments received from MWRC in response to the *Submissions Report*.

Comment(s)

In the first 0-6 months of site establishment and construction, the proposed transport route is via the existing road network utilising Pyangle Road and Maloneys Road. The proposed activities are beyond what would normally be accepted as initial site establishment with up to 124 workers on site and 178 daily traffic movements. Council does not support use of the existing network during this period as it will result in a significant amount of additional traffic through the village of Lue. The relocation of Maloneys Road should occur prior to any on site construction commencing.

Response

Heavy vehicles travelling through the village of Lue at the peak of construction activity would include the following.

- Up to 4 movements per weekday and Saturday by shuttle buses (1 bus arrives and departs in the morning and 1 bus arrives and departs in the evening), likely to be a full size coach. The buses would operate based on shift times, generating up to 2 movements through the village of Lue in the morning between 6:00am and 7:00am, and 2 movements between 5:00pm and 7:00pm.
- 32 movements per day (16 trucks inbound and 16 trucks outbound) before commissioning of the relocated Maloneys Road (first 6 months) and 10 movements per day (5 trucks inbound and 5 trucks outbound) after commissioning of the relocated Maloneys Road for miscellaneous deliveries, which typically occur during standard business hours 8:00am to 6:00pm.
- Occasional oversize or overmass vehicles, which would be managed on a case by case basis but would typically be limited to daylight hours.

Remaining traffic entering the Mine Site would be light vehicles. Section 2.9.3.1 and Table 2.5 of the EIS provides an estimate of light vehicle traffic with 120 movements per day required during construction of the relocated Maloneys Road. During this period 78 of these movements are predicted to occur through Lue (65% of total light vehicle movements). It is noted the number of light vehicle movements is predicted to increase slightly once the relocated Maloneys Road is constructed as the exploration personnel would return to ordinary operations based at the current site office.

It is reiterated that the proposed schedule is considered appropriate for the following reasons.

- The expected traffic levels during the construction period are likely to be low relative to existing traffic passing through Lue (10% of existing traffic at a peak).
- Bowdens Silver has committed to upgrade the intersection of Pyangle Road and Lue Road. This upgrade would not be required should the relocation of Maloneys Road occur first and access via Pyangle Road not be required.

Therefore, it is considered that minor impacts associated with relatively low traffic levels for a limited period of time would be mitigated by permanent improvements to the road network (separate to the relocation of Maloneys Road).

Comment(s)

Council requests that any required road upgrades be completed prior to the commencement of any on site activity or construction. All upgrades must be designed in accordance with appropriate and applicable standards.

Council maintains that the road upgrades should be conditioned separately to any VPA.

Response

The following road upgrades are proposed and have been committed to by Bowdens Silver.

- Intersection construction at the intersection of Lue Road and the Relocated Maloneys Road.
- Intersection improvement at Pyangle Road / Lue Road and sealing on an initial section of Pyangle Road.

All road upgrades would be undertaken in accordance with the applicable standards in consultation with MWRC.

The Planning Agreement for the Project has been accepted by MWRC and is in the process of being finalised. It does not contain the committed road upgrades as these are expected to form conditions of consent.

Comment(s)

To ascertain the required road upgrades, a road dilapidation report was requested, which has not been discussed in the EIS.

Response

A Road Safety Audit (RSA) of existing conditions was conducted in accordance with the relevant TfNSW (formerly RMS) guidelines to examine and identify road safety concerns along Lue Road between Mudgee and Lue. The RSA report is presented as Annexure 4 to the Traffic and Transport Assessment, and its principal findings are also presented in Section 3.13 of the Traffic and Transport Assessment. This document has the same effect as the road dilapidation report requested by MWRC. It is expected that MWRC would direct some of the contributions to be paid to MWRC through a formal Planning Agreement towards these matters.

Comment(s)

Council requests that a rehabilitation plan is in place within the first 5 years of operation.

Response

It will be a requirement that a Rehabilitation Management Plan be in place prior to the commencement of mining for the Project, should it be approved. Therefore, this request from MWRC would be satisfied.

Comment(s)

Council requests confirmation as to the long term impacts to the Region's water supply, and impacts downstream resulting from the open cut pit lake, which will require 133ML/year to fill over 200 years, post mining.

Response

As described in Section 5.24.18 of the *Submissions Report*, all inflow volumes to the open cut pit lake post closure would be licensed in accordance with the NSW Aquifer Interference Policy and therefore, would not impact the availability of water (water supply) to the region.

It is acknowledged that groundwater and some surface water would flow to the open cut pit lake post closure. However, this is unlikely to be 133ML per year as noted by MWRC. Once a groundwater equilibrium level is established in the lake (mostly achieved 16 years after the end of mining but up to 50 years post-mining with minor fluctuations after that time), the change in flows would be negligible and not noticeable at any private water supply.

Comment(s)

Council requests that the Department ensure that all health risks are adequately considered and sufficient management safeguards are implemented to address community concerns. A rigorous monitoring program should be implemented and made publicly available on a real time basis

Council requests real time monitoring of health issues.

Response

MWRC has not specified in its submission the type of monitoring that is requested, however refers to drinking water quality and dust in its commentary on the matter. As presented within the EIS and *Human Health Risk Assessment* (HHRA) prepared by EnRiskS[9], the Project is not predicted to result in health risk issues of concern, including at the Lue Public School. This conclusion has been supported by the independent peer review commissioned by DPIE and undertaken by Drew Toxicology Consulting. Importantly, the conclusion of the HHRA prepared by EnRiskS is as follows.

> *"Based on the available information, and with consideration of the uncertainties identified, no health risk issues of concern have been identified for the off-site community."*

Further to that, the peer review undertaken by Drew Toxicology provides the following conclusion.

> *"Overall, the HHRA follows the standard process for conducting such assessments in Australia. The HHRA concentrates on incremental health risks that the mine proposal may present. The revised HHRA adequately documents the methodology and important assumptions are supported. The calculations indicate health risks due to the proposed mine are very low. I agree with these conclusions."*

[9] The HHRA was updated in response to the peer review outcomes and presented as Appendix 7 of the *Submissions Report*

Regardless, Bowdens Silver has committed to real-time monitoring of particulate matter at two locations in the vicinity of the Mine Site. This monitoring would demonstrate that air quality remains as predicted and within the levels specified in conditions of the Project's development consent. It will also provide triggers for reactive management of dust generation so that environmental management may also occur in real time.

It is not possible to undertake real-time monitoring of drinking water quality, however Bowdens Silver has committed to a comprehensive surface water monitoring program which would include triggers based on long-term monitoring of water quality previously undertaken by Bowdens Silver. In addition, Bowdens Silver has included the installation of first flush systems and the cleaning out of water tanks for all residents within Lue in the matters to be put to the committee overseeing the Community Investment Program.

5.6 RESOURCES REGULATOR

Comment(s)

The Resources Regulator requires further information to clarify the vegetation communities that will be reinstated on disturbed areas. As requested in the Regulator's original submission, information is required on the post-mining vegetation community type, the specific location across each mining domain (e.g. included on a plan) and clear commitments on the rehabilitation objectives for re-vegetation, including land and soil capability class.

Response

EIS Table A5.11 lists a wide range of native grass, shrub and tree species suitable for revegetation of the ridges, mid slopes, flats and valleys within the Mine Site. Bowdens Silver proposes to identify the relevant species for each domain within the respective Rehabilitation Management Plan submitted to the Resources Regulator. The species would be selected based on factors such as aspect, typical moisture requirements and preferred substrates. Bowdens Silver would maintain detailed records of the growth of the respective vegetation throughout the Project life to ensure that the selected species are successful in achieving the nominated completion criteria.

The specific location of vegetation communities within each mining domain would be confirmed during preparation of the Rehabilitation Management Plan that would be ultimately approved by the Resources Regulator. It is considered that the information provided to date provides sufficient information on the proposed rehabilitation objectives to support approval of the development application.

Comment(s)

The Resources Regulator's original submission requested further information on the intended post mining land use of "grazing controlled" nominated for the Tailings Storage Facility (TSF) and Waste Rock Emplacement (WRE) areas. Further analysis of the post mining management and maintenance was requested for this land use to ensure the capping/covers in these areas will support the intended final landuse without unsustainable land management restrictions.

Based on this analysis, further clarification was requested to determine whether "grazing controlled" or another land use is more appropriate given the post-mining constraints associated with these features. The RTS acknowledges that controlled grazing on the TSF and WRE would require careful management but provides no comment as to whether the capping/covers in these areas will support the intended final land use.

Response

The final land use of "grazing controlled" for the WRE and TSF was chosen based on an assessment of the suitability of the land following rehabilitation. The proposed cover systems for the WRE and TSF are considered 'state of the art' when assessed against current industry practice. The cover systems would vary in thickness from 1.8m to 3.0m and would comprise a profile sufficiently robust to sustain grazing of sheep and cattle. Notwithstanding, grazing of the rehabilitated WRE and TSF would be introduced in a controlled manner to ensure rehabilitation objectives are not compromised. This would include grazing trials to assess ongoing land capability, soil health and pasture performance. It is likely that grazing would initially be used principally to control fuel loads but may be progressively expanded. It is most appropriate to consider the intended final land use as native vegetation conservation with controlled grazing.

Bowdens Silver's commitment to effective rehabilitation of the WRE and TSF would also involve a broader ongoing monitoring and maintenance program following both the progressive and end-of-Project operations to ensure that rehabilitation objectives are achieved. Monitoring throughout the Project life would involve the following.

- Evidence of any erosion or sedimentation from areas with establishing vegetation cover.
- Success of initial cover crop or grass cover establishment.
- Success of tree and shrub plantings.
- Natural regeneration of native species.
- Adequacy of drainage controls.
- General stability of the rehabilitated areas.
- Evidence of any acidic runoff.

Should any of the above identify a sub-optimal performance, remediation and enhancement activities would be undertaken.

It is noted that numerous examples of mine rehabilitation that support agricultural production are available in the literature – some examples follow.

- Kidston Gold Mine (DFAT, 2016)
  The tailings storage facility at Kidston Gold Mine was directly revegetated (no cover/capping) and was found by numerous research trials and monitoring campaigns to provide pasture cover that could support the grazing of cattle. It is noted that the revegetation cover has deteriorated in recent years due to a combination of overgrazing, prolonged drought and the free-draining nature of the tailings.
- New Acland Mine (New Hope, n.d.)
  New Hope has progressively rehabilitated approximately 490ha of disturbed land since 2002. Of this land, approximately 240ha has been returned to grazing between 75 and 100 head of cattle. Grazing trials indicate that cattle on mined land perform as well, or better than, cattle on unmined land.

- Wilkie Creek (Minerals Council of Australia, 2016)
  Peabody Energy has largely rehabilitated its Wilkie Creek site following the completion of mining in 2013 with approximately 60% of rehabilitation now completed. This includes a final landform designed to support a final land use of grazing.
- Commodore Coal Mine (Minerals Council of Australia, 2016)
  Approximately 250ha of land has been rehabilitated to grazing pasture by InterGen / Downer Mining at the Commodore Coal Mine.
- Liddell Coal Operations (Mineral Council of Australia, 2016)
  Glencore has achieved high-quality rehabilitation of grazing pasture at its Liddell Coal Operations site. Successful grazing trials indicate that cattle on rehabilitated land grew faster and averaged an extra 79kg over cattle on neighbouring pasture.

Comment(s)

The Resources Regulator's original submission requested an assessment of the application of a geomorphic landform design to the WRE coupled with an analysis of long-term stability, such as those provided by landform evolution models.

The RTS does not include this information, but outlines that the outer slopes of the WRE have been designed to generally follow a similar profile to the underlying natural surface (i.e. to have convex upper slopes and concave lower slopes), thereby avoiding straight sides with drainage lines and depressions. In addition, the RTS outlines that the detailed design for the rehabilitated landforms would be confirmed in the post-approval phase and ultimately submitted to the Resources Regulator for approval.

In light of the Proponent's response to this issue it should be noted that as part of the Resources Regulator's assessment process in determining whether to approve a final landform design, a detailed analysis of long-term stability will be required.

A potential implication of deferring the long-term stability assessment to the post consent phase is that the modelling may identify the need for a modified design in order to achieve a long-term stable landform.

Where this design is inconsistent with the approved project (e.g. extent of footprint and or height of the landform), a future modification to the development consent may be required to permit the construction of the modified final landform design.

Response

As identified in Section 5.22.15 of the *Submissions Report* (RWC, 2021), the outer slopes of the WRE have been designed to generally follow a similar profile to the underlying natural surface, i.e. to have a convex upper slopes and concave lower slopes, thereby avoiding straight sides with drainage lines and depressions. This, along with the outer slopes (infilled with subsoil and topsoil to remove any stepped landform) would reduce the "engineered" appearance of the WRE. The proposed outer slopes would be designed at a maximum of 1:3 (V:H) and are comparable with many of the slopes on nearby ridges and hills. The crest level of the WRE would also vary thereby creating a ridge and avoiding extensive flattened, geometric plateaus.

The detailed design for rehabilitated landforms would be confirmed during preparation of the Rehabilitation Management Plan that would be ultimately approved by the Resources Regulator. It is considered that the current design provides sufficient information on the proposed final landform and final land uses to support assessment and approval of the development application. Bowdens Silver acknowledges that any significant inconsistencies between the proposed final landform and any requirements identified as part of the Resource Regulator's assessment process may require a future modification to the development consent.

5.7 TRANSPORT FOR NSW

Comment(s)

TfNSW does not object to providing concurrence for the proposed water supply pipeline subject to the following:

- *Prior to the commencement of any works for the water pipeline within classified roads, plans are to be submitted for the proposed works to the relevant road authority pursuant to s138 of the Roads Act 1993.*

Response

The formerly proposed water supply pipeline has been removed from the Project and is the subject of the *Water Supply Amendment Report* submitted concurrently with this document.

Comment(s)

Pursuant to cl 16 of the Mining SEPP and clause 104 of ISEPP, TfNSW provides the following recommendations for your consideration:

- *The development is to be carried out in accordance with the submitted EIS and TIA, ensuring that the construction and operation comply with the material haulage limit and the identified heavy vehicle trips per an hour and during the peak for the construction of the development.*
- *All vehicles are to enter and exit the site in a forward direction.*
- *Prior to the commencement of construction works a Traffic Management Plan (TMP) including Driver Code of Conduct is to be submitted to and endorsed by TfNSW. The preparation of the TMP will require consultation with TfNSW, Mid-Western Regional Council, the principal contractor(s) and relevant stakeholders. The requirements of the TMP and Driver Code of Conduct are to cover the matters referred to within the TMP Annexure (attached).*
  - *The TMP is to be reviewed and updated in response to any changes in operating conditions. A copy of the TMP and Driver Code of Conduct is to be provided to contractors and employees as a part of the site induction and a copy is to be made available to Transport for NSW with each major update.*
  - *The development is to be carried out in accordance with the approved Traffic Management Plan throughout the life of the development.*

- *Relevant approval from the National Heavy Vehicle Regulator and TfNSW is to be sought by the proponent in regard to the transportation of any Over Size/Over Mass heavy vehicles required to transport oversize/mass items to site.*
- *Transportation of all dangerous goods to or from the site is to be undertaken in strict accordance with Australian Code for the Transport of Dangerous Goods by Road and Rail.*

Response

Bowdens Silver notes the recommendations provided by TfNSW and would commit to the following actions in the event that development consent is granted.

- All transport operations would be undertaken in accordance with the EIS and *Traffic Impact Assessment* (TTPP, 2020).
- All vehicles would enter and exit the site in a forward direction.
- A Traffic Management Plan would be prepared in consultation with TfNSW and ultimately approved by DPIE. It is expected that, should the Project be approved, it would be a condition of the development consent that such a plan must be approved before site establishment and construction commences.
- Approval would be sought from the National Heavy Vehicle Regulator and TfNSW for any Oversize Overmass (OSOM) heavy vehicles required to transport large, indivisible items to site.
- All transportation of dangerous goods would be undertaken in strict accordance with the *Australian Code for the Transport of Dangerous Goods by Road and Rail*.

Comment(s)

Prior to each blasting operation, the Proponent must obtain approval from John Holland Rail (JHR) by complying with JHR's Blasting Guideline (attached)

Response

During preparation of the *Submissions Report*, consultation was undertaken with representatives of John Holland Rail (JHR) to determine the applicability of JHR's Blasting Guideline to the Project. Bowdens Silver reiterated its position that JHR's Blasting Guideline does not apply to the Project as the distance from the nearest open cut boundary to the rail corridor is approximately 2.5 km. This distance falls well beyond the limit of a Category A blast i.e. blasting which has been assessed as not posing a risk to CRN infrastructure which occurs between 200m to 600m from CRN infrastructure. Additionally, it was noted that blasting risk at several private properties between the open cut pit and CRN infrastructure had been assessed as minimal.

JHR confirmed in email correspondence dated 12 October 2021 that approval from JHR would not be required for any blasting operations.

5.8 NSW ENVIRONMENT PROTECTION AUTHORITY

Bowdens Silver agrees with the EPA's recommended conditions of consent with the exception of item v) regarding the Air Quality Management Plan. Further context and commentary on this matter is provided as follows. No additional commentary is provided on the remaining EPA feedback.

Comment(s)

Air Quality Impacts

Surface Stabilisation

The Response to Submissions (RtS) provides evidence to justify the adopted emission reduction factors for surface watering for hauling operations and surface stabilisation. However, the additional information does not include:

- *Detailed information regarding the proposed approach to ensure that the revegetation/land stabilisation targets (as assumed in the AQIA) will be met*
- *Specific measurable and auditable revegetation/land stabilisation targets for achieving the level of controls assumed in the AQIA*
- *Discussion on contingency measures to be implemented to ensure revegetation/land stabilisation targets are met. These strategies need to be designed and implemented to prevent and minimise the risk of dust emissions due to wind erosion as assumed in the AQIA.*

It is therefore pertinent that the proponent ensures the diligent and ongoing implementation of the proposed controls, mitigation measures and strategies as assumed in the AQIA which includes surface stabilisation through rehabilitation and revegetation activities. The proponent's commitment to the diligent implementation of proactive and reactive management strategies should be reflected in an Air Quality Management Plan.

The EPA advises that failing to achieve in practice the assumed levels of control, including but not limited to surface watering and surface stabilisation, will increase the risk of adverse air quality impacts due to wind erosion form the proposed operations.

Response

At the outset, it important to note that the total emission outcomes are not sensitive to the control efficiencies applied for rehabilitated areas. Further explanation on this is provided in Section 5.5.7 of the *Submissions Report*. Therefore, the progress of rehabilitation is considered a low risk to air quality outcomes. Notwithstanding, it is recognised that appropriate implementation of all management controls is important in achieving best practice air quality management.

In relation to the proposed approach to ensure that revegetation/land stabilisation targets are met, as explained in the *Submissions Report*, prior to commencement of operations, a Rehabilitation Management Plan and Forward Plan would be prepared. These documents would be a requirement of any mining lease issued for the Mine and would need to be prepared in accordance with the NSW Resources Regulator's guideline documents. These documents specify both the

progression of rehabilitation (consistent with the EIS and in 3 yearly projections) and performance indicators / completion criteria against which the success of rehabilitation is to be measured. Furthermore, progress must be reported annually as part of an Annual Rehabilitation Report. These indicators / completion criteria are specific and measurable and require approval by the NSW Resources Regulator.

The required rehabilitation works must also be costed through a Rehabilitation Cost Estimate and this cost secured through a bank guarantee in favour of the NSW Government. As such, there can be high confidence that progressive rehabilitation would be undertaken and completed to the required standard.

Given the existing highly regulated and documented process for rehabilitation planning, monitoring and reporting, the inclusion of "*specific and measurable revegetation and land stabilisation targets*" and development of "*specific evaluation and reporting mechanisms*" as part of the Air Quality Management Plan, as specified in point v) of the EPA's recommended condition of consent, is not considered appropriate. In RWC's experience, inclusion of the same information in multiple documents can lead to inconsistencies and misunderstandings.

5.9 DEPARTMENT OF PLANNING INDUSTRY AND ENVIRONMENT.

The following query was provided by DPIE via email on 24 August 2021.

Comment(s)

Can you confirm whether the traffic numbers in Table 5.19 of the Submissions Report represent one way movements?

Also, it's also not clear how the vehicles numbers referenced in the second paragraph of the response to the EPA submission on page 232 relate to Table 5.19. The report refers to "peak hourly traffic". Table 5.19 doesn't provide the peak traffic, just the day and night totals. I note that the total night time count for light vehicles is 31 in the table, but page 232 makes reference to a "peak" of 34 at night. (And heavy vehicle peak is apparently 5, while the total over the whole night is 8, suggesting not many other movements outside of some unspecified peak time).

Response

The numbers are road traffic pass-bys (in any direction) – that is, one way movements.

Incorrect traffic volumes for the relocated Maloneys Road including additional traffic arising from the construction and relocation of the 500kV power transmission line were used in the Noise and Vibration Assessment (SLR, 2020). The corrected and updated road traffic numbers presented in **Table 5.1** below show road traffic volumes inclusive of the 500kV power transmission line construction-related traffic. For clarity, peak hourly traffic flows on the relocated Maloneys Road have also been included. Note that base plus project traffic is equal to total traffic flows for the assessed period.

Table 5.1
Submissions Report Table 5.19 (Amended) - Projected Base, Project-related and Total Road Traffic Flows

Road and Representative Receiver Locations	Time Period[1]	Base Traffic Flows		Project Traffic Flows		Total Traffic Flows	
		Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles	Light Vehicles	Heavy Vehicles
Scenario 2 (Year 3)[3] inclusive of 500kV power transmission line re-alignment works vehicles							
Lue Road - West of Pyangle Road, East of relocated Maloneys Road Receivers: L10, LPOI3, R90, R94	Daytime	784	40	68	11	852	51
	Night-time	80	5	20	3	100	8
	Daytime - Peak Hour (12:00pm-1:00pm)[1]	52	3	0	2	52	5
Lue Road - East of Pyangle Road Receivers: R40, R39	Daytime	644	37	28	11	672	48
	Night-time	61	5	20	3	81	8
Lue Road West of relocated Maloneys Road Receivers: R92B	Daytime	693	88	85	32	778	120
	Night-time	71	10	31	6	102	16
Relocated Maloneys Road Receivers: R88	Daytime	71	18	113	43	184	61
	Daytime Peak Hour (6pm-7pm)	3	0	57	11	60	11
	Night-time	8	2	51	9	59	11
	Night-time Peak Hour (6am-7am)	6	0	34	5	40	5

Daytime 7:00am to 10:00pm, Night-time 10:00pm to 7:00am.

Note 1: Base traffic flow coinciding with peak hourly project-related traffic movements during school hours.

Note 2: Base traffic flow coinciding with peak hourly project-related traffic movements.

Note 3: Assumes projected baseline traffic growth at 2024.

Corrected Traffic Flows | Peak Hourly Traffic Flows added

The recalculated $L_{Aeq(15hour)}$ and $L_{Aeq(9hour)}$ noise levels reflecting the corrected traffic levels are presented in **Table 5.2**.

From **Table 5.2**, it is established that the noise levels at LPOI3 (Lue Public School) increase by a marginal amount however the conclusions of the NIA remain the same that is: an increase of less than 2dB(A) represents a minor impact that is considered barely perceptible and investigation of noise mitigation measures is not warranted in accordance with the policy.

Table 5.2
Table 5.20 (Amended) - Traffic Noise Levels Operational Scenario 2 (Year 3) (dB(A) re 20 µPa)

Residence ID/Place of Interest[1]	Period and Descriptor	Base Traffic Noise Level	Total Traffic Noise Level	Project-related Traffic Noise Level Increase	Assessment Criteria
Lue Road					
L10	Day - LAeq(15hour)	57	57	0.6	60
	Night - LAeq(9hour)	49	51	1.7	55
R90	Day - LAeq(15hour)	51	51	0.6	60
	Night - LAeq(9hour)	43	45	1.4	55
R92B	Day - LAeq(15hour)	55	56	1.0	60
	Night - LAeq(9hour)	48	49	1.8	55
R94	Day - LAeq(15hour)	52	53	0.6	60
	Night - LAeq(9hour)	45	46	1.4	55
R40	Day - LAeq(15hour)	55	55	0.5	60
	Night - LAeq(9hour)	47	49	1.6	55
LPOI3 Lue Public School	Day - LAeq(1hour) (when in use)	52	53	1.3	50
Relocated Maloneys Road					
R88	Day - LAeq(15hour)	43[2]	45	1.9	55
	Night - LAeq(9hour)	36[2]	39	3.2	50

Note 1: See Land Ownership and Surrounding Residences (**Annexure 4**) and Land Ownership Details (**Annexure 5**).
Note 2: Existing road traffic noise prior to opening of Relocated Maloneys Road.
Note 3: Traffic noise level complies with relevant daytime and night-time assessment criteria (**NIA Table 57**)
Note 4: Traffic noise level marginal exceedance of 1 to 2dB(A) above the relevant daytime and night-time assessment criteria (**NIA Table 57**).
Note 5: Traffic noise level moderate exceedance of 3 to 5dB(A) above the relevant daytime and night-time assessment criteria (**NIA Table 57**).

Amended Noise Levels

In response to the EPA's request to address traffic noise over 1 hour, SLR has adopted the peak hourly traffic flows on the relocated Maloneys Road of 60 light vehicles and 11 heavy vehicles during the daytime (6pm-7pm) and 40 light vehicles and five (5) heavy vehicles during the night-time (6am-7am), as follows.

- The predicted peak hour noise levels from the relocated Maloneys Road are daytime $L_{Aeq(1hour)}$ 46 dB(A) and night-time $L_{Aeq(1hour)}$ 43 dB(A). This is compliant with the relevant hourly traffic noise criteria of daytime LAeq(1hour) 55 dB(A) and night-time $L_{Aeq(1hour)}$ 50 dB(A) respectively (applicable to existing residences affected by new local roads in accordance with the RNP). As R88 is the nearest residence to the relocated Maloneys Road, compliance would also be achieved at all receivers.
- During the night-time period, a total of nine project related heavy vehicles movements are proposed to occur on the relocated Maloneys Road. Five of these movements occur during the peak 6:00am to 7:00am period and the remaining four are predicted to occur during the 5:00am to 6:00am period. It is understood that these heavy vehicle movements would be workforce buses and not trucks.

6. RESPONSE TO PUBLIC COMMENTS ON SUBMISSIONS REPORT

6.1 PLANNING MATTERS

Representative Comment(s)

Within its Submission dated 27 July 2020 to SSD 5765, LAG identified numerous technical deficiencies within the Bowdens application as detailed below:

1. Acceptability of the application for SSD under the Environmental Planning & Assessment Act 1979.

- *Failure to demonstrate a legally permissible methodology for supplying water to support its operations.*
- *Failure to address water pollution to surface and groundwaters from the Tailing Storage Facility.*
- *Failure to assess surface water impacts of the proposed water supply pipeline.*
- *Failure to assess the impacts of both the powerline re-alignment and powerline supply for the Project.*
- *Failure to assess the impacts to the Koala population from the Project in accordance with the Koala Recovery Plan.*

Lue Action Group (Submission SE-26501897)

Response

Each point presented by Lue Action Group regarding perceived technical deficiencies within the Bowdens application is addressed in the following subsections.

Failure to demonstrate a legally permissible methodology for supplying water to support its operations.

As identified in Section 5.31.2 of the *Submissions Report*, Bowdens Silver has secured water licence entitlements that account for peak groundwater take during mining operations. In addition to its basic landholder (harvestable) rights entitlement of 180.6ML, Bowdens Silver holds the following volumetric entitlements under water access licences.

- 194ML from the Sydney Basin Murray Darling Basin Groundwater Source that is managed under the Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources Order, 2020.
- 1 480ML from the Lachlan Fold Belt Murray Darling Basin Groundwater Source - (Other) Management Zone Source that is managed under the Water Sharing Plan for the NSW Murray Darling Basin Fractured Rock Groundwater Sources Order, 2020.
- 137ML from the Lawsons Creek Water Source - (Other) Management Zone that is managed under the Water Sharing Plan for the Macquarie Bogan Unregulated and Alluvial Water Source 2012.

Bowdens Silver has also been notified of the successful purchase of an additional 200ML groundwater use entitlements within the Sydney Basin Groundwater Source of the *Water Sharing Plan for the NSW Murray Darling Basin Porous Rock Groundwater Sources Order 2020.*

Bowdens Silver has also acquired the necessary Water Access Licences (WALs) accounting for the requisite entitlement to the applicable management zone within the Lawsons Creek water source. The WALs were acquired via water trading (purchase) from the existing pool of WALs and Bowdens Silver is not required to consult or discuss WAL acquisition with any parties other than the vendor and NSW regulatory agencies.

Bowdens Silver has secured a total of 139 units of entitlement within the Lawsons Creek water source under the following licences.

- WAL 42206 – 72 units
- WAL 43473 – 67 units

These entitlements generally account for the predicted peak requirements that are not concurrent and with most occurring towards the end of mining operations.

Notwithstanding the minor shortfall (<3% of total requirements), when coupled with a 180.6ML basic landholder (harvestable) rights entitlement and additional WALs acquired by Bowdens Silver, the Project holds more entitlements than are required to account for its development. These entitlements are not dissimilar to those held by other landholders to access water from these water sources. It should be reiterated that Bowdens Silver would not take water directly (i.e. via pump) from Lawsons Creek but the required entitlement would account for water that would normally have entered Lawsons Creek from the Mine Site.

Bowdens Silver confirms that it has demonstrated a legally permissible methodology for supplying water to support Project operations.

Failure to address water pollution to surface and groundwaters from the Tailing Storage Facility.

As identified in Section 5.25.2 of the *Submissions Report*, it is important to note that the process of TSF design is principally guided by the assessment of risks to human life, property and the environment. This process identifies the minimum design criteria that are commensurate with the risk. These criteria then establish the nature, extent, and management of TSF design elements that would be constructed to reduce or eliminate risks.

Notwithstanding, Bowdens Silver has committed to preparation and implementation of a dam safety management system during all aspects of the TSF lifecycle, including design, construction, and operation in accordance with the NSW *Dams Safety Regulation 2019*. The dam safety management system would be provided to Dams Safety NSW, an independent regulatory agency with enforcement powers under the NSW *Dams Safety Act 2015*, and would:

- describe the processes and procedures associated with the risk framework for the dam;
- include procedures identifying Bowdens Silver's responsibilities and accountabilities for hazard identification, risk analysis, risk evaluation and risk treatment processes; and

- include a description of the risk management framework and how often hazard identification, risk analysis, risk evaluation and risk treatment processes are carried out.

In addition, Section 5.25.5 of the *Submissions Report* notes that approximately 25% of the moisture entrained within the tailings stream would be released soon after deposition within the TSF. This means that approximately 1.05ML/day would report to the TSF decant pond whilst the remaining 3.18ML/day would be retained within interstitial pores although some would be subsequently lost to evaporation. Bowdens Silver has also added a paste thickener to the processing circuit. This infrastructure reduces Project-related make-up water demand by reclaiming process water from the tailings slurry prior to deposition in the TSF. This would increase the solids concentration in deposited tailings, effectively removing all tailings bleed water. As noted in Section 16 of the TSF preliminary design (ATC Williams, 2020), the progression of tailings deposition would increase the dry density of deposited tailings with depth. This consolidation would reduce the tailings void ratio (permeability) and thus the capacity of tailings to retain interstitial water.

It is noted that responses to submissions relating to potential impacts of the TSF on groundwater resources, including seepage, are addressed in Section 5.11 of the *Submissions Report*. Notwithstanding, additional TSF design elements were assessed by Jacobs at the request of Bowdens Silver to further reduce potential groundwater impacts in recognition of advice from Government agencies and submissions received from the community. A summary of this assessment is provided in Section 3.3 of the *Submissions Report* whilst full details are provided in Section 6.5 and Annexure 10 of the *Updated Groundwater Assessment* included as Appendix 4 of the *Water Supply Amendment Report* (Jacobs, 2022).

Considering the above, Bowdens Silver contends that it has adequately addressed the potential impacts to surface water and groundwater from the TSF.

Failure to assess surface water impacts of the proposed water supply pipeline.

The proposed water supply pipeline has been removed from the Project and is the subject of an *Amendment Report* submitted concurrently with this document.

Failure to assess the impacts of both the powerline re-alignment and powerline supply for the Project.

The *Amendment Report* was prepared specifically to assess the impacts of the proposed re-alignment of the 500kV power transmission line. The proposed power supply to the Project would be sought through an approval under Part 5 of the EP&A Act. The assessment of potential impacts associated with the intended power supply would be assessed for that application. This approach is consistent with most power supply arrangements particularly for mining projects in NSW.

Failure to assess the impacts to the Koala population from the Project in accordance with the Koala Recovery Plan.

As discussed in Section 5.26.8 in the *Submissions Report* and Annexure 6 of the BAR, the overall objectives of the NSW Koala Recovery Plan are to:

- reverse the decline of Koalas in NSW;
- ensure adequate protection, management and restoration of Koala habitat; and

- maintain healthy breeding populations of Koala throughout their current range (DECC, 2008).

Bowdens Silver acknowledges that the Project would be in conflict with the second objective by removing habitat that is suitable for Koalas, however, it would also provide protection of the same vegetation types within and surrounding the Mine Site as part of the on-site biodiversity offset. Furthermore, higher quality habitats where clusters of Koala records occur to the north and east of the Mine Site would remain unaffected by the Project. As such, it is considered that the Project would not inhibit the achievement of the first and third objectives. In addition, the overall impacts upon Koalas have been assessed as part of the BAR and it has been determined that there would not be a significant impact upon Koalas.

Considering the above, Bowdens Silver contends that the impacts to the local Koala population have been assessed in accordance with the Koala Recovery Plan.

Representative Comment(s)

Within its Submission dated 27 July 2020 to SSD 5765, LAG identified numerous technical deficiencies within the Bowdens application as detailed below:

2. Unacceptable Health Impacts

- *The assessment of Health-Related Impacts from lead and other sources does not reflect the high in situ levels of lead in the ore body and inherently high bio-accessibility rates for the lead.*
- *The proximity of the proposed operations to residential areas (including but not limited to the Lue village which is located 1.9km from the proposed mining operations).*

Lue Action Group (Submission SE-26501897)

Response

Both points presented by Lue Action Group regarding perceived "unacceptable health impacts" are addressed in subsections as follows.

In situ levels of lead in the ore body and bio-accessibility rates

As identified in Section 5.15.1 of the *Submissions Report*, Bowdens Silver has spent considerable time and resources educating and informing the local community regarding the risks associated with lead exposure associated with the Project. This included commissioning a detailed assessment of metal concentrations in particulate matter as part of the *Air Quality Assessment* (AQA) and then further commissioning a *Human Health Risk Assessment* (HHRA) that considered lead exposure pathways amongst other health risks.

Potential health impacts of lead were addressed as part of the HHRA. An updated HHRA is included as Appendix 7 in the *Submissions Report* and was prepared to clarify and expand on matters presented in the original assessment. The updated HHRA also includes a sensitivity calculation for the adoption of lower background lead concentrations as suggested in the review undertaken for the Lue Action Group. Importantly, none of the outcomes of the HHRA have changed, with the HHRA concluding that impacts derived from the Project would make a

negligible contribution to overall exposures to the assessed metals including lead. Importantly, the detailed technical assessment concluded that there would be no health risk issues relevant to the Project for any members of the community, including children and sensitive individuals.

Bio-accessibility is addressed in Section 5.15.4 of the *Submissions Report.* In summary, the HHRA used site-specific data for lead and consequently, and as detailed in Section 5.5.5 of the *Submissions Report*, the differing concentrations of lead and other metals in soils, waste rock and ore were used to calculate the total received metal content at surrounding receivers.

Considering the above, Bowdens Silver contends that the HHRA risk calculations have accounted for the higher lead concentrations in the ore (and waste rock) and bio-accessibility.

Proximity of proposed operations to residential areas

As noted above, a comprehensive HHRA was undertaken that considered potential impacts on community health in relation to the predicted / assessed changes in air quality, water (both surface water and groundwater) and noise, which was updated to clarify and expand on matters presented in the EIS.

In summary, the HHRA concludes the following.

- Radioactive components of minerals would not be liberated by the proposed operations to interact within the environment.
- Where applicable, the assessments have considered cumulative impacts with relevant criteria and guidelines. The use of conservatively high baseline metal concentrations (as suggested within some submissions included in the *Submissions Report*) effectively results in a more conservative assessment with less 'buffer' remaining for any incremental increase to remain within the acceptable cumulative risk.
- The predicted concentrations for both respirable crystalline silica and cyanide are significantly below the respective health guidelines, with the HHRA concluding that there are no health risk issues in relation to community exposures.
- Both positive and negative mental health outcomes have been identified in submissions. Management measures are proposed to ensure that the community is accurately informed of Project progress and availability of support for health services that would be provided through Bowdens Silver's Community Investment Program.
- It has been reaffirmed that an extensive range of monitoring is proposed and would commence at the beginning of operations to demonstrate compliance with the relevant criteria and guidelines.

Considering the above, Bowdens Silver contends that the Project presents no health risk issues to the local community and that the proximity to the village of Lue should not be considered an unacceptable health impact.

6.2 COMPARISON WITH KANDOS CEMENT

6.2.1 General

Representative Comment(s)

You only need to look at nearby Kandos to understand this, how a once booming cement factory which generated many jobs for a brief period of time has now resulted in a desolate, quite (sic) *town whose environment has undergone longlasting impact. Do not allow Lue to fall into this same trap, please save this precious part of the Australia from the devastation that will ensue if Bowden's silver mine is approved.*

Name Withheld of Lindfield, NSW (Submission SE-26271733)

Response

As noted in Section 4.11 of the *Submissions Report*, the impacts of the Project on the ongoing viability and social capital of Lue, Rylstone and Kandos are likely to be substantial, particularly given the comparatively small size of these population centres, i.e. compared with Mudgee. Bowdens Silver has been extremely aware of the depressed nature of the retail and services sector in these townships over the past 4 years as it has progressively developed the Project and is committed to the ongoing support of these townships. Bowdens Silver is committed to implementing a local procurement and employment strategy that would help drive business within these small towns, both during and after the life of the Project.

Bowdens Silver has also sponsored and supported a large range of community groups, education providers and events in the Lue, Rylstone and Kandos areas. This type of support would continue if the Project is approved. Stakeholders that are involved in these initiatives have stressed the importance of support from large employers/projects like Bowdens Silver in being able to run or improve community events, services and infrastructure. Some would not exist without long-term external support, therefore denying the community social and community opportunities.

It is of note that 25 submissions from organisations and individuals included in the *Submissions Report* were supportive of the Project and referenced "keeping Rylstone, Lue and Kandos alive" as the reason for their support.

6.3 BOWDENS SILVER

6.3.1 General

Representative Comment(s)

A Mid Western Council Meeting scheduled for 4TH August 2021 has stated under the heading

Confidential Session the following item for discussion:

Bowdens Silver Voluntary Planning Agreement

Whatever the secret discussion is about the question is. Are there any Council Member present who have a fiduciary interest in Bowdens?

This is a question for the ICAC and should be treated as a matter of urgency!

Name Withheld of Camboon, NSW (Submission SE-25061741)

Response

Section 4.20.5 of the EIS notes that Planning Agreements are agreements entered into between a developer and the Minister for Planning or Council to provide either monetary contributions to or the physical provision of public amenity and public services, transport or other infrastructure. While the above comment refers to a Council meeting (not involving Bowdens Silver), a meeting between Bowdens Silver and MWRC was held on 4 November 2021 and involved discussions regarding a Planning Agreement between Bowdens Silver and MWRC to provide monetary or in-kind contributions to Council. The contents of this meeting were deemed confidential due to the financially sensitive nature of these discussions. Bowdens Silver cannot confirm the nature of Council's confidential discussions. However, it is noted that the Planning Agreement for the Project has been publicly exhibited and no comments were received. It is considered that this agreement would provide substantial local benefits through payments to MWRC.

As noted in Section 5.8.5 of the *Submissions Report*, Bowdens Silver does employ a staff member who is also a Councillor with MWRC. The role of all Councillors requires stringent regulations and actions around participation in Council matters and the declaration of interests. This indeed applies fully to this Councillor in terms of matters relating to the Bowdens Silver Project.

It is to be reiterated that MWRC is not the consent authority for the Project and therefore the input of a single Councillor on assessment matters and Project outcomes is negligible. Responsibility for decisions relating to the grant of development consent for the Project rests with the Independent Planning Commission with assessment and recommendations provided by the NSW Department of Planning, Industry and Environment.

6.3.2 Social

Representative Comment(s)

I'm sure Bowdens will try to discredit my concerns and objections as they have done in the past, however these concerns are valid. I have owned Wyuna for 24 years and I feel qualified to comment on how disastrous this will be for myself, my family and our community.

Phillip Cameron of St Ives, NSW (Submission SE-26269242)

Response

Concerns regarding the viability and survival of Lue, changes to population and the community cohesion and culture are all addressed in Section 5.23.3 of the *Submissions Report* and in the *Social Impact Assessment* for the Project (Umwelt, 2020).

In summary, in order to address the issues raised by the community relating to the perceived impacts on sense of community and sense of place, Bowdens Silver has committed to expand the existing Community Investment Program following an approval with a focus on Lue and other key communities in the Mid-Western Regional LGA (refer to Table 7.36 of the SIA). As discussed in Section 8 of the SIA, a key objective of the Community Investment Program would be to maintain sense of community, through enhancing Lue and its key community assets, including the Lue Public School and heritage buildings. This strategy attempts to incorporate some of the enhancement measures identified by the community through the SIA engagement program.

In addition, Bowdens Silver proposes to:

- lease back Bowdens Silver-owned properties to the community, where possible, and has already been doing this successfully for a number of years;
- implement a range of mitigation measures under the Property Mitigation Program; and
- develop and implement a Social Impact Management Plan for the ongoing monitoring and management of social impacts.

The SIA has demonstrated an understanding of the nature of the communities in which the Project is located and has identified potential impacts of the Project on sense of community, cohesion, character, and sense of place (refer to Section 7.4.2 of the SIA). The existing Community Investment Program would be expanded during mine development and would provide opportunities to work with local community members to identify projects which may assist in facilitating a stronger sense of community throughout the life of the Project and beyond.

The expectations of Mr Cameron and other community members are well known to Bowdens Silver through its comprehensive consultation program. However, it is anticipated that the environmental outcomes of the Project would not be as predicted by Mr Cameron and some others in the community, but more closely reflect the outcomes of technical assessment. In fact, it is considered that rather than being "disastrous", the Project will revitalise and enhance opportunities for the permanent residents of Lue and surrounding communities.

6.4 WATER PIPELINE

6.4.1 General

Representative Comment(s)

The proposed water pipeline from the Ulan coalfields to the project should be fully assessed. This structure should have been included in the project from the beginning. I am concerned and confused that an amendment for the realignment of the powerline has been permitted, but impacts from the 58.5km pipeline have still not been fully investigated and reported. See my prior Submission of Objection.

Rosemary Hadaway of Budgee Budgee, NSW (Submission SE-25589214)

Response

As noted in Section 6.1 of this document, the proposed water supply pipeline has been removed from the Project and is the subject of an *Amendment Report* submitted concurrently with this document.

7. EVALUATION OF THE PROJECT

This section provides an update to the evaluation of the merits of the Project presented in Section 6 of the EIS, Section 7 of the *Submissions Report* and Section 7 of the *Amendment Report*. It takes into account amendments made to the Project and refinements to management and mitigation that have been made in response to the submissions received from Government agencies, organisations and the public. As the majority of assessment outcomes have not changed as a result of the review of submissions, this section presents the relevant updates to the merits of the Project. That is, this section does not replicate or supersede the evaluation of merits presented in Section 6 of the EIS, Section 7 of the *Submissions Report* and Section 7 of the *Amendment Report*, except where it discusses the amended outcomes of assessment. A final review of the public interest is provided in conclusion to the document.

7.1 AMENDMENTS AND REFINEMENTS TO THE PROJECT

As identified in Section 3.2, a new proposed alignment for the 500kV power transmission line with a lower overall visual impact has been developed in response to community feedback, and Bowdens Silver contends the extent of the visual impact as assessed in the EIS remains valid, has not been underestimated and that the character and quality of the visual landscape in the village of Lue would not significantly change as a result of the proposed re-location.

In addition, as noted in Section 6.1, the proposed water supply pipeline has been removed from the Project and is the subject of the *Water Supply Amendment Report* submitted concurrently with this document.

7.2 UPDATED CONTEXT FOR THE PROJECT

7.2.1 Statutory Context

A thorough analysis of the statutory context for the Project was presented in Section 3.2.3 of the EIS and Section 3 of the *Amendment Report*. This remains largely unchanged as described further in Section 7.3.1 of the Submissions Report. The outcomes of this document also do not change the statutory context of the Project.

Clause 55AA of the *Environmental Planning and Regulation 2000* explicitly permits the amendment of development applications prior to determination as long as the requirements of Clause 55AA(2) are satisfied. This is the case for both amendments to the Project.

7.2.2 Strategic Context

The strategic context of the Project remains an important component of its merits. This relates to the geological setting of the Mine Site, the economic context for the commodities that would be mined and the social context for the development and operation of the Project.

7.3 UPDATED JUSTIFICATION OF THE PROJECT

7.3.1 Health Considerations

The outcomes of the updated HHRA remain consistent with those originally presented in the EIS, *Submissions Report* and *Amendment Report*, that is, the Project presents no health risk issues to the local community.

7.3.2 Social and Economic Considerations

Some members within the community remain concerned about potential social and economic impacts associated with the Project. Matters relating to the social implications of the Project have been clarified in this document and it is acknowledged that the changes to the visibility of the 500kV power transmission line and towers would make this infrastructure more visible for some residents, especially those located to the west of the Proposed Alignment. However, the character and quality of the visual landscape for private properties would not significantly change. Further to this, Bowdens Silver has mitigated visual impacts by proposing an alternative alignment that moves the structures closer to the proposed mining activities than was originally planned

The review of submissions concerning the 500kV power transmission line does not warrant a change to any of the social risk classifications for the Project and no new social impact mitigation is considered necessary. The outcomes of additional visual impact assessment conclude that the Overall, Bowdens Silver is confident that the outcomes of the SIA continue to reflect community expectations and the potential social impact risks for the Project.

The proposed re-alignment to the 500kV power transmission line does not change the outcomes of the economic assessment for the Project.

7.3.3 Biophysical Considerations

A detailed summary of the biophysical outcomes of assessment for the Project were presented in Section 6 of the EIS, Section 7.4.3 of the *Submissions Report* and Section 6 of the *Amendment Report*. There have been no changes to the outcomes of technical assessments as a result of review of the Government agency, organisational and public submissions received following public exhibition of the *Amendment Report*.

Additional clarification has been provided in relation to management of transport activities as requested by TfNSW, however these matters do not change the outcomes of assessment of potential road transport risks. No other additional management or mitigation measures relating to biophysical considerations are proposed

An update to the outcomes of the *Biodiversity Assessment Report* as a result of the recommendations received from the Biodiversity Conservation and Sciences Directorate is presented in an update to the *Biodiversity Assessment Report* that is presented as Appendix 5 of the *Water Supply Amendment Report*. The outcomes of updated assessment are discussed in detail in the *Water Supply Amendment Report.*

7.4 THE CONSEQUENCES OF NOT PROCEEDING WITH THE PROJECT

The consequences of not proceeding with the Project relate directly to the strategic context for the development. These remain largely unchanged since the exhibition of the EIS and are presented in detail in Section 6.3 of the EIS and Section 7.5 of the *Submissions Report*.

7.5 THE PUBLIC INTEREST

In relation to the proposed re-alignment of the 500kV power transmission line, it is acknowledged that this component of the Project would result in a change in visual outlook for some residents of Lue. However, it is not agreed that this change would be visible from all properties in Lue as expected by some members of the community. Review of the visual aspects of the re-aligned line has concluded that overall, the character and quality of the visual landscape would not significantly change. Power transmission towers and other power-related infrastructure are a common feature of the regional landscape. Regardless, Bowdens Silver has mitigated visual impacts by proposing an alternative alignment that moves the structures closer to the proposed mining activities than was originally planned. This alignment also permits a minor reduction to the vegetation clearing requirements of this component of the Project.

The proposed re-alignment may also be considered in light of the intended purpose, that is, to provide access to a strategically significant resource. This in turn would enable the efficient development of a mine that would provide substantial royalties to the NSW Government and would support and enhance local employment and business for the life of the Project and most likely beyond. The benefits of the Project are clearly demonstrated in the support that has been provided from many groups in the past. This in turn supports the re-alignment of the 500kV power transmission line as a component of the Project.

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Appendices

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Appendix 1

Register of Submitters

Table A1-1: Organisations Opposing the Project
Table A1-2: Individuals Opposing the Project

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Table A1-1
Organisations Opposing the Project

Submission ID	Organisation Name	Suburb	State	Postcode	Aboriginal Heritage	Aircraft	Air Quality	Alignment / Pole Location	Biodiversity	Consultation	Dust	Electric and Magnetic Fields	Need for Amendment	Noise	Tourism	Traffic	Visual
				Section Reference(s)	**4.4.2**	**4.5.3**	**4.4.4**	**4.2**	**4.4.3**	**4.7**	**4.4.4**	**4.5.3**	**4.3**	**4.4.4**	**4.5.8**	**4.4.6**	**4.6**
				Total - Organisations Opposing the Project	**7**	**0**	**2**	**3**	**7**	**1**	**1**	**2**	**5**	**2**	**1**	**1**	**5**
SE-25447594	Dubbo Environment Group	Dubbo	NSW	2830													
SE-25531415	Healthy Rivers Dubbo	Dubbo	NSW	2830	X				X				X				
SE-26055615	Mudgee District Environment Group	Budgee Budgee	NSW	2850	X				X				X				X
SE-26145656	Wollar Progress Association	Wollar	NSW	2850	X			X	X			X					X
SE-26181471	Bathurst Community Climate Action Network	Llanarth	NSW	2795													
SE-26204612	Wellington Valley Wiradjuri Aboriginal Corporation	Orange	NSW	2800	X				X								
SE-26209253	Rylstone District Environment Society Inc.	Rylstone	NSW	2849	X		X		X				X	X		X	X
SE-26211713	Gallanggabang Aboriginal Corporation	Orange	NSW	2800	X				X								
SE-26221484	Inland Rivers Network	Pyrmont	NSW	2009				X									
SE-26227343	Central West Environment Council	Summer Hill Ck	NSW	2800								X	X				X
SE-26235217	Running Stream Water Uses Association	Running Stream	NSW	2850	X		X	X	X				X	X	X		X
SE-26272224	ACN 059 643 533 Pty Ltd	Lue	NSW	2850													
SE-26501897	Lue Action Group	Mudgee	NSW	2850	X					X	X			X			X

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Table A1-2
Individuals Opposing the Project

Submission ID	First Name	Last Name	Suburb	State	Postcode	Aboriginal Heritage	Aircraft	Air Quality	Alignment / Pole Location	Biodiversity	Bowdens Silver	Construction Impacts	Consultation	Dust	Electric and Magnetic Fields	Erosion and Sediment Control	Health	Heritage	Need for Amendment	Noise	Operational Impacts	Proximity	Rehabilitation	Social	Telecommunication	Tourism	Traffic	Visual	Water Pipeline	Matters Not Relevant to 500kV Powerline
Section Reference(s)						**4.4.2**	**4.5.3**	**4.4.4**	**4.2**	**4.4.3**	**6.3.1**	**4.4**	**4.7**	**4.4.4**	**4.5.4**	**4.5.7**	**4.5.3**	**4.4.2**	**4.3**	**4.4.4**	**4.5**	**4.5.3**	**4.5.6**	**4.6**	**4.5.7**	**4.5.8**	**4.4.6**	**4.6**	**6.4.1**	
Total - Individuals Opposing the Project						**10**	**1**	**6**	**9**	**34**	**1**	**4**	**7**	**2**	**1**	**2**	**3**	**1**	**12**	**17**	**1**	**3**	**1**	**1**	**1**	**5**	**18**	**56**	**1**	**24**
SE-25061741	Name	Withheld	Camboon	NSW	2849						X																			
SE-25412369	Name	Withheld	Dubbo	NSW	2830					X								X										X		
SE-25448534	Margaret	McDonald	Dubbo	NSW	2830					X						X			X											
SE-25453309	Melissa	Gray	Dubbo	NSW	2830	X				X									X									X		
SE-25488501	Marie	Sitter	Blaxland	NSW	2774																									X
SE-25589214	Rosemary	Hadaway	Budgee Budgee	NSW	2850	X			X	X									X							X			X	X
SE-25643740	Charles	Combes	Lue	NSW	2850																							X		
SE-25647211	Elodie	Delwaide	Lue	NSW	2850																							X		
SE-25719297	Carolyn	Barlow	Rylstone	NSW	2849																							X		
SE-25770808	Yvonne	Butler	Lue	NSW	2850																							X		
SE-25792533	Name	Withheld	Narromine	NSW	2821														X									X		
SE-25859961	Paul	Evans	Totnes Valley	NSW	2850				X				X						X									X		
SE-25897728	Name	Withheld	Lue	NSW	2850					X										X							X	X		
SE-25942258	Jamie	Inglis	Havilah	NSW	2850																							X		
SE-25950881	Haydn	Washington	Rylstone	NSW	2849																									
SE-25972237	Joan	Goldsmith	Maroochydore	QLD	4558										X															
SE-26007120	Name	Withheld	Lue	NSW	2850					X										X		X								
SE-26069245	Lyn	Coombe	Lue	NSW	2850	X			X	X			X															X		
SE-26109828	Sarah	Inglis	Havilah	NSW	2850	X			X	X		X				X														
SE-26140744	Name	Withheld	Clandulla	NSW	2848	X			X	X			X						X									X		
SE-26140879	Maureen	Boller	Lue	NSW	2850														X											
SE-26143772	Margaret	Bryant	Cooks Gap	NSW	2850																									X
SE-26145239	Name	Withheld	Eurunderee	NSW	2850															X						X		X		
SE-26145622	Name	Withheld	Dulwich Hill	NSW	2203					X																		X		
SE-26145867	Sonia	Christie	Monivae	NSW	2850															X								X		
SE-26145905	Barbara	Beard	Springwood	NSW	2777																							X		
SE-26145931	Mick	Boller	Pyangle	NSW	2849														X											
SE-26147511	Name	Withheld	Glenbrook	NSW	2773					X																		X		
SE-26151961	Bruce	Christie	Monivae	NSW	2850					X																		X		
SE-26159764	Robert	Bleach	Breakfast Creek	NSW	2849																							X		
SE-26175995	Richard	Rains	Whale Beach	NSW	2107																									X
SE-26176250	Name	Withheld	Dubbo	NSW	2830					X																				

Table A1-2 (Cont'd)
Individuals Opposing the Project

Submission ID	First Name	Last Name	Suburb	State	Postcode	Aboriginal Heritage	Aircraft	Air Quality	Alignment / Pole Location	Biodiversity	Bowdens Silver	Construction Impacts	Consultation	Dust	Electric and Magnetic Fields	Erosion and Sediment Control	Health	Heritage	Need for Amendment	Noise	Operational Impacts	Proximity	Rehabilitation	Social	Telecommunication	Tourism	Traffic	Visual	Water Pipeline	Matters Not Relevant to 500kV Powerline
					Section Reference(s)	4.4.2	4.5.3	4.4.4	4.2	4.4.3	6.3.1	4.4	4.7	4.4.4	4.5.4	4.5.7	4.5.3	4.4.2	4.3	4.4.4	4.5	4.5.3	4.5.6	4.6	4.5.7	4.5.8	4.4.6	4.6	6.4.1	
SE-26176260	Name	Withheld	Havilah	NSW	2850																							X		
SE-26176584	Judy	Smith	Blaxland	NSW	2774					X																				
SE-26176986	Name	Withheld	Monivae	NSW	2850																							X		
SE-26177000	Name	Withheld	Condobolin	NSW	2877												X											X		
SE-26177715	Dean	Knott	Lue	NSW	2850																							X		
SE-26177734	Name	Withheld	Queanbeyan West	NSW	2620					X																		X		
SE-26178215	Luciana	Smink	Breakfast Creek	NSW	2849					X																	X			
SE-26178739	Katie	Christie	Queanbeyan West	NSW	2620																							X		
SE-26181720	Name	Withheld	Lue	NSW	2850				X			X								X			X				X	X		
SE-26182345	Name	Withheld	Bellevue Hill	NSW	2023																						X	X		
SE-26194719	Name	Withheld	Pyangle	NSW	2849					X				X						X							X			
SE-26205498	Bradley	Bliss	Orange	NSW	2800	X																								
SE-26226356	Hilary	Crawford	Rylstone	NSW	2849	X				X												X						X		
SE-26227254	Beverley	Smiles	Wollar	NSW	2850				X																					
SE-26227430	Name	Withheld	Hunters Hill	NSW	2110																							X		
SE-26234083	Lee	Patsky	Lue	NSW	2850					X										X							X	X		
SE-26234154	Kerry	Ferroni	Mount Evelyn	Vic	3796																							X		
SE-26238230	Jane	Roberts	Bombira	NSW	2850															X								X		
SE-26241821	Lara	Altimira	Lue	NSW	2850					X		X																X		
SE-26243141	Name	Withheld	Stony creek	NSW	2850																							X		
SE-26243977	Juanita	Kwok	South Bathurst	NSW	2795																							X		
SE-26245629	Name	Withheld	Lue	NSW	2850														X									X		
SE-26245636	Anna	White	Stony creek	NSW	2850																							X		
SE-26249960	Name	Withheld	Havilah	NSW	2850					X																				
SE-26250029	Max	Mosher	Camboon	NSW	2849					X				X					X								X	X		
SE-26250143	Name	Withheld	Cottesloe	WA	6011																									
SE-26254222	Jayne	Bentivoglio	Monivae	NSW	2850					X																X	X	X		
SE-26255508	Tom	Combes	Lue	NSW	2850		X						X							X					X			X		
SE-26257367	Hunter	White	Havilah	NSW	2850												X											X		
SE-26258249	Name	Withheld	Gracetown	WA	6284																									
SE-26258969	Andrew	McGrath	South Bathurst	NSW	2795																									X
SE-26259228	Susan	Combes	Lue	NSW	2850			X		X			X							X							X	X		

Table A1-2 (Cont'd)
Individuals Opposing the Project

Submission ID	First Name	Last Name	Suburb	State	Postcode	Aboriginal Heritage	Aircraft	Air Quality	Alignment / Pole Location	Biodiversity	Bowdens Silver	Construction Impacts	Consultation	Dust	Electric and Magnetic Fields	Erosion and Sediment Control	Health	Heritage	Need for Amendment	Noise	Operational Impacts	Proximity	Rehabilitation	Social	Telecommunication	Tourism	Traffic	Visual	Water Pipeline	Matters Not Relevant to 500kV Powerline
Section Reference(s)						4.4.2	4.5.3	4.4.4	4.2	4.4.3	6.3.1	4.4	4.7	4.4.4	4.5.4	4.5.7	4.5.3	4.4.2	4.3	4.4.4	4.5	4.5.3	4.5.6	4.6	4.5.7	4.5.8	4.4.6	4.6	6.4.1	
SE-26259994	Matthew	Brown	Lue	NSW	2850					X										X							X			
SE-26260650	Name	Withheld	Lue	NSW	2850																									
SE-26260720	B	Wannan	Lue	NSW	2850				X			X									X	X						X		X
SE-26262252	Evan	Leitch	Kings Plains	NSW	2799					X																		X		
SE-26262360	Richard	Inglis	Havilah	NSW	2850																									X
SE-26262471	Name	Withheld	Cottesloe	WA	6011																									
SE-26263713	Name	Withheld	Lue	NSW	2850				X	X																		X		
SE-26265317	Will	Cameron	Rylstone	NSW	2849																									X
SE-26265416	Lisa	Austin	Lue	NSW	2850															X							X	X		
SE-26265426	John	McCarthy	Rylstone	NSW	2849	X				X																				
SE-26266472	Luke	Cameron	St Ives	NSW	2075																							X		
SE-26266986	Name	Withheld	Stony Creek	NSW	2850			X		X																	X	X		
SE-26269242	Phillip	Cameron	St Ives	NSW	2075					X									X					X		X		X		
SE-26270252	Name	Withheld	Petersham	NSW	2049																									X
SE-26271733	Name	Withheld	Lindfield	NSW	2070																									
SE-26272215	Margaret	Cameron	Lue	NSW	2850																									
SE-26503965	Janet	Walk	Camboon	NSW	2849												X									X		X		
SE-26517707	John	Clarke	St Fillans	NSW	2850														X											
SE-27228493	Name	Withheld	Mount Frome	NSW	2850																									
SE-27584884	Judy	Dale	Lue	NSW	2850			X												X							X	X		
SE-27585111	David	Chandler	Lue	NSW	2850	X		X		X			X							X							X	X		
SE-27585926	Danka	Smith	Monivae	NSW	2850								X							X								X		
SE-27585930	Alan	Dale	Lue	NSW	2850			X		X										X							X	X		
SE-27589722	Suzana	Chandler	Lue	NSW	2850	X		X		X										X							X	X		
SE-27638400	Sue	Pridmore	Breakfast Creek	NSW	2849					X																	X			
SE-27683035	Rex	Plummer	Rylstone	NSW	2849																							X		
SE-27593656	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27601924	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27602981	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27602991	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27679750	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27681101	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27681115	Rex	Plummer	Rylstone	NSW	2849																									X

Table A1-2 (Cont'd)
Individuals Opposing the Project

Submission ID	First Name	Last Name	Suburb	State	Postcode	Aboriginal Heritage	Aircraft	Air Quality	Alignment / Pole Location	Biodiversity	Bowdens Silver	Construction Impacts	Consultation	Dust	Electric and Magnetic Fields	Erosion and Sediment Control	Health	Heritage	Need for Amendment	Noise	Operational Impacts	Proximity	Rehabilitation	Social	Telecommunication	Tourism	Traffic	Visual	Water Pipeline	Matters Not Relevant to 500kV Powerline
Section Reference(s)						4.4.2	4.5.3	4.4.4	4.2	4.4.3	6.3.1	4.4	4.7	4.4.4	4.5.4	4.5.7	4.5.3	4.4.2	4.3	4.4.4	4.5	4.5.3	4.5.6	4.6	4.5.7	4.5.8	4.4.6	4.6	6.4.1	
SE-27681130	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27682967	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27682996	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27683025	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27683710	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27683714	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27683737	Rex	Plummer	Rylstone	NSW	2849																									X
SE-27683745	Rex	Plummer	Rylstone	NSW	2849																									X

Appendix 2

Updated Summary of Environmental Management and Monitoring Measures

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Table A2.1
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure		Timing*
1. Noise			
Minimise noise-related impacts from all mobile earthmoving equipment.	1.1	Use noise attenuated mobile equipment comprising low noise or extra quiet mobile equipment where practical.	Ongoing.
	1.2	Restrict bulldozers to operate in 1st gear when operating out of the open cut pits.	Ongoing.
	1.3	Install broadband noise “quacker” style reversing alarms on all mobile equipment.	Ongoing.
	1.4	Progressively construct the lower embankment noise barrier around the WRE and southern barrier.	Ongoing.
	1.5	Position acoustic barriers up to 8.5m high adjacent to the main open cut pit haul road and northern exit to the ROM pad.	Prior to evening mining operations.
Minimise noise-related impacts from fixed plant.	1.6	Use full or partial enclosures to attenuate noise from fixed plant where practical.	Construction stage.
	1.7	Use low noise specifications, low noise idlers, soft-flow chutes and silencers.	Ongoing.
	1.8	Install mid-high frequency noise conveyor alarms.	Construction stage.
	1.9	Position nearfield acoustic barriers around the TSF crushing/screening plant.	During TSF embankment construction stage.
Continuous delivery of waste rock of an evening and ore at night.	1.10	Optimise the evening waste rock haul route to maximise the barrier effect from the existing topography and temporary acoustic bunds within the active WRE areas.	Prior to evening mining operations.
	1.11	Optimise the night-time ore haul route to maximise the barrier effect from the existing topography and acoustic barriers adjacent to the main open cut pit haul road to the ROM pad.	Prior to night-time mining operations.
Manage noise generated by the Project to levels that are compliant with conditional noise criteria.	1.12	Schedule potentially intrusive activities in day-time and/or favourable weather conditions, where feasible.	Ongoing.
	1.13	Establish and operate a real-time noise monitoring network at key residential receivers or at intermediate locations to identify the need to modify operations or shut down plant and equipment during noise enhancing weather conditions.	Ongoing.
	1.14	Establish and maintain a continuous meteorological monitoring network for the Project-life.	Ongoing.
Proactive Liaison with potentially affected residents.	1.15	Discuss planned activities and effectiveness of noise controls with residents in close proximity to each construction site.	During site establishment and construction stage.
	1.16	Discuss with all residents/occupiers of properties at which noise levels are predicted to exceed the Project Noise Trigger Level their actual experience of the noise that is audible.	Ongoing.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure		Timing*
2. Blasting and Vibration			
Proactively record baseline conditions for ongoing assessment of structural change impacts (where they are suspected to occur).	2.1	Commission structural surveys of all privately-owned residences within 2km of all open cut pits (subject to the agreement of the landowner and/or occupier).	Prior to the first blast (where agreement of the landowner and/or occupier has been provided).
Compliance with blasting criteria at all privately-owned residences / receivers.	2.2	Design all blasts within the Mine Area to meet airblast overpressure and ground vibration criteria at all privately-owned residences / receivers without VLAMP agreements.	All blasts.
	2.3	Provide notification of blasts to occupants of residences within 2km of each blast (subject to individual arrangements with landowners and/or occupiers).	At least 24 hours prior to each blast.
	2.4	Maintain a blast notification board at locations in Lue with notifications posted at least 24 hours prior to each blast.	At least 24 hours prior to each blast.
3. Air Quality			
Reduce dust generated by vehicles on site.	3.1	Apply site-wide vehicle speed limits and confine vehicle travel to designated routes.	Ongoing.
	3.2	Actively maintain and apply dust suppression to haul roads (with records kept of daily application rates).	Ongoing.
Reduce dust generated during extraction and processing.	3.3	Minimise travel speed and the distance travelled by bulldozers and coordinate activities to reduce push and haul distances and double handling.	Ongoing.
	3.4	Use of water sprays and/or dust aprons/collectors for drill rigs.	During drilling.
	3.5	Confirm proper stemming column length in each hole.	Prior to each blast.
	3.6	Minimise drop heights when loading ore, waste rock and soil.	Ongoing.
	3.7	Enclose the ROM feed hopper on three sides and operate water sprays during ore placement into the hopper.	Ongoing.
	3.8	Apply water during crushing operations.	During crushing operations.
	3.9	Progressively rehabilitate (both temporary and long-term) disturbed areas as applicable to the temporary / long-term use.	Ongoing as areas become available.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure	Timing*
	3. Air Quality (Cont'd)	
Undertake site activities without exceeding EPA air quality criteria or goals.	3.10 Implement a proactive dust management system through a combination of the following. i) Meteorological forecasts - to predict when the risk of dust emissions may be high (due to adverse weather) ii) Visual monitoring - to provide an effective mechanism for proactive control of dust at source, before it leaves the Mine Site. iii) Real-time meteorological and air quality monitoring – to provide alerts for appropriate personnel when short-term dust levels increase, to allow management of the location and intensity of activities or increased controls.	Ongoing during operations and rehabilitation works involving earthmoving.
	3.11 Test the concentration of lead and other metals, initially monthly and then at frequencies determined through ongoing review.	At commencement of air quality monitoring and ongoing (with frequency regularly reviewed).
	4. Greenhouse Gas	
Reduce GHG emissions during the design, construction, and operation of the Mine.	4.1 Rehabilitate and supplement areas cleared of vegetation within additional biodiversity offset areas, which would be improved through ongoing management of the vegetation.	Progressively during operations and ongoing.
	4.2 Consider energy efficiency during the final design of processing plant with energy efficient systems installed where reasonable and practicable.	Prior to construction stage.
	4.3 Operate plant and equipment to maximise efficiency, with mine planning used to minimise vehicle wait times and idling.	Ongoing.
	4.4 Procure locally produced goods and services where feasible and cost effective to reduce transport fuel emissions.	Ongoing.
	4.5 Review cut and fill balances for earthworks to make sure that material is transported the least possible distances.	Prior to and during construction activities.
	5. Groundwater	
An accurate understanding of the characteristics of the groundwater inflows to the open cut pits from all sources.	5.1 Conduct monitoring in nominated groundwater bores within and surrounding the Mine Site.	As documented in the Water Management Plan.
	5.2 Record water pumped from the advanced dewatering (production) bores and open cut pit sumps and assess annually to compare against licenced entitlements.	Ongoing with review annually.
Proactive awareness and understanding of potential changes to groundwater availability and quality.	5.3 Conduct monitoring in nominated groundwater bores within and surrounding the Mine Site, including 'regional control' sites.	As documented in the Water Management Plan.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure		Timing*
5. Groundwater (Cont'd)			
Minimal contamination of groundwater resources by surface activities.	5.4	Management of surface water flows in accordance with the Water Management Plan.	Ongoing.
	5.5	Construction of the TSF in accordance with detailed design.	Ongoing.
	5.6	Monitoring of groundwater quality and implementation of remedial actions.	Ongoing and in the event of an exceedance of any agreed parameters.
Appropriate compensation for any actual loss of groundwater availability in registered groundwater bores.	5.7	Establish acceptable contingency measures with potentially impacted landowners, should they be required in the event that the predicted lowering of the groundwater table eventuates.	Prior to operations intercepting the groundwater table for those landowners predicted to be impacted. In response to monitoring data for all others.
An accurate groundwater model.	5.8	Review groundwater model prepared by Jacobs (2022) once data is available and use this data to validate the model.	Within 2 years of extraction intercepting the regional groundwater table.
A plan for groundwater management post-mining.	5.9	Prepare a Final Void Management Plan that takes into account management requirements post-mining.	Prior to completion of mining.
6. Surface Water			
Maximise diversion of clean water around disturbed areas to maintain flows to downstream watercourses.	6.1	Divert runoff from a 50ha area in upper Blackmans Gully catchment to Price Creek.	Site establishment and construction stage.
	6.2	Divert Blackmans Gully away from the main open cut pit and satellite open cut pits.	Site establishment and construction stage.
Maximise discharge of water from sediment dams to downstream watercourse (after treatment) as a preferential approach for management. Capture, store and re-use water where this is not feasible.	6.3	Construct and manage sediment dams to collect sediment-laden water from the TSF, TSF NAF stockpile area, southern barrier, oxide ore stockpile, WRE perimeter embankments.	Site establishment and construction stage and ongoing.
	6.4	Construct all sediment dams in accordance with Volume 2E of *Soils and Construction – Managing Urban Stormwater* (DECC, 2008)	Site establishment and construction stage.
Maintain the active storage capacity of all sediment dams.	6.5	Discharge water satisfying EPL conditions within 5 days of rainfall event, i.e. after confirming acceptable water quality – assuming either sediment settlement or flocculation.	Following rainfall event and treatment period.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure		Timing*
6. Surface Water (Cont'd)			
Avoid discharge of any contaminated water from the containment zone.	6.6	Pump water from the open cut pit sumps to the plant water supply control for use in the processing plant.	As required.
	6.7	Pump all reclaim water to the plant water supply control for use in the processing plant.	Continuous.
	6.8	Collect all runoff from the processing plant area and mining facility in the processing plant dams.	Ongoing.
	6.9	Pump water from the Leachate Management Dam to the raw water dam or open cut pit dewatering pond.	Continuous.
	6.10	Pump brine from on-site Reverse Osmosis Plant to raw water dam.	Ongoing.
	6.11	Construct and maintain bunding around all tanks containing chemicals	Site establishment and construction stage and ongoing.
	6.12	Undertake regular inspections of all pipelines and containment structures to monitor for leaks.	Ongoing during use of water supply pipeline.
Avoidance of overflow from the TSF to downstream watercourses.	6.13	Monitoring the water level in the decant pond.	Continuously.
	6.14	Pump to open cut pit when TSF water level is $\leq$4.7m below the emergency spillway invert level.	As required.
Ensure all hydrocarbons contained within the Mine Site.	6.15	Store all diesel and waste oil in self-bunded above ground tanks	Ongoing.
	6.16	Refuel all mobile equipment (in the mining facility) in dedicated areas with perimeter bunding and spill kits.	Ongoing.
	6.17	Store all 205L/20L drums in bunded storage area(s)	Ongoing.
	6.18	Collect and remediate hydrocarbons – contaminated earth.	As required.
	6.19	Maintain an oil-water separator within the workshop / maintenance area.	Ongoing.
Manage the storage, use and spill management of other potential contaminants.	6.20	Store a range of potentially hazardous materials within bunded areas or containers at the Mine Site in accordance with a chemicals management system.	Ongoing.
	6.21	Implement and maintain a pump-out sewage management system by a licenced contractor.	Ongoing.
	6.22	Reuse all brine generated by the reverse osmosis plant in processing.	Ongoing.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure		Timing*
7. Health Risks			
Ensure dust is controlled on site to prevent further contamination.	7.1	Prepare and implement an Air Quality Management Plan outlining the measures to manage air emissions (consistent with those considered and outlined in the Air Quality Impact Assessment).	Prior to site disturbance activities and ongoing.
Prevent contamination of surface water downstream of the Mine Site to maintain water quality standards.	7.2	Implement the Project's Water Management Plan.	Ongoing.
Manage and minimise noise and blasting impacts from the Project on the surrounding population.	7.3	Develop and implement a Construction Noise Management Plan, Blast Management Plan and Operational Noise Management Plan.	Ongoing.
Management of perceived risks and confirmation of actual impacts.	7.4	Offer lead blood level testing to Lue and district residents.	Prior to site disturbance activities and at regular intervals during operation.
	7.5	Publication of environmental monitoring results relating to lead in air and water to reduce uncertainty regarding the extent of impacts.	Ongoing during operations.
	7.6	Maintain an open-door policy and implement a good neighbour program involving regular and ongoing community engagement, providing opportunity to discuss and provide information in relation to impact monitoring and management.	Ongoing.
Management of potential mental health impacts and maximisation of positive mental health benefits.	7.7	Provide support for health service programs in the region as part of Bowden Silver's Community Investment Program.	Ongoing.
	7.8	Maximise local employment to reduce fly-in/fly-out and drive-in/drive-out employees.	Ongoing.
	7.9	Management of noise impacts so as to reduce potential for sleep disturbance (and associated mental health impact).	Ongoing.
8. Visibility and Lighting			
Reduce the impact of the Project on the visual amenity at private residences and public roads.	8.1	Undertake progressive rehabilitation of the Mine Site focusing particularly on the revegetation of visible disturbed areas.	Ongoing.
	8.2	Enhance the existing tree screen adjacent to Pyangle/Powells Roads.	Ongoing and expanded from site establishment and construction.
	8.3	Plant tree screens around the outer southern perimeter of the southern barrier and TSF.	As it is developed.
	8.4	Adopt a dark grey/green colour scheme for site buildings and roadside noise barriers.	During site establishment and construction.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure		Timing*
8. Visibility and Lighting (Cont'd)			
Ensure Project-related lighting does not unreasonably impact the surrounding environment or operations at the Siding Spring Observatory and local astronomical observatories.	8.5	Ensure all lighting complies with AS/NZS 4282:2019 – Control of the Obtrusive Effects of Outdoor Lighting (as amended from time to time).	Ongoing.
	8.6	Ensure all light sources have appropriate correlated colour temperatures.	Ongoing.
	8.7	Ensure all floodlights have a maximum upcast angle of 10 degrees.	Ongoing.
	8.8	Ensure that lights with diffusing covers or with visible bare lamps that emit light above the horizontal plane are not used on the outside of buildings or structures.	Ongoing.
	8.9	Restrict the use of floodlight towers to periods of active operation.	Ongoing.
9. Terrestrial Ecology / Biodiversity			
Avoid and minimise impacts on terrestrial vegetation and animal habitats wherever possible.	9.1	Delineate areas of native vegetation that are to be removed to prevent accidental damage or removal of retained vegetation.	Prior to each vegetation clearing program.
	9.2	Restrict vehicles, persons and machinery from entering areas of retained vegetation (unless for required environmental monitoring or other valid purpose) to avoid unnecessary impacts to vegetation and habitat.	Ongoing.
	9.3	Implement a pre-clearance Survey Protocol for areas of native trees and shrubs including a two-stage clearing protocol for all hollow-bearing trees.	Prior to each vegetation clearing program.
	9.4	Mark all hollow-bearing trees to be removed and catalogue their species and approximate dimensions.	Prior to each vegetation clearing program.
	9.5	Implement a seed collection plan with measures and procedures to collect, maintain and propagate from native seed sources.	Ongoing to the extent required for rehabilitation.
	9.6	Prepare and implement a feral animal management plan including an inspection program to monitor for feral animal issues.	Ongoing.
	9.7	Prepare and implement a weed management plan to monitor and, as required, control weed species within the Mine Site.	Ongoing.
Rehabilitate disturbed areas to create a final landform that maintains or improves biodiversity values of the Site.	9.8	Prepare a Rehabilitation Management Plan in accordance with contemporary NSW Resources Regulator requirements / guidelines.	Prior to any ground disturbance.
Secure biodiversity offsets to offset residual biodiversity impacts.	9.9	Implement an approved biodiversity offset strategy.	Progressively in accordance with approved staging.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure	Timing*
9. Terrestrial Ecology / Biodiversity (Cont'd)		
Minimise the risk of fauna interaction with the TSF / Cyanide.	9.10 Construct the TSF in a way that minimises the risk of shallow ponds forming on uneven ground after rain events.	During TSF construction.
	9.11 Contour the floor of the TSF during construction to avoid island formation.	During TSF construction.
	9.12 Prepare and implement a Cyanide Management Plan including measures to contain cyanide, maintain levels within the prescribed limits, monitor and inform the need for contingency measures.	Prior to use of cyanide.
10. Aquatic Ecology		
Avoid and minimise impacts on aquatic vegetation and habitats where possible.	10.1 Where practical, treat water to be released from all existing dams to eradicate the invasive eastern gambusia.	Prior to any discharge of water from existing dams.
	10.2 Screen any discharge pipes to minimise any eastern gambusia from entering surrounding watercourses, if treatment in 10.1 is not successful.	Ongoing during water discharges.
	10.3 Implement a monitoring program within Hawkins and Lawsons Creeks and associated alluvial aquifers to monitor potential impacts to aquatic biota, habitat and stygofauna.	Prior to the commencement of construction activities and ongoing throughout operations.
11. Traffic and Transport		
Achieve safe and efficient road transport operations.	11.1 Prepare and implement a detailed Traffic Management Plan, incorporating a Driver's Code of Conduct, to safely manage any traffic impacts during all stages of the Project.	3 months prior to commencement of the site establishment and construction stage and for the Project-life.
	11.2 Deliver equipment and consumables necessary for the construction and operation of the Project and despatch mineral concentrates outside heavy vehicles restriction periods designated as school bus operation times.	Ongoing.
Mitigate potential traffic impacts to local road users.	11.3 Spread commencement and finish times of operational shifts at different times throughout the day.	Ongoing.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure	Timing*
12. Soils and Land and Soil Capability		
Minimise the clearing of native vegetation for the stockpile.	12.1 Undertake a weed control program (if required) in areas to be stripped of topsoil.	Prior to soil stripping.
	12.2 Where practical, transfer salvaged subsoil and topsoil directly to rehabilitation areas.	During soil stripping campaigns.
	12.3 Limit topsoil stockpile heights to 2m and stabilise with a well-fertilised non-persistent cover crop.	Ongoing.
	12.4 Limit subsoil stockpiles height to 5m and 1m of topsoil and stabilise with a well-fertilised non-persistent cover crop.	Ongoing.
Encourage organic carbon accumulation, promote microbial activity and minimise erosion.	12.5 Increase the thickness of topsoil and subsoil placed on the southern barrier to effectively provide an additional area to stockpile soil.	During southern barrier construction.
Minimise losses through erosion caused by the practices of soil stripping to maximise the value of soil as a resource for rehabilitation purposes.	12.6 Selectively strip topsoil and place in rehabilitation areas or in nominated stockpile areas.	During soil stripping campaigns.
	12.7 Add lime to the topsoil and subsoil prior to each scraping pass.	During soil stripping campaigns.
	12.8 Apply coarse grade gypsum prior to stripping and stockpiling of the 'Alluvium – medium quality' Soil Landscape Unit where required.	During soil stripping campaigns.
	12.9 Avoid stripping or spreading soils when either very dry or wet.	During soil stripping campaigns.
Minimise the impact on soil resources, terrestrial vegetation during stockpiling.	12.10 Prevent vehicle access on soil stockpiles, except where required for monitoring, seeding, addition of soil ameliorants, or weed control.	Ongoing.
	12.11 Place silt-stop fencing immediately down-slope of all stockpiles until stable vegetation cover is established. Return all material recovered from the silt-stop fencing to the stockpile.	Ongoing.
	12.12 Implement a weed eradication program should unacceptable weed generation be observed on soil stockpiles.	Ongoing.
	12.13 Establish and maintain an inventory of topsoil and subsoil resources (available and stripped) and reconcile with rehabilitation requirements.	Ongoing.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure	Timing*
13. Aboriginal Cultural Heritage		
Provide appropriate protection to the existing and any unknown Aboriginal artefacts.	13.1 Undertake archaeological field surveys with the local Aboriginal community of the areas within the water supply pipeline corridor and the proposed relocated Maloneys Road corridor that have not yet been surveyed.	Prior to any surface disturbance within the subject areas.
	13.2 Prepare and implement a Heritage Management Plan to manage those identified and any potentially unknown sites of Aboriginal heritage value within the Mine Site, relocated Maloneys Road and the water supply pipeline corridor.	3 months prior to commencement of the site establishment and construction stage and for the Project-life.
	13.3 Install and maintain protective barriers around all identified Aboriginal cultural heritage sites within the Mine Site that are located in areas that would not be disturbed by Project-related activities.	Prior to the commencement of the site establishment and construction stage.
	13.4 Install and maintain protective barriers around identified Aboriginal cultural heritage sites in the vicinity of the proposed relocated Maloneys Road corridor for the duration of construction activities.	During the site establishment and construction stage.
	13.5 Arrange for the full salvage and storage in a "Keeping Place" of Aboriginal objects at all identified Aboriginal cultural heritage sites that would be directly impacted as the result of Project-related disturbance.	Prior to disturbance commencing and in accordance with a Heritage Management Plan.
Prevent further inadvertent impact if any Aboriginal cultural heritage sites are identified.	13.6 Stop work immediately and report the find to BCD and a qualified archaeologist to assess the significance of the site. If the site contains bones indicative of a human burial, notify the Police immediately.	Ongoing.
14. Historic Heritage		
Provide appropriate protection to the existing and any unknown historic heritage sites.	14.1 Prepare and implement a Heritage Management Plan to manage those identified and any potentially unknown sites of historic heritage value within the Mine Site and the relocated Maloneys Road corridor.	3 months prior to commencement of the site establishment and construction stage and for the Project-life.
Prevent further inadvertent impact if any historic heritage sites are identified.	14.2 Stop work immediately and report the find to BCD and a qualified archaeologist to assess the significance of the site.	Ongoing.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure	Timing*
15. Public Safety Hazards		
Ensure the risk of bush fire attack is minimised at key Mine Site components.	15.1 Maintain appropriate Asset Protection Zones around key Mine Site components.	Ongoing.
	15.2 Ensure employees are trained in the proper use of firefighting equipment held on site.	Ongoing.
	15.3 Make Mine Site firefighting equipment available to the local Rural Fire Service in the event of a bush fire on land surrounding the Mine Site.	As required.
Minimise the risk of bush fire ignition from mining operations.	15.4 Restrict work in heavily vegetated areas.	During high fire danger periods.
	15.5 Develop procedures for hot works to prevent ignition sources for a bush fire.	Ongoing.
	15.6 Consult with the local Rural Fire Service.	Prior to each bush fire season and any controlled burns.
Ensure leaks and spills of sodium cyanide and cyanide solution are avoided on site and leaks and spills of sodium cyanide during transport are avoided.	15.7 Ensure bunding around the on-site mini sparge system complies with AS NZS 4452:1997.	Ongoing.
	15.8 Ensure the processing area is bunded to contain any processing leaks.	Ongoing.
	15.9 Ensure operators in contact with cyanide are licenced and trained in emergency response and/or HAZMAT.	Ongoing.
	15.10 Ensure cyanide transporters are certified as compliant with the Cyanide Code's Principles and Transport Practices.	Ongoing.
	15.11 Ensure cyanide transporters are compliant with the *Australian Dangerous Goods Code* with drivers and vehicles licensed to transport DGs.	Ongoing.
Minimise risks associated with the on-site use and storage of blasting agents (e.g. ANFO and ANE).	15.12 Implement quality assurance procedures to ensure blasting agents meet required specifications.	Ongoing.
	15.13 Ensure blasting agents are packaged in accordance with the *Australian Dangerous Goods Code*.	Ongoing.
	15.14 Ensure appropriate separation distances between blasting agents and the Mine Site boundary are maintained.	Ongoing.
	15.15 Ensure emergency response and evacuation procedures are in place.	Ongoing.
16. Economic		
Maximise local employment training, and engagement.	16.1 Develop and implement a Local Employee and Procurement Strategy.	Site establishment and construction.
	16.2 Give preference to local employees.	Ongoing.
	16.3 Provide ongoing training and certification opportunities for local community members to ensure they have the necessary skills to work in mining.	Ongoing.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure	Timing*
16. Economic (Cont'd)		
Involvement with local businesses to boost local economy.	16.4 Inform local businesses of the goods and services required for the Project.	Ongoing.
	16.5 Provide service provision opportunities and compliance requirements of business to secure contracts.	Ongoing.
	16.6 Collaborate with local businesses and encourage local businesses to meet the requirements of the Project for supply contracts.	Ongoing.
	16.7 Develop relevant networks to assist qualified local and regional businesses tender for provision of goods and services to support the Project.	Ongoing.
Support local sporting, social and community groups to ensure community directly benefits from the Project.	16.8 Implement a Planning Agreement with the Mid-Western Regional Council.	Agreement in place prior to commencement of site establishment and construction.
	16.9 Develop and implement a Community Investment Program.	Initial funding released within 12 months of commencement of mining operations. Then ongoing during operations.
17. Social		
To enhance local values and address community needs within the Lue, Rylstone, Kandos, Mudgee and surrounding localities.	17.1 Develop and implement a Community Investment Program.	Ongoing. Expanded program prior to commencement of mining operations. Then ongoing.
Contribution to the provision of public amenity and public services, transport or other infrastructure requirements as agreed with Council.	17.2 Implement a Planning Agreement with the Mid-Western Regional Council.	Agreement in place prior to commencement of site establishment and construction.
Maximisation of the economic benefits of the Project within in the Mid-Western Regional LGA.	17.3 Develop and implement a Local Employee and Procurement Strategy.	Prior to the commencement of site establishment and construction.
Maintenance and further development of Company-community relationships.	17.4 Develop and implement a Good Neighbour Program which outlines ongoing and effective communication and engagement.	Prior to the commencement of mining operations.
	17.5 Employ a dedicated Community Liaison officer to manage the ongoing engagement and monitoring and management commitments.	Ongoing.

Table A2.1 (Cont'd)
Updated Environmental Management and Monitoring Measures

Desired Outcome	Measure	Timing*
17. Social (Cont'd)		
Wholistic and adaptive management based upon monitoring/feedback and evaluation to minimise potential negative impacts and enhance benefits from the Project.	17.6 Develop and implement a Social Impact Management Plan that provides for monitoring and evaluation of social and community aspects of the Project and applies adaptive management to minimise potential impacts and maximise benefits.	Prior to commencement of mining operations.
	17.7 Prepare and implement appropriate complaint receipt / response and incident notification / reporting processes.	Ongoing during operations.
Keeping the community informed, maintaining transparency, and remaining accountable.	17.8 Public reporting of relevant statistics, monitoring results and engagement outcomes.	Ongoing during operations.
18. Seepage Management		
Reduce and manage seepage risks from the TSF.	18.1 Install a system of vibrating wire and standpipe piezometers upstream and downstream of the foundation grouting, beneath the embankment, at the toe of the embankment.	During site establishment and construction.
	18.2 Install groundwater monitoring bores downgradient of the TSF to monitor for any seepage migration.	During site establishment and construction.
	18.3 Monitor all vibrating wire and standpipe piezometers as well as groundwater monitoring bores during and following TSF operations.	As described in a Water Management Plan.
	18.4 Undertake inspections of the tailings transfer and discharge pipelines, water return pipelines, discharge points, decant system and decant pond, all of which would be fully documented, and where appropriate photographed.	As described in a TSF Operations and Maintenance Plan.
	18.5 Undertake weekly inspections of the external embankment and associated structures, the tailings beach, decant pond level and all monitoring installations.	As described in a TSF Operations and Maintenance Plan.
	18.6 Prepare a comprehensive Trigger Action Response Plan that is associated with monitoring outcomes.	As described in a Water Management Plan.
	18.7 Comply with all reporting and regulatory requirements of DPIE, EPA and Dams Safety NSW throughout the life of the development.	As required.
	18.8 Undertake independent reviews and audits against contemporary engineering and environmental standards.	As required.

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