New South Wales Government
Independent Planning Commission

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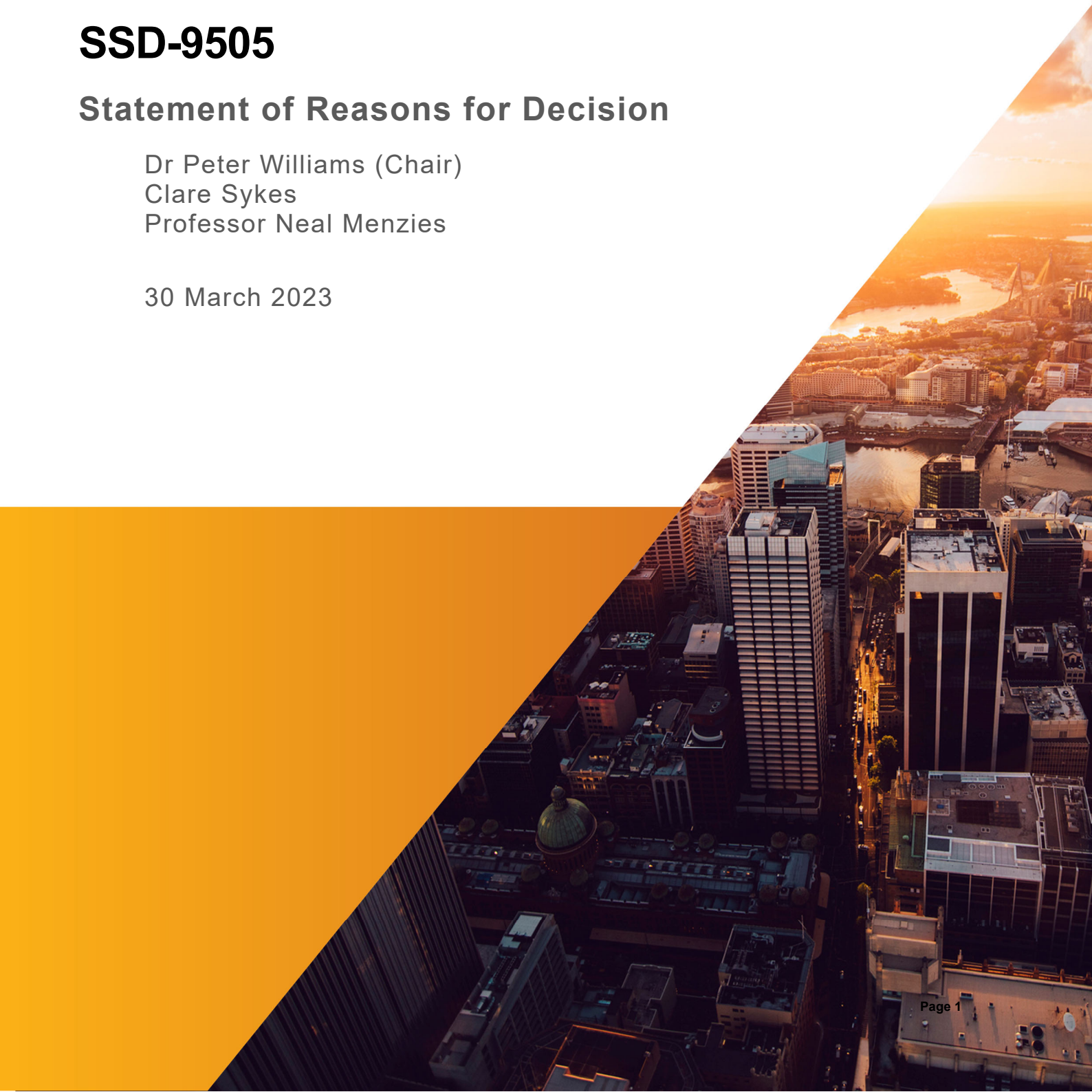
McPhillamys Gold Project

SSD-9505

Statement of Reasons for Decision

Dr Peter Williams (Chair)
Clare Sykes
Professor Neal Menzies

30 March 2023



Executive Summary

LFB Resources NL, a wholly owned subsidiary of Regis Resources Limited (Applicant), has sought consent for the development of an open cut goldmine and associated water supply pipeline, known as the McPhillamys Gold Project (SSD 9505) (Project). The mine is located within the Blayney and Cabonne Local Government Areas (LGAs) and is proposed to extract up to 60.8 million tonnes of ore and produce up to 2 million ounces of gold over 11 years of mining operations. The water supply pipeline traverses the Blayney, Bathurst and Lithgow LGAs and proposes to provide water from the Springvale Coal Pty Limited facility in Lithgow to the mine.

Commissioners Dr Peter Williams (Chair), Clare Sykes and Professor Neal Menzies were appointed to constitute the Commission Panel in determining the application. As part of its determination process, the Commission met with representatives of the Applicant, the Department of Planning and Environment, DPE Water, Blayney Shire Council, Cabonne Council, Lithgow City Council and Bathurst Regional Council. The Commission also undertook a site inspection and locality tour.

A Public Hearing was held over three days on 6, 7 and 8 February 2023. The Commission heard from community members and interest groups at the Public Hearing and received written submissions on the Application. Submissions raised concern regarding amenity impacts, including air quality, noise, vibration, visual and lighting impacts; social impacts; impacts to water resources; Aboriginal cultural heritage; biodiversity; rehabilitation; and impacts on agricultural land. The Commission also received submissions in support of the Project due to its positive economic benefits including employment opportunities; job security; and flow on economic benefits to local businesses.

After consideration of the material, and having taken into account the views of the community, the Commission has determined that development consent should be granted for the Application, subject to conditions. The Commission finds that the Application is consistent with the objects of the *Environmental Planning and Assessment Act 1979* and would achieve an appropriate balance between relevant environmental, economic and social considerations. The Commission finds that on balance, the Application is in the public interest.

The Commission has imposed conditions which seek to prevent, minimise and/or offset adverse impacts of the Project and to ensure ongoing monitoring and management. The Applicant will be required to prepare and implement comprehensive management plans and will need to report on mitigation measures, monitoring results and compliance with performance criteria on an ongoing basis. Conditions imposed by the Commission require the Applicant to ensure that it has sufficient water for all stages of the development, and if necessary, to adjust the scale of the development to match its available water supply. The Commission has also imposed conditions to minimise and mitigate impacts of the Project on amenity, including noise, air quality, vibration, visual and lighting impacts. The Applicant has also been required to prepare a range of management plans to ensure the social impacts of the Project are appropriately managed.

The Commission’s reasons for approval of this Application are set out in this Statement of Reasons for Decision.

Contents

Defined Terms

ABBREVIATION	DEFINITION
ACHA	Aboriginal Cultural Heritage Assessment
AIP	NSW Aquifer Interference Policy
AIS	*Agricultural Impact Assessment* prepared by the Applicant, dated June 2019, and updated in August 2020 (First Project Amendment)
Applicant	LFB Resources NL, a wholly owned subsidiary of Regis Resources Limited (Regis)
Application	McPhillamys Gold Project (SSD-9505)
Approved Methods	Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (EPA, 2016)
AR	Department's Assessment Report (dated November 2022)
AR para	Paragraph of the Department's Assessment Report (dated November 2022)
Au	Gold
Bathurst LEP	*Bathurst Local Environmental Plan 2014*
BC Act	*Biodiversity Conservation Act 2016*
BCS	Biodiversity Conservation and Science Directorate
BDAR	Biodiversity Development Assessment Report
BHPG	Belubula Headwaters Protection Group
Blayney LEP	*Blayney Local Environmental Plan 2012*
BOE	BIS Oxford Economics
BSAL	Biophysical Strategic Agricultural Land
Cabonne LEP	*Cabonne Local Environmental Plan 2012*
CCC	Community Consultative Committee
Commission	NSW Independent Planning Commission
DCP	Development Control Plan
Department	Department of Planning and Environment
DPE Water	Department of Planning and Environment – Water
DSNSW	Dams Safety NSW
EIS	The Applicant's Environmental Impact Statement, titled *McPhillamys Gold Project Environmental Impact Statement*, prepared by EMM Consulting, dated 27 August 2019
EP&A Act	*Environmental Planning and Assessment Act 1979*
EP&A Regulation	*Environmental Planning and Assessment Regulation 2000*
EPA	Environment Protection Authority
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPI	Environmental Planning Instrument
ESD	Ecologically Sustainable Development
First Project Amendment	First Amendment to the Application, dated September 2020
GHG	Greenhouse gas
GMP	Groundwater Management Plan
ICNG	Interim Construction Noise Guideline
LGA	Local Government Area
Lithgow LEP	*Lithgow Local Environmental Plan 2014*
LSPS	Blayney Shire Council Local Strategic Planning Statement
Mandatory Considerations	Relevant mandatory considerations, as provided in s 4.15(1) of the EP&A Act
Material	The material set out in section 3.1 **Error! Reference source not found.**
MIC	Maximum instantaneous charge

MNES	Matters of National Environmental Significance
Mt	Million tonnes
Mtpa	Million tonnes per annum
NPfI	NSW Noise Policy for Industry
OLALC	Orange Local Aboriginal Land Council
PNTL	Project Noise Trigger Level
Project	The Application (SSD-9505) for the development of an open cut gold mine and associated water supply pipeline by the Applicant
RAPs	Registered Aboriginal Parties
Regional Plan	Central West and Orana Regional Plan 2036
Regulations	*Environmental Planning and Assessment Regulations 2000*
RFS	NSW Rural Fire Service
RNP	NSW Road Noise Policy
RtS	The Applicant's Response to Submissions report, titled *McPhillamys Gold Project Submissions Report*, prepared by EMM Consulting, dated 3 September 2020
Second Project Amendment	Second Amendment to the Application, dated May 2022
SEPP Planning Systems	*State Environmental Planning Policy (Planning Systems) 2021*
SEPP SRD	*State Environmental Planning Policy (State and Regional Development) 2011*
SIA	Social Impact Assessment prepared by the Applicant, dated July 2019
SIA Guideline	Social Impact Assessment Guidelines for State Significant Mining, Petroleum Production and Extractive Industry Development 2017, Department of Planning and Environment
SIMP	Social Impact Management Plan
Site	The proposed mine site situated within the locality of Kings Plains, and bordered by the Mitchell Highway to the north, Vittoria Road to the north-west, the Mid Western Highway to the south, and Vittoria State Forest to the east
SPAL	Specific Purpose Access License
Springvale Coal	Springvale Coal Pty Limited facility, near Lithgow, NSW
SSD	State Significant Development
SWA	Surface Water Assessment prepared by the Applicant, dated 27 August 2019
SWGIA	Surface Water Groundwater Interaction Assessment prepared by the Applicant, dated 1 September 2020
SWMP	Surface Water Management Plan
Third Project Amendment	Third Amendment to the Application, dated October 2022
TSF	Tailings Storage Facility
VIA	Visual Impact Assessment prepared by the Applicant, dated August 2019
VLAMP	Voluntary Land Acquisition and Mitigation Policy
VPA	Voluntary Planning Agreement
WM Act	*Water Management Act 2000*
WMP	Water Management Plan

1. Introduction

1. On 19 February 2020, the then Minister for Planning and Public Spaces made a request under section 2.9(1)(d) of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**) for the NSW Independent Planning Commission (**Commission**) to conduct a Public Hearing and determine the State significant development (**SSD**) application for the McPhillamys Gold Project within 12 weeks of receiving the Department of Planning and Environment's (**Department**) Assessment Report (**AR**) in respect of the Project.
2. On 17 November 2022, the Department referred the application to the Commission for determination. The McPhillamys Gold Project (SSD-9505) application (**Application**) was made by LFB Resources NL, a wholly owned subsidiary of Regis Resources Limited (**Applicant**).
3. The Application seeks approval for development of an open cut gold mine and associated water supply pipeline (together referred to as the **Project**) in Central West New South Wales under section 4.38 of the EP&A Act. The mine is mainly located in the Blayney Local Government Area (**LGA**) with a small area within the Cabonne LGA, and the water supply pipeline traverses the Blayney, Bathurst, and Lithgow LGAs.
4. In accordance with section 4.5(a) of the EP&A Act and section 2.7(1) of the *State Environmental Planning Policy (Planning Systems) 2021* (**SEPP Planning Systems**), the Commission is the consent authority for the Application because the Department received more than 50 objections during public exhibition of the Application.
5. Professor Mary O'Kane AC, Chair of the Commission, first nominated Commissioners Professor Chris Fell AO (Chair), Dr Peter Williams and Clare Sykes to constitute the Commission Panel determining the Application. After the sudden and untimely death of Professor Fell on 8 December 2023, the Chair of the Commission reconstituted the Commission Panel with Dr Peter Williams (Chair), Clare Sykes and Professor Neal Menzies.

2. The Application

2.1 Site and Locality

6. The proposed mine site is situated within the locality of Kings Plains, approximately 8 kilometres north-east of the town of Blayney, and midway between the regional centres of Orange and Bathurst. The site is bordered by the Mitchell Highway to the north, Vittoria Road to the north-west, the Mid Western Highway to the south, and Vittoria State Forest to the east (**Site**).
7. The Belubula River, a tributary of the Lachlan River, runs roughly from the north-east to the south-west through the Site.
8. The location of the Site is illustrated in **Figure 1** and **Figure 2** below.

Figure 1 *– Regional Setting of the Site (source: AR Figure 1, cropped)*

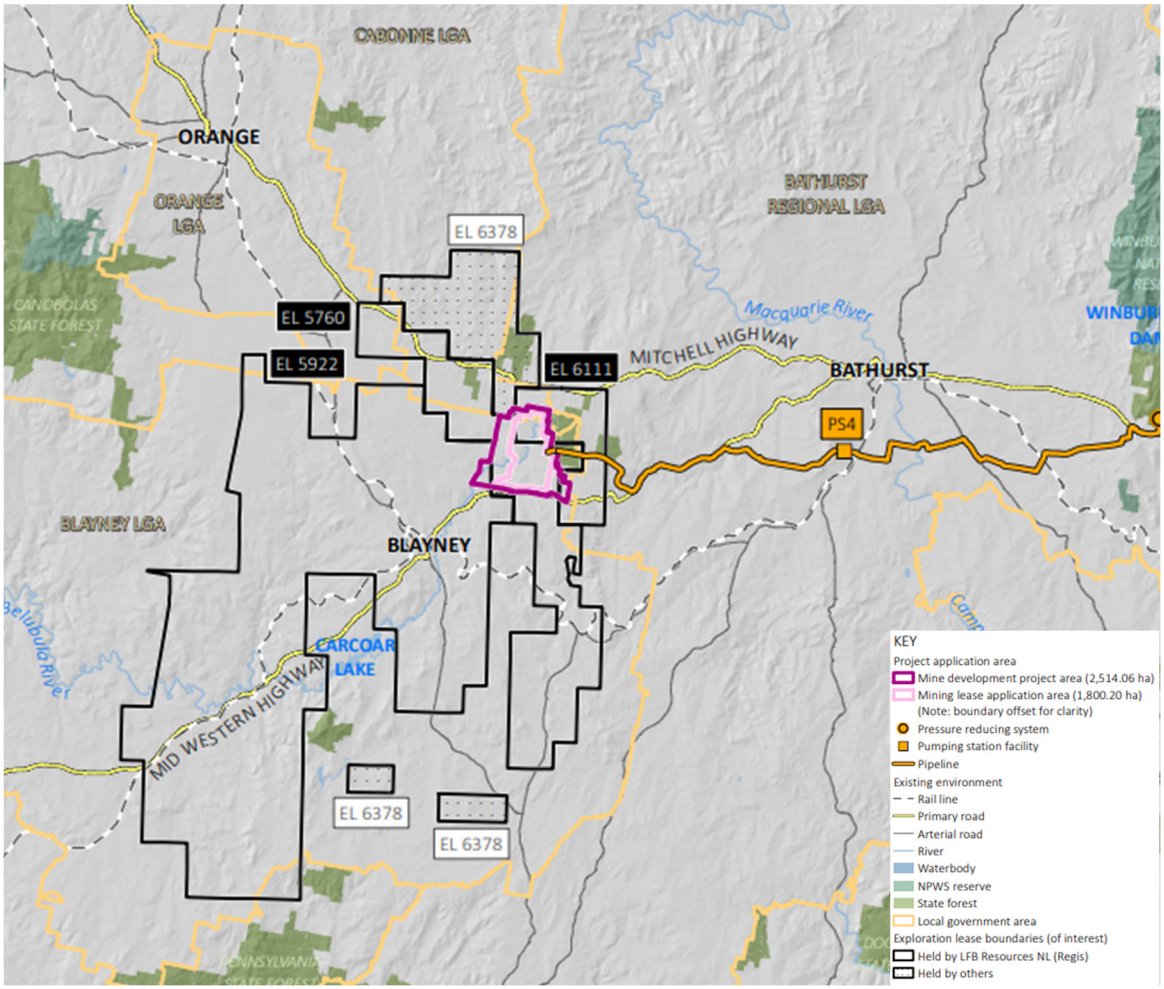
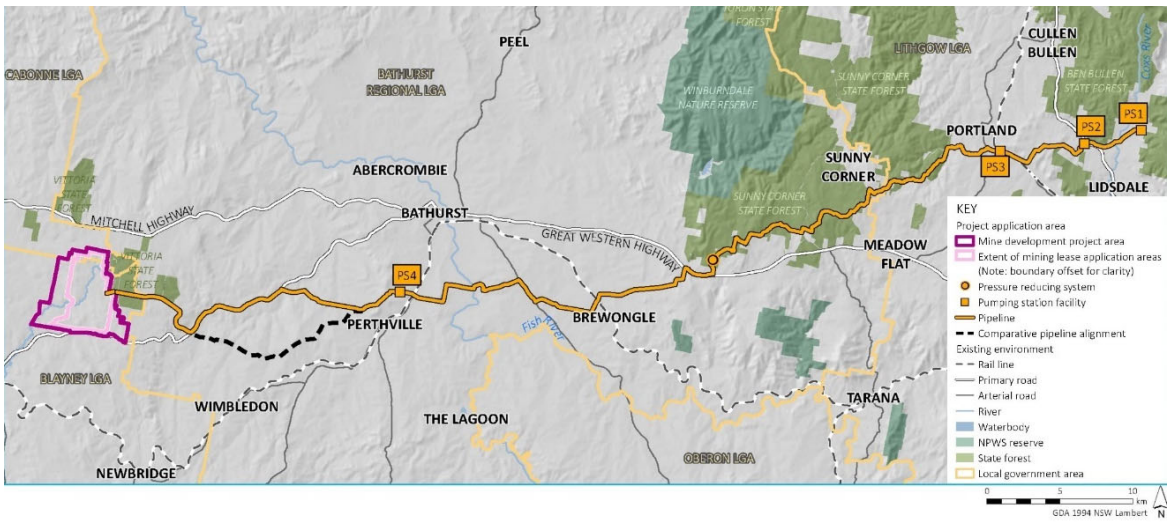


Figure 2 *– Regional Setting of the Water Supply Pipeline (source: AR Figure 4, cropped)*

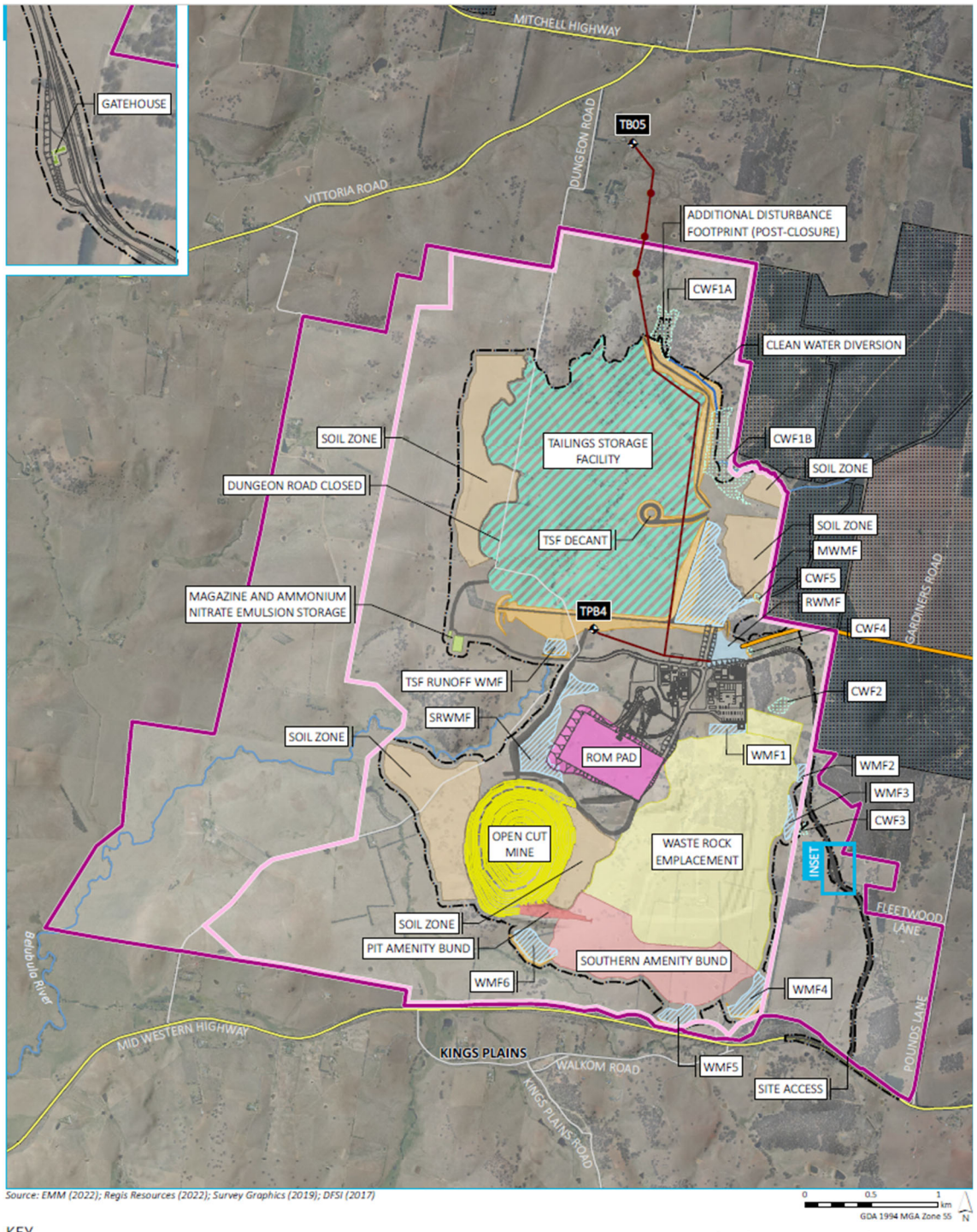


9. As described by the Department in paragraph 14 of its Assessment Report (**AR para**), the region surrounding the Site has a long history of both agricultural and mining land uses dating back to early European settlement in the mid-19th century. The discovery of gold near Bathurst in 1823 (recognised as Australia's first gold discovery), was subsequently followed by the commencement of the 'Australian gold rush' in 1851, which lasted for approximately 40 years and resulted in a sudden influx of hundreds of thousands of immigrants to the region surrounding the Site.
10. Current land uses surrounding the Site are predominantly agricultural and include grazing, cropping and areas of viticulture and apiary – with a large honey production operation located to the north-east of the Site – and forestry operations, with the Vittoria State Forest located to the east of the Site (AR para 17).
11. The nearest privately owned residences are located in the Kings Plains settlement, a rural residential area to the south of the Site (AR para 18).
12. The water supply pipeline route is proposed to traverse mainly cleared agricultural land, State forests and Crown land, and would require crossing of watercourses, roads and railway lines (AR para 19).

2.2 The Project

13. The Project comprises the following two components:
    - an open cut mining operation to extract up to 60.8 million tonnes (**Mt**) of ore and produce up to 2 million ounces of gold over 11 years of mining operations; and
    - an underground water supply pipeline (approximately 90 kilometres long) connecting the Site to the Springvale Coal Pty Limited facility (**Springvale Coal**) in Lithgow (AR para 4).
14. The Application is detailed in the Applicant's Environmental Impact Statement (**EIS**), prepared by EMM Consulting, dated 27 August 2019; its Response to Submissions Report (**RtS**), prepared by EMM Consulting and dated 3 September 2020; and its subsequent amendment reports. The main components of the Project are summarised in **Table 4** at **Appendix A** of this Statement of Reasons.
15. The Department publicly exhibited the EIS from 12 September to 24 October 2019. During this period, the Department received a total of 648 public submissions, including submissions from 21 government agencies. No government agencies objected to the Project (AR para 57).
16. In September 2020, the Applicant submitted its RtS report and an Amendment Report responding to the issues raised in submissions (AR para 69). The Department requested additional information from the Applicant on several matters following receipt of the RtS.
17. The Application has been amended three times, including in September 2020 (**First Project Amendment**), May 2022 (**Second Project Amendment**) and October 2022 (**Third Project Amendment**) (AR para 6). The Amendments have sought to reduce amenity impacts at nearby residences, to address impacts on road safety, heritage and water resources (AR para 6), and to address residual issues raised by the community, government agencies and the Department. All three amendments were agreed to by the Department, as the Commission's delegate.
18. The proposed mine layout is illustrated in **Figure 3** below.

Figure 3 *– Mine Site and Development Arrangement (source: AR Figure 3)*



3. The Commission's Consideration

3.1 Material Considered by the Commission

19. In this determination, the Commission has carefully considered the following material (**Material**):

- the Planning Secretary's Environmental Assessment Requirements (SEARs) issued by the Department, dated 19 December 2018;
- the Applicant's EIS and its accompanying appendices;
- all submissions made to the Department in respect of the Application during the public exhibition of the EIS, from 12 September to 24 October 2019, including submissions from members of the public, community organisations and public authorities;
- the Applicant's RtS and its accompanying appendices;
- the First Project Amendment, Second Project Amendment and Third Project Amendment, and all accompanying appendices;
- all agency advice received by the Department in respect of the Application;
- all additional information provided by the Applicant, including responses to requests for information sought by the Department;
- the Department's referral letter to the Commission, dated 17 November 2022;
- the Department's AR, dated November 2022, including material considered in that report;
- the Department's recommended conditions of consent, received by the Commission on 17 November 2022;
- all matters raised at stakeholder meetings held with the Commission, as well as presentation material at those meetings;
- all speaker comments made to the Commission at the three-day Public Hearing held on 6, 7 and 8 February 2023, as well as presentation material at that Public Hearing;
- all written submissions received and accepted by the Commission up until 17 February 2023;
- all correspondence from the Applicant to the Commission, including correspondence dated 31 January 2023 (and attachment dated 20 January 2023), 21 February 2023 and 1 March 2023;
- all correspondence from the Department to the Commission, including correspondence dated 9 February 2023 and 22 February 2023;
- all correspondence from community members to the Commission relevant to the Commission's determination;
- late submissions accepted and considered by the Commission, including submissions provided by the Environmental Defenders Office on behalf of the Belubula Headwaters Protection Group (**BHPG**) (dated 6 March 2023, 13 March 2023 and 14 March 2023,) and Wiradjuri Elder Nyree Reynolds and acquaintances (dated 16 March 2023); and
- the Department's comments on the feasibility and workability of proposed conditions, dated 17 March 2023.

3.2 Strategic Context

3.2.1 Mining

20. The Department, at AR para 20, notes that both the Federal and State Government recognise the importance of investment in mineral mining, and that this is reflected in the following policies:

- Australia's Global Resources Statement (2020);
- NSW Minerals Strategy (2019); and
- NSW Critical Minerals and High-Tech Metals Strategy (2021).

21. At AR para 21, the Department states that the global demand for gold is driven by four sectors, including the:

- jewellery industry (approximately 55.4%);
- investment sector (approximately 25%);
- central banks sector (approximately 11.3%); and
- technology industry (approximately 8.2%).

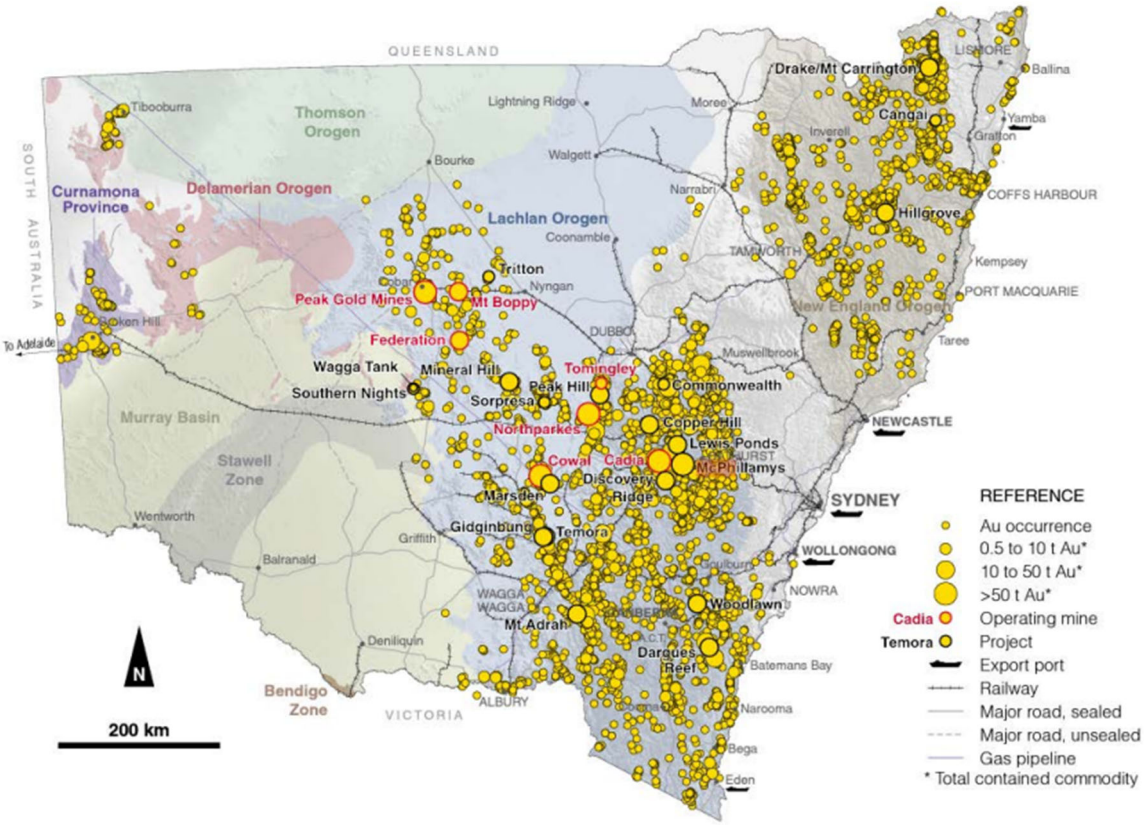
22. The Department states:

> *The increased demand for raw metals, including gold, is attributed to a growing middle class reliant on urbanisation and electrification and the increased use of minerals in technological developments, as seen in sectors such as information, energy and transport. The transition out of fossil fuel-based industries into the renewable energy sector will also depend on the increased availability of raw metals, given that renewable energy technologies are more metals intensive (AR para 21).*

23. The Department notes that NSW has significant mineral resources, including copper and gold within the 'Macquarie Arc Belt', a metal endowed geological belt which stretches across the centre of the NSW Central West region (AR para 22). The location of gold deposits in NSW is illustrated at **Figure 4** below.

24. The Department notes that the Department of Regional NSW's *Factsheet for Gold Opportunities in NSW* (2021) identifies the McPhillamys deposit as one of the most significant gold resources in NSW with an estimated contained gold of 2,251 thousand ounces ("mineral resource estimate (indicated and inferred) of 70 Mt @ 1 g/t Au and ore resource estimate (probable) of 61Mt @ 1 g/t Au") (AR para 23).

***Figure 4** – Gold Opportunities in NSW (source: AR Figure 5)*



3.2.2 Regional Context

25. The *Central West and Orana Regional Plan 2036* (**Regional Plan**) was adopted by the Department in June 2017 and applies to the Project area. The Regional Plan provides the strategic direction and land use planning priorities for the region for the next 20 years. The Commission notes the following Directions of the Regional Plan that are relevant to the Project:

- Direction 1: protect the region's diverse and productive agricultural land;
- Direction 8: sustainably manage mineral resources;
- Direction 11: sustainably manage water resources for economic opportunities;
- Direction 12: plan for greater land use compatibility;
- Direction 13: protect and manage environmental assets;
- Direction 14: manage and conserve water resources for the environment;
- Direction 16: respect and protect Aboriginal heritage assets; and
- Direction 23: build the resilience of towns and villages.

26. Regarding key objectives for the Blayney LGA, the Regional Plan identifies the priority to "continue to grow the mining, agribusiness, transport and logistics sectors and associated businesses" (page 68).

27. The Blayney Shire Council *Local Strategic Planning Statement* (**LSPS**) gives effect to the Regional Plan and builds on the *Blayney Shire Community Strategic Plan* (2018-2028). The LSPS states its vision for the Blayney LGA over the next 20 years is to:

> *…maintain the high levels of environmental, scenic and historic qualities that shape Blayney Shire, whilst supporting our primary economic contributors of agriculture and mining to create a connected, stronger and sustainable community.*

28. The LSPS identifies the need to support sustainable growth in the mining and agribusiness sectors (Planning Priority 2) and states:

> *In planning to promote and support growth in mining and agribusiness sectors, Council will continue to find a balance between the positive effect on the economy and the protection of the natural and environmental qualities of Blayney Shire (page 28).*

29. The *Orange, Blayney and Cabonne Regional Economic Development Strategy* (2018-2022) and the *Lithgow Regional Economic Development Strategy* (2018-2022) are also relevant to the Project. Both strategies aim to leverage the regions' endowments and capitalise on existing opportunities to enable growth in mining and mining services (AR para 27).

3.3 Statutory Context

3.3.1 Permissibility

30. The Site is located in both the Blayney and Cabonne LGAs. Under both the *Blayney Local Environmental Plan 2012* (**Blayney LEP**) and *Cabonne Local Environmental Plan 2012* (**Cabonne LEP**), the Application is located on land zoned 'RU1 Primary Production'. Development for the purpose of 'open cut mining' is permissible with development consent in the RU1 zone (AR para 32).

31. Clause 2.9(1) of *State Environmental Planning Policy (Resources and Energy) 2021* provides that mining may be carried out with consent on any land where development for agriculture is permissible, or in any part of a waterway that is not within an environmental conservation zone. The mining portion of the Application is therefore permissible with consent.

32. The proposed water supply pipeline traverses the Lithgow, Bathurst, and Blayney LGAs and is subject to the *Lithgow Local Environmental Plan 2014* (**Lithgow LEP**), *Bathurst Regional Local Environmental Plan 2014* (**Bathurst LEP**) and Blayney LEP. Under each respective LEP, mining (and thus associated works within the pipeline corridor) is permissible with consent in some but not all land use zones. However, section 4.38(3) of the EP&A Act provides that development consent may be granted for SSD despite the development being partly prohibited by an environmental planning instrument (**EPI**) (AR para 35). The water supply pipeline portion of the Application is therefore permissible with consent.

33. The Department states that it is satisfied that the Project as a whole is permissible with development consent (AR para 36). The Commission agrees with the Department's conclusion.

3.3.2 Gateway Certificate and Site Verification Certificate

34. A development application for mining development must be accompanied by either a Gateway Certificate or a Site Verification Certificate from the Mining and Petroleum Gateway Panel that certifies that the land on which the proposed development is to be carried out is not identified as Biophysical Strategic Agricultural Land (**BSAL**) (AR para 37).

35. On 18 June 2019, the Department issued a Site Verification Certificate verifying that the Mining Lease Application associated with the Project is not located on BSAL (AR para 38).

3.3.3 Commonwealth Matters

36. On 28 May 2019, a delegate of the Commonwealth Minister for the Environment determined that the Project is a 'controlled action' under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (**EPBC Act**) due to its potential impacts on listed threatened species and communities (AR para 51 and 52).

37. The Commission notes that under the current Bilateral Agreement between the Commonwealth and NSW Governments, the Commonwealth has accredited the NSW assessment process under the EP&A Act for the controlled action. However, the Commonwealth's decision-maker maintains a separate approval role, which will be exercised following the Commission's determination of the Application.

38. The Department provides an assessment of matters under the EPBC Act in Appendix D of the AR. The Commission has given further consideration to biodiversity matters in section 5.6 below.

3.3.4 Integrated and other NSW Approvals

39. As per section 4.4 of the Department's AR, the Commission notes the Department has, on behalf of the Commission, consulted with relevant government authorities that are responsible for providing integrated and other approvals. The Commission notes that the Application may also require other approvals which are not integrated into the SSD process, including those listed in AR para 41.

3.4 Mandatory Considerations

40. In determining this Application, the Commission is required by section 4.15(1) of the EP&A Act to take into consideration such of the listed matters as are of relevance to the development the subject of the Application (**Mandatory Considerations**).

41. The mandatory considerations are not an exhaustive statement of the matters the Commission is permitted to consider in determining the Application. To the extent that any of the Material does not fall within the mandatory considerations, the Commission has considered that Material where it is permitted to do so, having regard to the subject matter, scope and purpose of the EP&A Act.

***Table 1** – Mandatory Considerations*

Mandatory Considerations	Commission's Comments
Relevant EPIs	Appendix C of the Department's AR identifies relevant EPIs for consideration. The key EPIs (in their present, consolidated form) include: • SEPP Planning Systems; • *State Environmental Planning Policy (Resources and Energy) 2021*; • *State Environmental Planning Policy (Biodiversity and Conservation) 2021*; • *State Environmental Planning Policy (Resilience and Hazards) 2021*; • *State Environmental Planning Policy (Transport and Infrastructure) 2021*; • Blayney LEP; • Cabonne LEP;

	• Bathurst LEP; and • Lithgow LEP.
Relevant DCPs	Section 2.10 of SEPP Planning Systems states that development control plans do not apply to SSD. The Commission does not consider any development control plans to be relevant to the determination of the Application.
Likely Impacts of the Development	The likely impacts of the Application have been considered in section 5 of this Statement of Reasons.
Suitability of the Site for Development	The Commission has considered the suitability of the Site and finds that the Site is suitable for the following reasons: • the Application is permissible with consent; • the proposed extraction of gold is consistent with the orderly and economic use and development of land; • impacts on surrounding land uses have been minimised and are capable of being further mitigated through conditions of consent; • impacts to biodiversity have been suitably minimised and offset; • Aboriginal heritage items to be destroyed have been suitably recorded; • impacts to other heritage have been suitably minimised; • notwithstanding the final void proposed as part of the Application, the Site is capable of being rehabilitated in accordance with Government policy; and • the proposed development would provide social and economic benefits to the region and the state.
Objects of the EP&A Act	The Commission has carefully considered the Objects of the EP&A Act and, for the reasons set out in this Statement of Reasons, is of the view that the Application is consistent with the Objects of the EP&A Act.
Ecologically Sustainable Development	The Commission has considered the principles of Ecologically Sustainable Development (ESD) in its determination as set out below. ***a) the precautionary principle*** The Commission finds that the precautionary principle has been appropriately applied throughout the assessment of the Application, with environmental consequences being appropriately avoided, mitigated, remediated or offset, as set out in the Application, the Department's AR and recommended conditions of consent. The Commission has imposed conditions requiring additional measures to further mitigate the impacts of the Project. ***b) inter-generational equity*** The Commission has considered inter-generational equity in its assessment of the potential environmental, social and economic impacts of the Project. The Commission finds that, subject to the imposed conditions, which are aimed at ensuring the health, diversity and productivity of the environment are maintained post-mining, the Project would appropriately balance the environmental, social and economic impacts of the present generation with those of future generations. The Commission finds that the positive impacts resulting from the Project – including employment, training, investment and additional economic activity – will outweigh the negative impacts. ***c) conservation of biological diversity and ecological integrity***

	The Project's potential impacts on biodiversity, including through clearing of native vegetation and impacts on aquatic habitat associated with the upper Belubula River, have been a key consideration during the assessment of the Application. The Commission finds that any potential impacts must be appropriately managed (including by being mitigated and/or offset) to enable acceptable long-term biodiversity outcomes to be achieved. The Commission agrees with the Department that the conservation of biological diversity and ecological integrity has been applied through avoiding and minimising biodiversity impacts. The Commission finds these impacts can be further mitigated and/or offset through the imposed conditions to support the achievement of long-term biodiversity outcomes for the region. ***d) improved valuation, pricing and incentive mechanisms*** The Commission notes that valuation and pricing of the resource has been considered through economic, social and cost-benefit analyses completed as part of the EIS. The Commission agrees with the Department's view that the economic assessment has been appropriately considered and the Project would deliver a significant net benefit to the local region and the State of NSW. The Commission has imposed performance-based conditions that provide incentive to the Applicant to achieve environmental outcomes and objectives in the most cost-effective way.
The Public Interest	The Commission has considered whether the granting of consent to the Application is in the public interest. In doing so, the Commission has considered the predicted benefits of the Application and its predicted negative impacts. The Commission finds that, on balance, the Application is not inconsistent with the principles of ESD, and that it would achieve an appropriate balance between environmental, economic and social considerations. The likely benefits of the Project warrant the conclusion that an appropriately conditioned approval is in the public interest.

3.5 Additional Considerations

42. In determining the Application, the Commission has also considered:

- Australia's Global Resources Statement (2020);
- NSW Minerals Strategy (2019);
- NSW Critical Minerals and High-Tech Metals Strategy (2021);
- Factsheet for Gold Opportunities in NSW (2021);
- Central West and Orana Regional Plan (2036);
- Blayney Shire Council Local Strategic Planning Statement;
- Orange, Blayney and Cabonne Regional Economic Development Strategy (2018-2022);
- Lithgow Regional Economic Development Strategy (2018-2022);
- NSW Noise Policy for Industry (**NPfI**);
- Voluntary Land Acquisition and Mitigation Policy (**VLAMP**)
- Interim Construction Noise Guideline (**ICNG**);
- NSW Road Noise Policy (**RNP**);
- NSW Aquifer Interference Policy (**AIP**);
- Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales (EPA, 2016) (**Approved Methods**);

- NSW Risk Assessment Guideline for Groundwater Dependent Ecosystems (NOW, 2012);
- Guidelines for the Economic Assessment of Mining and Coal Seam Gas Proposals (NSW Government, 2015);
- Social Impact Assessment Guideline for State Significant Mining, Petroleum Production and Extractive Industry Development, 2017 (**SIA Guideline**);
- NSW Climate Change Policy Framework;
- United Nations Framework Convention on Climate Change Paris Agreement 2015;
- NSW Net Zero Plan Stage 1: 2020–2030; and
- Global Industry Standard on Tailings Management (2020).

3.6 The Commission's Meetings

43. As part of the determination process, the Commission met with various persons as set out in **Table 2**. All meeting and site inspection notes were made available on the Commission's website.

***Table 2** – Commission's Meetings*

Meeting	Date	Transcript/Notes Available on
Site Inspection	28 November 2022	7 December 2022 (re-published on 30 January 2023 to amend a numbering error only)
First Locality Tour	28 November 2022	7 December 2022
Department and DPE Water	6 December 2022	14 December 2022
Applicant	6 December 2022	14 December 2022
Bathurst Regional Council	6 December 2022	14 December 2022
Blayney Shire Council	6 December 2022	14 December 2022 (re-published on 21 February to amend a spelling error only)
Cabonne Council	6 December 2022	14 December 2022
Lithgow City Council	6 December 2022	14 December 2022
Professor Crowther (with observers)	1 February 2023	3 February 2023
Second Locality Tour	5 February 2023	6 February 2023
Nyree Reynolds (with observers)	7 February 2023	13 February 2023
Public Hearing	6, 7 and 8 February 2023	14 February 2023

3.7 Site Inspection

44. On 28 November 2022, the previous Panel of the Commission chaired by Professor Fell, conducted an inspection of the Site, along with the Applicant and several representatives from community groups (refer Section 4.1 below).

45. The inspection included a physical inspection as well as viewing of drone footage provided by the Applicant of difficult to access and flood-affected areas of the Site.

46. Inspection notes and a photographic log of the site inspection were made publicly available on the Commission's website.

3.8 Locality Tour

First Locality Tour

47. On 28 November 2022, the previous Panel of the Commission chaired by Professor Fell, conducted a tour of the locality surrounding the Site. Inspection notes and a photographic log of the locality tour were made publicly available on the Commission's website, and that material was considered by the current, reconstituted Panel.

Second Locality Tour

48. On 5 February 2023, the present Panel of the Commission conducted a second tour of the locality surrounding the Site. Inspection notes and a photographic log of the locality tour were made publicly available on the Commission's website.

3.9 Public Submissions

49. Section 4 of this Statement of Reasons sets out the matters raised in submissions made to, and considered by, the Commission. Consideration has been given to these submissions in the Commission's assessment of the Project, as set out in the Key Issues section of this report (see section 5). For the reasons set out in this Statement of Reasons, the Commission considers that the matters raised in submissions do not preclude the granting of development consent and that the matters raised can be satisfactorily addressed by the conditions of consent imposed by the Commission.

4. Community Participation & Public Submissions

4.1 Community Group Attendance at the Site Inspection

50. On 28 November 2022, the Commission conducted an inspection of the Site. The Commission also invited representatives from community groups to attend and observe at the site inspection. The following groups were represented:

- Orange Local Aboriginal Land Council (**OLALC**);
- a local Wiradjuri Elder;
- Goldfields Honey;
- BHPG; and
- NSW Farmers Association (Blayney Branch).

4.2 Public Hearing

51. The Commission conducted a Public Hearing over three days on 6, 7 and 8 February 2023. The Public Hearing was held in-person on all three days at the Blayney Shire Community Centre in Blayney, with registered speakers presenting to the Commission in-person as well as via online video conference or telephone. The Public Hearing was streamed live on the Commission's website. The Commission heard from the Department, the Applicant, various community group representatives and individual community members.

52. In total, 79 speakers presented to the Commission during the Public Hearing.

53. Presentations made at the Public Hearing have been considered by the Commission as submissions and are referenced below in section 4.3 below.

4.3 Public Submissions

54. As part of the Commission's consideration of the Project, all persons were offered the opportunity to make written submissions to the Commission until 17 February 2023.

55. The Commission received a total of 1,016 written submissions on the Application, comprising 698 unique written submissions made to the Commission via the online portal, email or post, and 318 hand-written form submissions supplied to the Commission by the Applicant.

56. The Commission notes that because the 318 hand-written submissions supplied by the Applicant were not made directly to the Commission in accordance with the Commission's policies or usual process, the Commission does not have visibility into the circumstances in which they were gathered. While these submissions have been considered by the Commission, the process by which they were collected precludes the Commission from treating these submissions as submissions made directly to the Commission. The Commission acknowledges that all of the 318 hand-written submissions supplied by the Applicant were in support of the Project.

4.3.1 Topic Analysis

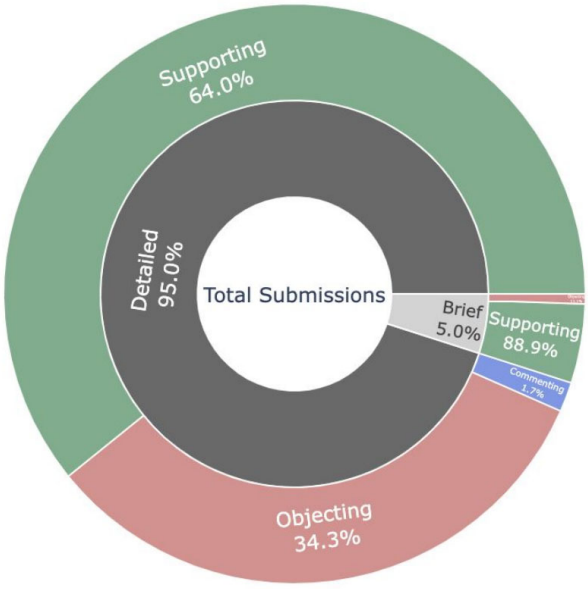
57. The Commission undertook a topic analysis of written and oral submissions made to, and accepted by, the Commission. The analysis combined unique authors (where the written and oral submission was from the same person). It excluded the 318 hand-written form submissions supplied by the Applicant. As such, a total of 725 unique submissions were analysed.

58. The submissions comprised:

- 473 submissions in support of the Project;
- 240 submissions in objection to the Project; and
- 12 neutral comments on the Project.

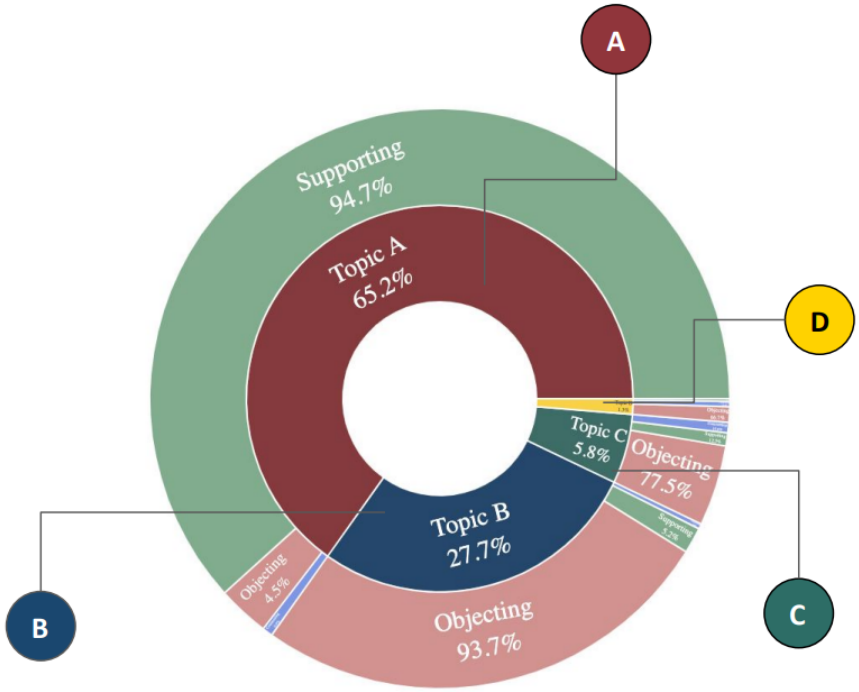
59. **Figure 5** provides an overview of unique submissions received by the Commission. The Commission observes that 95% of submissions comprised detailed submissions (longer than 10 words) and 5% comprised brief submissions. Of the 725 unique submissions that were analysed, 65.2% of submissions were in support of the Project, 33.1% of submissions objected to the Project, and the remaining 1.7% provided neutral comments on the Project.

Figure 5 *– Overview of Submissions Received by the Commission*



60. The analysis also identified the key themes raised in written and oral submissions, as set out in **Figure 6** below.

Figure 6 *– Thematic Analysis of Submissions Received by the Commission*



A Topic: Economic and employment benefits

B Topic: Agriculture and pollution

C Topic: Social costs and ecological issues

D Topic: Indigenous and heritage issues

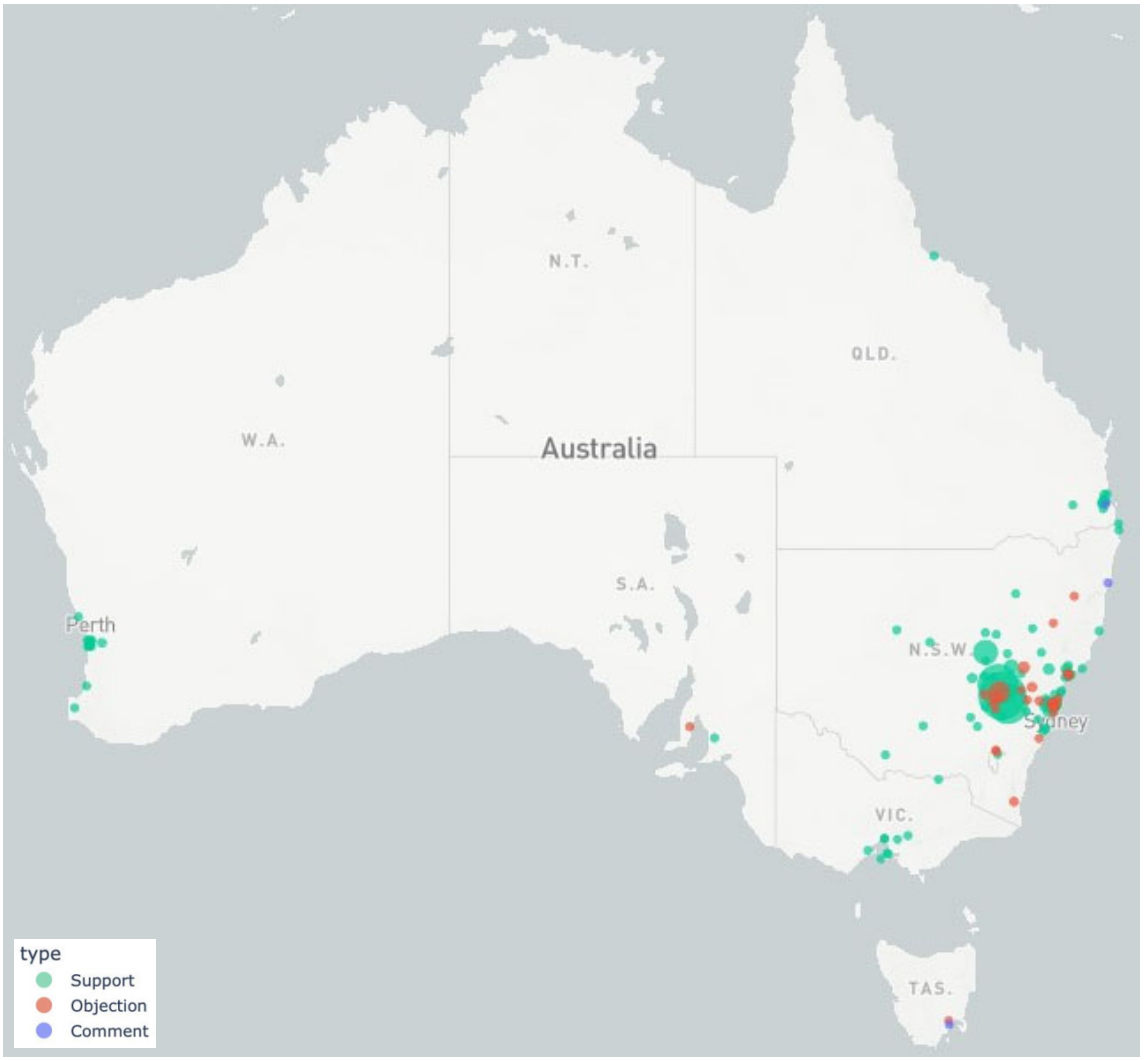
61. The Commission notes that the majority of supporting submissions were made in relation to economic and employment benefits, while a majority of objections to the Project were made in relation to impacts to one or more of the following matters: agriculture, pollution, social costs, ecological, indigenous and heritage.

4.3.2 Geographic Distribution

62. A geographic analysis was undertaken of the 725 unique written and oral submissions received by the Commission during the Public Hearing, via the online portal, email and post. **Figure 7** and **Figure 8** illustrate the submissions received in support, objection and commenting on the Project from across NSW and Australia, with the size of the circle indicating the relative number of submissions from that area.

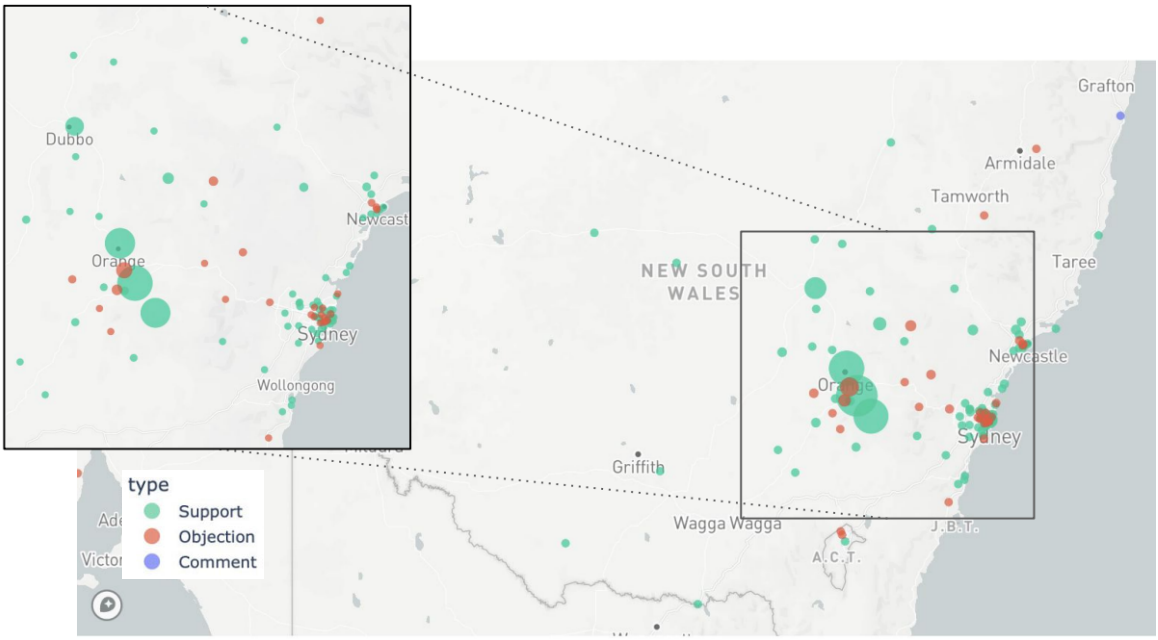
63. The Commission observes that the majority of the submissions were received from the Central West region of NSW, with some submissions made from interstate areas and capital cities including Sydney, Melbourne, Brisbane, Perth and Hobart.

***Figure 7** – Geographic Analysis (National)*



64. The Commission observes that the majority of submissions from the area close to the Site, including Blayney, Orange, Bathurst and the wider Central West region were mainly in support of the Project.

***Figure 8** – Geographic Analysis (State)*



4.3.3 Key Issues Raised

65. Submissions to the Commission raised a number of key issues, which are outlined below. The Commission notes that while the issues referred to below are not an exhaustive report of the submissions considered by the Commission, they are reflective and illustrative of what the Commission regards as the key issues that emerged from the submissions. Each of these issues have been considered by the Commission and are discussed, along with the Commission's findings, in section 5.

Amenity Impacts

66. The Commission received written submissions and heard oral submissions at the Public Hearing from residents who raised concerns about the likely amenity impacts of the Project. The Commission received submissions from residents located close to the Site, including immediately to the south at Kings Plains and Fitzgeralds Mount, and to the north at Vittoria. Key concerns included noise, vibration, visual impacts, lighting, air quality and dust, as described below.

- **Noise** – the Commission received submissions from local residents concerned about the noise impacts from mining, including noise from blasting, heavy machinery and truck movements. Submissions noted that increased background noise levels would negatively impact residents' quality of life and could have adverse impacts on animals, including native animals and livestock.
- **Vibration** – the Commission received submissions from local residents concerned about the vibration impacts from mining. Submissions noted that vibrations could have adverse impacts on animals, including horses, cattle and other livestock.

- **Visual impacts** – the Commission received submissions in objection to the Project because of its likely visual impacts. Submissions noted that the impacts would particularly be experienced by residents of Kings Plains (Walkom Road and the Mid Western Highway). Submissions raised concern about the change of the view from a vegetated landscape to a mine site, including the proposed pit and southern amenity bunds.
- **Lighting** – the Commission received submissions concerned about the lighting impacts of the Project. Submissions commented on the additional visual impacts caused by light pollution and loss of sky views at night. Submissions also noted that night lighting may impact the nearby apiary industry by causing stress and night-time disorientation to bees.
- **Air quality and dust** – the Commission received submissions that raised concern about air quality impacts from the Project and dust generated by earth moving activities, processing and truck movements, especially on windy days. Submissions raised concern about health-related impacts from dust, including asthma, hay fever and dust allergies. Submissions also raised concern about the impact of dust and pollutants settling on residential properties, and its impact on rainwater collection and contamination of freshwater sources for agriculture.

Socio-economic Impacts

67. The Commission received written submissions and heard from speakers at the Public Hearing in support of the Project because of its positive social impacts, including its economic benefits to the region, employment opportunities for individuals and opportunities for local businesses in the area and wider region.

68. The Commission received written submissions and heard from speakers at the Public Hearing in objection to the Project because of social impact concerns. Submissions related to the Project's negative amenity impacts, as well as its impacts to residents' way of life, inter-generational equity, property value, stress on local housing supply and stress on local services.

Aboriginal Cultural Heritage

69. The Commission received written submissions and heard comments at the Public Hearing and through stakeholder meetings, raising concerns about loss of intangible Aboriginal cultural heritage and Aboriginal heritage items as a result of the Project. The Commission received written submissions and heard from members of the community that objected to the Project based on damage to Wiradjuri cultural heritage, and damage to the Belubula River (known as 'Bilabula'). Aboriginal cultural heritage was also raised by the OLALC, which requested that appropriate management provisions and protocols be included as a condition of consent were the mine to be approved.

Water

70. The Commission received submissions that raised concern about the water impacts of the Project, including impacts to groundwater and surface water. Key concerns related to impacts on the Belubula River system, including damming the river headwaters, impacts on groundwater and springs, downstream flow rates, and impacts to Carcoar Dam. Contamination of the Belubula River was also a key concern raised in submissions. The Commission also received submissions that raised concern about the quality of the water entering the water supply pipeline and being pumped to the Site. Submissions in support of the Project noted the positive opportunities provided by the water supply pipeline infrastructure and considered that, if retained after the Project, the pipeline could provide a valuable water supply for various uses in the region.

Tailings Storage Facility

71. The Commission received submissions that raised concern about the tailings storage facility (**TSF**) and its proposed location in the headwaters of the Belubula River. Concerns were raised about management of the TSF, seepage and contamination impacts, and the consequence of failure.

Agriculture

72. The Commission received written submissions and heard from speakers at the Public Hearing in objection to the Project because of its impacts on agriculture, including impacts on farming and the local beekeeping industry.

Biodiversity

73. The Commission received submissions that raised concern about impacts to biodiversity, including the impacts of land clearing (including on koala habitat) and impacts on threatened species and aquatic ecology.

Greenhouse Gas Emissions

74. The Commission received submissions relating to Greenhouse Gas (**GHG**) emissions that raised concerns about the consideration of GHG emissions in the assessment of the Project.

Rehabilitation

75. The Commission received submissions that raised concern about mine site rehabilitation and the final landform, including that the open cut would remain a void.

Economics

76. The Commission received submissions in support of the Project based on its positive economic benefits. Submissions commented on the importance of job creation and job security in the area – through direct and indirect employment – and the role of the Project as a major employer in the area. Submissions also highlighted the positive opportunities provided by the water supply pipeline infrastructure as a valuable water source for the region in the future.

5. Key Issues

5.1 Amenity Impacts

77. The Commission received written submissions and heard from speakers at the Public Hearing in opposition to the Project because of amenity impact concerns.

78. In its AR, the Department identified the Project's potential to impact the amenity of privately owned rural residential receivers around the Site within approximately two kilometres of the Site boundary, and particularly for "47 privately owned residential receivers located to the south of the mine within the Kings Plains locality, including 19 residences in the Kings Plains settlement, in and around Walkom Road" (AR para 78).

79. The Commission's consideration of physical amenity impacts is set out under the key themes below:

- noise;
- vibration;

- visual and lighting impacts; and
- air quality and dust.

80. The Commission has considered social impacts separately at section 5.2 below.

5.1.1 Noise

81. The Commission received written submissions and heard presentations from nearby residents during the Public Hearing that raised concern about the noise impacts of the Project.

82. The Applicant's EIS was accompanied by a Noise and Vibration Impact Assessment, dated August 2019. The Commission understands that the noise assessment, and other acoustic assessments prepared as part of the Project's amendment reports, were prepared in accordance with applicable noise guidelines including the NPfI and VLAMP (AR para 80).

83. The Department states that in response to public submissions and advice received from the Department and the Environment Protection Authority (**EPA**), the Applicant made changes to the mine design and amended operational measures to reduce predicted noise levels. Changes included revising construction and operational staging; relocating the Site access road; and selecting equipment with lower sound power levels. Subsequently, the EPA was satisfied that the issues it had raised about the noise assessment had been appropriately addressed (AR para 81). In its letter to the Department dated 4 March 2021, the EPA recommended conditions relating to noise limitations. These conditions were included in the Department's recommended conditions of consent.

84. Regarding construction noise, the Department's assessment finds that the amendments made by the Applicant have the capacity to reduce construction noise impacts on residents such that the noise management levels set by the ICNG would be met at all receivers (AR para 86).

85. Regarding operational noise, the Department's assessment states that the Project Noise Trigger Levels (**PNTL**) were set at the lowest level that can be applied under the NPfI (40 dBA during the day and 35dBA during the evening and night), except for a slightly higher level (41dBA) set during the day for residences close to the Mid-Western Highway due to the existing background traffic noise (AR para 87). The Department states that after the adoption of mitigation measures and acquisition agreements, 14 privately owned residences are predicted to exceed the PNTL (AR para 88). Exceedances are predicted to be negligible (1-2 dBA) with no receivers predicted to be 'significantly' or 'moderately' affected (AR para 89). The noise assessment predicted that maximum noise levels would comply with the sleep disturbance trigger level of LAFMax 52 dB(A) (AR para 100).

86. The Department states that given the low noise exceedance levels, property acquisition rights under the VLAMP would not apply:

> *Under the VLAMP, noise mitigation and acquisition requirements at residences apply when predicted noise levels reach a level that are characterised as more than negligible, which as [sic] is defined where the predicted noise level is 0-2 dB(A) above the PNTL (AR para 102).*
>
> *…The noise assessment for the project predicts that a 1-2 dB(A) exceedance would occur at 14 receivers... Therefore, based on these predictions, the voluntary mitigation and acquisition rights under the VLAMP would not apply to the project (AR para 104).*
>
> *Nonetheless, outside the VLAMP process, Regis has offered negotiated agreements with 16 landowners in the Kings Plains settlement to the south of the mine… (AR para 105).*

87. The Commission notes that during the Public Hearing the Applicant commented on the status of the negotiated agreements, stating:

> *…we've offered agreements to 18 of these residents in Kings Plains… 16 of those 18 agreements offered have an acquisition clause that can be exercised any time within the first 10 years of the project. Eight agreements have been signed, seven are close, and, and well progressed, and close to signing, and three have stalled… we are committed to progressing those agreements if we possibly can, and our, our door is open for, for those discussions to continue (Day 1 Transcript, page 19).*

88. Overall, the Department is of the view that, regardless of the negotiated agreements offered by the Applicant as an additional mitigation measure, the predicted noise impacts would be acceptable under the NPfI and VLAMP policies (AR para 111), subject to strict conditions. It concludes that:

> *The Department recognises that completely avoiding amenity impacts from the project is not possible given the location of the gold resource in relative proximity to existing community members. However, there are important aspects of the project design that would help to minimise impacts, including the establishment of amenity bunds and various operational limits to reduce noise… (AR para 175).*
>
> *The Department considers that amenity impacts could be managed to meet levels acceptable under NSW government policy through the preparation of a suite of management plans, incorporation of best practice contemporary mitigation measures and negotiated agreements… (AR para 176).*

89. The Department considers that the noise impacts of the Project can be appropriately minimised, managed or compensated to achieve an acceptable level of environmental performance (AR para 177). The Department has therefore recommended conditions to ensure operational noise levels are minimised and a Noise Management Plan is prepared and implemented (incorporating EPA's recommendations for meteorological conditions) based on real time noise monitoring to ensure mining activities comply with required noise limits.

90. During its meeting with the Commission on 6 December 2022, the Applicant stated that it had undertaken an extensive iterative process during the preparation of the EIS and amendment reports "to continually improve the project design to minimise noise levels" (Transcript, page 5). The Applicant noted that the Department is of the view that noise impacts can be managed to meet acceptable noise levels under NSW Government policy (Transcript, page 6), however it stated that:

> *Notwithstanding, proactive noise management during construction and operations has been committed to by Regis comprising a combination of weather forecasting,* [real] *time noise monitoring and operational measures such as shielding noisy equipment during adverse weather conditions to manage levels from the site to within the criteria that will be specified in the consent and the environment protection licence and these measures will also be outlined in a noise management plan (Transcript, page 6).*

91. During its meeting with the Commission on 6 December 2022, Blayney Shire Council acknowledged that some local residents, and in particular residents of Kings Plains, are likely to be affected by noise impacts from the Project (Transcript, page 11), however Council was also of the view that the Applicant has "been very proactive in identifying what those issues potentially are…" (Transcript, page 11). Blayney Shire Council is of the view that noise impact mitigation measures should be "reasonable, effective and enforceable" (Transcript, page 11).

Commission's Findings

92. The Commission has considered the concerns of nearby residents and other submitters and finds that the noise impacts of the Project can be appropriately minimised, managed or compensated to achieve an acceptable level of environmental performance that is consistent with relevant government policies and guidance. In forming this view, the Commission recognises that there is a real prospect of a remaining adverse impact on nearby residents, and the Commission has placed weight on this prospect. However, the Commission has formed the view that the impacts would be appropriately minimised, managed or compensated to an acceptable level having regard to the other considerations including the countervailing considerations favouring the grant of approval. The Commission has therefore imposed conditions B1 to B5 which set construction noise criteria and conditions B6 to B11 which set operational noise criteria for the Project.

93. To ensure ongoing noise management the Commission imposed condition B13 which requires the Applicant to take all reasonable and feasible steps to minimise noise from construction and operational activities. The Applicant must also operate a comprehensive noise management system, regularly assess real time noise monitoring data and carry out regular attended noise monitoring. The Commission has also imposed conditions B26 to B28 which require the Applicant to prepare a Noise and Blast Management Plan in consultation with the EPA and Community Consultative Committee (**CCC**).

5.1.2 Vibration

94. The Commission heard concerns from nearby residents during the Public Hearing and received written submissions that raised concern about the vibration impacts of the Project. Submissions raised concern about the impact of vibrations on nearby houses and buildings, the wellbeing of livestock (including horses) and sleep disturbance.

95. The Applicant's EIS was accompanied by a Noise and Vibration Impact Assessment, dated August 2019.

96. Regarding vibration impacts during construction works, the assessment states that a qualitative assessment of potential vibration impacts was completed and found that "due to the nature of the works proposed and distances to potential vibration sensitive receivers, vibration impacts from the mine development would be negligible" (page 24).

97. During blasting, impacts to nearby residential receivers and heritage items would remain within the 'airblast overpressure criteria' and 'ground vibration criteria' (5/10 mm/s) for blasts up to 300 kg maximum instantaneous charge. The Department notes that this includes the Hallwood Farm where more stringent ground vibration criteria of 3 mm/s would apply (AR Table 19).

98. In relation to livestock, the Applicant's assessment states that worst-case blasting impacts would result in overpressure up to 115dBZ and ground vibration between 0.1 mm/s and 1.3 mm/s, which is "well below the regulatory criteria" (page 83).

99. Vibration impacts from the pipeline development would be negligible (AR Table 19).

100. The Department has recommended construction and operating conditions to ensure the safety of people and livestock by managing and minimising blasting and vibration impacts, including any associated structural damage to buildings or infrastructure.

101. The Commission understands that the Applicant has committed to limiting the maximum instantaneous charge for blasts at the project to 300 kg, and blasting would only be undertaken between 9am and 4pm (Monday to Saturday inclusive) (AR Table 19).

102. The Commission sought advice from the Department on imposing an airblast overpressure limit for agricultural uses within 2 kilometres of the Site due to comments heard at the Public Hearing regarding impacts to livestock. The Department's response (Department's comments on the feasibility and workability of proposed conditions, dated 17 March 2023) was that:

> *The proposed addition of blasting limits for agricultural uses within 2 km of the site is not workable and would be difficult to enforce. The issue of blast impacts on livestock has been extensively considered in Hunter Valley coal mines (including on the nearby thoroughbred industry) with no alternative limits imposed for livestock on any mines in NSW. The proposed blast overpressure and vibration levels are predicted minimum levels that are below the recommended acceptable levels based on the ANZECC guideline "Technical Basis for Guidelines to Minimise Annoyance Due to Blasting Overpressure and Ground Vibration". Similarly, to the approach on noise limits, if the predicted level is below the recommended acceptable level, the predicted level should not be used to set the limit, rather the recommended acceptable limit should be applied. The use of "agricultural uses within 2 km of the site" is also not clear, for example this could include bees foraging within the development site – which would be unworkable.*

103. The Commission accepted the Department's advice and determined not to impose such a condition.

Commission's Findings

104. The Commission has considered the concerns of nearby residents and other submitters and finds that the vibration impacts of the Project can be appropriately minimised or managed to achieve an acceptable level of environmental performance that is consistent with relevant government policies and guidance. In forming this view, the Commission recognises that some adverse vibration impacts on nearby residents will remain. However, the Commission finds that the impacts of vibration would be appropriately minimised, managed or compensated to an acceptable level and given the positive impacts of the Project and its recognised benefits, approval of the Project is acceptable.

105. Noting the concerns raised in relation to the impacts of blasting and vibration, the Commission has imposed conditions B14 and B16 which set specific blasting criteria for private residences, Hallwood Farm Complex, the TSF embankment and public infrastructure. The Commission has also imposed conditions B24 and B25 which set blast operating conditions for the Project.

106. As described in paragraph 93 above, and to ensure ongoing blast and vibration management, the Commission has imposed a requirement for the Applicant to prepare a Noise and Blast Management Plan.

5.1.3 Visual and Lighting Impact

107. The Commission considered submissions (including from residents of Kings Plains) that raised concern about the visual impacts of the Project, particularly during the early years of the Project during the development of the pit and southern amenity bunds.

108. A Visual Impact Assessment (**VIA**) was prepared as part of the Applicant's EIS, dated August 2019, and assessed the Project's likely visual and lighting impacts.

Visual Impact

109. The VIA considered the visual effect (a measure of contrast with the existing landscape) and visual sensitivity (a consideration of land use and visibility) within the four sectors around the Site – northern, eastern, southern and western (AR para 149).

110. As summarised by the Department (AR Table 11), the most impacted locations were found to be:

- rural residences to the east of the Site (high impact);
- the Kings Plains locality to the south of the Site, including rural residences and some roads (Mid Western Highway and Walkom Road) (high impact); and
- rural residences and elevated areas of Blayney to the west of the Site (high impact).

111. Other areas surrounding the Site were found to have 'no impact' or 'moderate to low' impact (AR Table 11).

112. The Department notes that visual impacts will be experienced by rural residences and also by motorists traveling along the Mid Western Highway and Walkom Road (AR para 154).

113. The VIA states that the following visual mitigation measures have been incorporated into the design of the Project (page 115, summarised):

- the priority development of the pit and southern amenity bunds to screen the development of the open cut pit, mine infrastructure and haul roads;
- development of mine and waste rock emplacement staging to create progressive screening bunds;
- progressive rehabilitation and development of an appropriate landform that incorporates natural design principles (micro-topographic design and natural landform topographic articulation of the waste rock emplacement);
- early off-site residential mitigation planting; and
- negotiated agreements and property acquisition.

114. The Department notes that "off-site tree screen planting and advanced landscaping concept plans" have been tested at three representative residences to "confirm the effectiveness of a range of off-site residential visual mitigation measures which can be implemented at highly impacted residences" (AR para 159).

115. During its meeting with the Commission on 6 December 2022, the Applicant stated that it is "committed to establishing and maintaining tree screens in and around the mine" and has "already undertaken a substantial amount of tree planting around the site to establish natural screens". The Applicant said it has to date "planted an estimated 10,000 native trees in and around" the Site (Transcript, page 8).

116. The Department states that visual impacts are "expected to be substantially reduced from Year 6, as the rehabilitation measures progress across the southern face of the pit amenity and southern amenity bunds, with visual impacts reduced to low / very low in the long term" (AR para 155). However, the Department acknowledge that "even following rehabilitation of the face of the southern emplacement, the landscape character of the area would be permanently changed, particularly in the Kings Plains settlement immediately south of the project" (AR para 148).

117. Overall, given the "fundamental limitations in the ability to avoid and minimise visual impacts where the location of the target mineral resource is physically fixed", the Department is of the view that the Applicant's proposed mitigation measures would reduce visual impacts to an acceptable level (AR para 171 and 172).

Lighting Impacts

118. The VIA states that there are two types of light pollution that could be generated by the Project – direct light effects (when the light source is directly visible and experienced if there is a direct line-of-sight to the light source) and diffuse light effects (the general night-glow that results from light of sufficient strength being reflected into the atmosphere) (page 93).

119. The VIA states that all external lighting associated with the Project will comply with *AS/NZS 4282:2019 – Control of the Obtrusive Effects of Outdoor Lighting*, including the minimisation of light spill through the following mitigation measures (page 119, summarised):

- restriction of night lighting to the minimum required for operations and safety requirements;
- use of unidirectional lighting techniques;
- use of shielded fittings to limit the spill of light where safe to do so;
- use of anti-reflective paint to light spill surfaces where practicable;
- minimising upward spill of light or spill of light directly towards Kings Plains;
- use of warm white lighting for fixed lighting where compliant with industrial lighting standards; and
- provision of screening (natural or physical) on private properties in consultation with landholders.

120. In addition to the above mitigation measures, the Department notes that negotiated agreements and the proposed landscaping works will also help to mitigate any impacts for direct and diffuse lighting at nearby receptors (AR para 170).

121. The Department is of the view that the Applicant's proposed mitigation measures would reduce lighting impacts to an acceptable level (AR para 172).

Commission's Findings

122. The Commission acknowledges that several residential receivers close to the mine site would experience significant visual and lighting impacts because of the Project, particularly during the early stages of construction and operation. The Commission also recognises that the visual outlook from these residences will be irreversibly changed by the Project and therefore some adverse impacts may remain after the Project. The Commission has placed weight on this prospect. Overall, however, the Commission finds that visual impacts would be significantly reduced over time as a result of the mitigation measures proposed, which would reduce visual and lighting impacts as far as practicable. The Commission finds that, on balance and when weighed against the considerations favouring the grant of approval of the Project, the remaining visual and lighting impacts are capable of being further minimised and mitigated through conditions to ensure an acceptable outcome.

123. The Commission has imposed condition B77 which requires the Applicant to take all reasonable steps to minimise visual and off-site lighting impacts. This condition also requires all external lighting associated with the Project to comply with *AS/NZS 4282:2019 – Control of the Obtrusive Effects of Outdoor Lighting.*

124. To further mitigate visual impacts, the Commission has imposed condition B78 which states that upon receiving a written request from the owner of any residence on privately owned land which has, or would have, high visual impacts, the Applicant must implement reasonable and feasible additional visual impact mitigation measures, where warranted. These include measures such as landscaping treatments or vegetation screens to reduce the visibility of the mining operations and infrastructure from the residences on the privately-owned land.

5.1.4 Air Quality and Dust

125. The Commission received written submissions and heard from community members during the Public Hearing that raised concern about air quality and dust impacts from the Project, including health impacts, impacts on fresh water sources and the exposure of bees to dust.

126. During its meeting with the Commission on 6 December 2022, Blayney Shire Council noted that air quality and dust impacts are "front of mind" for the community due to a recent quarry approval close to Blayney township (where potential dust and air quality impacts were a key issue) and "ongoing issues" from the Cadia mine (Transcript pages 11 and 12).

127. The Applicant's EIS was accompanied by an Air Quality and Greenhouse Gas Assessment, dated August 2019. The Commission understands that the assessment was prepared in accordance with applicable guidelines, including the *Approved Methods for the Modelling and Assessment of Air Pollutants in NSW* (EPA, 2016) and the VLAMP (AR para 129).

128. Four periods of the Project's development – Year 1, Year 2, Year 4 and Year 8 – were the focus of emissions quantification and dispersion modelling. The Department notes that modelling scenarios were conservative in selecting the years with greatest emissions resulting from peak production rates and longer haulage distances (AR para 130). The Department states that as a result of the Project design changes, including the proposed changes to waste rock scheduling and the use of larger capacity haul trucks, dust emissions were reduced compared the modelling completed for the EIS (AR para 131).

129. Key air pollution sources during construction and operation include (AR para 128, summarised):

- particulate matter (due to material handling and processing operation of mobile plant and equipment and wind erosion of open surfaces);
- metal emissions (from waste rock, ore and tailings material); and
- gaseous emissions (due to mobile fleet, material processing and blasting).

130. The Applicant's assessment states that "the design of the project will incorporate a range of dust mitigation and management measures" and that a "best practice dust control measures review was undertaken for the project and this identified that the proposed mitigation and management measures will be in accordance with accepted industry best practice for dust control" (page ES.1).

131. Proposed measures to minimise particulate emissions include (AR para 132, summarised):

- use of chemical suppressants on high traffic haul roads and water suppression to all other routes;
- speed restrictions on vehicles;
- implementation of dust control systems on machinery;

- use of water sprays during the run-of-mine pad operations and primary crusher operations;
- water suppression for dozer activities for waste rock and topsoil removal; and
- temporary stabilisation of disturbed areas through hydro-mulching or hydro seeding, ahead of final rehabilitation.

132. The Department notes that dust suppression would be one of the main water demands of the Project at about 18% of water usage (AR para 308). Water within the mine water management system would be captured and reused in processing and dust suppression activities (AR Table 1).

133. The Applicant's assessment predicted that there would be "no exceedances of project alone or cumulative particulate matter criteria for at (sic) surrounding residences as a result of the project" (AR para 133).

134. During its meeting with the Commission on 6 December 2022, the Applicant stated:

> *The predicted levels of dust and possible pollutants are predicted to be well below the EPA's criteria at the residents surrounding the mine site throughout the mine life and this is due to a combination of weather, the project design and it minimising dust emissions through, for example, smoothing out the production profile and maximising the capacity of trucks which keeps trucks movements to a minimum as well as the placement of pit exit ramps... (Transcript, page 7).*

135. The Applicant is of the view that air quality and dust impacts can be appropriately managed. It stated that the monitoring system that it has committed to will include "continuous real-time monitoring of fine dust" to allow "early responses to rising levels if they rise towards those EPA limits" (Transcript, page 7).

136. The Department is also of the view that air quality impacts of the development could be managed to meet levels acceptable under NSW government policy. It has recommended strict conditions to ensure that the Applicant complies with air quality limits and adaptively manages air quality emissions (AR para 145 and 146).

Commission's Findings

137. The Commission agrees with the Department and finds that the air quality impacts of the Project can be appropriately minimised or managed to achieve an acceptable level of environmental performance that is consistent with relevant government policies and guidance. In forming this view, the Commission acknowledges the concerns from surrounding residents regarding the impact of the Project on air quality and recognises that there may be some remaining adverse impacts on nearby residents. The Commission has given this detailed consideration and finds that, on balance and when weighed against the considerations favouring the grant of approval of the Project, the remaining air quality impacts are capable of being further minimised and mitigated through conditions to ensure an acceptable outcome.

138. The Commission has imposed condition B30 which requires all reasonable and feasible avoidance and mitigation measures to be employed so that particulate matter emissions generated by the Project do not cause exceedances of the air quality criteria at any residence on privately-owned land.

139. The Commission has imposed condition B33 which sets out air quality and greenhouse gas operating conditions to ensure that ongoing impacts are mitigated and managed. Further to the above, the Applicant must prepare an Air Quality and Greenhouse Gas Management Plan in consultation with the EPA and CCC as required by conditions B34 to B37. These conditions require the Applicant to undertake an air quality monitoring program in accordance with the relevant government policies and guidelines.

5.2 Socio-Economic Impacts

140. The Commission received written submissions and heard from speakers at the Public Hearing both in opposition to the Project because of social impact concerns and in support of the Project because of its likely social benefits, including economic and employment opportunities.

141. The Department states that it "recognises that many of the social impacts from the project are related to air quality, noise, and other environmental impacts that have been assessed separately in accordance with relevant legislation and government policy" (AR para 178). The Commission agrees with the Department that amenity impacts are a key concern related to social impacts, particularly for the residents of Kings Plains. The Commission has considered amenity impacts in section 5.1 above.

142. The Applicant's EIS included a Social Impact Assessment (**SIA**), dated July 2019, with an Addendum SIA prepared in response to submissions and to incorporate the amendments to the Project (AR para 180). The SIA and Addendum SIA were prepared in accordance with the Department's *Social Impact Assessment Guidelines for State Significant Mining, Petroleum Production and Extractive Industry Development 2017* (**SIA Guideline**) (AR para 181).

143. The Department explains that a key aspect of applying its SIA Guideline is to use a risk matrix that assesses social risks based on a likelihood rating and consequence rating. The Department cautions that "while a social risk rating of 'high' or 'extreme' on one particular category of social impact might appear problematic if considered in isolation, there are a number of other important factors that must be taken into account in the broader assessment of social impacts" (AR para 184).

144. The Department's specialist social impact team undertook a review of the Applicant's SIA, including additional information provided in response to information requests by the Department. The review focused on two key geographic areas of social impacts – Kings Plains, and Blayney and the surrounding region. The Commission has considered these two areas in the following paragraphs.

Kings Plains

145. The Department considered the following key themes in relation to social impacts to Kings Plains residents:

- loss of amenity, community cohesion and wellbeing;
- loss of culture, rural way of life and sense of place; and
- impacts to health, reasonable community fears, uncertainty and trust.

146. Regarding loss of amenity, the Applicant has undertaken negotiations with many of the most affected landowners in the Kings Plains settlement, as discussed above (see section 5.1.1). The Applicant proposes to implement measures at these properties to minimise or mitigate residents' loss of amenity where possible and/or negotiate property acquisition agreements (AR para 193).

147. Regarding community cohesion and wellbeing, the Department states:

> *The Department notes that the acquisition and subsequent relocation of residents from the area may cause negative social impacts, particularly on community wellbeing and cohesion, on the remaining community of Kings Plains. The Department's SIA team considers that the impact of outmigration would have an extreme risk rating if many residents choose to take up the option for Regis to acquire their property* (AR para 196).

148. The Applicant has committed to "minimise the risk of outmigration" by managing the Project to comply with the applicable amenity criteria. Where it does acquire properties, it proposes to make them available for rent to existing residents in Blayney LGA and the Project workforce (AR para 198).

149. The Department considers that impacts on community cohesion in the Kings Plains locality would require adaptive management by the Applicant and would need to be tracked and monitored through a Social Impact Management Plan (**SIMP**). Accordingly, the Department has recommended a condition that a SIMP be prepared "with the involvement of landowners and that a Community Benefits Program be developed as part of the SIMP" (AR para 199).

150. Regarding the community's sense of place and rural way of life, the Department states:

> *The Department considers that the impacts to the sense of place and rural way of life are inevitable with the introduction of a mining development in the locality and notes that the mitigation measures proposed by Regis are consistent with industry best practice to reduce the impacts as far as practicable (AR para 200).*

151. The Department states that loss of sense of place and rural way of life includes adverse impacts on rural values such as a rural outlook (AR para 204). A measure to minimise these impacts is to reduce the visual appearance of the mining landscape on rural vistas, as discussed above. Reducing views of mining landforms, via measures such as visual screening, would assist in mitigating impacts to the sense of place for the affected community.

152. The Applicant acknowledges the "potential impacts to the health, wellbeing and associated fears and stress experienced by the community, particularly the most affected residents in Kings Plains" which include "fears and stress associated with sleep disturbance, air quality impacts, water impacts, traffic hazards and impacts associated with population influx" (AR para 207). The Applicant proposes to address these impacts through commitments to undertake clear and transparent communications, including the dissemination of monitoring results.

153. The Department also notes the importance of transparent communication, stating:

> *…the ongoing monitoring, reporting and transparent communication with the community is vital to allay these concerns. The maintenance of community consultation, the ongoing operation of the CCC and reporting of the project's performance against its operational criteria would ensure the relevant information is available to the community. Ongoing adaptive management and responses to any complaints, exceedances or incidents is also important to ensure Regis builds trust with the community (AR para 210).*

154. The Commission notes that the Applicant has proposed a 'Near Neighbours Impact Management Framework', which would be included as part of the SIMP, and includes actions to further analyse and adaptively manage impacts to the sense of place of Kings Plains during the life of the Project (AR para 205).

155. Section 6.3.5 of the Department's AR sets out a list of the proposed social impact mitigation measures for the Project. Mitigation measures relevant to the residents of Kings Plains include, but are not limited to, the following actions (summarised):

- the ongoing operation of the Community Consultative Committee (**CCC**);
- preparation of a Stakeholder Engagement Plan (which aims to build relationships between the Applicant and the community);
- preparation of a SIMP (to address management, monitoring and reporting of potential social impacts and opportunities);

- preparation of a Near Neighbours Impact Management Framework (which aims to further analyse and adaptively manage impacts to the sense of place of Kings Plains);
- negotiated agreements for property acquisition;
- finalisation of a Voluntary Planning Agreement (**VPA**) with Blayney Shire Council (which includes direct contributions to Council with funds to be allocated towards community infrastructure projects); and
- the preparation of various other plans and strategies to manage matters such as complaints and grievances.

156. The Applicant is of the view that the proposed mitigation measures, together with the amendments it has made to the Project design, would achieve an appropriate social outcome. During the Public Hearing (Day 1), the Applicant stated:

> *"…the project takes a practical balance between resource recovery and impact. There are certainly some compromises that we- we've done in the mining, in the extraction process, to ensure that we minimize that impact" (Day 1 Transcript, page 16).*

157. During the Public Hearing (Day 3) the Commission heard concerns about the adequacy of the Applicant's proposed social impact mitigation measures. Dr Alison Ziller, as an independent expert speaking on behalf of the BHPG stated:

> *A mitigation which is not tangible, and/or is not able to be delivered by the proponent, and/or is not likely to be effective, is not worth much. The documentation presented by both the proponent and the Department reveal, in my view, that not one of the mitigations proposed would be durably effective in mitigating the adverse social impacts that they have identified* (Day 3 Transcript, page 8).

158. Dr Ziller also raised concern that "the majority of 85 households within two kilometres of the mine boundary are proposed to be uncompensated for [amenity impacts] and/or any damage to their social environment" (Day 3 Transcript, page 8).

159. The Commission notes Blayney Shire Council's view regarding the social impacts to Kings Plains. During Day 1 of the Public Hearing, Council stated:

> *Around the social impact, while the economic benefits associated with mining are enjoyed by the wider region and New South Wales economy generally it is important to note that Council sincerely acknowledges the impact that will occur to our residents of Kings Plains who ultimately will bear the direct impact and disruption to their normal lives if the mine is developed* (Day 1 Transcript, page 26).

Blayney and the Surrounding Region

160. The Department considered the following key themes in relation to social impacts to Blayney and the surrounding region:

- accommodation supply, housing availability and affordability; and
- distributive and inter-generational equity.

161. The Applicant's SIA states that "the peak project construction phase workforce is anticipated to be around 710 people in Year 1" with variations through the year, "averaging at around 580 people in this first year". During operations the "annual average workforce from Year 2 to Year 11 will be approximately 260 full-time equivalent (FTE) persons. The peak operations workforce of 320 FTE persons is anticipated to occur in around Year 4 and Year 5 and is associated with the increase in production within the open cut operations at this time" (page iii).

162. Regarding accommodation availability and impacts, the Applicant's SIA states impacts are "confined largely to the construction phase of the project and are primarily associated with the potential influx of a temporary construction workforce to Blayney township and increased demand for short-term accommodation and private rental housing" (page ix). The SIA found "there are approximately 170 rooms of short-term accommodation available across the Blayney LGA, the majority of these rooms are located in hotels and motels within Blayney and the villages" (page 117). This represents an "insufficient supply of rooms in short-term accommodation in the Blayney LGA to meet the accommodation demands of the construction phase" without adversely impacting the local tourism industry in Blayney (page 118) and it will therefore be necessary for non-local employees to seek accommodation in areas outside of the Blayney LGA, such as in the neighbouring regional centres of Bathurst and Orange. The SIA indicates that there are a more than 1,000 rooms of short-term accommodation available in Bathurst and Orange and ample housing supply (page 119).

163. Regarding the source of its workforce, the Applicant's SIA states that "approximately 60% (367 workers) of the total construction workforce for the mine development and 20% (24) of the pipeline construction workforce is anticipated to be local hires, which may result in labour draw from existing local employers" (AR para 214).

164. The Department notes that the Applicant has "committed to preparing a Workforce Accommodation and Management Framework to minimise the impacts of workforce accommodation demands during construction and operation of the project". Additionally, "the proposed SIMP would include measures to address accommodation demands without adversely impacting tourism growth in the region or availability" (AR para 213).

165. During its meeting with the Commission on 6 December 2022, the Applicant stated that the SIMP will:

> *…provide [analysis] of unskilled and skilled labour requirements for the Project. It will also provide an analysis of the labour market conditions and the adaptive management approach to recruitment that will be adopted based on the availability of skills and people for jobs at the time* (Transcript, page 10).

166. Further, the Applicant stated:

> *The workforce management plan will also describe actions to be taken to avoid, minimise or offset potential impacts of the project workforce recruitment activities on existing local businesses and service providers. Key actions include using local businesses wherever possible to [deliver] construction activities and to embed local businesses in our site operations. The trigger action response plan will also be developed based on labour market monitoring to inform adaptive management.*
>
> *We have been working and will continue to work and engage with other large employers in the area and, in particular, on their major capital expansion projects so wherever we can we will schedule our [construction] activities so we don't hit the peak at the same time that they do* (Transcript, page 10).

167. The Department notes that the Applicant advised that it is part of the 'Orange360' group, which is facilitated by the three regional councils and monitors accommodation availability and employment in the broader region (AR para 215).

168. Regarding economic benefits, the Commission received submissions both in support of the Project because of its stated employment and economic benefits for the local area, the region and NSW more broadly, and also in objection to the Project because of concerns that such economic benefits were overstated or may not directly benefit the local community.

169. The Applicant, in its submission to the Commission dated 17 February 2023, noted the community's concerns raised during the Public Hearing regarding the Project's overall economic benefits. The Applicant stated:

> *The economic impact assessment (Gillespie Economics 2020) found that the total annual impact of the peak year of construction on the regional economy is estimated at up to:*
>
> - *$531 M in annual direct and indirect regional output or business turnover*
> - *$218 M in annual direct and indirect regional value added*
> - *$114 M in annual direct and indirect household income*
> - *1,289 direct and indirect jobs.*
>
> *…The project operation is estimated to make up to the following contribution to the regional economy:*
>
> - *$492 M in annual direct and indirect regional output or business turnover*
> - *$272 M in annual direct and indirect regional value-added*
> - *$67 M in annual direct and indirect household income*
> - *788 direct and indirect jobs (page 48).*

170. The Department states:

> *The cost-benefit analysis, which includes estimated costs from all environmental externalities, indicates that the project would have a production benefit of $139M (excluding employee benefits) in net present value (NPV) terms (at 7% discount rate). However, in consideration of the recent significant increases in the forecast gold price, the net benefit of the project is likely to be significantly greater, at around $244 M NPV (at 7% discount rate)* (AR para 464).

171. The Department commissioned BIS Oxford Economics (**BOE**) to undertake an independent peer review of the Applicant's economic assessment (prepared by Gillespie Economics in July 2019 as part of the EIS and amended in August 2020 as part of the First Project Amendment).

172. The Department states that "BOE sought additional clarification and justification regarding the price of gold assumptions, employee benefits, environmental externalities, project costs and the local effects analysis". The Department states that following review of additional information provided by the Applicant, including a review of estimates for gold price, "BOE confirmed that its comments had been addressed but reiterated that employee benefits should not be included in the CBA outputs" (AR para 468). The Department agrees with this conclusion and confirms that employee benefits have been excluded from the estimated costs (AR para 469).

173. Mining, Exploration and Geoscience (MEG) confirmed that the State would receive around $65M in NPV terms in royalty from the Project over 15 years, and at full production, the NSW Government would receive around $11M per year in royalties (AR para 470).

174. The Department considers that the Project would have considerable economic benefits for the region and NSW through employment and royalties. The Department also notes that the Applicant has executed a VPA with Council, which would provide funding for local infrastructure projects. The Department has recommended conditions requiring the Applicant to commence the executed VPA with Council (AR para 476).

175. Regarding engagement with the local Aboriginal community, the Applicant proposes to prepare an Indigenous Participation Plan, which would encourage indigenous business and employment opportunities. It would also engage through the Cultural Heritage Management Plan, which would address management of cultural heritage values during the development and operation of the Project (AR para 219). The Commission considers Aboriginal cultural heritage further at 5.5 below.

176. The Commission has considered the principle of inter-generational equity, as required under the Mandatory Considerations, and has considered inter-generational equity in its assessment of the potential environmental, social and economic impacts of the Project. The Commission notes the Department's view that potential inter-generational impacts of the Project on future generations include "concerns with ongoing liability of the mining landforms such as final landform and land use potential, and potential legacy issues associated with the mine – such as long-term impacts on water resources" (AR para 227). The Commission has considered these matters in the relevant sections of this Statement of Reasons.

177. Overall, the Department concludes that "the social impacts on some community members are inevitable with the introduction of a mining development in the locality" however it is of the view that the mitigation measures proposed by the Applicant are consistent with industry best practice to reduce the impacts as far as practicable (AR para 232). The Department has recommended conditions to manage and mitigate these risks throughout the life of the mine and into mine closure.

178. In its submission to the Commission dated 17 February 2023, the Applicant stated that it considers the social impacts of the Project can be appropriately minimised, mitigated and managed and the Project is in the public interest. It is of the view that the Project "achieves an appropriate balance between its benefits and impacts" (page 58).

Commission's Findings

179. The Commission considers that the Applicant has assessed the social impact of the Application in sufficient detail. The Commission agrees with the Department's view that because the Project would be located on a greenfield site, previously undisturbed for mining uses, there would inevitably be cumulative changes that contribute to the social impacts on surrounding receivers. However, the Commission also agrees with the Department that the proposed mitigation measures are comprehensive and consistent with industry best practice to reduce the social impacts as far as practicable. The Commission finds that the negotiated agreements offered by the Applicant to impacted residents (which are outside the VLAMP process), and the proposed additional measures offered to property owners to further mitigate impacts on an individual basis, are appropriate.

180. The Commission also agrees with the Department and the Applicant that the Project would have considerable economic benefits for Blayney, the Central West region and NSW through employment and royalties.

181. The Commission acknowledges the submissions received and the comments made by the community during the Public Hearing about the social and amenity impacts that will likely be experienced by nearby residents as a result of the Project, particularly to residents of Kings Plains. The Commission also recognises the associated fears and stress experienced by the community, and that some members of the community will experience a substantial sense of loss or grievance. In making its determination, the Commission has given careful consideration to these matters and placed significant weight on them. Nevertheless, on balance, the Commission finds that the Project will provide significant value and social benefits and the social impacts associated with the Project, including those relating to way of life, inter-generational equity, property value, stress on local housing supply and stress on local services are capable of being minimised and mitigated through conditions.

182. The Commission has therefore imposed conditions to minimise and mitigate social impacts as far as practicable. Condition B101 imposed by the Commission requires the Applicant to prepare a Social Impact Management Plan in consultation with Blayney Shire Council, the CCC and affected stakeholders (including Kings Plains and other local residents). A Stakeholder Engagement Framework must also be prepared, including details about communications with relevant stakeholders. As set out in section 5.1 above, the Commission has imposed conditions that require the Applicant to monitor and report on certain environmental impacts – for example noise, blast and air quality data must be made publicly available on the Applicant's website.

5.3 Infrastructure

5.3.1 Water Supply Pipeline

183. On 21 October 2022, approval was granted to Springvale Coal for a modification to its Western Coal Services Project, which includes construction and operation of a water management system to allow transfer of water between the Western Coal Services Project site and other operations including the Project (via a pipeline) (AR para 11).

184. The 90-kilometre pipeline is proposed to cross up to 114 watercourses and drainage lines, nine of which are perennial watercourses including the Coxs River and Macquarie River (AR para 274). The Department notes that "the pipeline crossings of the Macquarie River and Queen Charlottes Creek would be constructed using horizontal direct drilling, the Wangcol Creek crossing would be attached to an existing aboveground causeway and the remainder would be constructed using standard trench excavation" (AR para 275). According to the Department, the water supply pipeline would be retained for future use after the Project and if no uses are identified, all surface infrastructure would be removed (AR para 2).

185. The Applicant's EIS included a Pipeline Development Water Assessment, dated August 2019. A Fluvial Geomorphology Addendum, dated August 2020, for the amended pipeline route was also submitted by the Applicant. The Applicant's Pipeline Development Water Assessment concluded that the potential risk to surface water sources is considered low and periodic monitoring of water quality is proposed along the pipeline route at permanent stream locations (page 48).

186. DPE Water, in its advice letter dated 20 December 2019, stated that the pipeline works need to be constructed in accordance with the *Guidelines for Controlled Activities on Waterfront Land* (NRAR 2018).

187. The Applicant proposes to address key risks in a Construction Environment Management Plan (**CEMP**) in consultation with DPE Water (AR para 278).

188. The Department has recommended conditions requiring the Applicant to prepare a Pipeline CEMP including measures to ensure the pipeline is designed and constructed consistent with DPE Water requirements. The Department also recommended that the Pipeline CEMP includes rehabilitation measures including "the requirement to progressively stabilise the pipeline corridor during construction and ongoing monitoring and response strategy to ensure the stability of creek crossings and success of rehabilitation is monitored" (AR para 281).

Commission's Findings

189. The Commission accepts the Applicant's assessment that the potential risks from the construction of the water supply pipeline to the surrounding area is low. The Commission agrees with the Department's recommendation and finds that impacts associated with construction of the water supply pipeline are capable of being managed through the implementation of a CEMP. The Commission has therefore imposed condition C1 which states that the Water Supply Pipeline CEMP must be prepared in consultation with DPE Water, Transport for NSW (**TfNSW**), DPI Agriculture, Forestry Corporation of NSW, Biodiversity Conservation and Science Directorate (**BCS**), Water NSW, Blayney Shire Council, Bathurst Regional Council and Lithgow City Council. The Commission accepts the DPE Water advice referenced above and has imposed a requirement for the Water Supply Pipeline CEMP to be constructed in accordance with the *Guidelines for Controlled Activities on Waterfront Land.* The Applicant must give consideration to biodiversity, heritage, air, noise, vibration, traffic, rehabilitation and social impacts as part of this CEMP.

5.3.2 Tailings Storage Facility

190. Concerns were raised in submissions, such as that by Professor Gavin Mudd, as an independent expert speaking on behalf of the BHPG (Day 3 Transcript, pages 12 to 16), regarding TSF design options, the permeability of the TSF lining and the long-term seepage risks of the TSF.

191. The Applicant's EIS included a TSF Risk Assessment, dated 3 July 2019, and a TSF Feasibility Study, dated 9 July 2019. The Applicant also submitted a TSF Design Review, dated 10 August 2020, which included a technical review of the TSF design, dated 26 July 2019, and a Peer Review of the amended TSF design, dated 10 August 2020. The Department stated that the TSF Feasibility Study was "prepared in accordance with the relevant guidelines and policies of Dams Safety NSW, Australian National Committee on Large Dams (ANCOLD) and the EPA's requirements for liner design" (AR para 244).

192. According to the TSF Feasibility Study, four investigation areas were identified as potentially viable for the containment of tailings, with over thirty different TSF options considered. The Applicant undertook an options assessment and concluded that the proposed location is preferred because it "contained the most suitable geological conditions to reduce the risk of seepage, plus it enabled a preferred engineering outcome with regard to the embankment construction and tailings deposition and would be the least visible of the options considered from residences in Kings Plains" (AR para 247). Once a location was selected the Applicant refined the TSF layout focusing on minimising earthworks, maximising diversion of clean water, constraining the TSF within Applicant owned land and minimising impacts to critically endangered Box Woodland areas (TSF Feasibility Study, page 22). The Department considered that the Applicant had undertaken a comprehensive analysis of TSF locations and disposal options (AR para 249).

193. The TSF embankment wall and eastern embankments are proposed to be constructed of suitable waste rock material sourced from the open pit with a clay core and clay lined upstream face to minimise seepage of water through the embankment (AR para 250). The Department stated that "water that seeps through the tailings material would be intercepted at a cut-off drain at the base of the embankment, which would direct seepage to a storage downslope of the TSF embankment for redistribution through the site's water management system" (AR para 253).The Applicant's TSF Design Review stated that the proposed TSF multi-barrier seepage management system provides a robust system which exceeds the requirements of the *EPA Solid Waste Landfill Guidelines 2016* (page 63). The Peer Review of the amended TSF design stated that the proposed multi-barrier approach will provide a high level of risk mitigation (page 32). The Department stated that "to control seepage of water from the TSF into groundwater, the TSF would be constructed to achieve the EPA recommended permeability standard of $1x10^{-9}$ m/s at 1 m thickness or equivalent performance across the TSF footprint" (AR para 251). The Department also noted that the Applicant has committed to a TSF Construction Quality Assurance Plan as part of the detailed design (AR para 252).

194. The Department stated that the TSF would be regulated by Dams Safety NSW (**DSNSW**) under the *Dams Safety Act 2015* and *Dams Safety Regulation 2019* (AR para 254). Under this regulation, the design of the TSF embankment would need to comply with the requirements of *AS/NZS ISO 9001:2016 Quality Management Systems* and the design must be independently reviewed by suitably qualified and experienced engineers (AR para 255). DSNSW in its advice to the Department dated 23 September 2020 stated that the TSF would likely be "Declared" under the *Dams Safety Act 2015*.

Use of Cyanide

195. Public submissions also raised concerns regarding the proposed use of cyanide at the Site and potential risks this may present to contamination of downstream waterways.

196. The Applicant's EIS included a Cyanide Utilisation Report, dated June 2019, in which the Applicant undertook a review of the alternative options to the use of cyanide for the recovery of gold. The Cyanide Utilisation Report concluded that cyanide leaching was the optimal gold recovery method as it is a proven technology and other methods would not provide a saleable concentrate and had only been trialled on small scale applications (page 2). The Department noted that "cyanide destruction methods using carbon in leach methodology is the most prevalent gold processing technique globally" (AR para 257). The Department also stated that the proposed use of cyanide is safely and consistently managed at most other gold mining operations in NSW (AR page vi).

197. The Applicant's RtS stated that prior to placing any tailings in the TSF area, and before leaving the plant, the tailings will undergo treatment (cyanide destruction) to greatly reduce concentrations of cyanide and stabilise other materials in tailings water, minimising potential environmental impacts through Project design.

198. The Applicant's RtS stated that cyanide can be manufactured, stored, transported, utilised and disposed of in a safe manner. The Applicant stated that sodium cyanide will be stored consistent with the International Cyanide Code. The Applicant proposed to store all potentially hazardous material onsite away from Project area boundaries to minimise the risk, or potential for, off-site impacts.

199. The Department stated that the Applicant "proposes to undertake monitoring of water quality in tailings and TSF seepage with ongoing modelling of these results to confirm the concentration of leachate from the tailings water and TSF" (AR para 260).

Commission's Findings

200. The Commission acknowledges the concerns of submitters in relation to the TSF. However, the Commission agrees with the Department that the Applicant has undertaken a comprehensive analysis of alternative gold extraction methods, TSF design and location, and tailings disposal options. The Commission accepts that the design of the proposed TSF multi-barrier seepage management system is capable of providing a high level of risk mitigation. The Commission also accepts the advice of the Department and DSNSW above and has imposed performance measures under condition B50 which require the Applicant to:

- design, install and maintain the TSF to ensure no unlicensed or uncontrolled discharge of mine water off-site;
- ensure that the TSF is designed to meet the EPA recommended permeability standard; and
- ensure that the TSF is designed, constructed and operated in accordance with the requirements of the *Dams Safety Act 2015*, *Dams Safety Regulation 2019.*

201. The Commission notes that the design of the TSF embankment would also be independently reviewed by suitably qualified and experienced engineers. Further to the above, the Commission has imposed condition B53(e)(v) which requires the Applicant to prepare a SF Liner Design and Verification Plan in consultation with the EPA, WaterNSW and Dams Safety NSW. The Verification Plan requires the Applicant to set out how it will meet the performance measures described above.

202. The Commission acknowledges the concerns regarding long term-seepage risks of the TSF. The Commission is of the view that long term risks associated with the TSF should be monitored and managed over the life of the Project. The Applicant must report on performance measures, criteria and operation conditions in the Annual Review required under condition E8 imposed by the Commission.

203. The Commission acknowledges that public submissions raised concerns regarding the proposed use of cyanide at the mine site. The Commission notes that the Applicant has investigated alternative options to the use of cyanide and concluded that cyanide leaching was the optimal gold recovery method. The Commission acknowledges that cyanide leaching is the most prevalent gold processing technique globally and is safely and consistently managed at most other gold mining operations in NSW, as stated by the Department above.

204. The Commission notes that the Applicant proposes to treat the tailings to greatly reduce concentrations of cyanide and stabilise other materials in tailings water prior to placing them in the TSF area. The Commission finds that the cyanide handling measures proposed by the Applicant in conjunction with the proposed TSF design are sufficient to minimise and mitigate contamination and seepage risks. To ensure that the use of cyanide is safely managed at the Site, the Commission has imposed conditions B88 to B91 which require the Applicant to prepare and implement a Hazardous Materials Management Plan in consultation with Blayney Shire Council, TfNSW, EPA and the Resources Regulator.

5.4 Water

205. The Commission received submissions that raised concern about the water impacts of the Project, including impacts on the Belubula River system, groundwater and springs, downstream flow rates, impacts to Carcoar Dam, and the quality of the water supply entering the Site via the pipeline.

206. The Site is located in the upper Belubula River catchment, approximately 26 kilometres upstream of the Carcoar Dam. The catchment of the Site is approximately 9.32 square kilometres within a broader 43.5 square kilometre sub-catchment of the Belubula River, with the total catchment area above Carcoar Dam approximately 230 square kilometres (AR paras 236 and 237). The local catchments around the Site are illustrated in Figure 11 of the Department's AR.

207. The Department describes the water resource context in section 6.4.2 of the AR. DPE Water, Water NSW, Dams Safety NSW, the Resources Regulator and EPA provided advice to the Department during its assessment of the Project.

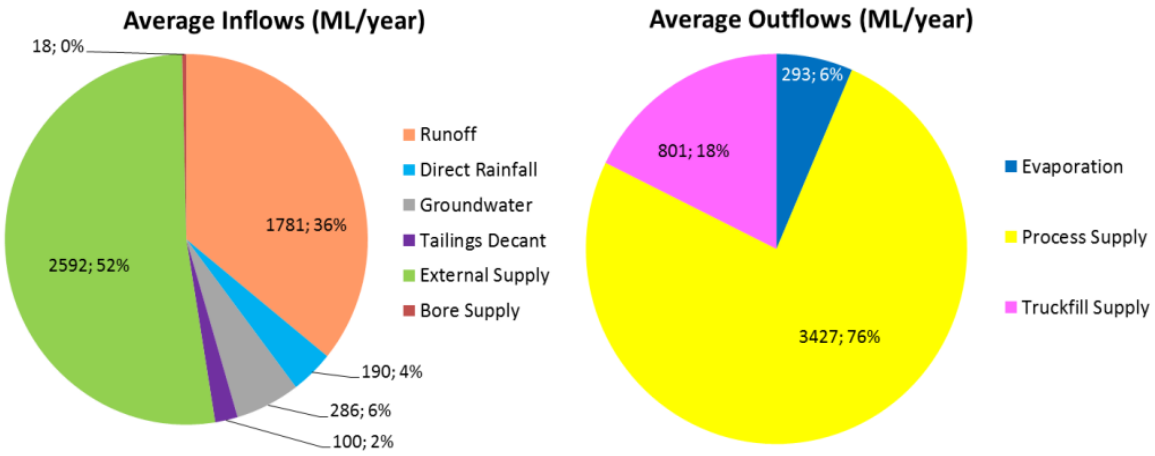
208. The Applicant's EIS included a Surface Water Assessment (**SWA**), dated 27 August 2019. The Applicant also submitted a Revised SWA, dated 31 August 2020 and provided information in the RtS and in response to Agency advice and requests for further information.

209. The Applicant's EIS also included a Groundwater Assessment, dated 11 July 2019. A peer review of the Groundwater Assessment was undertaken by HydroGeoLogic, dated 28 June 2019, which concluded that the groundwater modelling was fit for purpose. Further information was submitted by the Applicant in a Groundwater Assessment addendum, dated 24 August 2020 (GA Addendum), the RtS and the Applicant's response to Agency advice and requests for further information. The Department engaged JBS&G Australia Pty Ltd to undertake a review of the Applicant's Groundwater Assessment, dated 5 December 2019, and a review of the GA Addendum, dated 9 December 2020. The Department describes the groundwater setting in AR paras 286 to 290.

5.4.1 Site Water Balance

210. The Applicant's SWA and Revised SWA forecast the water supply and storage requirements for the Project. The main water demand for the Project would be for the operation of the processing plant (around 76%) and dust suppression (18%). The Department states that "Mining operations would prioritise water from the TSF, open cut pit groundwater inflows and captured on-site runoff, with shortfalls in water supply to be made up through water from the water supply pipeline" (AR para 309). Average Project inflows and outflows are illustrated in **Figure 9** below.

***Figure 9** – Average Predicted System Water Balance (source: Revised SWA)*



211. Totalling the figures provided by the Applicant in **Figure 9** gives total average inflows of 4967 ML/yr which exceed total average outflows of 4521 ML/yr as per **Table 3**, indicating that there appears to be sufficient supply to meet demand for the Project:

***Table 3** – Average Predicted System Water Balance (source: based on Revised SWA)*

Average Inflows		**Average Outflows**	
Source	**Volume (ML/yr)**	**End use**	**Volume (ML/yr)**
External supply (pipeline)	2,592	Process supply	3,427
Runoff	1,781	Truckfill supply	801
Groundwater	286	Evaporation	293
Direct rainfall	190	**TOTAL**	**4,521**
Tailings decant	100		
Bore supply	18		
TOTAL	**4,967**		

212. The Applicant would source water during construction from onsite groundwater bores until the water pipeline is commissioned. Approximately 470 ML would be required for the initial 9 months of construction (AR para 313). The Applicant has secured 400-unit shares, leaving a shortfall of 70-unit shares to meet the predicted demand (AR para 314). The Department noted that the Applicant's investigations demonstrate that sufficient groundwater resource exists on the Site to meet the construction water demands and the Applicant has lodged an expression of interest for an additional 200-unit shares to accommodate the shortfall if required (AR para 314).

213. In relation to operational water supply, the Applicant's Revised SWA states that the imported pipeline supply provides the highest proportion of the total system inflow, followed by runoff from the operational water management system (Revised SWA, page 74).

214. The water supply pipeline will transfer approximately 13 ML per day (and up to 15.6 ML per day) of water to the Site (AR page 3). The water pipeline supply and captured inflows would be collected, stored and distributed in a series of mine water storages on the Site (AR para 309). The Applicant also proposes to install a reverse osmosis plant on the Site to treat water sourced from the pipeline to produce potable water (AR para 310).

5.4.2 Volumetric impacts

215. According to the Department, the total reduction in median flows to Carcoar Dam would be 223 ML/year (including predicted baseflow losses), or around 5% of total median flow during operations. The Department states that following mine rehabilitation, the estimated total reduction in median flows would reduce to 62 ML/year (including base flow losses) (AR para 265).

216. DPE Water assessed the impacts of reduced inflow to Carcoar Dam. This is set out in DPE Water's advice to the Department dated 10 February 2021. The DPE Water analysis found (AR para 266):

- *long-term annual extraction for general Security diversion for irrigation would be reduced by 1.8%;*
- *long-term annual extraction for general Security diversion for mining would be reduced by 4.6%;*
- *flows at Carcoar would be below 2 ML/d (related to Basic Landholder Rights) for an additional 0.4% of the time; and*
- *flows at the base of the catchment within the Water Sharing Plan (Helensholme End of System (EoS)) would be below the 10 ML/d minimum flow requirement for an additional 0.3% and would cease for an additional 0.3% of the time.*

217. DPE Water recommended consideration of a condition requiring the surface water model be improved to "include entitlement which captures runoff, to account for attenuation of daily flows due to runoff capture, and include changes to groundwater peak inflow into the pit" (DPE Water Advice, dated 10 February 2021).

218. The Department concluded that the "estimated increase in the duration of low flow events is relatively minor and would not have any significant impacts on downstream users" (AR para 267).

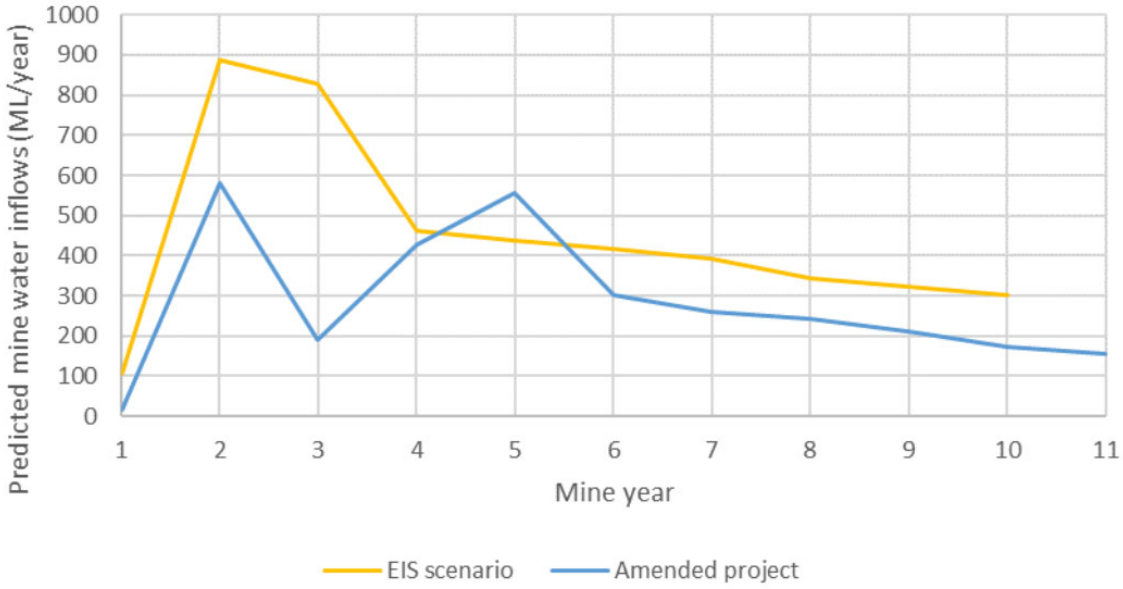
219. Public submissions raised concern regarding the impacts of the Project on the downstream availability of water for agricultural and other uses. The Commission notes that the Belubula Landholders Association, who are part of Lachlan Valley Water Incorporated and represent 45 licensed irrigators from Carcoar Dam to the Lachlan River, stated at the Public Hearing (Day 2 transcript, p 40) that the:

> *…effect of their mine site on reducing the inflow into Carcoar Dam. It was being advised to retain their runoff water on site. So, this had meant that there's a slight reduction in the inflow into Carcoar Dam. With the decision by Regis to apply for a SPAL, a special purpose allocation license, which requires them to trade existing licenses, and these licenses, they can't use for extracting water since they are needed to offset the... need to offset their reduction in water, the water they are preventing from getting into Carcoar Dam from their mine site, so they have to secure that amount of water in licenses. And these licenses cannot be used for extraction and, um, for, for, for the period of the model or for the period that they hold the licenses. And slight positive result for irrigators is that it takes away some of the license that's going to extract from the Dam, so it does reduce the demand on the Carcoar Dam.*
>
> *So, in conclusion, Belubula Landholders Association has no objection to the water access plans as proposed.*

Groundwater Drawdown

220. The GA Addendum states that mine inflows to the open cut are predicted to peak at 580 ML/year in year 2 of the Project, with a second slightly smaller peak in year 5 at 557 ML/year declining to 160 ML/year in year 11 (GA Addendum, page 110). Predicted inflow into the open cut during mine operation for the Amended Project is illustrated in **Figure 10** below.

***Figure 10** – Predicted Inflows to the Open Cut Mine During Operation (Source: GA Addendum, Figure 6.11)*



221. According to the GA Addendum, based on DPE Water's mapped areas of groundwater productivity in NSW (DPI Water 2012), the Project is within a 'less productive' porous and fractured rock source. The Applicant stated that drawdown at neighbouring privately owned bores is predicted to be less than 2m (GA Addendum, page 136).

222. The Department noted that the predicted drawdown at private bores is less than the 2m drawdown threshold of the *NSW Aquifer Interference Policy* (**AIP**) (AR para 294). Notwithstanding, the Department has recommended conditions requiring the Applicant to provide compensatory water supply to any landowner whose rightful water supply has been adversely and directly impacted as a result of mining operations.

Surface-Groundwater Interaction

223. The Applicant submitted a Surface Water-Groundwater Interaction Assessment, dated 1 September 2020 (**SWGIA**). According to the Department the SWGIA was prepared in response to concerns raised regarding the impacts of the Project on springs and seeps and reduction of flow in the Belubula River.

224. The Applicant's SWGIA concludes that the Project would not have a significant impact on streamflow because of changes in groundwater discharge and/or surface water – groundwater interaction. The SWGIA states that groundwater currently contributes approximately 5% of overall streamflow to both Tributary A (SWGIA, Figure 2.6) and the Belubula River. The Applicant states that at the time when the Project has the most impact on groundwater, groundwater contribution to streamflow above Tributary A will be 4.25% (SWGIA, page ES.2). The Department notes that this reduction would be equivalent to up to 38 ML/year during operations (AR para 301).

225. According to the Applicant's Amended Biodiversity Development Assessment Report (**BDAR**) dated 24 May 2022, no negative groundwater access impacts are expected to occur for groundwater dependent ecosystems. This is noted by the Department at AR para 298.

Water Licensing

226. The Department states that the 'take' of water from surface water sources and groundwater aquifers must be licensed under the *Water Management Act 2000* (**WM Act**) and that this has been an important issue in the Department's assessment as the Belubula River above Carcoar Dam surface water source is highly constrained in terms of available water licenses" (AR para 306).

227. DPE Water in its advice dated 10 February 2021 stated that there is insufficient water entitlement available in the Belubula River above Carcoar Dam water source to account for the water take requirements of the Project.

228. The Department states that the Applicant has acquired 262 unit shares from a total allocation of 264 shares in the Belubula River above Carcoar Dam water source. The Department notes that this does not fully account for the Project's water take and the Project would have a shortfall of around 2,083 ML/yr (AR paras 324 and 325).

229. The Applicant has identified the following approaches to address the license allocation shortfalls (AR para 329):

- applying for a Specific Purpose Access License (**SPAL**) under the NSW *Water Management Act 2000* (**WM Act**) for the TSF and any other storages not captured by harvestable rights or the excluded works exemption;
- applying the excluded works exemption under the *Water Management (General) Regulation 2018*;
- constructing two storages that do not capture rainfall runoff and are exempt from licensing under the WM Act; and
- the use of groundwater drawdown entitlements for loss of groundwater flows reporting to surface water.

230. DPE Water in its advice dated 15 August 2022 stated that it had not identified any critical barriers to a successful application for a SPAL.

231. The Department adopted DPE Water's recommended conditions requiring the Applicant to:

- *prepare and implement a Trigger Action Response Plan (**TARP**) to monitor, investigate and manage impacts to water supply availability on the Belubula River between the project site and Carcoar Dam.*
- *offset the impacts to the Belubula River Regulated River Water Source caused by an estimated reduction in inflows to Carcoar Dam of 413 ML/year associated with the construction of the TSF by acquiring water access licence shares of high and/or general security water in the Belubula River Regulated Water Source (and not using or trading those shares until the TSF is rehabilitated).*

5.4.3 Water Quality Impacts

232. The Commission notes that the Project has been designed to operate as a nil discharge site for mine water. The Department stated that runoff from the catchment above the Site would be captured in clean water storages and pumped to the Belubula River downstream of the mine during and following rain events (AR para 268).

Construction

233. To manage erosion during construction, the Applicant has committed to constructing an upstream coffer dam to capture upstream flows and divert water flows around the TSF construction site and downstream (AR para 270).

234. The EPA, in its advice to the Department dated 4 March 2021, did not raise significant concern, however stated that Applicant must design, construct and manage all erosion and sediment controls consistent with the practices and principles of *Managing Urban Stormwater, Soils and Construction Vol. 1* (Landcom, 2004) and *Vol. 2E Mines and Quarries* (DECC, 2008).

Operation

235. The Department noted that there would be no discharges of tailings or mine water downstream and that the Project's water management system is designed to provide sufficient mine water management storage capacity to avoid discharges during periods of high rainfall (AR para 271). The EPA in its advice dated 16 October 2020 stated: "*Given the sizing of the clean water dams, the EPA considers that there is minimal risk to the environmental values of the receiving waters and any residual risks can be managed through standard management and mitigation measures*". Further, the EPA in its advice dated 4 March 2021 noted that the Project will operate as a nil discharge Site and did not recommend any surface water monitoring or discharge quality limit conditions.

Post-Mining

236. The Department notes that in the post mining phase, the catchment areas would be largely restored following the completion of mining and rehabilitation of the Site, however there would be a final void. The Commission notes that the final void would function as a groundwater sink with inflows exceeding outflows and evaporation exceeding rainfall (AR para 302) and that therefore water from the final void would not overflow into the Belubula River catchment. A pit lake would slowly form at the base of the void, reaching a dynamic equilibrium level of around 902 metres AHD (AR para 302).

5.4.4 Commission's Findings

237. The Commission notes that the Applicant would source water from onsite groundwater bores until the pipeline is commissioned. Shortfalls in water supply during operations would be made up through water from the water supply pipeline. According to the Applicant, there is a predicted high level of supply reliability with no significant shortfalls due to the imported pipeline supply. The Commission is of the view that the Applicant must have sufficient water for all stages of the development and if necessary, adjust the scale of the development to match its available water supply. The Commission has therefore imposed condition B39 which gives effect to this requirement. The Commission has also imposed condition A7 which states that the Applicant must provide a copy of the executed water offtake agreement which provides for the supply of water to the site via the water supply pipeline over the life of the development.

238. The Commission acknowledges the concerns raised in submissions regarding the impact of the Project on downstream water availability. The Commission notes that the Project would result in a reduction in median flows of 223 ML/year to Carcoar Dam during operations, while post mine closure and rehabilitation median flows would result in a reduction of 62 ML/year. However, the Commission accepts the DPE Water analysis referenced in section 5.4.2 above and agrees with the Department that the estimated increased duration of low flow events is relatively minor and would not have any significant impacts on downstream users.

239. The Commission also accepts the Applicant's analysis that the Project would not have a significant impact on streamflow because of changes in groundwater discharge and/or surface water – groundwater interaction.

240. The Applicant's modelling indicates that groundwater drawdown at private bores is predicted to be less than the 2m minimal impact threshold of the AIP. The Commission agrees with the Department's recommendation and has therefore imposed conditions B42 to B48 requiring the Applicant to provide compensatory water supply to any landowner whose rightful water supply has been adversely and directly impacted as a result of mining operations.

241. The Commission is of the view that the Applicant's approach to address the water license allocation shortfalls is appropriate. The Commission accepts the advice of DPE Water that no critical barriers to a successful application for a SPAL have been identified. The Commission has therefore imposed conditions B51 and B52 which require the Applicant to offset the impacts to the Belubula River Regulated River Water Source by acquiring water access licence shares of high and/or general security water in the Belubula River Regulated Water Source. These shares cannot be used or traded by the Applicant until the TSF is rehabilitated.

242. Further to the above, the Commission has imposed condition B53(e)(i) which requires the Applicant to prepare a Site Water Balance. The Site Water Balance is required to include details of predicted annual inflows to and outflows from the Site, sources and security of water supply, and protocols for supply, storage and use of water imported via the water supply pipeline. The Applicant must also identify opportunities to improve water use efficiency and minimise the use of clean water on the Site as part of the Site Water Balance. In addition, the Applicant must publish the annual site water balance on its website.

243. The Commission finds that impacts to water quality during construction are capable of being managed through conditions of consent. The Commission accepts the EPA's advice referenced in paragraph 234 above and has imposed condition B53(e)(ii) requiring the Applicant to prepare an Erosion and Sediment Control Plan as part of the Water Management Plan (**WMP**).

244. The Commission acknowledges the concerns raised in public submissions regarding the potential water quality impacts of the TSF and broader Site on the surrounding environment. The Commission has given consideration to the design of the TSF in section 5.3.2 above, finding that the design of the TSF was robust and would be constructed to meet the EPA's recommended permeability standard. The Commission has imposed conditions, as noted above, to manage impacts associated with the TSF.

245. The Commission notes that the Applicant has proposed a nil discharge site which means that there would be no discharges of tailings or mine water downstream. The Commission accepts the EPA's advice that there is minimal risk to the environmental values of the receiving waters and any residual risks can be managed through standard management and mitigation measures. The Commission has therefore imposed condition B50 which requires the Applicant to comply with specific water management performance measures. These require the Applicant to minimise the potential for acid mine drainage and to encapsulate and prevent migration of acid forming and Potentially Acid Forming materials. The Applicant must also design, construct and maintain the TSF and mine water storage infrastructure to ensure no unlicensed or uncontrolled discharge of mine water off-site.

246. The Commission agrees with the Department that the Applicant's proposed mitigation and management measures reflect a best practice approach to minimise, monitor and manage the potential impacts of the project on local and regional water resources. To ensure water related impacts are monitored, managed and mitigated, the Commission has imposed condition B53 which requires the Applicant to prepare a WMP in consultation with DPE Water and the EPA.

247. Condition B53(e)(iii) requires the Applicant to prepare a Surface Water Management Plan (**SWMP**) as part of the WMP. As part of the SWMP the Applicant is required to implement a program to periodically upgrade and validate the surface water model for the mine site, including an independent review of the model every 3 years.

248. Condition B53(e)(iv) requires the Applicant to prepare a Groundwater Management Plan (**GMP**) as part of the WMP. The GMP must include groundwater performance criteria, including trigger levels for identifying and investigating any potentially adverse groundwater impacts associated with the mine site. The Applicant must also undertake a program to monitor and evaluate groundwater inflows, outflows and water storages as part of the GMP.

249. The Commission has also imposed requirements for the Applicant to prepare a trigger action response plan as part of both the SWMP and GMP to respond to any exceedances of the performance measures or performance criteria, and repair, mitigate and/or offset any adverse impacts of the Project.

250. The Commission notes that the Site would be rehabilitated following the completion of mining and accepts that there would be a final void at the cessation of mining. Submissions made to the Commission raised concern regarding the potential impacts of the final void water on downstream users. The Commission notes that the final void would function as a groundwater sink with inflows exceeding outflows and evaporation exceeding rainfall. The Commission accepts that water from the final void would not overflow into the Belubula River catchment. The Commission has imposed condition B95 which sets out rehabilitation objectives for the Site. These objectives require the Applicant to optimise the size and depth of the final void to ensure the final landform is stable and non-polluting. The Commission is of the view that the Applicant must give consideration to improving the final void over the life of the mine and has therefore imposed condition B98 which requires the Applicant to prepare a Rehabilitation Strategy to refine and improve over time the final landform and final void outcomes.

5.5 Aboriginal Cultural Heritage

251. The Commission received written submissions and heard comments at the Public Hearing and through stakeholder meetings that highlighted that the Site is of cultural significance to the Aboriginal community, and there are strong spiritual connections for Aboriginal people to the Kings Plains area and upper catchment of the Belubula River. Submissions raised concern about impacts to Aboriginal cultural heritage, including loss of tangible and intangible cultural values, items and resources.

252. The Commission acknowledges that the majority of the Site falls within Wiradjuri tribal land, with a small zone of interaction between the Wiradjuri, the Dharug to the east and the Gundungurra to the south (AR para 405).

253. The Department's AR states that the Project would "directly impact on Aboriginal cultural heritage values through clearing of artefact scatters and isolated aboriginal items" (AR para 404).

254. The Applicant prepared an Aboriginal Cultural Heritage Assessment (**ACHA**) as part of the EIS for the mine site (dated July 2019) and the water supply pipeline corridor (dated July 2019). Addendums to each ACHA were prepared in 2020. The ACHAs and addendums were prepared in accordance with applicable guidelines, including the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010* (AR para 406 and 411), and were developed via a desktop assessment of known and predicted cultural heritage within the Project area, and subsequent archaeological surveys involving Registered Aboriginal Parties (**RAPs**) (AR para 408).

255. The Department states:

> *Following expressions of interest for Registered Aboriginal Parties (RAPs) for the preparation of the ACHA for the EIS, Orange Local Aboriginal Land Council (Orange LALC) registered interest as a RAP for the mine site and pipeline, while a further 12 RAPS registered interest for the pipeline development only (AR para 407).*

256. Further, the Department states:

> *Given the period of time since the original ACHA was prepared for the project, Regis also sought a further expression of interest for RAPs in late 2020 and sought further feedback on the ACHA completed to date. In addition to the existing RAPs, Ms Nyree Reynolds (previously associated with the Orange LALC) registered an interest in the project as an individual and was offered the opportunity to provide input on the ACHA completed to date and be involved in ongoing ACHA for the project (AR para 409).*

257. The Applicant's ACHA identified "a total of 30 artefact scatters/isolated stone artefacts likely to be disturbed by the amended mine site project boundary, this included 27 that would be directly impacted and three indirectly impacted" (AR para 417). It states that the sites "are all small scatters or isolated finds of stone artefacts" (ACHA, page 12). These sites were all assessed by the Applicant's consultant as having "low scientific, educational or aesthetic significance, and all of moderate/high Aboriginal cultural heritage significance" (AR para 418). The Department states there are no culturally sensitive landforms located in the mine site area (AR para 419).

258. The ACHA for the water supply pipeline corridor states that seven Aboriginal sites were recorded along the route (ACHA, Executive Summary). The Department notes that six of the sites were identified during the field surveys, with a seventh site having previously been recorded although not able to be found during surveys. The sites comprise of isolated artefacts and artefact scatters (AR para 424).

259. All impacted sites are proposed to be salvaged in accordance with a Heritage Management Plan, which would be prepared in consultation with the RAPs and Heritage NSW (AR para 420).

260. The Commission notes that advice from the BCS, Heritage NSW, Blayney Shire Council and Forestry NSW on the ACHAs did not raise any significant concerns with the assessments or the proposed avoidance and mitigation measures (AR para 410).

261. The Commission notes that the Department sought further information from the Applicant regarding Aboriginal heritage consultation. In addition to earlier correspondence, the Applicant provided a letter to the Department dated 15 April 2021, which summarised consultation undertaken to date. In that letter the Applicant stated its view that it has undertaken consultation "above and beyond the requirements of the *Aboriginal Cultural Heritage Consultation Requirements for Proponents 2010*" (page 2).

262. During its meeting with the Commission on 6 December 2022, the Applicant stated that:

> *…it should be noted that Heritage NSW has not raised any significant concerns in relation to the Aboriginal cultural heritage impacts of the Project and have noted that the proposed mitigation measures to reduce harm to Aboriginal objects are adequate and proportionate to the type of objects and the land use disturbance history and that the assessment adequately complied with the Aboriginal consultation requirements.*

263. During the Public Hearing (Day 1), the Applicant stated:

> *…we've consulted with the Orange Aboriginal Land Council, and other registered Aboriginal parties. Surveys, as you'd expect, have been carried out on our site. All identified sites have been assessed and recorded. We will have management plans that will involve monitoring and reporting, and we're committed to continuing to work with the Orange Aboriginal Land Council, and other registered Aboriginal parties as we move forward (Day 1 Transcript, page 19).*

264. Also during Day 1 of the Public Hearing, the Commission heard from a representative of OLALC who commented "we are not for or against this mine" but highlighted the importance of appropriate management measures to protect Aboriginal culture and heritage if the Project is approved. OLALC stated:

> *There are numerous other opportunities for environmental protection enhancement of the mine and surrounding landscape which we urge the company consider [if] the project does proceed. It's our hope that Regis will do some partnership with [all key] stakeholders including us, as the custodians of this land, commencing to the planning stage and the mine development. Any approval of this project should only be done with the strictest conditions in place to protect and preserve Aboriginal cultural heritage, both on and surrounding the mine site (Day 1 Transcript, page 32).*

265. During a meeting between Wiradjuri Elder (and RAP), Ms Nyree Reynolds, and the Commission on 7 February 2023, the Commission heard Ms Reynolds' view about the significance of the physical landscape, and its importance as a meeting place, for the Wiradjuri people. Ms Reynolds commented on the cultural importance of the "sacred triangle" between Gaanha Bula (Mount Canobolas), Wahluu (Mount Panorama) and Guhanawahlni (Mount Macquarie) (Transcript, page 3). Ms Reynolds expressed her objection to the Project and shared paintings depicting her interpretation of the Aboriginal cultural landscape and the cultural heritage that could be lost as a result of the Project, including the capacity for storytelling and knowledge sharing. The Commission also heard about the importance of an "ochre site" located near the Site. Ms Reynolds stated: "…the ochre belongs to all Wiradjuri people. And we only take what we need, so that's a special place" (Transcript, page 5).

266. During the Public Hearing (Day 1), Blayney Shire Council stated that it "acknowledges that the EIS appears to contain a robust assessment of the potential impact on Aboriginal culture heritage… and fully support the requirement for condition B66 [as recommended by the Department], to prepare a comprehensive heritage management plan" (Day 1 Transcript, page 27).

267. The Department states that the Applicant has committed to preparing an Aboriginal Cultural Heritage Management Plan which would describe the measures to be implemented prior to, during and following operation of the Project in consultation with the RAPs, local councils and Heritage NSW (AR para 428).

268. At AR para 428, the Department sets out the key management measures proposed to minimise impacts on Aboriginal heritage values, such as appropriate archaeological testing, salvaging of artefacts, limiting the area of ground surface disturbance and an unexpected finds protocol.

269. Overall, the Department is of the view that "with implementation of the appropriate measures… the Department considers that the project's impacts on Aboriginal cultural heritage are acceptable under NSW government policy" (AR para 431).

Commission's Findings

270. The Commission acknowledges the submissions received and the comments made during stakeholder meetings about the cultural significance of the Site to Aboriginal people and the strong spiritual connections to the Kings Plains area and upper catchment of the Belubula River. In making its determination, the Commission has given careful consideration to these matters and placed significant weight on them. On balance, the Commission agrees with the views of Heritage NSW, the Department and the Applicant and finds that harm to Aboriginal heritage, including intangible Aboriginal cultural heritage, can be acceptably managed through conditions of consent.

271. The Commission has therefore imposed conditions B66 to B68 requiring the preparation of a Heritage Management Plan (including for Aboriginal cultural heritage). The Applicant must ensure that all known Aboriginal objects or Aboriginal places on the Site are properly recorded in consultation with the OLALC and RAPs, and those records are kept up to date in an Aboriginal Heritage Information Management System (AHIMS) Register, and any Aboriginal objects salvaged on the Site are appropriately stored and managed, both during the life of the Project and in the long term. The Commission has also imposed condition B66(c)(ii) requiring the Applicant to protect, monitor and/or manage identified ochre deposits in consultation with RAPs.

5.6 Biodiversity

272. The Commission received written submissions and heard from community members during the Public Hearing that raised concern about the Project's likely biodiversity impacts, particularly in relation to the clearing of potential koala habitat and other native vegetation within the Site, impacts to aquatic ecology associated with the Belubula River, and impacts to threatened species.

273. The mine footprint comprises predominantly cleared pasture with some fragmented remnant native vegetation and riparian vegetation. The water supply pipeline corridor is located mostly within road reserves however it also crosses agricultural land and State Forest land (AR para 347).

274. The Project was determined to be a controlled action under the EPBC Act due to the potentially significant impacts on Matters of National Environmental Significance (**MNES**) for listed threatened species (Koala) and communities (White Box – Yellow Box – Blakely's Red Gum Grassy Woodland) within the mine development footprint (AR para 348).

275. A Biodiversity Development Assessment Report (**BDAR**) was submitted with the EIS, and updated following the amendments to the Application (September 2020). The Applicant has since provided further clarifications to the Department and BCS.

276. The Commission notes that both the Department and BCS consider that the BDARs have been prepared in accordance with relevant guidelines and policy, including the Biodiversity Assessment Method under the *Biodiversity Conservation Act 2016* (**BC Act**), and that all of BCS's previous comments have been adequately addressed (AR paras 346, 351, 355).

277. The BDAR identified three fauna species located within the mine site, and 15 threatened flora and six fauna species within the water supply pipeline corridor that would be potentially impacted by the Project (AR para 361). It included an assessment for the koala and states that approximately 116.95 hectares of koala habitat is located in the mine disturbance footprint and will be directly impacted (page ES.2). Methods utilised for recording koala habitat and presence of koalas at the Site included spotlighting and nocturnal surveys, spot assessment technique, and call playback (Table 5.6). The BDAR also included an assessment of the White Box Yellow Box Blakely's Red Gum Woodland (mine and pipeline development), and the Werriwa Tablelands Cool Temperate Grassy Woodland (pipeline development only) and the Yellow-spotted Tree Frog as candidates for Serious and Irreversible Impacts in accordance with the Biodiversity Assessment Method (AR para 367). However, the Department is satisfied that that there would be no Serious and Irreversible Impacts on these candidate species, and that the proposed clearing would not contribute to a risk of extinction (AR para 368).

278. The updated BDAR concludes:

> *The mine development is expected to result in significant impacts on White Box Yellow Box Blakely's Red Gum Woodland and Derived Native Grassland and the Koala. As the McPhillamys Gold Project is being assessed in accordance with the bilateral agreement made between the NSW and the Commonwealth under Section 45 of the EPBC Act, impacts on this listed ecological community and species will be compensated through the implementation of the biodiversity offset strategy (page 351).*

279. The BDAR notes that annual biodiversity surveys "have been carried out in parallel with, and have informed the evolution of, the mine and pipeline design". This has "ensured the avoidance and minimisation of biodiversity constraints as far as practicable". The BDAR states that the implementation of the biodiversity offset strategy will compensate for residual impacts to native vegetation and threatened species (page 351). The biodiversity offset strategy comprises (AR para 370, summarised):

- a 384-hectare land-based offset site ('Aziel' Biodiversity Stewardship Site) located approximately 9 kilometres south-west of Blayney;
- acquiring 'like for like' credits available on the market; and/or
- paying any residual credits into the Biodiversity Conservation Fund.

280. Further, during its meeting with the Commission on 6 December 2022, the Applicant outlined: the proposed aquatic offset area and aquatic ecology biodiversity offset strategy developed in consultation with DPI Fisheries; the 22-hectare offset of Box Gum Woodland within the northern part of the Site; the avoidance of high value Box Gum Woodland achieved by amending the Project's design; and the Biodiversity Stewardship Agreement for the Aziel site.

281. On 1 February 2023, the Commission heard from an independent scientific expert, Associate Professor Crowther, speaking on behalf of the BHPG. Assoc. Prof. Crowther commented on the possible impact of the Project on koalas and koala habitat. He stated that "the koala is an endangered species at both the New South Wales level and at the Commonwealth level and some of the main threats to why the koala is an endangered species is because of the threatening processes of both habitat loss and habitat fragmentation" (Transcript, page 3). Assoc. Prof. Crowther noted that one koala had been identified in the area – stating therefore "we know it's a koala habitat" – and said that although it can be estimated how many koalas will be affected based on the area of koala habitat, it is difficult to be certain about how many koalas may actually be impacted (Transcript, page 5). Assoc. Prof. Crowther commented that he did not consider the water supply pipeline development would impact primary koala habitat (Transcript, page 7). Regarding offsetting, Assoc. Prof. Crowther acknowledged that the Applicant has "calculated offsets using the framework of biodiversity assessment in New South Wales" but commented that "offsets can be problematic in the way that they apply" because habitats aren't 'like for like' and there could be variations in the quality of the habitat (such as leaf nitrogen and soil fertility etc.) (Transcript, page 7).

282. In its submission to the Commission dated 17 February 2023, and in response to comments made during stakeholder meetings and the Public Hearing, the Applicant described the proposed biodiversity offset site (Aziel):

> *[Aziel] contains a number of the required ecosystem and species credits (PCT 951, PCT 1330 and Koala). It is Regis' intention to secure the property under a Biodiversity Stewardship Agreement (BSA) with the Biodiversity Conservation Trust (BCT)…*
>
> *Surveys also confirmed the presence of the Koala within Aziel.*
>
> *The proposed Aziel offset site will provide all of the necessary credits required for Box Gum Woodland (PCT 1330 and PCT 649) and around 70% of the required credits for*

Koala. Overall, the proposed offset site will provide 54% of the required ecosystem credits required for the project (page 26).

283. The Commission understands that the residual credit requirement will be met by either purchasing 'like for like' credits in the market or paying into the Biodiversity Conservation Fund (Applicant's submission, 17 February 2023, page 27).

284. In considering the 'avoid, mitigate, offset' hierarchy, the Department considers that the Applicant has appropriately avoided impacts on established woodland and habitat corridors, and that the impacts of the water supply pipeline would likely be reduced following detailed design compared to those predicted in the BDAR (AR para 353 and 354).

285. The Department considers that the required ecosystem credits could be obtained, and that the retirement of these credits would sufficiently compensate for residual biodiversity impacts (AR para 401). Further, the Department considers that biodiversity impacts could be effectively managed under a Biodiversity Management Plan (AR 402).

286. The impacted councils did not raise concern regarding biodiversity matters, other than that Bathurst Regional Council commented that it welcomed the proposed offsets for biodiversity impacts, including for the Bathurst Copper Butterfly which it noted "is a symbol of unique biodiversity in our region" (meeting between Bathurst Regional Council and the Commission, 6 December 2022, Transcript page 4).

Commission's Findings

287. The Commission agrees with the views of the Department and is satisfied that the biodiversity impacts of the Project can be appropriately managed, subject to conditions of consent.

288. The Commission has imposed strict conditions to minimise and/or mitigate the impacts of the Project on matters raised in submissions, such as the clearing of potential koala habitat and Box Gum Woodland (bee foraging resources). These include conditions B59 to B61 which require the Applicant to prepare and implement a Biodiversity Management Plan. Condition B59(e)(ii) specifically requires the Applicant to minimise impacts on fauna, including undertaking pre-clearance surveys and translocation of threatened species as guided by the NSW Government's *Translocation Operational Policy 2019.*

289. Regarding impacts to aquatic ecology associated with the Belubula River, condition B59(g) requires the Applicant to prepare and implement an Aquatic Ecological Offset Strategy in consultation with DPI Fisheries. Monitoring and reporting on the effectiveness of measures to minimise and mitigate biodiversity impacts is also required under condition B59(h).

290. The Commission has imposed conditions B56 to B58 which require the Applicant to retire specified biodiversity credits in accordance with the Biodiversity Offsets Scheme prior to commencing construction of the mine site or the mine access road, and prior to commencing construction of the water supply pipeline.

5.7 Agriculture

291. The Commission considered submissions that raised concern about impacts on agricultural businesses in the local and regional area, including apiarists and graziers. Submissions raised concerns about the impact of the Project on water quality and quantity, air quality and possible pollution impacts.

292. As part of its EIS, the Applicant prepared an Agricultural Impact Assessment (**AIS**), dated June 2019, which was updated as part of the First Project Amendment in August 2020. This update included a supplementary AIS (dated August 2020) for the water supply pipeline corridor. The EIS also included a Land Capability and Soils Assessment, dated May 2019, which was updated as part of the First Project Amendment in August 2020 (AR para 433).

Apiary Industry

293. There are two bee keeping and honey production operations located close to the Site, being Goldfields Honey (approximately 2.5 kilometres to the north-east) and Cottesbrook Honey (approximately 3.8 kilometres to the south-east). The Department states that approximately 1,500 beehives belonging to Goldfields Honey are located within the Vittoria State Forest adjoining the Site, and the hives include queen bee rearing, nucleus and honey producing beehives (AR para 445).

294. The Commission understands that potential impacts of the Project to the apiary industry include (AR para 446):

- *clearing of Box Gum Woodland and associated loss of bee foraging resources;*
- *bee exposure to dust and water containing potentially toxic metals and cyanide (arsenic, copper, manganese and lead) and resultant impacts on bee health and honey production; and*
- *attraction of bees to project lighting.*

295. An independent scientific expert speaking on behalf of Goldfields Honey outlined the possible impacts of the Project on the foraging behaviour of bees and the propensity of honeybees to bioaccumulate "potentially toxic trace elements". The speaker stated that while such trace elements "won't get into the honey", it would "influence the foraging capacity of those bees" and potentially reduce the productivity of the bees and the product quality (Day 3 Transcript, page 58-59).

296. During its meeting with the Commission on 6 December 2022, the Applicant cited the Potential Impact on European Honey Bees and Local Honey Production report (dated April 2020) which was prepared as part of its RtS. The report finds that "it is not expected that there will be any adverse impacts on the bee industry from metals in dust or from water in the tailings storage facility at the proposed mine" and that any metals that may get into nectar or pollen in plants around the proposed mine (or soil deposits or water) are "all estimated to be below concentrations" that might affect the survival or health of the bees (page 56).

297. The Project would clear around 21.2 hectares of Box Gum Woodland in woodland form, which the Department notes provides an important source of pollen and nectar for bee foraging (AR para 447). The Department states:

> *…the proposed disturbance would impact on around 1.7 % of the Box Gum Woodland community within a 5 km radius of the mine site. Approximately 35 ha of the species would remain within the project boundary, including areas directly adjoining the Vittoria State Forest as well as a large high quality patch east of the disturbance area (AR para 448).*

298. DPI Agriculture recommended revegetation initiatives including planting an "identical species mix with provenance from surrounding areas". The Applicant agreed to this recommendation and advised that the species would also be appropriately offset through the Project's offset strategy (AR para 449). The Department has recommended conditions that require the Applicant to restore a minimum of 22 hectares of Box Gum Woodland in undisturbed areas of the Site, targeting areas close to the Vittoria State Forest, in addition to its proposed Aziel offset site (AR para 450).

299. The Department acknowledges that bee keeping industries play a crucial role in food security and considers that measures should be in place to detect and mitigate adverse impacts on local operators. It has therefore recommended conditions requiring the Applicant to develop a targeted monitoring program and trigger action response plan in consultation with DPI Agriculture and local operators. The Department considers that the recommended conditions would provide a suitable approach to evaluate and respond to unforeseen impacts (AR para 456).

300. Blayney Shire Council stated that while it could not comment on the environmental impacts of the Project on local apiary operations, it considers the industry is important to the LGA and is a significant employer (meeting between Blayney Shire Council and the Commission, 6 December 2022, Transcript, page 13).

301. Bathurst Regional Council noted that impacts on local apiary operations "could be manageable but they will have to be carefully monitored and adjustments made should impacts be observed" (meeting between Bathurst Regional Council and the Commission, 6 December 2022, Transcript, page 8).

Surrounding Farming

302. Submissions from farmers located in the downstream catchment of the Belubula River noted the importance of the water supply from the river for their agricultural operations, and the value of the catchment's system of springs, particularly during times of drought. The Commission heard from speakers at the Public Hearing who stated that farmers are reliant on the river's water supply to produce quality feed and stock (Day 1 Transcript, page 66).

303. The AIS considers the key risks of the Project to surrounding agriculture and the potential impacts on water resources, including impacts on downstream users associated with reduced water availability (AR para 442).

304. The AIS describes measures proposed to minimise and/or mitigate impacts on surrounding agricultural uses. Such measures would address water impacts as well as air quality and noise impacts, and pest and weed management (AR para 443).

305. Groundwater and surface water impacts are considered in detail at section 5.4 of this Statement of Reasons.

Land and Soil Capability

306. In its updated AIS for the mine site development, the Applicant states that:

- *The amended project will not impact any potential BSAL.*
- *There will be negligible reduction (less than 0.9%) in the gross value of agricultural production in the Blayney LGA during the life of the project and a post mine operation reduction of 0.3%.*
- *The amended project is predicted to be associated with a net reduction of 414 ha of soil with LSC classes 4 (3 ha) and 5 (411 ha) and a net increase of 348 ha of soil with LSC classes 6 (323 ha) and 7 (25 ha). The project will result in the permanent removal of 66 ha (LSC Class 8) from agriculture (i.e. final void).*
- *A minor reduction in the median annual inflow to Carcoar Dam (4%) will occur as a result of construction and operation of the project. Permanently, following mine-closure and rehabilitation, the reduction in flows will be much smaller (0.5%)…*
- *The groundwater model predicts that privately owned bores within the vicinity of the project area will experience little to no change as a result of the project… (page 41).*

307. The AIS states that a "comprehensive mitigation program will be implemented to manage potential impacts on agricultural resources", including "monitoring and, where appropriate, establishment of triggers and appropriate responses" (AIS, page 41).

308. In its updated AIS for the water supply pipeline development, the Applicant states that it will ensure "land disturbed by the pipeline is rehabilitated to an appropriate standard and representative of surrounding vegetation communities (including pasture) and is compatible with pre-disturbance and surrounding land uses" (AIS, page 44).

309. The updated Land Capability and Soils Assessment found that the Land and Soil Capability (LSC) of the Site comprises mostly (96%) Class 4 and 5 land, suitable for grazing and cropping, with the remaining land of lower capability. No land was identified as BSAL within the mine disturbance area (AR para 434).

310. The Department states:

> *The project would result in a net reduction in LSC across the site, resulting in the loss of 414 ha of LSC Class 4 and 5 soils and increase of LSC Class 6 and 7 of 348 ha, with the 66 ha void classed as LSC Class 8. Disturbance associated with the mine site represents approximately 0.8% of the available agricultural land in the Blayney LGA (AR para 435).*

311. To mitigate impacts on land and carrying capacity, the Applicant proposes to maximise the rehabilitation outcomes by reusing topsoil and subsoil profiles from disturbed areas in rehabilitation of the site. The Land Capability and Soils Assessment estimated there would be sufficient topsoil and subsoil available to establish the required soil profiles for successful rehabilitation of the mine site (AR para 437). Parts of the Site would be returned to grazing following closure of the mine.

312. The water supply pipeline corridor contains predominantly LSC Class 5 soils (66%) with some better-quality soils in places, and crosses land subject to ongoing agricultural operations including approximately 4.5 hectares of mapped BSAL. The Department states that following construction of the pipeline, the Applicant proposes to restore the land capability to match that prior to construction, with the exception of approximately 1.86 hectares associated with pumping stations and access tracks (AR para 439).

313. Overall, the Department considers that although there would be a net reduction in land capability within the mine site disturbance area, the proposed rehabilitation methods would ensure that most of the Site is suitable for agricultural uses in the future, and nearly all disturbance associated with the pipeline would be restored to its existing land capability class (AR para 461).

Commission's Findings

314. Regarding impacts to local apiary operators, the Commission acknowledges the concerns of local operators, particularly Goldfield Honey which is located in close proximity to the Site. The Commission agrees with the Department's comments about the importance of the apiary industry and its crucial role in food security. The Commission has considered, and placed significant weight on, the submissions as to the risk of adverse impact on the local beekeeping industry and on businesses that rely upon it. However, the Commission finds that the likely impacts of the Project on nearby apiary operators can be appropriately managed through conditions of consent. The Commission agrees with the Department that the recommended conditions would provide a suitable approach to minimise, mitigate, and if necessary, repair or offset any unforeseen impacts caused by the Project.

315. The Commission has therefore imposed conditions B104 to B106 requiring the Applicant to engage a suitably qualified and experienced expert/s (approved by the Planning Secretary) to undertake research, prepare and implement an Apiary Monitoring and Management Program to the satisfaction of the Planning Secretary. The program must be prepared in consultation with DPI Agriculture and local apiary operators.

316. The Commission agrees with the recommendations from DPI Agriculture that revegetation planting should include a species mix with provenance from surrounding areas where possible and has imposed this requirement through condition B95.

317. The Commission also acknowledges the concerns raised by local graziers. The Commission finds that while there may be some reductions in surface water supply and other localised impacts, the conditions recommended by the Department are balanced and require the Applicant to provide appropriate mitigation methods and responses. The Commission's findings regarding surface water and groundwater are provided above.

318. The Commission finds that the future land and soil capability of the rehabilitated Site is acceptable, despite the proposed net reduction within the mine site disturbance area. The Commission has imposed conditions B95 to B100 to ensure that most of the Site is suitable for agricultural uses in the future, and nearly all disturbance associated with the pipeline would be restored to its existing land capability class.

5.8 Other Issues

5.8.1 Rehabilitation

319. The Commission considered submissions that raised concerns about the proposed rehabilitation of the Site, particularly regarding the final void, TSF, post-mining land uses and the future use or decommissioning of the water supply pipeline.

320. The Project would comprise up to four years of rehabilitation. The post mining land use across the majority of the rehabilitated area (excluding the void) would be grass cover for grazing purposes, with some woodland over the waste rock emplacement to enhance biodiversity values and visual amenity of the area and to reduce erosion risk (AR, Table 19). The water supply pipeline would be retained for future use and if no uses are identified, all surface infrastructure would be removed (AR, Table 1).

321. As part of its EIS the Applicant prepared a Rehabilitation and Landscape Management Strategy, dated July 2019. This strategy was updated with an addendum report (September 2020) as part of the First Project Amendment and responded to comments from the Resources Regulator and the EPA. The addendum states:

> *…grazing land use is proposed across most of the rehabilitated mine development project area, with woodland proposed over the [waste rock emplacement]. The final void will remain a void… the rehabilitation approach for the project continues to comprise the reinstatement of pre-mining land uses as much as possible, while enhancing biodiversity values lost due to past agricultural clearing (page 28).*

322. The proposed post mining land uses for each area of the Project – including the proposed post-mining land and soil capability – are summarised in the addendum report.

323. As described in section 5.7 above, the Department considers that while there would be an overall net reduction in land capability class within the mine site disturbance area, rehabilitation practices would see the majority of the area still suitable for agricultural practices (AR, page vii).

324. With regard to the post-mine closure design of the TSF, the Department states that "the TSF would include a beach drain to discharge clean water, which would be installed post closure and designed to withstand significant rainfall events in accordance with the Australian National Committee on Large Dams guidelines". The Commission also understands that the TSF would include an emergency spillway which would be decommissioned following successful rehabilitation of the TSF and it meeting water quality criteria (AR, Table 19).

325. In relation to the open cut pit, the Applicant proposes to leave this as a final void:

> *There is no opportunity to progressively backfill the void due to the single pit configuration, and any backfilling would prevent access to the orebody at depth. Reclaiming the waste rock to backfill the void after mining has been completed would both prolong the duration of visual, noise and air quality impacts on sensitive receivers by a number of years and would render the project financially unviable.*
>
> *Notwithstanding, the blasting and movement of rock results in swelling of the rock, meaning that even if the pit could be backfilled, only a portion of the waste rock material would fit back into the pit and a WRE [waste rock emplacement] would always be required.*
>
> *For these reasons, backfilling of the void is not considered financially viable nor reasonable and feasible and would exclude the full extent of the resource being mined* (EIS Appendix U, page 40).

326. Professor Gavin Mudd appeared at the Public Hearing, as an expert briefed by the BHPG, and stated:

> *…now one of the things I find, uh, and very disappointing actually, is that there was no examination or no assessment of actually transferring tailings once the project was finished, and actually depositing them into the, uh, the final void, or the pit and back filling that pit* (Public Hearing Day 3, Transcript page 13).

327. The Applicant responded to Professor Mudd's statement, concluding that "the options proposed for alternative tailings disposal… are not considered feasible for the McPhillamys single 'open pittable' (sic) ore body". It stated that transferring of tailings after the end of mining in the pit could have flow-on impacts, such as potential impacts on groundwater, extended activities (and associated environmental and social impacts), and resource sterilisation (Applicant's submission to the Commission, dated 17 February 2023, page 53).

328. The Department states that:

> *In terms of post-mining groundwater quality, the final void would continue to function as a groundwater sink, with inflows exceeding outflows and evaporation exceeding rainfall. Inflows are predicted to equilibrate at approximately 66 ML/year with approximately 11 ML/year of outflows possible. Rainfall and runoff inputs to the final void are an estimated 472 ML/year with evaporation losses estimated at 519 ML/year. A pit lake would slowly form at the base of the void, reaching a dynamic equilibrium level of around 902 m AHD after about 500 years post mining) (AR para 302).*
>
> *The predicted lake level would be well below the crest height of the void (around 916 m AHD) and would therefore not spill under any circumstances. This would generally prevent the release of saline water into the surrounding environment, but as a result the salinity of the pit lake would rise over time, reaching a salinity of 1,600 µS/cm after about 1,000 years post mining (AR para 303).*

329. To ensure effective rehabilitation of the Site, the Department has recommended conditions requiring the Applicant to (AR Table 19):

- *meet strict rehabilitation objectives;*

- *progressively rehabilitate the development as soon as reasonably practicable following disturbance;*
- *prepare and implement a Rehabilitation Strategy to the satisfaction of the Planning Secretary;*
- *decommission the pipeline if alternative uses for the water supply pipeline cannot be found following the completion of mining operations; and*
- *prepare and implement a Rehabilitation Management Plan in accordance with the Mining Act 1992.*

330. The Resources Regulator confirmed that the Site rehabilitation, including conceptual final landform, proposed postmining land uses and progressive rehabilitation, were adequately addressed (AR, Table 2).

331. The Department of Primary Industries also provided comments on the proposed rehabilitation, and following review of additional information, confirmed that its concerns had been addressed and recommended mitigation measures relating to rehabilitation (AR, Table 2).

332. Overall, the Department considers that adequate exploration of rehabilitation options for the final landform and land use has been considered, with improved outcomes compared to the original Project design. It also considers that the Project area can be rehabilitated to achieve a sustainable final landform to be used for agricultural purposes and enhanced biodiversity values in the area (AR Table 19). As discussed above, a pit lake would slowly form at the base of the void. Water from the void would not overflow into the Belubula River catchment (AR para 273).

333. The Department has recommended conditions of consent that require the Applicant to prepare a Rehabilitation Strategy in consultation with the Resources Regulator, DPE Water, Blayney Shire Council, Cabonne Council and the CCC.

334. During its meeting with the Commission on 6 December 2022, Blayney Shire Council commented that it considers the rehabilitation of the Site to be an opportunity because of the potential future use of the water supply pipeline (Transcript, page 15). It commented that it would like to ensure there is an opportunity for Council and community to collaborate with the Applicant on suitable future land and infrastructure uses at the time of mine closure (Transcript, page 16).

335. Bathurst Regional Council also commented that the potential future use of the water supply pipeline could be an opportunity, particularly in terms of building the region's water resilience (Meeting between Bathurst Regional Council and the Commission, 6 December 2022, Transcript, page 3).

336. The Commission is satisfied that the proposed final landforms and rehabilitation plans could be achieved and meet contemporary best practice in the NSW mining industry. The Commission agrees with the Department's view in this regard.

337. The Commission has imposed conditions B95 to B100 that establish rehabilitation objectives for each land use type (including achieving certain land and soil capabilities), require the preparation and implementation of a Rehabilitation Strategy for the mine site and water supply pipeline, and a Rehabilitation Management Plan. Condition B97 imposed by the Commission requires the Applicant to rehabilitate the Site progressively (as soon as reasonably practicable following disturbance) and to take all practical steps to minimise the total disturbed area exposed at any time.

5.8.2 Greenhouse Gas Emissions

338. With regard to greenhouse gas (GHG) emissions from the Project, the Department states:

> *The GHG assessment included Scope 1 (direct emissions from owned or controlled sources of an organisation/ development), Scope 2 (indirect emissions from the generation of purchased energy electricity, heat and steam used by an organisation/ development), and Scope 3 (all other indirect emissions/upstream and downstream emissions related to an organisation/ development) using the Commonwealth Government's National Greenhouse Accounts Factors (NGAF) workbook (2019) (AR Table 19).*

339. The Assessment found that the highest annual GHG emissions would be during the material handling and processing (Year 2 – Year 12) and would be attributed to fuel and energy consumption. It estimated the combined annual Scopes 1 to 3 emissions would be about 0.11% of the NSW and 0.03% of the total Australia's emissions (AR Table 19).

340. Neither the Applicant nor Blayney Shire Council commented on the Project's GHG emissions during stakeholder meetings with the Commission. The Commission also did not receive a large volume of submissions from the public raising GHG emissions as a key concern in relation to the Project. Nevertheless, the Commission did receive some submissions raising concerns about GHG emissions and the Commission has considered these submissions.

341. The Department considers that the Project is generally consistent with the *NSW Government's Climate Change Policy Framework*, and the impacts can be minimised to the greatest extent possible (AR Table 19).

342. The Department has recommended conditions that require the Applicant to (AR Table 19):

- *implement all reasonable and feasible steps to improve energy efficiency and reduce Scopes 1 and 2 GHG emissions of the development; and*
- *implement an approved Air Quality and Greenhouse Gas Management Plan, describing the best practice management measures to minimise the project's Scope 1 and 2 GHG emissions and ensure energy efficiency.*

343. The Commission notes that GHG emissions from the Project would be generally consistent with the NSW framework and agrees with the Department that the impacts can be minimised to the greatest extent possible.

344. The Commission has therefore imposed conditions that require the Applicant to prepare an Air Quality and Greenhouse Gas Management Plan (condition B34), including taking all reasonable and feasible measures to minimise the Scope 1 and Scope 2 GHG emissions (condition B33). The plan must be regularly updated and include a detailed review of the feasibility of implementing various GHG abatement options.

5.8.3 Traffic and Transport

345. The Commission considered submissions that raised concern about traffic impacts caused by the Project. Key concerns related to increased traffic volumes on the local road network (including increased truck movements) and road safety risks (including at the Site access road intersection with the Mid Western Highway).

346. The majority of Project traffic would travel via the Mid Western Highway from Blayney and Bathurst, and via Vittoria Road and Guyong Road when travelling from the Orange area (AR Table 19). Vehicle access to the mine site would be from the Mid Western Highway. The water supply pipeline development includes roadway and rail line crossings.

347. Vehicle access to the Site was originally proposed via Dungeon Road, a predominately unsealed road that runs through the centre of the project area (connecting Vittoria Road and the Mid Western Highway), however in response to safety concerns raised by TfNSW and the community in submissions to the EIS, the Applicant amended the Site access location to approximately 1 kilometre further to the east (part of the First Project Amendment). The proposed new Site access road is located further away from receivers in the Kings Plains settlement.

348. During Project early works, Dungeon Road would be used for site access for a maximum of 6 months, as agreed by TfNSW (AR Table 19). The Applicant proposes to close Dungeon Road to the public from approximately 550 metres north of the intersection with the Mid-Western Highway and 1.2 kilometres south of Vittoria Road at the start of construction (AR table 19). The Commission understands that access to the Site through the life of mine would be maintained from Dungeon Road via locked gates for emergency vehicles, environmental monitoring or mine inspections.

349. During its meeting with the Commission on 6 December 2022, Blayney Shire Council referred to its negotiations with the Applicant regarding Dungeon Road. It stated:

> *At this stage it's fair to say we're fairly happy with the way that is proceeding. We did have a small point about the first 500 metres of that road from the highway to be sealed with an all-weather sealer and we're still negotiating with them about that.*

350. Blayney Shire Council also raised concerns about the impact of "increased traffic movements" during its meeting with the Commission (transcript, page 9), and during the Public Hearing (Day 1) Council stated:

> *The project, if approved, will create a significant number of traffic movement particular during the development period. These movements have the potential to significantly impact our council road networks. Council has requested in its original submission that a Transport Management Plan be developed and are very happy to see this specifically conditioned in B73 (Day 1 Transcript, page 27).*

351. The Commission notes that Orange City Council requested the inclusion of a condition of consent that would require the Applicant to utilise regional roads rather than local roads.

352. TfNSW, in its submission to the EIS, noted that the mine site is located approximately 6 kilometres from the nearest rail line (Tarana to Orange Junction) and stated that the Project is "unlikely to have consequential impact on rail corridor operations". However, regarding the water supply pipeline, TfNSW stated that it will traverse rail corridors at three locations that are currently in operation.

353. The Department has recommended the following conditions to minimise the traffic and transport impacts of the Project (AR Table 19). The Applicant would be required to:

- *limit the use of Dungeon Road to access the site to the first six months of construction;*
- *limit project related traffic on Vittoria and Guyong Road;*
- *construct the new access point and road in accordance with relevant design standards;*
- *decommission the mine access road upon closure;*
- *prepare a Traffic Management Plan to monitor and manage traffic impacts on the road network during temporary access arrangements, the mine site construction and operational stages; and*
- *prepare and implement a Pipeline Construction Environmental Management Plan inclusive of a traffic and access management sub-plan.*

354. The Commission agrees with the Department's views regarding traffic and transport and has imposed conditions B69 to B76 accordingly. The Commission notes that condition B72 requires the Applicant to design, construct and maintain the mine access road intersection to the satisfaction of TfNSW and Blayney Shire Council. Condition B73 requires the Applicant to prepare and implement a Traffic Management Plan as requested by Blayney Shire Council. The Traffic Management Plan includes a requirement for the Applicant to specify all transport routes and must be prepared in consultation with TfNSW and Blayney Shire Council.

5.8.4 Hazards

355. The Applicant's EIS included a Preliminary Hazards Analysis, dated 29 June 2019. The Commission understands that the analysis has been prepared in accordance with *Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'* (AR Table 19).

356. Both NSW Rural Fire Service (**RFS**) and Fire and Rescue NSW are satisfied with the Applicant's risk and hazard assessments (AR, Table 2) and consider that hazards associated with the Project can be appropriately managed, subject to conditions.

357. In its advice letter to the Department dated 3 January 2020, RFS made recommendations relating to preparation of an Emergency Management and Operations Plan and a Bush Fire Emergency Management and Evacuation Plan by an appropriately qualified person. It also recommended that a minimum 10 metre asset protection zone (APZ) should be provided around any building or infrastructure, and that buildings, roads and infrastructure be compliant with relevant standards and guidelines.

358. The Department considers that the Applicant's Preliminary Hazards Analysis adequately estimated that the worst-case fire and toxic scenarios that may cause significant impacts would be well within the Site boundary and would not reach neighbouring land uses (AR Table 19).

359. The Department, with advice from the Department's Hazards Unit, is of the view that the Project can comply with all requirements under the *Explosives Act 2003*, including relevant Australian Standards regarding explosives.

360. To minimise the hazards and risks of the Project, the Department has recommended conditions (AR Table 19) requiring the Applicant to comply with all requirements under the *Explosives Act 2003*, and relevant standards for the transport, storage and use of a range of dangerous goods, and prepare and implement a range of post-approval documents to manage hazards, including:

- Hazard and Operability Study;
- Final Hazard Analysis;
- Transport of Hazardous Materials Study;
- Emergency Plan;
- Safety Management System;
- Hazard Audits; and
- Hazardous Materials Management Plan (including onsite storage and handling of sodium cyanide and other toxic chemicals).

361. The Commission agrees with the views of the Department, RFS and Fire and Rescue NSW and finds that the hazards and risks associated with the Project can be appropriately managed subject to conditions. The Commission has therefore imposed conditions B88 to B94 to minimise and manage hazards and risk.

5.8.5 Historic Heritage

362. At AR Table 19, the Department states that a total of 24 historic heritage sites are located in the area of the Project, including the Hallwood Farm Complex, which has potential State and local heritage significance, and 14 items potentially of local significance. The 14 items include "ruins, building material dumps, building complex and bridge, remnants from early gold mining in the area (shafts, benching, adit and dump), survey marker tree, and stockyards".

363. Heritage NSW, in its advice letter to the Department on the EIS, stated that "except for Hallwood Farm Complex, the disturbance to the sites within the mine project area would not greatly impact the historic heritage value of the area or region or cause cumulative impact" (page 1).

364. As part of the First Project Amendment, the Applicant redesigned the Project layout. The Applicant's Amendment Report, dated September 2020, states that based on advice from its heritage consultant and the letter from Heritage NSW, it redesigned the water management system and removed the secondary water management system to avoid impacts to the Hallwood Farm Complex.

365. During its meeting with the Commission on 6 December 2022, the Applicant stated:

> *…further refinements were made to the TSF and the site water management system to better facilitate a clean water diversion and overall site water management and importantly to avoid impacting Hallwood, which is a potential item of historic heritage significance. These amendments have all combined to result in a Project that strikes a balance between efficient resource recovery and residual impacts which are acceptable to the NSW Government and that can be offset or mitigated appropriately (Transcript, page 4).*

366. The Department states that there would be no direct impacts to the Hallwood Farm Complex, but there would be direct impacts (destruction) to 13 items, including 10 with local heritage significance.

367. The Department states that there will be no direct impacts on the four locally significant heritage items within the vicinity of the water supply pipeline (AR Table 19).

368. Overall, the Department is of the view that the Project's impacts to historic heritage are acceptable and can be appropriately managed through conditions of consent.

369. During its meeting with the Commission on 6 December 2022, Blayney Shire Council stated that it does not anticipate that the Project will impact its built colonial heritage (Transcript, page 17).

370. Heritage NSW and the Department have recommended conditions relating to all non-Aboriginal cultural heritage items including requiring the preparation of a Heritage Management Plan prior to commencing construction, and a structural inspection of the Hallwood Farm Complex prior to commencing blasting on the Site (AR Table 19).

The Panel agrees with the views of the Department, Heritage NSW and Blayney Shire Council and finds that impacts to historic heritage can be appropriately managed. The Panel has therefore imposed conditions B65 to B68 that require the preparation and implementation of a Heritage Management Plan that includes measures for the protection of heritage items.

6. The Commission's Findings and Determination

371. The views of the community were expressed through public submissions and comments received (as part of the EIS exhibition and as part of the Commission's determination process), as well as in oral presentations to the Commission at the Public Hearing. The Commission carefully considered all of these views as part of making its decision.

372. The Commission has considered the Material before it as set out in section 3.1 of this report. Based on its consideration of the Material, the Commission finds that the Project should be approved subject to conditions of consent for the following reasons:

- amenity impacts of the Project (noise, vibration, visual and lighting and air quality and dust impacts) are capable of being minimised, managed or compensated where necessary;
- residual social impacts to nearby rural residences are capable of being minimised, managed or compensated where necessary;
- the Project would have a net positive economic impact for the region and NSW through employment (approximately 710 construction and 260 operational jobs) and up to $65 million (net present value) royalties over the life of the Project;
- the water supply pipeline, if retained after the Project as proposed, could provide a valuable water supply for various uses in the region, thereby extending the benefits of the Project beyond the mine life;
- impacts to water quality and quantity are capable of being minimised, managed or compensated where necessary;
- harm to Aboriginal cultural heritage can be minimised and can be acceptably managed through conditions of consent;
- impacts on historic heritage are capable of being managed;
- biodiversity impacts can be suitably avoided, mitigated and/or offset;
- harm to agricultural operations are capable of being minimised, managed or compensated where necessary;
- traffic impacts can be appropriately managed for the duration of mining activities;
- hazards, waste and risks associated with the Project can be appropriately managed through conditions of consent;
- greenhouse gas emissions are small and have been minimised to the greatest extent possible;
- the proposed final landforms and rehabilitation plans are appropriate and meet contemporary best practice;
- the proposed extraction of gold is consistent with the orderly and economic use and development of land;
- the Project would produce a significant mineral resource to meet the growing demand for raw metals (including gold);
- the Site is suitable for the Project;
- the Project is not inconsistent with the ESD principles, because it would achieve an appropriate balance between the relevant environmental, economic and social considerations;
- recognising that some negative impacts described in section 5 and summarised in this paragraph will be minimised or managed but not eliminated altogether, the Commission's assessment of the balance of considerations favours the grant of approval subject to conditions; and
- the Project is in the public interest.

373. For the reasons set out in paragraph 372 above, the Commission has determined that development consent should be granted subject to conditions. These conditions are designed to:

- prevent, minimise and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance
- require regular monitoring and reporting; and
- provide for the on-going environmental management of the development.

374. The reasons for the Decision are given in the Statement of Reasons for Decision dated 30 March 2023.

Dr Peter Williams (Chair)
Member of the Commission

Clare Sykes
Member of the Commission

Professor Neal Menzies
Member of the Commission

Appendix A – Key Components of the Application

***Table 4** – Key components of the Application (source: Department's AR, Table 1)*

Component	Description
Project Area	Up to 2,727 hectares (ha) comprising: • 2,514 ha for the mine development area (disturbance area 1,116 ha); and • 213 ha for the water supply pipeline (disturbance area 127 ha).
Project Life	Approximately 15 years, including 11 years of mining operation, up to 2 years of construction and up to 4 years of rehabilitation, with overlap between the project phases.
Mine Operations	Conventional drill and blast excavation of the open pit, with ore transported to the run-of-mine (ROM) stockpile for processing.
Processing	Up to 7 Mt of ore would be processed each year through carbon in leach processing using cyanide to produce gold doré.
Tailings / Waste Management	Storage of 46,700 ML of waste residue (tailings) from ore processing in an on-site tailings storage facility (TSF). Approximately 84.5 million bank cubic metres (Mbcm) of waste rock transported to a waste rock emplacement area. Potentially Acid Forming (PAF) would be encapsulated by Non-Acid Forming (NAF) material.
Water Supply	Construction water supply sourced from captured rainfall and groundwater bores on the site for initial 9 months of construction. Operational water supply would be sourced from tailings decant, captured runoff and process water, groundwater inflows to the open pit and through the transfer of approximately 13 ML per day (up to 15.6 ML per day) via the water supply pipeline.
Water Management	The on-site water management system comprises clean water diversion, clean water capture and discharge, mine water management facilities, sediment basins and storage of pipeline supply water, and an on-site water treatment plant to produce potable water. Operating as a 'nil-discharge' site – water within the mine water management system would be captured and reused in processing and dust suppression activities.
Rehabilitation and Mine Closure	Progressive rehabilitation of the mine site comprising a mix of agriculture and pasture with the waste emplacement to be rehabilitated to open woodland habitat regeneration and enhancement. The water supply pipeline would be retained for future use and if no uses are identified, all surface infrastructure would be removed.
Ancillary Infrastructure	Construction and operation of ancillary infrastructure, including administration buildings; workshops and stores facilities, plant parking, laydown and hardstand areas, internal road network, explosives magazine, and on-site laboratory.

Operating Hours	Mine construction (initial six months) and pipeline construction: • Monday – Friday: 7:00am – 6:00 pm; • Saturday: 8:00am – 1:00 pm; and • No work on Sunday or public holidays. After six months, ongoing construction and mining activities would be carried out 24 hours per day, 7 days per week except for developing the southern end of the waste rock emplacement area, which would only be undertaken during the daytime period only.
Employment	Construction: 710 Full Time Equivalent (FTE) (120 FTE for construction of the pipeline) Operation: Average of 260 FTE for 10 years and approximately 320 FTE for 5 years

New South Wales Government
Independent Planning Commission

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