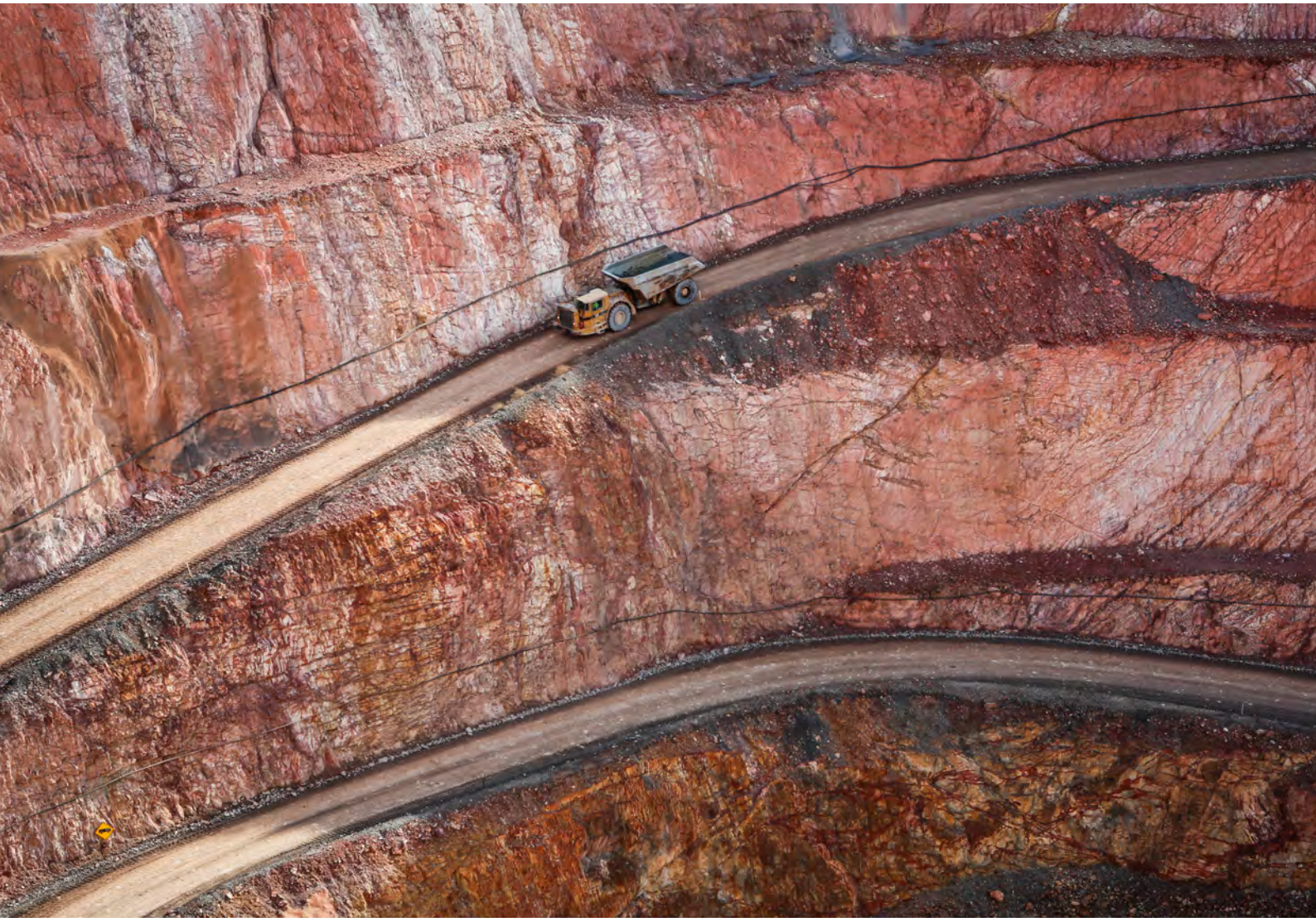

# New Cobar Complex Project, State Significant Development (SSD10419)

## Response to Submissions Report

**Prepared for Peak Gold Mines**
**August 2021**



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METALS Ltd.

# New Cobar Complex Project (SSD10419)

Response to submissions report

**Report Number**

J190278 RP32

**Client**

Peak Gold Mines

**Date**

20 August 2021

**Version**

v3 Final

| **Prepared by** | **Approved by** |
| --- | --- |
|  |  |
| **Ellie Evans**<br>Senior Environmental Scientist<br>20 August 2021 | **Robert Morris**<br>Associate Director<br>20 August 2021 |

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# 1 Introduction

## 1.1 Background

Peak Gold Mines Pty Ltd (PGM), a wholly owned and operated subsidiary of Aurelia Metals Limited (Aurelia), owns and operates the Peak Gold Mines operation south-east of Cobar, far western New South Wales (NSW) (Figure 1.1 and Figure 1.2).

The PGM operation comprises the New Cobar Complex located 3 kilometres (km) to the south-east of Cobar town centre and the Peak Complex located 10 km south-east of the town centre. Both complexes are located adjacent to Kidman Way, which connects Cobar to Bourke to the north and Hillston to the south.

Geologically, the area around Cobar comprises a series of polymetallic high-grade ore bodies dominated by gold, silver, copper, lead and zinc, with a long history of stable, large-scale, low-cost production that has produced more than 200,000 tonnes (t) of copper and 3,000,000 ounces (oz) of gold since mining began in the area in 1870.

PGM has been operational since modern mining commenced at the Peak Complex in 1991 and all current mining operates under development consents issued by Cobar Shire Council (CSC).

### 1.1.1 Existing and proposed development

The New Cobar Complex Project State Significant Development (SSD) (the project) is an amalgamation of existing approved underground mining of the Chesney and Jubilee deposits and development of new underground workings of the Great Cobar and Gladstone deposits to create the New Cobar Complex Project.

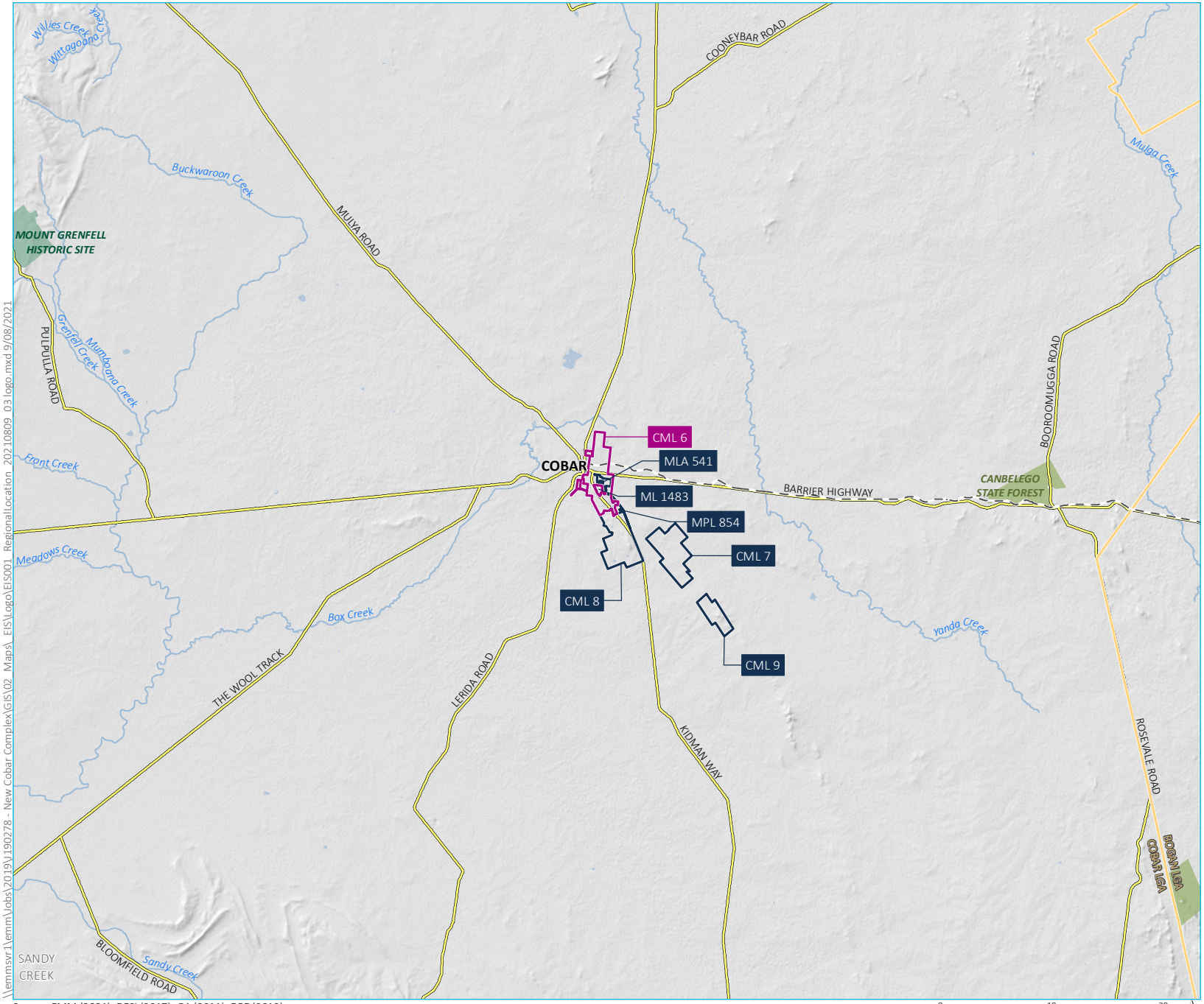
PGM is also seeking to consolidate all existing development consents applicable to the New Cobar Complex, into a single modern consent issued by the Department of Planning, Industry and Environment (DPIE). Approval is being sought for project elements accessed from, and undertaken within, the existing New Cobar Complex located within consolidated mining lease (CML) 6, mining purposes lease (MPL) 854 and mining leases (ML) 1483 and ML 1805.

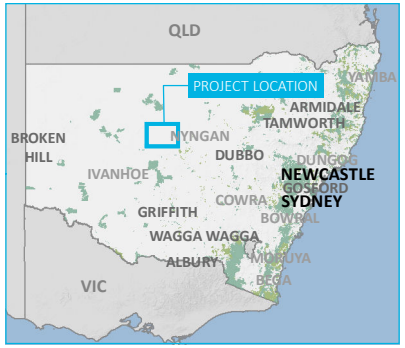
PGM has been operational since mining commenced at the Peak Complex in 1991 producing gold, copper, lead, zinc and silver. Mining at the New Cobar Complex commenced with the open cut mine in 2000, then transitioned to underground mining in 2004.

The current CSC development consents at Peak Complex and New Cobar Complex allow for the operations to continue indefinitely and process up to 800,000 tonnes per annum (tpa) of ore. Ore processing, tailings storage and concentrate handling is undertaken at the Peak Complex with ore from the New Cobar Complex trucked by public road to processing facilities at the Peak Complex. Both the processing plant and the tailings storage facility (TSF) are located at the Peak Complex, and activities at those facilities are outside the scope of this project, although a parallel application has been submitted to CSC to increase the capacity of the TSF to facilitate this SSD Application.

The application to increase the capacity of the TSF was approved by CSC in July 2021 and consents PGM to construct an additional three lifts and providing enough capacity in the TSF for tailings storage until 2035 (based on an 800,000 tonne per annum processing rate). The timing of each lift and capacity of the TSF may change from the conceptual design pending the realisation of assumptions made in the design. PGM regularly conducts capacity assessments to recalibrate the conceptual design and the timing of each lift.

PGM has identified the Gladstone and Great Cobar deposits as targets for further mining to extend the life of operations at the New Cobar Complex. The Great Cobar deposit was historically exploited by surface and shallow underground mining between 1870 and 1919, but no mining of the deposit has been undertaken since that time.




KEY

- CML6
- Other mining lease boundary
- Rail line
- Major road
- Named watercourse
- Waterbody
- Local government area
- NPWS reserve
- State forest

Source: EMM (2021); DFSI (2017); GA (2011); DPE (2019)

0 10 20 km

GDA 1994 MGA Zone 55

N

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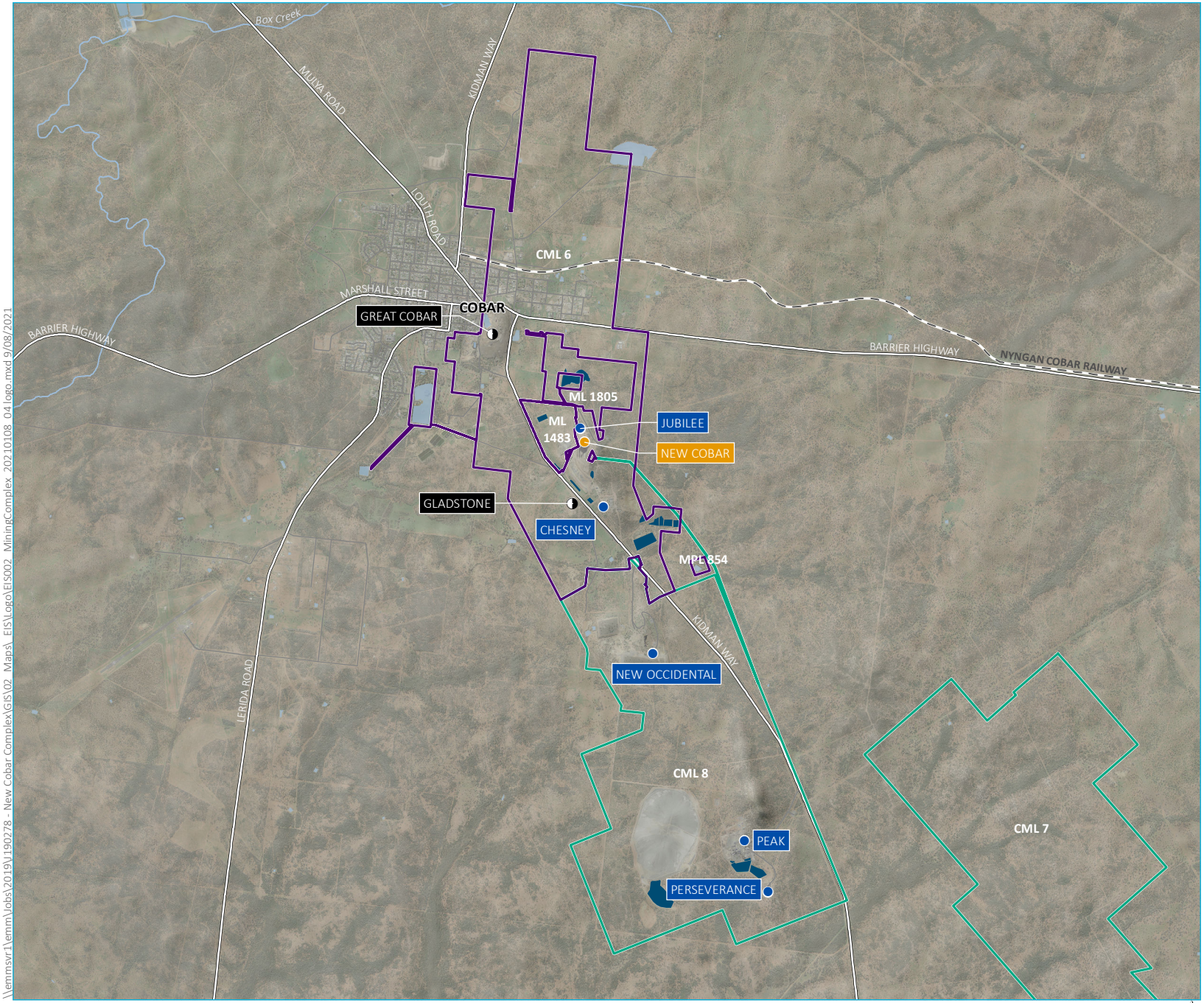
Regional context

Peak Gold Mines
New Cobar Complex Project
Response to submissions report
Figure 1.1




\\emmsvr1\emm\Jobs\2019\190278 - New Cobar Complex\GIS\02 Maps\ EIS\Logo\EIS002 MiningComplex 20210108 04 logo.mxd 9/08/2021

Source: EMM (2021); DFSI (2017); GA (2011); DPE (2019)

Mining leases and complexes

Peak Gold Mines
New Cobar Complex Project
Response to submissions report
Figure 1.2

PGM has obtained approval for development of an exploration decline to facilitate exploration activities within the Great Cobar deposit. The objectives of the exploration activities are to:

- further define the mineral resource through underground drilling from an exploration decline; and
- take a bulk sample to provide further samples for metallurgical, geotechnical and associated test work.

## 1.2 Project overview

All works associated with the project will be located underground or on the surface within an existing, operational mining complex (the New Cobar Complex) (Figure 1.3 and Figure 1.4). The exception is a short (no more than 400 metre (m)) power line from an existing 22 kilovolt (kV) line servicing PGM to a compact substation located adjacent to the fresh air intake and emergency egress winder (Figure 1.5).

PGM proposes to use the decline, infrastructure and intake and exhaust ventilation elements developed for the Great Cobar exploration decline (approved, but not yet constructed) to facilitate project development. Ventilation fans are not required during the development of exploration activities, however as they will be necessary during mining operations, construction of a new power line and compact substation, to be located adjacent to the fresh air intake is required. The power line will continue to the exhaust air rise where a ventilation fan will be installed at a depth of approximately 100 m or greater below ground level (mbgl). An emergency egress winder headframe and winder house will be installed at the fresh air intake for the purpose of mine rescue in the event of an incident below ground preventing evacuation by conventional means. No additional new surface infrastructure is proposed as part of this application.

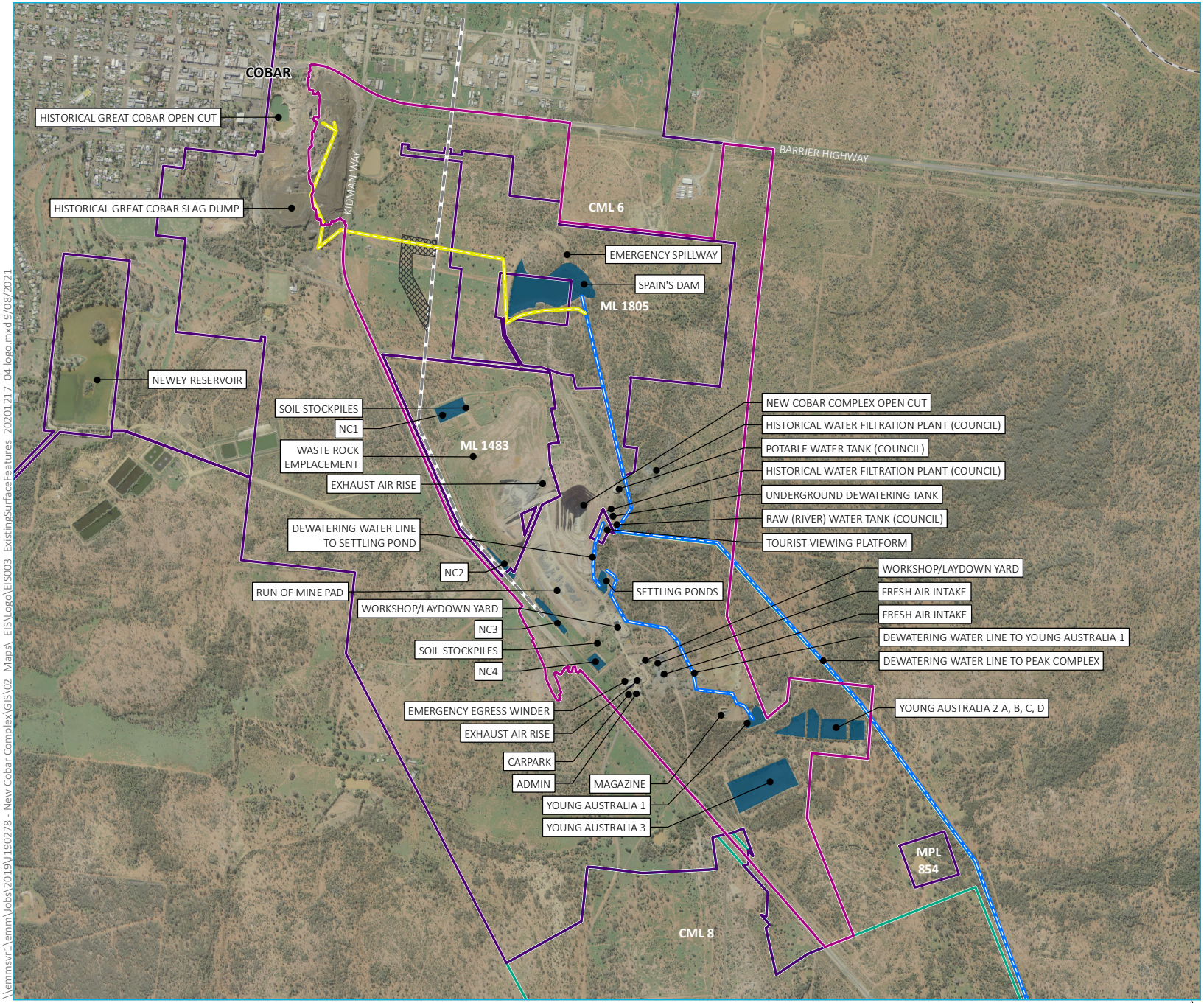
The existing surface infrastructure and facilities at the New Cobar Complex currently support underground mining of the Chesney and Jubilee deposits, and will continue to be used for this project. Access to all underground workings in the complex is from a portal and decline at the base of the existing New Cobar open cut. SSD approval is being sought for the following project elements accessed from, and undertaken within, the existing New Cobar Complex:

- Underground mining of the New Cobar Complex including, but not limited to, the, Jubilee and Chesney deposits (presently operating under an existing development approval issued by CSC to be incorporated into this project).
- Underground mining of the New Cobar Complex including Great Cobar and Gladstone (not yet approved).
- Groundwater dewatering of the relevant historical and proposed underground workings via the historical Great Cobar Shaft (existing development approval issued by CSC to be incorporated into this project).
- An increase of the number of ore haulage trucks between the New Cobar Complex and Peak Complex from 25 loaded trips per day (50 movements in and out) to 50 loaded trips (100 movements in and out) per day (daylight hours only) averaged over a calendar year. The increase of daily truck movements will accommodate movements associated with the additional ore and waste rock produced by the New Cobar Complex under this application and will provide flexibility to PGM if there are unforeseen production disruptions (eg bad weather).
- Crushing and screening of ore within the existing surface run of mine (ROM) pad at the New Cobar Complex (existing approval by CSC to be incorporated into this project).
- Transportation of ore to the Peak Complex via Kidman Way for processing, using road registered heavy vehicles (HV);

- Harvesting of waste rock and:
  - immediately deploying the material underground for use in stope backfilling operations (waste rock will remain underground and will not be transported to the surface as a preference); and
  - transportation of waste rock to the surface for use across the complexes for construction/rehabilitation tasks (eg tailings dam lifts).
- Deposition of potentially acid forming waste rock brought to the surface and stored within the waste rock emplacements (WRE) where at end of mine life it would be capped, or progressively returned underground for disposal.
- Continuation of all other approved activities within the New Cobar Complex.

Processing will remain at the existing approved rate of up to 800,000 tpa, with production of ore from the Great Cobar and Gladstone deposits making up for the future decrease in production from other workings across PGM.

Additionally, there are remaining resources in the Jubilee and Chesney deposits (currently mined under existing consent) that are mineral rich, but which are currently not economical to mine in isolation. Keeping the New Cobar Complex operational and gaining access to Great Cobar and Gladstone deposits will lead to increases in economies of scale and maximise opportunities to mine these resources, and keep PGM operational until 2035.




KEY

- Project area
- Pipeline route
- Great Cobar dewatering pipeline
- Existing 22 kV powerline
- Rail line
- Proposed power line corridor
- Mine water management storage

Mining lease boundaries

- New Cobar Complex
- Peak Complex

\\emmsvr1\emm\Jobs\2019\J190278 - New Cobar Complex\GIS\02 Maps\ EIS\Logo\EIS003 ExistingSurfaceFeatures 20201217 04 logo.mxd 9/08/2021

Source: EMM (2021); DFSI (2017); GA (2011); DPE (2019)

0 0.5 1 km

GDA 1994 MGA Zone 55

N

Existing surface features

Peak Gold Mines
New Cobar Complex Project
Response to submissions report
Figure 1.3

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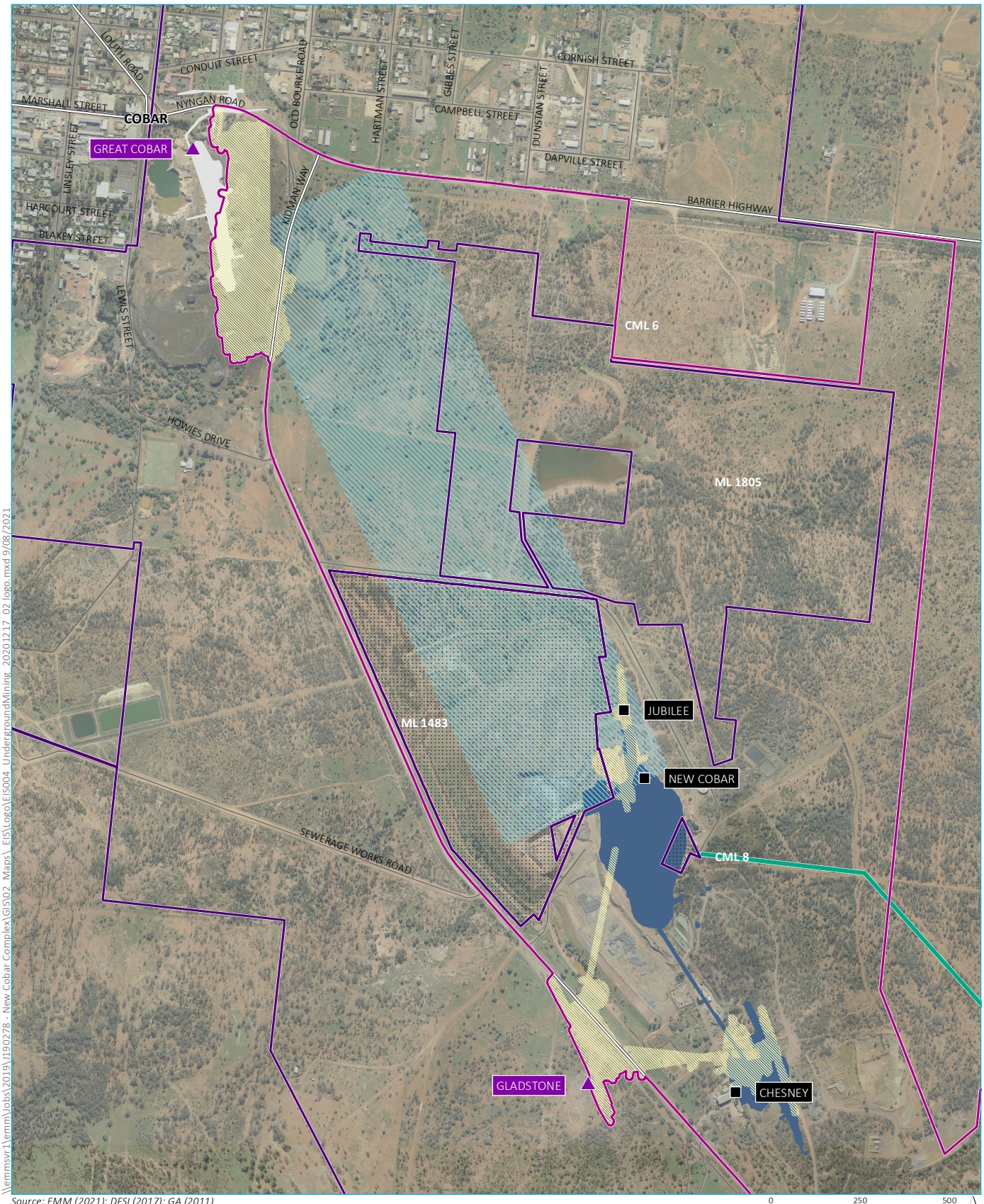


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Source: EMM (2021); DFSI (2017); GA (2011)

0 250 500 m

GDA 1994 MGA Zone 55

N

KEY

- Project area
- Indicative proposed mine workings
- Indicative approved decline area
- Historical mine workings
- Existing mine workings
- Operating mine
- Prospect mine
- Major road
- Minor road

Mining lease boundaries

- New Cobar Complex
- Peak Complex
- ML 1483

# Existing and proposed undergound mining locations

Peak Gold Mines
New Cobar Complex Project
Response to submissions report
Figure 1.4

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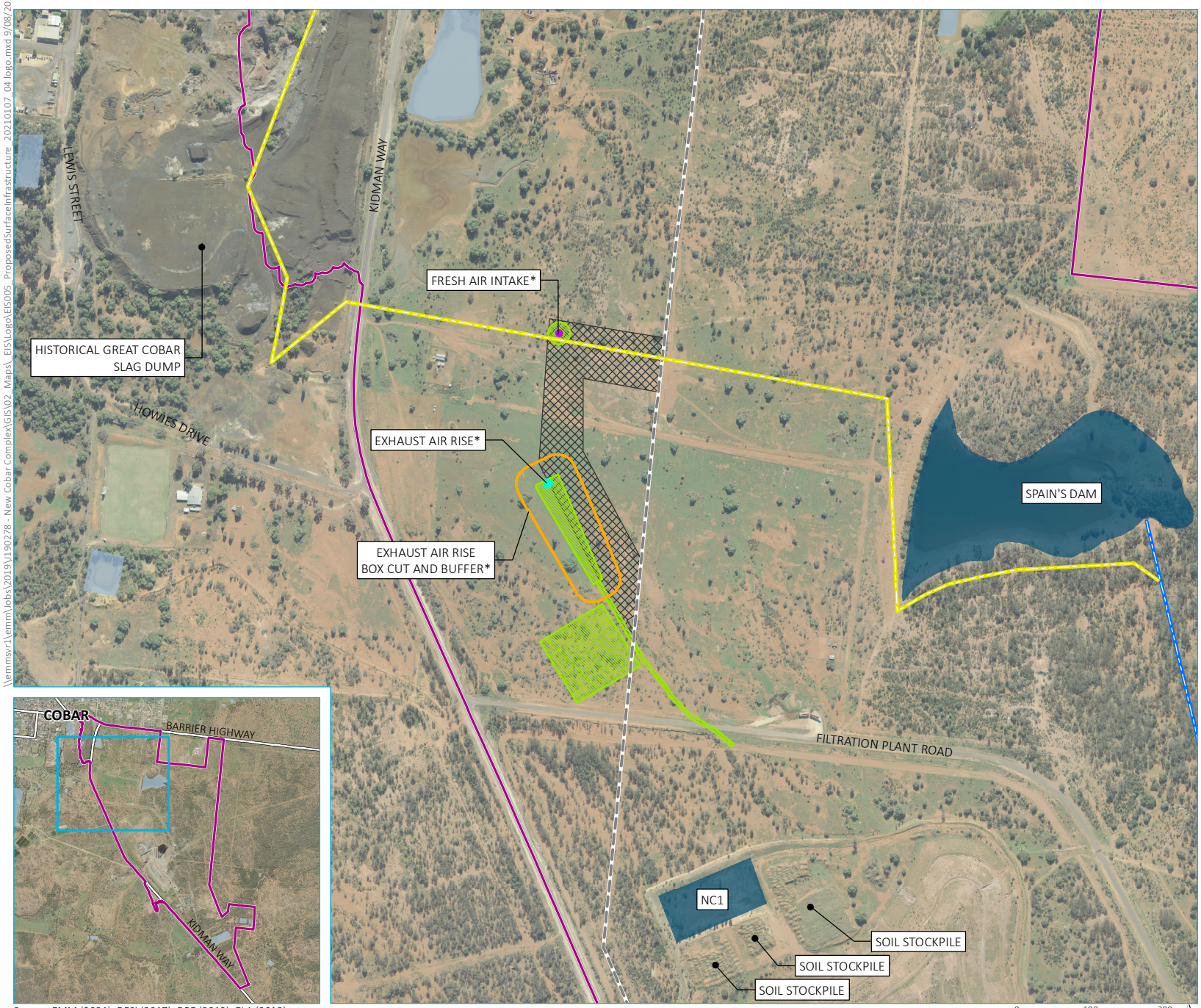


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Source: EMM (2021); DFSI (2017); DPE (2019); ELA (2018)

Proposed surface infrastructure

Peak Gold Mines
New Cobar Complex Project
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Figure 1.5

### 1.2.1 Project objectives

The project design seeks to meet the following objectives:

- to extract a further 148,000 oz of gold, 3,970,000 oz of silver, and over 210,000 t of base metals not accessible by current underground operations (estimate using current market assumptions and quantities may fluctuate pending exploration success, market conditions and realisation of grades);
- to maintain continuity of mining and extend ore production at the site beyond 2023;
- to optimise the recovery of gold, copper, zinc, lead and silver in CML 6;
- to safely mine an economically extractable resource;
- to provide further stability and secure employment for its workers and to generate economic activity and wealth for the local, regional and state communities; and
- to effectively manage impacts on surrounding residents and the local environment during construction and operations and achieving, at a minimum, compliance with relevant statutory requirements.

## 1.3 Approvals approach

EMM Consulting (EMM) was engaged by PGM to prepare and submit an EIS to support an SSD application for development consent under section 4.12 of the *Environmental Planning and Assessment Act 1979* (EP&A Act). The EIS was prepared to the form and content requirements set out in Clauses 6 and 7 of Schedule 2 of the Environmental Planning and Assessment Regulation 2000 (EP&A Regulation), as well as clause 8(1) and clause 5 of Schedule 1 of State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP).

The Peak Complex, which is not part of this SSD application will continue to operate under local government (CSC) approvals, as there is no proposed change to this arrangement. PGM received development approval from CSC for additional storage capacity in the TSF at the Peak Complex in July 2021.

## 1.4 Purpose of this report

DPIE wrote to PGM on 31 March 2021 requesting responses to the matters raised by NSW Government agencies, local government authorities and the community that were received during the public exhibition of the EIS.

This Submissions Report addresses the issues raised in advice and submissions received on the project (SSD 10419).

This report also documents the additional activities undertaken relating to the applications since the conclusion of the exhibition, including further technical studies undertaken and stakeholder and community engagement activities that PGM has carried out.

The Response to Submissions Report forms part of the Environmental Impact Statement documentation and is submitted to DPIE to assist its merit assessment of the SSD 10419 application.

The purpose of this Response to Submissions Report is to:

- accurately summarise the issues raised in submissions for SSD 10419;
- provide meaningful responses to the submissions;
- summarise any additional assessment and management commitments; and
- update the evaluation of the project as a whole, having regard to any relevant issues raised in submissions and the responses.

Accordingly, this Response to Submissions Report has been prepared by EMM in accordance with the draft DPIE guideline Preparing a Submissions Report State Significant Development Guide (DPIE 2020).

# 2 Submissions analysis

## 2.1 Exhibition details

The EIS was publicly exhibited from 25 February 2021 to 24 March 2021 at multiple locations on-line and in print:

- online at the NSW Government Major Projects website;
- print copies:
  - full EIS and appendices at the CSC offices, and
  - main EIS document (without appendices) at the Cobar Shire and TAFE Library.

Links to the online EIS were shared on Aurelia's Facebook page, and in community Facebook groups, as well as the Social Pinpoint page for the project, and Aurelia Metals' website. An advert was placed in the Cobar Weekly newspaper which notified readers of the EIS exhibition period and how to make a submission.

## 2.2 Submissions received

During the exhibition period, advice was received from fourteen NSW Government agencies, ten submissions were received from individual community members, and two from community organisations. Of the twelve community submissions, seven were in support, and four were in objection. Following the exhibition period, advice was received from one further NSW Government agency and Cobar Shire Council. No form letters or petitions were received.

The advice and submissions received on the project can be viewed on the DPIE Major Projects Portal at:

https://www.planningportal.nsw.gov.au/major-projects/project/26616

**Table 2.1 Summary of submissions received on SSD 10367**

| Source/type | Support | Object | Comment | Total |
|---|---|---|---|---|
| State Government | - | - | 15 | 15 |
| Local Government | - | - | 1 | 1 |
| Community (individual) | 5 | 4 | 1 | 10 |
| Community (organisation) | 2 | | | 2 |
| **Total** | **8** | **4** | **16** | **28** |

## 2.3 Summary of submissions

The submissions were reviewed and evaluated by PGM and EMM, and key issues identified. Some issues were found across multiple submissions, and in accordance with the submissions report guideline (DPIE 2020), responses have been categorised by subject area. Issued raised in submissions were given a unique identifier to track across different submissions.

Responses have been prepared by PGM and EMM, with input from relevant technical specialists, where required. The study team was the same team that prepared the EIS.

### 2.3.1 Community submissions

Twelve community submissions were received, ten from individuals, and two from community organisations or companies. Of the twelve submissions, seven were in support of the project while four objected to the project.

#### i Supporting comments

Key comments from community submissions in support of the project were related to economic benefits and general support include the following:

- GE1: It is fitting that 150 years after the discovery of copper in 1871, that the Great Cobar Deposit will continue to support the town through the New Cobar Complex Project.
- GE2: Peak Gold Mines has a 30-year history of successfully mining the Peak, New Occidental, New Cobar, Perseverance and Chesney deposits.
- EC1: As an isolated community, Cobar relies heavily on mining operations for employment, therefore any project which extends mine life provides a positive contribution to the local community.
- EC2: The New Cobar Complex Project will help to offset some of the losses experienced when the Endeavor mine ceased operations, and will continue to provide direct employment for mine workers and contractors, as well as indirect employment for community services and businesses.
- EC3: With improvements to environmental performance of mining operations, and the oversight of the planning and environment departments within the NSW Government, the benefits to the town, peoples' lives and the State of NSW will far outweigh the minimised environmental impacts the project may have.
- EC4: The New Cobar Complex Project is of great importance to the future of Cobar. Mining is the main driver of the economy in Cobar and Cobar Shire. Without mining, the town of Cobar would likely not exist.
- EC5: Without mining, Cobar relies economically on agriculture and tourism which also have both positive and negative environmental impacts. Agriculture and tourism are also reliant on unpredictable weather and people, as the drought and the COVID-19 pandemic have shown.
- EC6: The economic benefits of the project are important to maintain local services within Cobar town and the wider region, including roads, schools and healthcare.
- EC7: As a metalliferous mining operation, the project will assist in industry diversification across the state and support a transition from fossil fuels, especially coal mining.
- EC8: Primary industries such as mining are key to recovering financially from the long-term economic impacts of COVID-19.
- EC11: The project will ensure local and regional companies can maintain skilled employment and provide appropriate career development based on the reliability and continuity of mining projects.
- EC12: The project will ensure that regional and state-wide companies can maintain a physical presence and ongoing direct employment in Cobar.

### ii Objecting comments

Key comments from community submissions objecting to the project include the following:

- GE3: Do not inherently oppose the project but request attention be given to concerns raised.
- GE4: Would like to enter into an agreement between CDRUFC and PGM regarding guaranteed provisions for potential impacts to CDRUFC.
- AQ1: Concerned about an increase in dust impacts as a result of the project.
- AQ2: Concerned that the lack of comparative data used in the air quality modelling is inadequate to accurately assess impacts on human health and ecology.
- AQ3: Requests that the informal unsealed truck stop opposite the entrance to the New Cobar Complex should be sealed to reduce dust generation.
- NV1: Vibration associated with existing operations at the New Cobar Complex has already caused damage to property. With the Great Cobar and Gladstone deposits being closer to the town and other residential properties, there are significant concerns that the damage will continue or increase.
- NV2: Concerned about the cumulative and long-term impacts of blasting on older buildings in Cobar town.
- NV3: Concerned that the traffic noise assessment for heavy vehicles only considers travelling along a road at maximum speed, and hasn't taken into account additional noises such as loading, changing gears etc.
- NV4: Current levels of operation and traffic noise such as rock breaking and reversing alarms at the New Cobar Complex already cause sleep disturbance and stress. Concerns that an increase in noise levels will be unbearable.
- NV5: Concerned that not all blasts are recorded and reported appropriately as vibrations have been felt when there was no blasting according to PGM records.
- HH1: Concerned about lead and other heavy metals in stormwater runoff, domestic water tanks and gardens. Requests more information on blood lead testing and general environmental testing in domestic water tanks and gardens.
- HH2: Concerned about the fumes from existing vent rises, and the potential health impact on the Cobar community, in particular children attending Cobar primary schools, local residents and visitors to the area (particularly children) as a result of increased operations.
- GW1: Loss of groundwater will cause the death of trees and vegetation. The lack of information on aquifers is inadequate for the groundwater modelling to accurately predict impacts.
- GW2: Concerned that make-good arrangements under the AIP will not be possible to implement in times of drought if town water is unavailable.
- SW1: Concerned about water quality and quantity in watercourse B, as it is the primary water source for domestic and stock purposes at R31 – Dellavale.
- SW2: Concerned that new operations will impact surface water in the area, and that the EIS should examine the issue further.

- TT1: Concerned about road safety at the entry to the New Cobar Complex as it is opposite the property entrance for R31, Dellavale. Suggests that Kidman Way at the new Cobar Complex entrance should be widened for safety, as the proposed splaying will only assist trucks accessing the New Cobar Complex and not other road traffic.

- TT2: Concerned about traffic safety on Kidman Way as a result of the increase in truck movements. Request the following measures be implemented to improve road safety:

    - reduced speed limit for heavy vehicles (50 kmh) and all other vehicles (90 kmh) be implemented on Kidman Way between the Peak Complex and the Barrier Highway;

    - clear marking and widening of all side road entries to Kidman Way between the Peak Complex and the Barrier Highway; and

    - adjustment of Filtration Plant Road intersection with Kidman Way for improved visibility.

- TT3: Concerned about project-related heavy vehicles using the access road for Dellavale (R31), and a request that the EIS should examine the issue further.

- HR1: Concerned that the mineralogy of the proposed ore bodies includes a significant increase in sulfur content, presenting an increased risk of dust explosions.

- WA1: Waste rock from the project has not been sufficiently provided for.

- SO1: Previous complaints (particularly about vibration and associated damage (structural damage, tiles cracking, dishes falling)) have not been adequately addressed by PGM, and that PGM do not take responsibility for the damage they cause.

- EC9: Does not believe the project will provide economic benefits to Cobar.

- EC10: Concerned that the project will negatively impact land values on nearby properties.

### 2.3.2 NSW Government agency submissions

#### i Water NSW

SW3: Water NSW stated that the project was not located near any WaterNSW land, assets or infrastructure, therefore had no comments or requirements regarding the project.

#### ii Department of Primary Industry – Agriculture

GE5: Department of Primary Industry (DPI) – Agriculture stated they had no comments regarding the project.

#### iii Biodiversity, Conservation and Science Directorate

BI1: The Biodiversity, Conservation and Science Directorate (BCS) noted that a biodiversity development assessment report (BDAR) waiver was issued for the project on 23 October 2021, and noted that the project described in the EIS is the same as what was assessed for the waiver. Therefore, BCS had no further comments regarding the project.

### iv Subsidence Advisory NSW

SU1: Subsidence Advisory NSW stated that the project area is not within a mine subsidence district, therefore Subsidence Advisory had no authority over improvements.

### v Environment Protection Authority

The Environment Protection Authority (EPA) noted that the project would be subject to Environment Protection Licence (EPL) 3596 issued by the EPA under the *Protection of the Environment Operations Act 1997* (POEO Act) for the scheduled activities of mining for minerals, mineral processing and general chemical storage. EPA requested further information and clarification regarding noise and air impacts of the project.

#### a Noise

EPA requested further clarification on elements of the noise and vibration impact assessment (NVIA), including:

- NV6: The actual predicted noise levels at each receiver in Tables 6.1, 6.2 and 6.3 of the NVIA, rather than predicted compliance at each receiver. EPA noted that more information was required to determine the noise level margin between the predicted level and the relevant criteria.
- NV7: Clarification in Section 3.5.2 of the NVIA to reflect the findings of the meteorological assessment. EPA noted that there was an inconsistency in how temperature inversions had been described and wanted to be clear about what was assessed.

These clarifications are included in the addendum to the NVIA, included as Appendix C.

#### b Air

EPA requested further clarification on elements of the air quality and greenhouse gas impact assessment (AQIA), including:

- AQ4: Additional information to describe the activities undertaken at both the New Cobar and Peak complexes, including the processing circuit, to demonstrate that the AQIA accounted for all significant emission sources. EPA noted that the Peak and New Cobar complexes are covered by one EPL, and that a detailed description of the activities undertaken at the Peak complex including the processing circuit was required to ensure all relevant emission sources from the facility have been assessed.
- AQ5: Confirmation that the assumed throughputs outlined in the AQIA represented a reasonable worst-case scenario with consideration given to any potential variations in operations and processing capacities. EPA noted that the EIS did not include a breakdown of the proposed annual processing capacities associated with each complex. EPA requested further information regarding:
  - Information on the potential for extraction rates to vary from those assessed in the AQIA and
  - Demonstration that the scenario assessed in the AQIA considers potential variations in annual operations and processing capacities through both mine complexes.
- AQ6: Addition of detailed discussion regarding the methodology used to establish emission sources parameters, including:
  - A summary of individually modelled sources and corresponding parameters.
  - A segregated list of modelled activities.
  - How total emission rates were calculated.

- AQ7: Benchmarking of proposed mitigation measures against best-practice dust control measures, as well as other emission sources, including:
    - Measures to minimise emissions from ventilation shafts.
    - Use of chemical suppressants to reduce dust from unpaved roads.
    - Alternative methods of ore transportation from the New Cobar Complex to the Peak Complex.
- AQ8: The EPA also requested that PGM nominates and commits to the implementation of mitigation measures during the construction phase of the proposal, if approval is granted.

These clarifications are included in the addendum to the AQIA, included as Appendix B.

### vi Crown lands

Crown lands noted that the following requirements will apply, where relevant:

- GE6: All Crown land and Crown roads within a Mining Lease (with surface rights), subject to mining or mining related activity, must be subject to a Compensation Agreement issued under Section 265 of the Mining Act 1992, to be agreed and executed prior to any mining activity taking place. The Compensation Agreement may include conditions requiring the Mining Lease Holder to purchase Crown land impacted on by mining activity.
- GE7: All Crown land and Crown roads located within an Exploration Licence, subject to exploration activity, must be subject to an Access Arrangement issued under Section 141 of the Mining Act 1992, to be agreed and executed prior to any exploration activity taking place.
- GE8: All Crown land and Crown roads within a Mining Lease (with sub-surface rights only) must be subject to a Section 81 Consent under the Mining Act 1992 where surface activities are proposed, to be agreed and executed prior to any surface activity taking place.

Crown lands also noted that the Crown road owned portion of Filtration Plant Road, east of the Kidman Highway, is currently being transferred to Council.

### vii Heritage NSW (historic heritage matters)

HI1: Heritage NSW stated that they concurred with the findings, assessment and recommendations of EMM's Statement of Heritage Impact (SoHI).

HI2: Heritage NSW recommend that as a condition of approval, the proponent must prepare and implement an Historical Heritage Management Plan to detail how construction impacts to non-Aboriginal heritage will be avoided, minimised and managed.

### viii Roads and Maritime Services and Transport for NSW

Roads and Maritime Services (RMS) submitted a duplicate of the Transport for NSW (TfNSW) submission, therefore both submissions have been addressed together.

TfNSW stated that they had reviewed the documentation and that additional information was required to continue the assessment of the application.

The requests for additional information included:

- TT4: A request for provision of construction related traffic, including:
  - The largest vehicle to use the construction access.
  - The daily and peak hour generation for both light and heavy vehicles.
  - Trip origin and designation.
  - Number of oversize vehicles.
- TT5: Quantification of the total traffic generated by the project, including peak daily and hourly traffic.

TT6: TfNSW noted that CML6 includes both operational and non-operational rail corridors, and requested additional information identifying whether proposed underground mine workings would require access to or involve any works within the non-operational rail corridor. If access to the corridor is required, additional information should be provided to TfNSW and other relevant bodies.

These clarifications are included in the addendum to the traffic and transport impact assessment (TIA), included as Appendix E.

### ix Resources Regulator

The Resources Regulator noted the following:

- HR2: There were no specific concerns regarding mine safety, but noted that a High-Risk Activity notification was required for all new mine entrances and emergency egresses and that two means of access from all parts of the mine must be available at all times.
- GE9: That PGM is seeking to consolidate the existing development applying to the New Cobar Complex into a single modern consent issued by DPIE, but that this would exclude activities at the Peak Complex which will continue to be regulated under the CSC consent. The Resources Regulator recommended that DPIE should consult with both the Resources Regulator and CSC to ensure rehabilitation options were consistent across both consents.
- GE10: That PGM will be required to comply with rehabilitation requirements under the current mining authorisation prior to commencement of, and during the works associated with the New Cobar Complex Project.

The Resources Regulator requested further information on the following subjects:

- LR1: That further detail on the nominated final land use of 'modified ecosystem' should be provided, including target rehabilitation outcomes and vegetation types.
- LR2: That detail of proposed changes to the final landform of the WRE should be provided, including strategies to ensure that exposed Potentially Acid Forming Material (PAF) will be encapsulated to ensure the final landform is stable in the long term.
- LR3: That while a conceptual final landform plan may not be feasible at this stage, PGM should provide a commitment that geomorphic landform design principles will be considered and implemented where practicable as part of the final landform to achieve long term stability.

- LR4: That PGM has committed to undertake additional waste rock and soil characterisation studies, and that a landform evolution model will be used to scope the degree of re-work required on the northern and eastern batters of the existing WRE to address erosion and vegetation failures that have occurred.

- LR5: That geomorphic landform design principles should be considered and implemented where practicable.

These clarifications are included in the addendum to the rehabilitation and landscape management strategy (RLMS), included as Appendix F.

### x DPIE – Hazards

DPIE Hazards noted that the New Cobar Complex currently operates under an existing consent which approves the storage and handling of dangerous goods, in particular Class 5.1 explosives.

DPIE Hazards requested the following additional information:

- HR3: A breakdown of Class 5.1 storage quantities from the existing operation, and the proposed Class 5.1 storage quantities as part of the New Cobar Complex Project.

- HR4: Further details on how threshold distances were calculated, and what the calculated threshold distance was.

These clarifications are included in the addendum to the hazard, risk and public safety assessment (HRPSA), included as Appendix G.

### xi Regional NSW Mining, Exploration and Geoscience

The NSW Mining, Exploration and Geoscience (MEG) had prepared a Resource and Economic Assessment (REA) in response to the EIS.

The REA noted the following points:

- EC9: That the project is considered to be an efficient use of resources.

- EC10: That if approved, MEG estimated that over the life of the project the value of the metals produced would be of the order of $1,270M in current dollars, with the net present value of this revenue stream at around $710M at a discount rate of seven per cent.

- EC11: That the additional export income from the project would contribute to the around $6 billion (B) of metallic and processed metals exported from NSW (2019/20 total), and that additional export income contributes a positive impact on both the credit rating of both NSW and Australia and has benefits to the A$/US exchange rate.

- EC12: That if the project does not proceed the economic benefits outlined above would not be realised.

### xii Heritage NSW (Aboriginal heritage matters)

AC1: Heritage NSW noted that the Aboriginal Cultural Heritage Assessment (ACHA) and associated consultation was adequate, and consistent with the expectations set out in the SEARs. Heritage NSW noted the following:

- AC2: That the proposed harm to Aboriginal objects as a result of the project is minimal, however considered that the objects and associated locations retain research interest, and are of value to local Aboriginal people.

- AC3: That the management strategies and commitments proposed in the ACHA, are acceptable, adequate and proportionate, and recommended further research of Cornish Town.

- AC4: That the interest in exploring the shared histories of the interconnection between Aboriginal and non-Aboriginal residents of Cornish Town is valid, and that Heritage NSW supported a management strategy that increases knowledge and awareness of post-Colonial ways of life in the Cobar region.

AC5: Heritage NSW recommended that an archival and oral history study of the post-contact shared histories of Cornish Town be undertaken.

### xiii DPIE-Water and the Natural Resources Access Regulator

DPIE-Water and the Natural Resources Access Regulator (NRAR) noted:

- GW3: That the numerical model had been prepared in accordance with the Australian Groundwater Modelling Guidelines to a standard suitable for the scale of activity and the relatively low-risk of groundwater impacts in the area. However, the model was not independently peer reviewed as required by the Aquifer Interference Policy (AIP).

- GW4: That a basic landholder rights (BLR) bore (85WA752553) had been overlooked in the assessment.

GW5: DPIE Water and NRAR made the following recommendations:

- Pre-approval:
  - That an independent peer review of the numerical groundwater model be undertaken.
  - That BLR bore 85WA752553 be included in the assessment and address whether mitigation under the AIP was required.
- Post-approval:
  - That PGM should install a monitoring bore in the unconfined aquifer (depth 20 – 25 mbgl) at the New Cobar precinct so that PGM should not have to rely only on water levels of the third party water supply bore in future monitoring and assessments.
  - That the Water Management Plan (WMP) should be updated to document relevant changes to water management infrastructure, water use, storage, transfer, water take, licencing, water metering, water balance, monitoring and management responses.
  - That the ability to accurately meter and monitor water take from surface and groundwater sources would need to be developed with ongoing review of actual versus modelled predictions.
  - That PGM must report on water take at the site each year (direct and indirect) in the Annual Environmental Review. That this report should include water take where a water licence is required and where an exemption applies.
  - That PGM must ensure sufficient water entitlement is held in a water access licence/s to account for the maximum predicted take for each water source prior to take occurring.
  - That PGM must ensure that nominated works approvals have been completed prior to water take occurring.
  - That PGM must comply with relevant water sharing plans.

These clarifications are included in the addendum to the groundwater impact assessment (GIA), included as Appendix D.

#### xiv NSW Rural Fire Service

HR5: NSW Rural Fire Service (RFS) made the following recommendations:

- A Fire Safety Study (FSS) to the satisfaction of DPIE Hazards should be undertaken and updated consistently with the Hazardous Industry Planning and Assessment Papers (HIPAPs) detailing fire prevention and mitigation measures for all credible fire hazards.
- A minimum asset protection zone (APZ) of 30 m in accordance with *Planning for Bush Fire Protection 2019* (PBFP 2019) should be provided around the explosives magazine;
- A minimum APZ of 10 m in accordance with PBFP 2019 should be provided around above-ground structures;
- The FSS must include recommendations for appropriate quantities of static water supply in accordance with PBFP 2019.

### 2.3.3 Cobar Shire Council submission

The submission from CSC stated that it considered the project has merit, but that its ongoing support is contingent on conditions of consent to protect the environmental, social and economic attributes of Cobar and its community (GE11).

CSC reiterated its support for issues raised by NSW Government agencies, including EPA, Heritage NSW, the Resources Regulator and DPIE Water.

The matters raised by CSC were outlined in different categories, as detailed below:

#### i Potential impacts on Council infrastructure

- GE12: CSC stated that it seeks conditions to protect council assets including the Great Cobar Heritage Centre, the Great Cobar pit, Council owned water tanks, the Crown road portions of Filtration Plant Road, Ft Bourke lookout, public access to Towser's huts and Chesney mine.
- GE13: CSC stated that it seeks an updated dilapidation assessment of the Great Cobar Heritage Centre and time-lapse filming of water level movements in the Great Cobar pit.

#### ii Traffic and transport

- TT7: CSC stated that it seeks justification for the increase in truck movements.
- TT8: CSC stated that any consent must include a condition that stipulates the proponent must provide an allocation of road maintenance funding for local roads used by project related traffic.
- TT9: CSC suggested that the development application examines alternatives for ore transport such as conveyors or subsurface transportation.
- TT10: CSC requires information relating to school buses, including safety procedures to reduce interaction with school buses, evidence of three-monthly training regarding school buses, six-monthly independent compliance reports to verify safety procedures are adequate and compliant.

### iii Groundwater

- GW6: CSC requested conditions that place the burden of proof on PGM to ensure the rugby club retains access to the same quantity and quality of water as historically used, and this satisfies the rugby club's needs.
- GW6: CSC requested conditions that protect the value and condition of rugby club assets reliant on bore water.

### iv Noise and vibration

- NV8: CSC raised the issue that there is a disconnect between compliance with technical standards and the experiences of local residents with regards to blast vibration.
- NV9: CSC requested that open and transparent measures are used to address property owners' concerns regarding impacts to structural integrity of homes and buildings.
- NV10: CSC requested the tightest conditions reasonably possible for blast vibrations.
- NV11: CSC requested a condition for the most up-to-date blast and noise monitoring equipment to be used at R31, Dellavale and Ft Bourke Hill.
- NV12: CSC requested that data from blast monitoring be made available live and in real time on a website and recorded in future annual environmental monitoring reports (AEMRs).

### v Enhanced openness and transparency of environmental monitoring results

- SO2: CSC requested conditions for a blast notification procedure to include texts, calls and/or email alerts and to include residential and commercial property owners and CSC main office.
- GE14: CSC requested that environmental monitoring results be conditioned to be available live and in real time on a website for transparency in community and stakeholder engagement.

### vi Livelihood benefits from ongoing employment and mining operation

- SO3: CSC noted and appreciated that more than half of the PGM workforce reside locally.
- S04: CSC requested a condition for PGM and workforce contractors to implement a local participation strategy. The strategy should facilitate local sourcing of labour where practical, and provide training and skill enhancement opportunities for employees.

### vii Social cohesion and resilience benefits in the local community

- SO5: CSC supported the enhanced workforce stability through ongoing secure employment to the benefit of the local community and local business and services. This is particularly important due to local and regional population decline.
- SO6: CSC requested that PGM adopt workforce rosters and schedules in accordance with the Cobar Shire Local Strategic Planning Statement.

- SO7: CSC requested a condition requiring PGM to develop and implement a community and stakeholder engagement strategy (CSES) aimed at strengthening social cohesion, capital and resilience in the local area by increasing project transparency and facilitating investment into the local community. CSC recommended that the CSES include the following matters:
    - respect for the personal and property rights of the community including perceived and actual risks of damage to structures from project impacts;
    - that PGM create a paid position for a local community engagement and social representative to be filled by a local resident to develop PGM and community relationships;
    - promotion of consistent and ongoing engagement with the local community and reporting of feedback in the review of impacts, monitoring and management measures;
    - development of an action plan for the enhanced identification of shared value opportunities in the local area;
    - development and implementation of a definitive plan to hire locally where possible and procure goods and services locally;
    - creation of training programs, apprenticeships in consultation with the TAFE mining school;
    - development and implementation of a consistent blasting notification procedure;
    - implementation of real time availability of environmental monitoring data on a website;
    - inclusion of information about subsidence monitoring results in quarterly updates;
    - inclusion of information about heavy metal monitoring in quarterly updates;
    - revision of the accommodation strategy and development of a local business and local industry procurement strategy to increase local benefit;
    - development of local catering arrangements for the project workforce and other local procurement activities; and
    - use of the Great Cobar Heritage Centre to hold events and initiatives in a partnership that emphasises the history of mining in the local area and experiences today
- SO8: CSC emphasised the importance of shared value opportunities emphasising the mutual dependency of the competitiveness of a local company and the health of the surrounding communities. CSC provided an example of a shared value opportunity as attending to community concerns about an increasingly non-resident workforce and demonstrating clear expectations of the intention for PGM to hire locally where possible.
- SO9: CSC noted the importance of a CSES to help PGM to identify potential risks to their ongoing social licence to operate, and to establish adequate and appropriate means of community consultation to minimise negative impacts and maximise positive community and company benefits.

### viii Heritage matters

- HI3: CSC recommended that Towser's Huts be surrounded by a robust fence that prevents human interference, and that the Cobar Pastoral and Mining Technology Museum (known locally as the Great Cobar Heritage Centre) be protected from risks of blasting or subsidence.

### ix Planning agreement

- GE15: CSC sought development contributions from the proponent via a planning agreement that acknowledges the broad, tangible and intangible environmental, social and economic costs arising from the development.

- GE16: CSC stated they wish to negotiate a planning agreement before any project approval is granted, with the key terms of the planning agreement to be included as a specific condition within the project determination.

# 3 Actions undertaken since exhibition

## 3.1 Stakeholder engagement

### 3.1.1 Introduction

PGM has actively engaged with the community throughout the design phase of the project and during the preparation of the EIS. The value of this engagement was highlighted following consultation with the community and CSC regarding the initial location of the vent rises. The community and CSC were concerned with the proximity of the vent rise to the town and as a result, PGM repositioned the vent rises further from town which has been strongly supported by the community and CSC. The purpose of this engagement has been to obtain further feedback, and inform and update stakeholders about the project. This engagement continued throughout the public exhibition period and remains ongoing. PGM's stakeholder engagement has been comprehensive to date and reflects the importance PGM places on this project and its relationship with the local community.

### 3.1.2 Community engagement

Following lodgement of the EIS, an email was sent to everyone who had expressed an interest in the project during previous consultation, or who was a local landholder or other stakeholder. The email included details of where the EIS was available for review, for how long, and how to make a submission, and what the next steps in the approvals process would be.

Approximately half-way during the consultation period, a community representative contacted EMM by email to communicate that some community members found the process of making an online submission on the EIS difficult. EMM responded with an offer of assistance, but made it clear that any assistance would be to assist with accessing the website, so as to be clear there was no interference or influence in the responses of community members. EMM and PGM contacted DPIE to let them know that people were having difficulty with the online submission process.

#### i Community Consultative Committee

Two meetings of the Community Consultative Committee (CCC) have occurred since the EIS was lodged, one on 4 March 2021 during the exhibition period, and one on 3 June 2021.

The CCC meeting in March included a presentation regarding the New Cobar Complex Project and provided details on where the EIS was available for review, and how to make a submission. The presentation also included a summary of the assessment process, and how it would fit in with other mine approvals such as the TSF lift.

No concerns regarding the project were raised at either meeting.

### 3.1.3 Government agency and local government consultation

There has been no formal consultation with NSW Government agencies or with CSC regarding material details of the project. The majority of communications have been of an administrative nature.

There has been ongoing consultation between PGM and the Resources Regulator regarding the Mine Operation Plan (MOP) which covers both the Peak and New Cobar complexes. This ongoing consultation commenced prior to the preparation of the New Cobar Complex Project EIS, and during a meeting between PGM and the Resources Regulator in June 2021, some aspects of the project were discussed. Details of these discussions have been included in the addendum to the RLMS included as Appendix F.

## 3.2 Further technical assessments and investigations

### 3.2.1 Air quality

In response to the air quality issues raised by EPA and CSC, EMM prepared an addendum to the AQIA, included as Appendix B. This included additional information to describe the activities undertaken at the Peak and New Cobar complexes, confirmation of assumptions used for the AQIA, additional detail on the AQIA method used and discussion of dust control measures.

### 3.2.2 Noise, vibration and blasting

In response to the noise and vibration issues raised by EPA and CSC, EMM prepared an addendum to the NVIA, included as Appendix C. This included details of actual predicted noise levels, and clarification of the method for the meteorological assessment in the NVIA.

### 3.2.3 Groundwater

In response to the groundwater issues raised by DPIE-Water and CSC, EMM prepared an addendum to the GIA, included as Appendix D. This included details of the independent peer review, as well as inclusion of an overlooked bore in the groundwater model and impact assessment.

### 3.2.4 Traffic

In response to the traffic issues raised by TfNSW and CSC, EMM prepared an addendum to the TIA, included as Appendix E. This included provision of additional information relating to construction traffic and clarification that no proposed activities would take place within any rail corridors.

### 3.2.5 Landform and rehabilitation

In response to the landform and rehabilitation issues raised by the Resources Regulator and CSC, EMM prepared an addendum to the RLMS, included as Appendix F. This included further details on proposed final uses and detail on strategies to ensure long-term stability of the WRE.

### 3.2.6 Hazards, risk and public safety

In response to the hazardous materials issues raised by DPIE Hazards, EMM prepared an addendum to the HRPSA, included as Appendix G. This included further discussion of hazardous materials stored at the New Cobar Complex, and clarification of assessment method.

# 4 Response to submissions

Responses to the issues raised by the various stakeholders are provided in the sub-sections below.

## 4.1 General

**Table 4.1 Response to submissions summary - general**

| ID | Issue | Response |
|---|---|---|
| GE1 | It is fitting that 150 years after the discovery of copper in 1871, that the Great Cobar Deposit will continue to support the town through the New Cobar Complex Project. | Noted. |
| GE2 | Peak Gold Mines has a 30-year history of successfully mining the Peak, New Occidental, New Cobar, Perseverance and Chesney deposits. | Noted. |
| GE3 | Do not oppose the project, but request attention be given to concerns raised. | Noted. |
| GE4 | Would like to enter into an agreement between CDRUFC and PGM regarding guaranteed provisions for potential impacts to CDRUFC. | Detailed answer in Section 4.1.1. |
| GE5 | Department of Primary Industry (DPI) – Agriculture stated they had no comments regarding the project. | Noted. |
| GE6 | All Crown land and Crown roads within a Mining Lease (with surface rights), subject to mining or mining related activity, must be subject to a Compensation Agreement issued under Section 265 of the Mining Act 1992, to be agreed and executed prior to any mining activity taking place. The Compensation Agreement may include conditions requiring the Mining Lease Holder to purchase Crown land impacted on by mining activity. | Noted. |
| GE7 | All Crown land and Crown roads located within an Exploration Licence, subject to exploration activity, must be subject to an Access Arrangement issued under Section 141 of the Mining Act 1992, to be agreed and executed prior to any exploration activity taking place. | Noted. |
| GE8 | All Crown land and Crown roads within a Mining Lease (with sub-surface rights only) must be subject to a Section 81 Consent under the Mining Act 1992 where surface activities are proposed, to be agreed and executed prior to any surface activity taking place. | Noted. |
| GE9 | Notes that the resources regulator has provided comments on the development application for the Stage 5, 6 and 7 TSF raise currently being considered by CSC. | Noted. |
| GE10 | Notes that the Peak Complex will continue to be regulated under the existing CSC consent, and recommends that DPIE consult further with the Resources Regulator and CSC to ensure rehabilitation obligations are consistent between the various consents. | Noted. |
| GE11 | CSC considers the project has merit, however support is contingent on conditions of consent to protect environmental, social and economic attributes of Cobar and its community. | Noted. |
| GE12 | CSC seeks conditions to protect council assets including the Great Cobar Heritage Centre, the Great Cobar pit, Council owned water tanks, the Crown road portions of Filtration Plant Road, Ft Bourke lookout, public access to Towser's huts and Chesney mine. | Detailed answer in Section 4.1.2 |
| GE13 | CSC seeks updated dilapidation assessment of the Great Cobar Heritage Centre and time-lapse filming of water level movements in the Great Cobar pit | Detailed answer in Section 4.1.3 |
| GE14 | CSC requests that environmental monitoring results be conditioned to be available live and in real time on a website for transparency and community and stakeholder engagement. | Detailed answer in Section 4.1.4 |

**Table 4.1 Response to submissions summary - general**

| ID | Issue | Response |
|---|---|---|
| GE15 | CSC seeks development contributions from the proponent via a VPA [voluntary planning agreement] that acknowledges the broad, tangible and intangible environmental, social and economic costs arising from the development. | Detailed answer in Section 4.1.5 |
| GE16 | CSC wishes to negotiate a VPA before any project approval is granted, with the key terms of the VPA to be included as a specific condition within the project determination. | Detailed answer in Section 4.1.6 |

### 4.1.1 Detailed answer to GE4

PGM has committed to make good arrangements to supply supplementary water to replace any reduction in pumping capacity that may occur at the Cobar District Rugby Club bore (GW803422). If required, the make-good arrangements will be implemented in consultation with the CDRUFC to achieve a solution that is in all parties' best interests.

### 4.1.2 Detailed answer to GE12

Noted.

However, it should be noted that Towser's Huts and the Chesney mine are not CSC assets, and are on land owned by PGM, and part of an active mine site, with no public access permitted. Access to Towser's Huts for specific heritage purposes can be arranged through PGM. PGM is considering tourism options (but no determination or commitment has been made) for Towser's Huts but this is a complex issue and the health and safety of the community is PGM's first priority. Chesney mine has no heritage listing and is part of the active mine site and therefore access for heritage purposes is considered unnecessary unless significant benefit can be demonstrated. Furthermore, the Great Cobar pit and Fort Bourke lookout are both PGM owned assets. The public has access to these areas for tourism purposes and PGM would like to continue this relationship with CSC in supporting and promoting tourism of this great town and its rich mining history.

### 4.1.3 Detailed answer to GE13

As described in Section 14.6.2 of the EIS, in accordance with commitments made in the REF for the Great Cobar Exploration Decline (R.W. Corkery & Co 2020), PGM has commenced vibration monitoring of Cobar Pastoral and Mining Technology Museum 1910 (the Great Cobar Heritage Centre) and has conducted a dilapidation assessment of the building. This dilapidation assessment was provided to CSC. The Great Cobar Heritage Centre is currently undergoing extensive renovations and there would be little value in completing another dilapidation assessment at this time. If CSC require an additional dilapidation assessment after the renovations are complete, PGM would be happy to organise this in consultation with CSC.

The Great Cobar pit is located on land owned by PGM, and is part of an active mine site. The Great Cobar underground workings are approved to be dewatered (which may also result in dewatering of the Great Cobar pit due to inflows (yet to be determined as continuous pumping has not commenced)) to supplement process water demands for PGM operations, as approved by CSC in October 2019 (ref: 2019/LD-00024). This is part of a strategy for PGM's operations to become more independent and sustainable in times of drought and replaces up to 400 megalitres per year of town water that was previously used. As part of the conditions of this consent, PGM has committed to visual (photographic) monitoring of the Great Cobar Pit. This monitoring will continue until such time that the Great Cobar Pit is dewatered or CSC no longer require the information.

### 4.1.4 Detailed answer to GE14

PGM monitors blast vibrations, air quality, noise, surface water and weather conditions in accordance with the relevant planning conditions and the EPL. This information is documented in Monthly Environmental Monitoring Summary reports which are uploaded on to Aurelia's website (following quality control checks) on a monthly basis, as found here:

https://aureliametals.com.au/projects/peak/monitoring.

All blasts are designed and monitored to minimise potential impacts on the surrounding environment and to remain compliant with PGM's EPL limits. This being the case, PGM has an exceptionally strong record of compliance, with monitoring of dust gauges and noise and vibration monitors during 2020/2021, showing full compliance with levels set out in the EPL.

As with all conditioned environmental limits, PGM reports any non-compliance within 24 hours to CSC, the EPA and the Resource Regulator.

Recorded ground vibrations at monitoring locations for over 2,000 blasts in the past five years have complied with EPL blasting limits. There was one exceedance of the CSC development consent conditions, where a blast in 2020 was recorded at the Fort Bourke Hill monitoring location as exceeding the blast limit at "an affected location". This was immediately reported to the relevant authorities and no response or follow-up correspondence was received. This demonstrates that overall, PGM has a long history of compliance and good performance of ground vibration from blasts at the New Cobar Complex.

On this basis, PGM considers that real time or live monitoring on a website would not provide a measurable benefit to the community.

### 4.1.5 Detailed answer to GE15

PGM has commenced discussions with CSC to enter into a formal planning agreement (formerly known as voluntary planning agreements or VPAs). PGM intends to work collaboratively with CSC to reach an agreement that is proportional to the scale and impacts of the new development and is accordance with the EP&A Act, the EP&A Regulation and Planning agreements – Practice note (DPIE 2021a).

### 4.1.6 Detailed answer to GE16

PGM is keen to progress the details of the planning agreement with CSC, and is committed to negotiating an in-principle planning agreement before the project approval is granted. PGM is very aware of the pressures that CSC is under and appreciate that it may take an extended time to negotiate and agree on a planning agreement. This has been evident with the recent negotiations at the Hera Mine (an Aurelia owned asset near Nymagee, NSW) whereby CSC was unable to commit to finalising a planning agreement for at least 18 months. Therefore, in the interest of not delaying the determination of this project, PGM believes the key terms of the planning agreement, along with a time frame for the agreement to be executed, should be included as a condition within the project determination to allow CSC sufficient time to consider the planning agreement.

## 4.2 Air quality

**Table 4.2 Response to submissions summary – air quality**

| ID | Issue | Response |
|---|---|---|
| AQ1 | Concerned about an increase in dust impacts as a result of the project. | Detailed answer in Section 4.2.1. |
| AQ2 | Concerned that the lack of comparative data used in the air quality modelling is inadequate to accurately assess impacts on human health and ecology. | Detailed answer in Section 4.2.2. |
| AQ3 | Requests that the informal unsealed truck stop opposite the entrance to the New Cobar Complex should be sealed to reduce dust generation. | Detailed answer in Section 4.2.3. |
| AQ4 | EPA requests that the proponent provides additional information to describe the activities undertaken at both the New Cobar and Peak complexes, including the processing circuit, to demonstrate that the AQIA accounted for all significant emission sources. EPA noted that the Peak and New Cobar complexes are covered by one EPL, and that a detailed description of the activities undertaken at the Peak complex including the processing circuit was required to ensure all relevant emission sources from the facility have been assessed. | Detailed answer in Section 4.2.4. |
| AQ5 | EPA requests confirmation that the assumed throughputs outlined in the AQIA represented a reasonable worst-case scenario with consideration given to any potential variations in operations and processing capacities. EPA noted that the EIS did not include a breakdown of the proposed annual processing capacities associated with each complex. EPA requested further information regarding:<br>• Information on the potential for extraction rates to vary from those assessed in the AQIA and<br>• Demonstration that the scenario assessed in the AQIA considers potential variations in annual operations and processing capacities through both mine complexes. | Detailed answer in Section 4.2.5. |
| AQ6 | EPA requested addition of detailed discussion regarding the methodology used to establish emission sources parameters, including:<br>• A summary of individually modelled sources and corresponding parameters.<br>• A segregated list of modelled activities.<br>• How total emission rates were calculated. | Detailed answer in Section 4.2.6. |
| AQ7 | EPA requested benchmarking of proposed mitigation measures against best-practice dust control measures, as well as other emission sources, including:<br>• Measures to minimise emissions from ventilation shafts.<br>• Use of chemical suppressants to reduce dust from unpaved roads.<br>• Alternative methods of ore transportation from the New Cobar Complex to the Peak Complex. | Detailed answer in Section 4.2.7. |
| AQ8 | The EPA also noted that PGM should commit to specific mitigation measures during the construction phase of the project. | Detailed answer in Section 4.2.8. |

### 4.2.1 Detailed answer to AQ1

Concerns regarding air quality and dust are noted.

An AQIA was undertaken for the project (included as Appendix E of the EIS and summarised in Chapter 6 of the EIS). The AQIA presented an in-depth assessment of potential impacts to air quality as a result of project-related emissions, including an additional exhaust air rise and increased road truck transportation of ore and waste rock from the New Cobar Complex to the Peak Complex. The assessment was based on the dispersion modelling of maximum air pollutant emissions under worst-case meteorological conditions

The AQIA found that the increased emissions from the project are not predicted to negatively impact the air quality environment in Cobar.

### 4.2.2 Detailed answer to AQ2

As described in the EIS, the comparative data used in the air quality modelling is based on PGM's existing air quality monitoring network, which has 30 years of comparative data to provide baseline information on air quality in the Cobar area. In addition, comparative data from Broken Hill and Nymagee (both located within closely aligned Köppen climate classifications) was used to provide contextual data, particularly useful in highlighting regional trends, such as an increase in dust during droughts.

Further information on the human health risk assessment (HHRA) which used the outputs of the AQIA to determine the risk of the project on human health is detailed in Chapter 7 and Appendix F of the EIS, and in Section 4.3.1 of this report.

Further information on the ecological impacts of the project (including the impacts of air quality on biodiversity) is included in Chapter 12 of the EIS. PGM submitted a BDAR waiver request to DPIE which included an assessment of the potential impacts of the project on biodiversity. DPIE determined that the project was unlikely to have a significant impact on biodiversity values, and therefore a BDAR was not required as part of the EIS.

### 4.2.3 Detailed answer to AQ3

To PGM's knowledge, the unsealed truck stop opposite the New Cobar Complex heavy vehicle access is not used by project related traffic and PGM personnel and contractors are discouraged from its use. However, a driver code of conduct will be prepared to support future operations of the New Cobar Complex. This will apply to heavy vehicles transporting ore between Peak Complex and New Cobar Complex. The driver code of conduct will include specifications on where to wait if access to the ROM pad is not available for loading, with the designated location being within the New Cobar Complex, rather than opposite the entrance to the New Cobar Complex. This will prevent dust generation from this location as a result of PGM activities.

Furthermore, PGM would support the barricading or sealing of this "unofficial" unsealed truck stop by the relevant authority (TfNSW). This truck stop is regularly used by non-project related traffic which may be incorrectly identified as project related traffic.

### 4.2.4 Detailed answer to AQ4

Refer 2.2 from the AQ memo – waiting for PGM to confirm SF assumptions.

A detailed description of all activities undertaken at the New Cobar Complex and the Peak Complex, including the processing circuit at the Peak Complex are presented in Section 2.2 of Appendix B.

### 4.2.5 Detailed answer to AQ5

A detailed description of all assumptions used to inform the AQIA in the EIS is presented in Section 2.2 of Appendix B.

### 4.2.6 Detailed answer to AQ6

A description of emission sources configured in the AERMOD dispersion modelling conducted for the AQIA in the EIS is presented in Table 4.1 of Appendix B.

### 4.2.7 Detailed answer to AQ7

A best practice review of dust control measures and associated discussion is included in Section 5.2 and Table 5.2 of Appendix B.

### 4.2.8 Detailed answer to AQ8

The construction phase referenced in the AQIA was assessed under a separate review of environment factors for the Great Cobar Exploration Decline project (RW Corkery 2020), which was approved by the NSW Resources Regulator in May 2020. Particulate matter emissions from construction activities will be managed in accordance existing dust suppression measures used across PGM operations, discussed in Section 5.2 of Appendix B.

## 4.3 Human health

**Table 4.3 Response to submissions summary – human health**

| ID | Issue | Response |
|---|---|---|
| HH1 | Concerned about lead and other heavy metals in stormwater runoff, domestic water tanks and gardens. Requests more information on blood lead testing and general environmental testing in domestic water tanks and gardens. | Detailed answer in Section 4.3.1. |
| HH2 | Concerned about the fumes from existing vent rises, and the potential health impact on the Cobar community, in particular children attending Cobar primary schools, local residents and visitors to the area (particularly children) as a result of increased operations. | Detailed answer in Section 4.3.1. |

### 4.3.1 Detailed answer to HH1 and HH2

Concerns regarding lead and other heavy metals is acknowledged. A human health risk assessment (HHRA) was undertaken for the project (included as Appendix F of the EIS and summarised in Chapter 7 of the EIS). The HHRA presented an in-depth assessment of potential risks to human health as a result of project-related emissions, including lead and other heavy metals. The assessment was based on the worst-case potential impacts on the most vulnerable community members (children aged 1-2 years old and pregnant mothers), and multiple exposure routes, including inhalation of dust, ingestion of metals in water from rainwater tanks, consumption of home-grown produce and incidental ingestion and dermal contact with soil/dust.

The HHRA was supported by an extensive field sampling program (PGM reached out to various public authorities and was unable to locate a comparable study conducted in Cobar). The HHRA found that the risk of harm to human health as a result of the project was very low, and as such, blood lead testing, and general environmental testing is not warranted.

## 4.4 Noise, vibration and blasting

**Table 4.4 Response to submissions summary – noise, vibration and blasting**

| ID | Issue | Response |
|---|---|---|
| NV1 | Vibration associated with existing operations at the New Cobar Complex has already caused damage to property. With the Great Cobar and Gladstone deposits being closer to the town and other residential properties, there are significant concerns that the damage will continue or increase. | Detailed answer in Section 4.4.1. |
| NV2 | Concerned about the cumulative and long-term impacts of blasting on older buildings in Cobar town. | Detailed answer in Section 4.4.2. |
| NV3 | Concerned that the traffic noise assessment for heavy vehicles only considers travelling along a road at maximum speed, and hasn't taken into account additional noises such as loading, changing gears etc. | Detailed answer in Section 4.4.3. |
| NV4 | Current levels of operation and traffic noise such as rock breaking and reversing alarms at the New Cobar Complex already cause sleep disturbance and stress. Concerns that an increase in noise levels will be unbearable. | Detailed answer in Section 4.4.3. |
| NV5 | Concerned that not all blasts are recorded and reported appropriately as vibrations have been felt when there was no blasting according to PGM records. | Detailed answer in Section 4.4.4. |
| NV6 | EPA request clarification that the actual predicted noise levels at each receiver in Tables 6.1, 6.2 and 6.3 of the NVIA, rather than predicted compliance at each receiver. EPA noted that more information was required to determine the noise level margin between the predicted level and the relevant criteria. | The details of actual predicted noise levels at each receiver are presented in Table 4.1 of Appendix C. |
| NV7 | EPA request clarification in Section 3.5.2 of the NVIA to reflect the findings of the meteorological assessment. EPA noted that there was an inconsistency in how temperature inversions had been described and wanted to be clear about what was assessed. | The findings of the meteorological assessment are presented in Table 4.1 of Appendix C. |
| NV8 | CSC raises the issue that there is a disconnect between compliance with technical standards and the experiences of local residents with regards to blast vibration. | Detailed answer in Section 4.4.7. |
| NV9 | CSC requests that open and transparent measures are used to address property owners' concerns regarding impacts to structural integrity of homes and buildings. | Detailed answer in Section 4.4.7. |
| NV10 | CSC requests the tightest conditions reasonably possible for blast vibrations. | Noted |
| NV11 | CSC requests a condition for the most up-to-date blast and noise monitoring equipment to be used at R31, Dellavale and Ft Bourke Hill. | Noted |
| NV12 | CSC requests that data from blast monitoring be made available live and in real time on a website and recorded in future annual environmental monitoring reports (AEMRs). | Detailed answer in Section 4.4.8. |

### 4.4.1 Detailed answer to NV1

This comment is noted.

As described in Section 8.5.6 of the EIS, the blast vibration criterion used in the Noise and Vibration Impact Assessment (NVIA), included as Appendix G of the EIS, to determine impacts to residential receivers is 5 mm/s peak particle velocity (PPV). This is in accordance with national and international guidelines, as well as the vibration criteria of the EPL which states that <95% of the total blasts in a 12-month period are to be below 5 mm/s PPV, and that all blasts within any period must be below 10 mm/s PPV.

The residential receiver criterion (5 mm/s PPV) is significantly lower than the criterion for structural damage to buildings (10 mm/s PPV). Therefore compliance with the vibration criteria of the EPL will ensure compliance with the structural damage criterion.

Compliance with the EPL vibration limits aims to ensure that vibration effects from underground blasting do not cause structural damage. Vibration limits for blasting are drawn from the following documents:

- Australian and New Zealand Environment and Conservation Council (ANZECC) 1990, *Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration*.
- Standards Australia, AS 2187.2-2006 'Explosives – Storage and use – Part 2: Use of explosives'.

The ANZECC guidelines are among the most restrictive applied to extractive operations worldwide. The ANZECC states:

> A maximum level for ground vibration of 5mm/s (peak particle velocity). The level of 5mm/s may be exceeded on up to 5% of the total number of blasts over a period of 12 months. The level should not exceed 10mm/s.

AS 2187 also addresses "safe" vibration levels for the control of damage from blasting activities. AS 2187 recommends that the frequency dependent guideline values and assessment methods given in British Standard BS 7385.2-1993 'Evaluation and measurement for vibration in buildings. Guide to damage levels from ground borne vibration' be used as they are "applicable to Australian conditions".

AS 2187 sets guide values for building vibration based on the lowest vibration levels above which damage has been credibly demonstrated. These levels are judged to give a minimum risk of vibration induced damage, where minimal risk for a named effect is usually taken as a 95% probability of no effect.

Sources of vibration that are considered in AS 2187 include demolition, blasting, piling, ground treatments, construction equipment, tunnelling, road and rail traffic and industrial machinery.

The recommended PPV guide values for transient vibration to manage minimal risk of cosmetic damage to residential and industrial buildings are presented numerically in Table 4.5 and graphically in Figure 4.1.

**Table 4.5 Transient vibration guide values – minimal risk of cosmetic damage**

| Line[1] | Type of building | PPV in frequency range of predominant pulse | |
|---|---|---|---|
| | | 4 Hz to 15 Hz | 15 Hz and above |
| 1 | Reinforced or framed structures Industrial and heavy commercial buildings | 50 mm/s | 50 mm/s |
| 2 | Unreinforced or light framed structures Residential or light commercial type buildings | 15 mm/s at 4 Hz increasing to 20 mm/s at 15 Hz | 20 mm/s at 15 Hz increasing to 50 mm/s at 40 Hz and above |

Notes: 1. Refers to the "Line" illustrated in Figure 4.1.

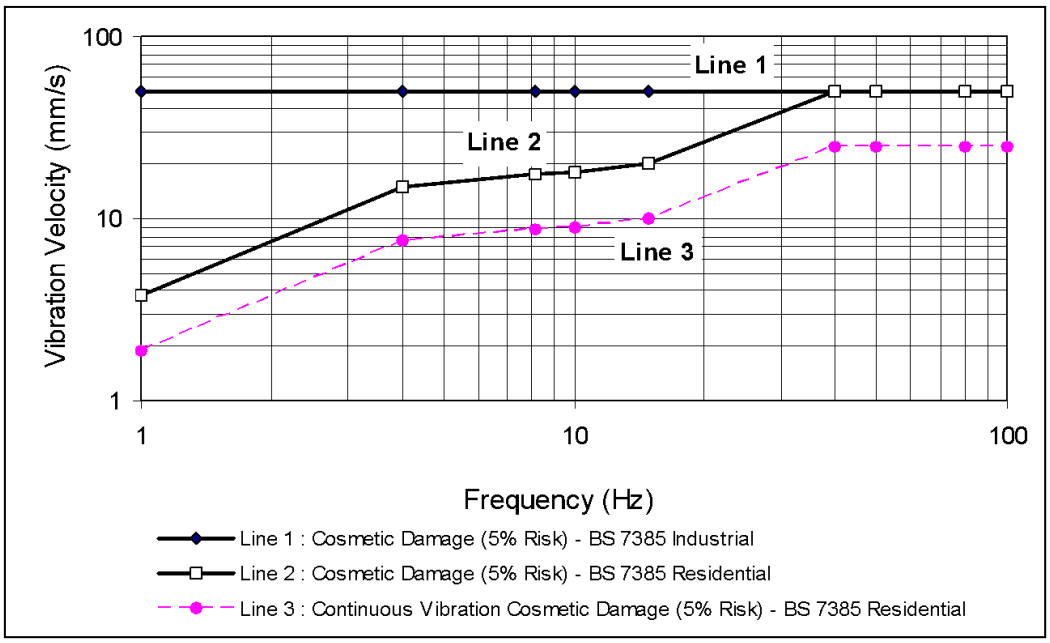



**Figure 4.1 Graph of transient vibration guide values for cosmetic damage**

In the lower frequency region where strains associated with a given vibration velocity magnitude are higher, the guide values for building types corresponding to Line 2 are reduced. Below a frequency of 4 Hz where a high displacement is associated with the relatively low PPV value, a maximum displacement of 0.6 mm (zero to peak) is recommended. This displacement is equivalent to a vibration velocity of 3.7 mm/s at 1 Hz (as shown in Figure 4.1).

Fatigue considerations are also addressed in AS 2187, which concluded that unless calculation indicates that the magnitude and number of load reversals is significant (in respect of the fatigue life of building materials) then the guide values in Table 4.5 should not be reduced for fatigue considerations.

In order to assess the likelihood of cosmetic damage due to vibration, AS 2187 specifies that vibration measurements should be undertaken at the base of the building and the highest of the orthogonal vibration components (transverse, longitudinal and vertical directions) should be compared with the criteria curves presented in Table 4.5.

It is important to note that in addition to the guide values nominated in Table 4.5, AS 2187 states the following:

> Some data suggests that the probability of damage tends towards zero at 12.5 mm/s PPV. This is not inconsistent with an extensive review of the case history information available in the UK.

The NVIA has assessed the potential impacts from vibration on building structures by adopting the more stringent EPL vibration limits applicable at residential receivers (ie 5 mm/s PPV) as the impact assessment criteria. Therefore, based on the preceding information, potential vibration impacts related to building damage from future underground blasting have been appropriately assessed in the NVIA.

### 4.4.2 Detailed answer to NV2

As discussed in the response to NV1 above, structural damage to buildings as a result of blast vibrations from the project is highly unlikely.

As described in Section 14.6.2 of the EIS, in accordance with commitments made in the REF for the Great Cobar Exploration Decline (R.W. Corkery & Co 2020), PGM has commenced vibration monitoring of Cobar Pastoral and Mining Technology Museum 1910 (the Great Cobar Heritage Centre) and conducted a dilapidation assessment of the building in September 2019, which was provided to CSC in October 2019.

In addition, older buildings in town that date to when the Great Cobar works were in operation prior to 1920 would have been exposed to higher levels of vibration as a result of blasting associated with that mining activity as it involved a surface pit and it is assumed the explosives and blast designs would have been inadequate compared to today's standards given the change in community expectations, legislation and technological advancements over the last 100 years. It is unlikely that any further damage to these buildings would occur, as any settlement is likely to have already occurred during this period.

PGM will continue to implement mitigation measures currently in place at the New Cobar Complex to reduce the potential impact of ground vibration as a result of blasting.

### 4.4.3 Detailed answer to NV3 and NV4

The road noise assessment from the EIS takes into account movement of heavy vehicles at maximum posted speed along Kidman Way.

The operation noise assessment from the EIS is based on the plant and equipment to be used at the New Cobar Complex. This included the maximum sound power level for road trucks (ie including changing gears and engines revving) from the New Cobar Complex access road to the run-of-mine (ROM) pad, ie the nearest point to the nearest sensitive receiver, R31, Dellavale. The operational noise assessment determined that location specific project noise trigger levels (PNTLs) developed in accordance with the Noise Policy for Industry (EPA 2017), and the current EPL noise limits will be complied with for the project.

Reversing alarms were considered as part of the NVIA. Alarms are typically 'more' audible and often specifically mentioned in grievances; however, when measured reversing alarms are much lower than other sources in regards to sound power levels. A penalty of 5 dB is generally adopted on top of the sound power level for annoyance sources such as reversing alarms. Even with the 5 dB penalty applied, the sound power level of a reversing alarm is lower than 125 dB Lamax. While the majority of PGM and contractor plant and equipment use "broadband" style reversing safety-alarms, occasionally, vehicles on site will have the older style beeping safety-alarms. PGM prioritises the use of broadband reversing alarms, and will replace beeping reversing alarms with broadband reversing alarms where applicable.

### 4.4.4 Detailed answer to NV5

PGM keeps detailed records of all blasts undertaken at the New Cobar Complex. PGM undertakes blast ground vibration monitoring at six monitoring locations, consisting of four near field on-site locations and two offsite locations. All blasts are monitored to record the levels of vibration that eventuate from each event using Instantel Micromate Plus vibration monitors. Not all blasts generate enough ground movement to trigger the activation of vibration monitors; which is 0.5 mm/s PPV, or one tenth of the most conservative limit in the EPL. This is why for some blasts, the result of 'No Trigger' is recorded. This information is documented in Monthly Environmental Monitoring Summary reports which are uploaded on to Aurelia's website (following quality control checks) on a monthly basis, as found here: https://aureliametals.com.au/projects/peak/monitoring.

Not all vibration events are associated with blasting, and some vibration can occur due to other mining activities or from sources external to the mine (traffic, weather events etc). Other (non-blast related) vibration events from the mine are very occasional and would cause very minor vibration levels, well below the most conservative EPL limit of 5 mm/s PPV. Notwithstanding the above, any vibration event, whether related to blasting, other mine activity or an external source would be registered by the vibration monitors if vibration is greater than the trigger level of the monitors (0.5 mm/s PPV).

### 4.4.5 Detailed answer to NV6

The details of actual predicted noise levels at each receiver are presented in Table 2.1, Table 2.2 and Table 2.3 of Appendix C.

### 4.4.6 Detailed answer to NV7

The findings of the meteorological assessment are presented in Section 2.2.2 of Appendix C.

### 4.4.7 Detailed answer to NV8 and NV9

The potential impacts from ground vibration as a result of blasting were assessed in the NVIA (included as Appendix G of the EIS, in accordance with all relevant standards and guidelines. No impacts from vibration originating from the proposed Great Cobar and the Gladstone underground mines are anticipated at any residential receivers.

Potential impacts from vibration are managed by PGM through careful blast design including reduced maximum instantaneous charge (MIC), optimised blasts using electronic detonators and use of a ground vibration prediction model throughout the planning process and altering the blast design where required. Blast vibration is monitored in accordance with the limits of the EPL. PGM will continue to implement mitigation and monitoring measures currently in place at the New Cobar and Peak complexes to reduce the potential impacts of vibration on nearby receivers.

The vibration limits set out in the EPL are standard vibration limits used in most developments, and are based on the Australian and New Zealand Environmental Council document - Technical Basis for Guidelines to Minimise Annoyance due to Blasting Overpressure and Ground Vibration (ANZECC 1990).

Compliance with the EPL vibration limits aims to ensure that vibration effects from mine operations are acceptable to nearby residents. It should be noted that vibration levels that are deemed acceptable to residents (relating to human comfort) do not necessarily mean that these levels are not noticeable. According to the Society of Explosives Engineers, the threshold PPV of ground vibration perception is about 0.5 mm/s PPV for most people, which is significantly lower than the blast vibration criterion of 5 mm/s PPV in the EPL (SEE 2019).

The NVIA demonstrates that the expected noise and vibration levels are anticipated to remain within the limits outlined by the EPL. However, a minority of stakeholders within the local area still report negative experiences as a result of blasting. Research demonstrates that human perception and response to vibration is subjective, with personal responses to vibration dependent on a person's location within a structure, their mental state, and their previous personal experiences (SEE 2019).

PGM acknowledges that the perceptions of some local residents related to blast vibration may not align with compliance with technical standards. However, blasting vibration limits in the EPL are based on the technical guidelines and conditions placed by the EPA. PGM will continue to comply with these standards.

Stakeholders will be encouraged to raise any concerns they have using PGM's community grievance mechanism. PGM's grievance system documents:

- name of persons receiving the grievance;
- name of person making the grievance;
- date and time of the grievance;
- nature of the grievance;
- actions taken to rectify the grievance (if any);

- actions to minimise the risk of reoccurrence; and
- name of the person(s) responsible for undertaking the required actions.

PGM representatives will continue to address and manage received grievances and will continue to encourage the community to notify PGM when they have an issue.

As committed to in the EIS, PGM will develop and implement a community and stakeholder engagement strategy (CSES) which will include blast notification procedures in addition to those currently undertaken. PGM already notifies the Water Treatment Plant and Cobar Heritage Centre prior to blasting. Inclusion of additional sensitive receivers in blast notification procedures will be explored and developed in further consultation with local residents to identify the preferred and most effective ways to communicate with them.

### 4.4.8 Detailed answer to NV12

As described in the response to NV5, PGM monitors all blasts in accordance with the relevant planning conditions and the EPL. This information is documented in Monthly Environmental Monitoring Summary reports which are uploaded on to Aurelia's website (following quality control checks) on a monthly basis, as found here: https://aureliametals.com.au/projects/peak/monitoring.

All blasts are designed and monitored to minimise potential impacts on the surrounding environment and to remain compliant with PGM's EPL limits. There was one exceedance of the CSC development consent conditions (which have a wording variation when compared to the EPL conditions), where a blast in 2020 was recorded at the Fort Bourke Hill monitoring location as exceeding the blast limit at "an affected location". This was immediately reported to the relevant authorities and no response or follow-up correspondence was received.

Recorded ground vibrations at monitoring locations for over 2,000 blasts in the past five years have complied with blasting limits (except one at Fort Bourke Hill in 2020), showing a history of compliance and good performance of ground vibration from blasts at the New Cobar Complex. On this basis, PGM considers that real time or live monitoring on a website is not justified and would not provide a measurable benefit the community.

## 4.5 Groundwater

**Table 4.6 Response to submissions summary – groundwater**

| ID | Issue | Response |
|---|---|---|
| GW1 | Loss of groundwater will cause the death of trees and vegetation. The lack of information on aquifers is inadequate for the groundwater modelling to accurately predict impacts. | Detailed answer in Section 4.5.1 below. |
| GW2 | Concerned that make-good arrangements under the AIP will not be possible to implement in times of drought if town water is unavailable. | Detailed answer in Section 4.5.2 below. |
| GW3 | Notes that the numerical model had been prepared in accordance with the Australian Groundwater Modelling Guidelines to a standard suitable for the scale of activity and the relatively low-risk of groundwater impacts in the area. However, the model was not independently peer reviewed as required by the Aquifer Interference Policy (AIP). | Detailed answer in Section 4.5.3 below. |
| GW4 | Notes that a basic landholder rights (BLR) bore (85WA752553) had been overlooked in the assessment. | Detailed answer in Section 4.5.3 below. |

**Table 4.6 Response to submissions summary – groundwater**

| ID | Issue | Response |
|---|---|---|
| GW5 | DPIE-Water makes the following recommendations:<br>• Pre-approval:<br>– That an independent peer review of the numerical groundwater model be undertaken.<br>– That BLR bore 85WA752553 be included in the assessment and address whether mitigation under the AIP was required.<br>• Post-approval:<br>– That PGM should install a monitoring bore in the unconfined aquifer (depth 20 – 25 mbgl) at the New Cobar precinct so that PGM should not have to rely only on water levels of the third party water supply bore in future monitoring and assessments.<br>– That the Water Management Plan (WMP) should be updated to document relevant changes to water management infrastructure, water use, storage, transfer, water take, licencing, water metering, water balance, monitoring and management responses.<br>– That the ability to accurately meter and monitor water take from surface and groundwater sources would need to be developed with ongoing review of actual versus modelled predictions.<br>– That PGM must report on water take at the site each year (direct and indirect) in the Annual Environmental Review. That this report should include water take where a water licence is required and where an exemption applies.<br>– That PGM must ensure sufficient water entitlement is held in a water access licence/s to account for the maximum predicted take for each water source prior to take occurring.<br>– That PGM must ensure that nominated works approvals have been completed prior to water take occurring.<br>– That PGM must comply with relevant water sharing plans. | Detailed answer in Section 4.5.3 below. |
| GW6 | CSC requests conditions that place the burden of proof on PGM to ensure the rugby club retains access to the same quantity and quality of water as historically used, and this satisfies the rugby club's needs. | Noted |
| GW7 | CSC requests conditions that protect the value and condition of rugby club assets reliant on bore water. | Noted |

### 4.5.1 Detailed answer to GW1

The groundwater model has been peer reviewed by Hugh Middlemis of HydroGeoLogic, an independent consultant specialist with over 40 years of industry experience. Hugh undertook an independent peer review consistent with the best practice guidelines on groundwater modelling and uncertainty analysis.

The independent peer review concluded that the groundwater model and groundwater impact assessment has generally been conducted consistent with best practice. The review agreed that there is an acknowledged lack of data on the historical mine progression and inflows at the Great Cobar deposit, however the model is fit for the purpose of guiding impact assessment, mitigation and management planning and licensing.

In addition to the peer review of the groundwater model, a BDAR waiver was granted by DPIE in October 2020 following an assessment which determined there was a minimal impact on biodiversity values, including terrestrial vegetation that is dependent on groundwater (groundwater dependent ecosystems).

The independent peer review is appended to Appendix D.

### 4.5.2 Detailed answer to GW2

PGM has committed to make good arrangements to supply supplementary water to replace any reduction in pumping capacity that may occur at the Cobar District Rugby Club bore (GW803422). The make-good arrangements will be implemented in consultation with the CDRUFC to achieve a solution that is in all parties' best interests. This bore is part of the New Cobar Complex groundwater monitoring network with monitoring frequency and parameters outlined in the PGM Water Management Plan (WMP) (PGM 2020).

A Trigger Action Response Plan (TARP) is included in the WMP outlining corrective actions if greater than 2 m drawdown occurs. If this occurs as a result of PGM operations, make good provisions under the Aquifer Interference Policy (AIP) will apply. A make good provision will be agreed upon between PGM and CDRUFC which may include augmenting the water supply for irrigation use.

### 4.5.3 Detailed answer to GW3, GW4 and GW5

As a result of recommendations made in DPIE-Water's submission for the project, an independent peer review of the groundwater model was undertaken, and a revision of the groundwater impact assessment (GIA) was made to take into account a groundwater bore that had been overlooked in the original assessment.

As discussed in Section 4.5.1, the independent peer review found that the groundwater model and groundwater impact assessment was consistent with best practice, and was considered fit for the purpose of guiding impact assessment, mitigation and management planning and licensing.

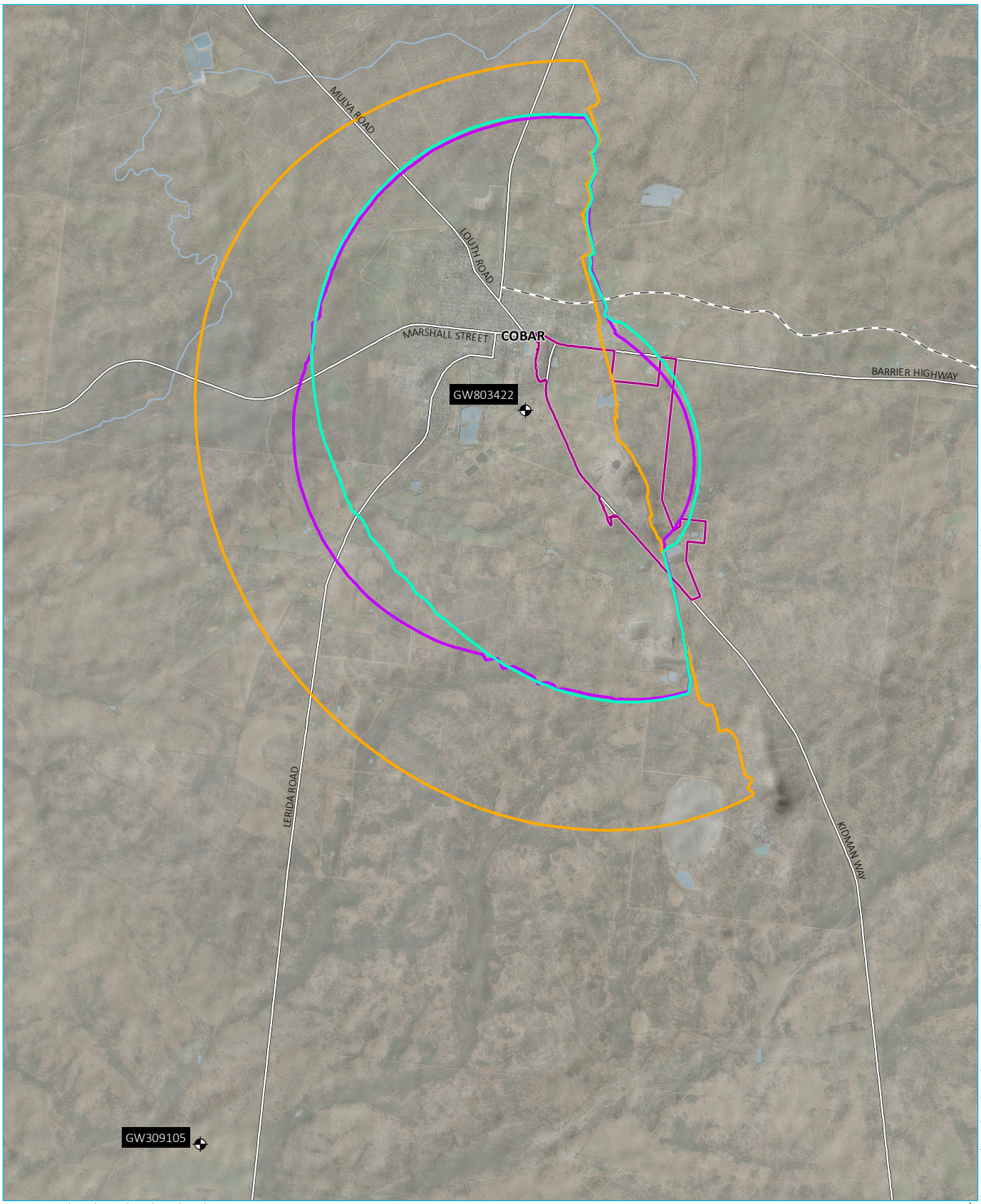
The addendum to the GIA, included as Appendix D, was prepared in part to address the inclusion of groundwater bore 85WA752553 (also known as GW309105) within the groundwater mode domain. GW309105 is located approximately 12.5 km to the south west of Cobar, as shown in Figure 4.2.

Although the bore lies outside the simulated maximum extent of the 0.5 m drawdown contours over the entire predicted mining period, it was assumed that the bore is at low risk of impact from development of the New Cobar Complex. For completeness though, the bore was imported to the groundwater model and predictive model simulations were run to assess the potential impacts of dewatering associated with the New Cobar Complex Project.

The maximum predicted drawdown at bore GW309105 was modelled to be well below 2 m in all modelled scenarios. Therefore, impacts to the bore as a result of the project will be negligible, and make good provisions are not required under the AIP.

A full explanation of the peer review and the updated assessment is included in Appendix D.

PGM acknowledges DPIE-Water's post-approval recommendations and will undertake the project in accordance with all conditions of approval.




*Source: EMM (2021); DFSI (2017); GA (2011)*

0 1 2 km

GDA 1994 MGA Zone 55

N

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KEY

- Project area
- Groundwater bore
- Base case additional water supply modelled drawdown (0.5 m contour)
- Low inflow additional water supply modelled drawdown (0.5 m contour)
- High inflow additional water supply modelled drawdown (0.5 m contour)
- Rail line
- Major road
- Named watercourse
- Waterbody

## Groundwater bore locations and maximum drawdown extents

Peak Gold Mines
New Cobar Complex Project
Response to submissions report
Figure 4.2

aurelia METALS Ltd. EMM creating opportunities

## 4.6 Surface water

**Table 4.7 Response to submissions summary – surface water**

| ID | Issue | Response |
|---|---|---|
| SW1 | Concerned about water quality and quantity in watercourse B, as it is the primary water source for domestic and stock purposes at R31 – Dellavale. | Detailed answer in Section 4.6.1. |
| SW2 | Concerned that new operations will impact surface water in the area, and that the EIS should examine the issue further. | Detailed answer in Section 4.6.1. |
| SW3 | Water NSW stated that the project was not located near any WaterNSW land, assets or infrastructure, therefore had no comments or requirements regarding the project. | Noted. |

### 4.6.1 Detailed answer to SW1 and SW2

As discussed in Section 11.3 of the EIS, Watercourse B receives runoff from a natural catchment that is diverted around the New Cobar Complex by a series of diversion banks and drainage channels (clean-water diversion). Figure 11.4 of the EIS demonstrates that the clean-water diversion re-joins the original flow path for Watercourse B downstream of Young Australia 3 before traversing Kidman Way. These water diversion structures are regularly inspected and maintained as part of PGM's ongoing operations.

Surface water modelling for the project demonstrates that no mine-related water management structures will discharge or overflow to Watercourse B for the life of the mine. Therefore, there is no predicted impact on water quantity or water quality in Watercourse B as a result of the project.

The impacts of the project on surface water are fully detailed in Chapter 11 of the EIS, and the Surface Water Impact Assessment included as Appendix J of the EIS.

### 4.6.2 Detailed answer to SW3

The impacts of the project on surface water are fully detailed in Chapter 11 of the EIS, and the Surface Water Impact Assessment included as Appendix J of the EIS.

## 4.7 Biodiversity

**Table 4.8 Response to submissions summary – biodiversity**

| ID | Issue | Response |
|---|---|---|
| BI1 | The Biodiversity, Conservation and Science Directorate (BCS) noted that a biodiversity development assessment report (BDAR) waiver was issued for the project on 23 October 2020, and noted that the project described in the EIS is the same as what was assessed for the waiver. Therefore, BCS had no further comments regarding the project. | Noted. |

## 4.8 Aboriginal heritage

**Table 4.9 Response to submissions summary – Aboriginal cultural heritage**

| ID | Issue | Response |
|---|---|---|
| AC1 | Notes that the Aboriginal cultural heritage assessment and associated consultation is adequate and consistent with the expectations set out in the SEARs. | Noted. |
| AC2 | Notes that the proposed harm to Aboriginal objects as a result of the project is minimal, however considered that the objects and associated locations retain research interest, and are of value to local Aboriginal people. | Noted. |
| AC3 | Accepts that the management strategies and commitments proposed in the ACHA, are acceptable, adequate and proportionate, and recommends further research of Cornish Town. | Noted. |
| AC4 | Notes that the interest in exploring the shared histories of the interconnection between Aboriginal and non-Aboriginal residents of Cornish Town is valid, and that Heritage NSW supports a management strategy that increases knowledge and awareness of post-Colonial ways of life in the Cobar region. | Noted. |
| AC5 | Recommends that an archival and oral history study of the post-contact shared histories of Cornish Town be undertaken. | Noted. |

## 4.9 Historical heritage

**Table 4.10 Response to submissions summary – Historical heritage**

| ID | Issue | Response |
|---|---|---|
| HI1 | Heritage NSW concurred with the findings, assessment and recommendations of EMM's Statement of Heritage Impact (SoHI). | Noted. |
| HI2 | Heritage NSW recommend that as a condition of approval, the proponent must prepare and implement an Historical Heritage Management Plan to detail how construction impacts to non-Aboriginal heritage will be avoided, minimised and managed. | Noted. |
| HI3 | CSC recommended that Towser's Huts be surrounded by a robust fence that prevents human interference, and that the Cobar Pastoral and Mining Technology Museum (known locally as the Great Cobar Heritage Centre) be protected from risks of blasting or subsidence. | Detailed answer in Section 4.9.1. |

### 4.9.1 Detailed answer to HI3

Towser's Huts, located on PGM owned land to the north of the New Cobar open cut, are already protected by fencing. This area is not available to the public as it is within the area of an active mine site.

As described in Section 4.1.2 of this report and Section 14.6.2 of the EIS, PGM has commenced vibration monitoring of Cobar Pastoral and Mining Technology Museum 1910 (the Great Cobar Heritage Centre) and conducted a dilapidation assessment of the building in September 2019 which was provided to CSC in October 2019.

## 4.10 Traffic and transport

**Table 4.11 Response to submissions summary – Traffic and transport**

| ID | Issue | Response |
|---|---|---|
| TT1 | Concerned about road safety at the entry to the New Cobar Complex as it is opposite the property entrance for R31, Dellavale. Suggests that Kidman Way at the new Cobar Complex entrance should be widened for safety, as the proposed splaying will only assist trucks accessing the New Cobar Complex and not other road traffic. | Detailed answer in Section 4.10.1. |
| TT2 | Concerned about traffic safety on Kidman Way as a result of the increase in truck movements. Request the following measures be implemented to improve road safety:<br>• reduced speed limit for heavy vehicles (50 kmh) and all other vehicles (90 kmh) be implemented on Kidman Way between the Peak Complex and the Barrier Highway;<br>• clear marking and widening of all side road entries to Kidman Way between the Peak Complex and the Barrier Highway; and<br>• adjustment of Filtration Plant Road intersection with Kidman Way for improved visibility. | Detailed answer in Section 4.10.2. |
| TT3 | Concerned about project-related heavy vehicles using the access road for Dellavale (R31), and a request that the EIS should examine the issue further. | Detailed answer in Section 4.10.3. |
| TT4 | No information has been provided on construction related traffic generation, and additional information is requested, including the largest vehicle to use the construction access, the daily and peak hour traffic generation for both light and heavy vehicles for construction traffic, trip origin and designation and number of oversize vehicles. | Detailed answer in Section 4.10.4. |
| TT5 | Quantification of the total traffic generated by the project to be approved is required to be provided both for peak daily traffic and peak hour traffic. | Detailed answer in Section 4.10.5. |
| TT6 | CML6 includes both operational and non-operational rail corridors, and TfNSW request additional information identifying whether proposed underground mine workings would require access to or involve any works within the non-operational rail corridor. If access to the corridor is required, additional information should be provided to TfNSW and other relevant bodies. | Detailed answer in Section 4.10.6. |
| TT7 | CSC seeks justification for the increase in truck movements. | Detailed answer in Section 4.10.7. |
| TT8 | CSC requests any consent must include a condition that stipulates the proponent must provide an allocation of road maintenance funding for local roads used by project related traffic. | Noted |
| TT9 | CSC suggests development application examines alternative for ore transport such as conveyors or subsurface transportation. | Detailed answer in Section 4.10.8. |
| TT10 | CSC requires information relating to school buses, including safety procedures to reduce interaction with school buses, evidence of three-monthly training regarding school buses, six-monthly independent compliance reports to verify safety procedures are adequate and compliant. | Detailed answer in Section 4.10.9. |

### 4.10.1 Detailed answer to TT1

As described in Section 15.8 of the EIS, intersection modelling using signalised and unsignalised intersection design and research aid (SIDRA) software was undertaken for the access to the New Cobar Complex from Kidman Way. The modelling indicated that the intersection would retain the highest rated level of service (LOS A).

The proposed splaying of the access road to the New Cobar Complex has been proposed to allow simultaneous entry and exit of heavy vehicles at this intersection, which will negate the need for trucks entering the complex to wait for trucks exiting the complex.

Kidman Way has an approximate width of 7 m between the Peak Complex and the New Cobar Complex. This increases to 10 m at the New Cobar Complex access, which allows for safe, unimpeded travel for northbound through-traffic along Kidman Way, even if trucks are waiting to turn into the New Cobar Complex.

Under the relevant Austroads standards (Austroads 2017), there is no justification for further widening at this intersection.

### 4.10.2 Detailed answer to TT2

As described in Section 4.10.1 above, Kidman Way will continue to meet relevant safety and service standards between the Peak Complex and the Barrier Highway with the traffic increase as a result of the project.

Kidman Way is a State Road, therefore any changes to road markings or speed limits would be determined by TfNSW.

Use of the intersection of Filtration Plan Road and Kidman Way by project-related traffic will be negligible.

### 4.10.3 Detailed answer to TT3

There is no existing or proposed use of the access road for Dellavale (R31) by project-related heavy vehicles. The only time the access road to Dellavale is used by project-related vehicles is occasional use of light vehicles to access the dust monitors and conducted attended noise monitoring near the property. This occasional use will continue as part of the New Cobar Complex Project.

A driver code of conduct will be prepared to support future operations of the New Cobar Complex. This will apply to all project-related vehicle uses, including heavy vehicles transporting ore between New Cobar Complex and Peak Complex. PGM is not aware of any heavy vehicle project related traffic using the unsealed truck stop of the access road to Dellavale. However, we acknowledge the concerns of the respondent, and the driver code of conduct will include specifications on where to wait if access to the ROM pad is not available for loading, with the designated location being within the New Cobar Complex, which will negate any potential impacts on the access road to Dellavale.

### 4.10.4 Detailed answer to TT4

Construction traffic for the project will relate to the construction of a short (no more than 400 m) power line spur to supply power for a ventilation fan to be installed at the exhaust air rise, and an emergency egress winder at the fresh air intake shaft. The ventilation shafts are approved, but not yet constructed as part of the Great Cobar exploration decline, a separate project approved by Cobar Shire Council.

The construction phase will take approximately 6 months, and will comprise one week for mobilisation of equipment, four weeks for site preparation and minor earthworks, eighteen weeks for structural, mechanical, piping, electrical and instrumentation (SMPEI) works and one week for demobilisation of equipment.

Traffic generation for construction works is summarised in Table 4.12 below.

**Table 4.12 Construction traffic**

| Construction stage | Daily light vehicle trips | Daily heavy vehicle trips | Peak hourly light vehicle trips | Peak hourly heavy vehicle trips |
|---|---|---|---|---|
| Mobilisation | 5 | 2 | 4 | 2 |
| Site preparation | 5 | 3 | 4 | 2 |
| SMPEI | 5 | 2 | 4 | 2 |
| Demobilisation | 5 | 2 | 4 | 2 |

Construction will typically take place during daylight hours, with a morning peak between 6 am and 7 am, and an afternoon peak between 5 pm and 6 pm.

Construction vehicles are likely to include:

- semi-trailers;
- a 130 tonne (t) mobile crane;
- side tippers;
- prime mover and floats;
- a water cart (nominally 25 kilo-litre (kL));
- 3 t and 8 t Hiab trucks; and
- a 25 t Franna crane.

The largest design vehicle will be a prime mover and float, with a maximum length of 19 m. Oversize vehicles will likely include the mobile crane (60 t vehicle, with the weight distributed over five axles), and prime movers and floats to transport earthmoving equipment and the ventilation fan. The relevant permits from the National Heavy Vehicle Regulator (NHVR) will be acquired by the transport operator for any oversized vehicles for the project, prior to mobilisation.

Vehicle origin and destination will be confirmed during the detailed design and procurement phases. It is likely that all light vehicles and the majority of heavy vehicles will have trip origins and destinations within the Cobar local area, including the Peak and New Cobar Complexes. Specialised components such as the ventilation fan and compact substation will come from further away, and will likely be transported to site from Sydney, Newcastle, Broken Hill or Adelaide along the Barrier Highway and Kidman Way.

The proposed construction access off Kidman Way is located 650 m south of the intersection with the Barrier Highway, and is an existing intersection which provides access to a PGM owned road and property. The intersection is located on a straight section of road, and has sufficiently wide geometry to accommodate the construction vehicles. The construction traffic is unlikely to have a significant impact on road traffic on Kidman Way.

### 4.10.5 Detailed answer to TT5

A summary of current and proposed operational traffic is presented in Table 4.13.

This summary is considered to be a maximum traffic scenario where there are no interruptions to operations and ore trucks are operating continuously during daylight hours, as well as dry conditions where a water truck is in continuous operation between the Peak and New Cobar complexes.

Light vehicle traffic will relate to movement of the underground workforce from the Peak Complex to the New Cobar Complex, with peak movements at shift changeover periods of 6-7 am and 6-7 pm. The PGM workforce, distributed across both the Peak and New Cobar complexes will remain at current workforce levels of approximately 272 FTE. Most of the project workforce will remain based at the Peak Complex, and the majority of workers travelling from the Peak Complex to the New Cobar Complex will be working underground, or in ancillary services based at the Peak Complex.

**Table 4.13 Operation traffic**

| | Daily light vehicle trips | Daily heavy vehicle trips | Peak hourly light vehicle trips | Peak hourly heavy vehicle trips |
|---|---|---|---|---|
| **Current** | 22 | 33 | 20 | 6 |
| **Proposed** | 45 | 60 | 30 | 8 |

The increase in traffic as a result of the project is minor in the context of the existing road network and current volumes of traffic, and will not impact the current intersections operating at level of service (LOS) A.

### 4.10.6 Detailed answer to TT6

While CML6 covers areas which include both operational and non-operational rail corridors, all works associated with the New Cobar Complex Project will be more than 500 m south of the Cobar-Nyngan rail corridor, and there are no non-operational rail corridors in the vicinity of the project. Therefore, the New Cobar Complex Project and any associated activities will have no impacts on any operational or non-operational rail corridor.

### 4.10.7 Detailed answer to TT7

The increase in truck movements allows for the increased ore tonnages proposed from the New Cobar Complex to the Peak Complex. The additional movements will also allow for flexibility in managing variations in production as a result of external factors such as machinery breakdowns, poor weather, staff availability etc. The increase in truck movements allows for efficiencies in transport of waste rock from the New Cobar Complex to the Peak Complex for construction and backfill operations, such as the TSF lifts which have been approved by CSC.

### 4.10.8 Detailed answer to TT9

Alternatives for ore transport were considered as part of the project design, and road transport was determined to be the only feasible option. Conveyors would be prohibitively expensive, and require significant vegetation clearance between the Peak and New Cobar complexes, which could have a significant impact on local and regional biodiversity. Subsurface transportation would also be prohibitively expensive due to the lack of underground connection and the need to develop a tunnel connection between the two complexes. This option would also generate significant amounts of waste rock which would need to be disposed of, with associated noise and air quality issues, and have potential significant impacts on groundwater due to the dewatering required to keep the decline dry.

### 4.10.9 Detailed answer to TT10

PGM ensures heavy vehicles are not transporting ore during school bus times.

Truck movements between the Peak Complex and the New Cobar Complex will continue to be prohibited during the times school buses are operational. The school bus schedule will be integrated into the driver code of conduct.

## 4.11 Rehabilitation and closure

**Table 4.14 Response to submissions summary – Rehabilitation and closure**

| ID | Issue | Response |
|---|---|---|
| LR1 | Requests that further detail on the nominated final land use of 'modified ecosystem' should be provided, including target rehabilitation outcomes and vegetation types. | Detailed answer in Section 4.11.1. |
| LR2 | Requests that detail of proposed changes to the final landform of the WRE should be provided, including strategies to ensure that exposed Potentially Acid Forming Material (PAF) will be encapsulated to ensure the final landform is stable in the long term. | Detailed answer in Section 4.11.2. |
| LR3 | Notes that while a conceptual final landform plan may not be feasible at this stage, PGM should provide a commitment that geomorphic landform design principles will be considered and implemented where practicable as part of the final landform to achieve long term stability. | Noted. |
| LR4 | Notes that PGM has committed to undertake additional waste rock and soil characterisation studies, and that a landform evolution model will be used to scope the degree of re-work required on the northern and eastern batters of the existing WRE to address erosion and vegetation failures that have occurred | Noted. |
| LR5 | Requests that geomorphic landform design principles be considered and implemented where practicable. | Noted. |

### 4.11.1 Detailed answer to LR1

Several post-mining land uses are described in the EIS, and a "modified ecosystem" land use is proposed for the following areas:

- Domain 2 – historical shafts;
- Domain 5 – waste rock emplacement; and
- Part of Domain 7 - historical tailings.

Section 5.2.3 of the RLMS (included as Appendix N of the EIS) provides a list of the structural dominant species that will be used to rehabilitate Domain 2 to Plant Community Type 108 – *Gum Coolabah – Mulga woodland on gravel ridges of the Cobar Peneplain Bioregion* (PCT 108).

Section 5.2.6 of the RLMS provides a list of the structural dominant species that will be used to rehabilitate Domain 5 to PCT 72 – *White Cypress Pine-Poplar Box woodland on footslopes and peneplains mainly in the Cobar Peneplain Bioregion*.

EMM also noted that the species list will be refined based on species present at PGM's existing rehabilitation analogue monitoring sites. Consultation with PGM's independent rehabilitation monitoring consultant Dr Donna Johnstone from DnA Environmental during the development of the post-mining land use criteria indicated that a combination of species from Both PCT72 and PCT108 were present at the analogue monitoring sites however, neither had sufficient species to be entirely considered PCT72 or PCT108 (pers.comm D.Johnston).

PGM has committed to seeding/planting structural dominant species from PCT72 and PCT108 for areas of biodiversity post-mine land use but cannot commit to establishing the PCTs as there are no suitable analogues sites to assess rehabilitation performance.

### 4.11.2 Detailed answer to LR2

PGM has been engaged in ongoing discussions with the Resources Regulator regarding proposed landform design for the New Cobar Complex WRE. This has been undertaken in parallel with the EIS approval process as it involves an existing landform on an operational mine site.

The outcome of these discussions is that PGM has committed to the following actions regarding the WRE:

- PGM will engage a suitably qualified expert in waste material characterisation to undertake a detailed geochemical investigation of the WRE. This will include drilling of the WRE to determine the spatial extent and volumes of potentially acid forming (PAF) waste rock and non-acid forming (NAF) waste rock. A detailed report will be prepared which includes a detailed geochemical characterisation of the WRE, methodologies used, evaluation of the suitability and availability of waste rock for rehabilitation and material requirements and inventories across PGM operations.

- The geochemical assessment will provide key input to the erosion modelling and landform design of the WRE. The landform design will incorporate 2D and 3D modelling outputs to develop a design for the WRE based on site and material conditions that will be safe, stable and non-polluting in the long-term.

A full explanation of the landform design process is included in Appendix F.

## 4.12 Hazard, risk and public safety

**Table 4.15 Response to submissions summary – Hazard, risk and public safety**

| ID | Issue | Response |
|---|---|---|
| HR1 | Concerned that the mineralogy of the proposed ore bodies includes a significant increase in sulfur content, presenting an increased risk of dust explosions. | Detailed answer in Section 4.12.1. |
| HR2 | No specific concerns regarding mine safety, but notes that a safety requirements must be met for new mine entrances and emergency egresses. | Noted. |
| HR3 | DPIE Hazards requests a breakdown of Class 5.1 storage quantities from the existing operation, and the proposed Class 5.1 storage quantities as part of the New Cobar Complex Project. | Detailed answer in Section 4.12.2. |
| HR4 | Requests further details on how threshold distances were calculated, and what the calculated threshold distance was. | Detailed answer in Section 4.12.3. |
| HR5 | NSW RFS recommends that:<br>• A Fire Safety Study (FSS) to the satisfaction of DPIE Hazards should be undertaken and updated consistently with the Hazardous Industry Planning and Assessment Papers (HIPAPs) detailing fire prevention and mitigation measures for all credible fire hazards.<br>• A minimum asset protection zone (APZ) of 30 m in accordance with Planning for Bush Fire Protection 2019 (PBFP 2019) should be provided around the explosives magazine;<br>• A minimum APZ of 10 m in accordance with PBFP 2019 should be provided around above-ground structures;<br>• The FSS must include recommendations for appropriate quantities of static water supply in accordance with PBFP 2019. | Noted. |

### 4.12.1 Detailed answer to HR1

Typically, ores with a sulfur content greater than 18% can support dust explosions under ideal conditions (DIR 1997). While there may be pockets of minerals with high sulfate content, the majority of the mineralogy at the Great Cobar deposit shows significantly lower sulfate percentages. Assay data from the Great Cobar deposit indicates that of the 9205 samples where sulfate was present, only 121 samples (0.013%) of the samples had sulfate levels of 18% or greater.

Current dust suppression measures in place underground to reduce dust impacts, which will further reduce the likelihood of sulfur related risks, will continue to be implemented for the New Cobar Complex Project, including the following measures:

- use of sprinklers in the decline when required;
- stand-off zones and times after firing stopes to ventilate the areas; and
- washing down of faces, backs and walls as required.

### 4.12.2 Detailed answer to HR3

Since exhibition of the EIS in March 2021, PGM has updated the types and materials stored at the New Cobar Complex, therefore this response provides an update to the quantities of materials described in Section 3.2.5 of the original HRPSA.

PGM is authorised to manufacture, supply, transport, possess and store Class 1.1B, 1.1D and 5.1 explosives at the New Cobar Complex in accordance with Licence Number XMNF200002. It is a condition of that licence that PGM must comply with the requirements of the *NSW Explosives Act 2003* and *NSW Explosives Regulation 2005*, as well as the SafeWork NSW (2013) *General Explosives Licence and Security Clearance Conditions*. No changes to this licence are proposed as part of the project.

Explosives are stored at the New Cobar Complex in an above ground magazine (storage ID DG-D1N) and an underground magazine (storage IDs DG-D2N DG-D3N, DG-D4N and DG-D5N), located approximately 360m below ground level. details of quantities and types of material stored in each facility are presented in Table 4.16. The quantity of explosives stored on-site is not expected to increase as a result of the project, therefore the quantities in Table 4.16 will be those used for the project.

**Table 4.16 Dangerous goods stored at the New Cobar Complex**

| Storage facility ID | Class/Division | Name | Typical quantity | Maximum capacity |
|---|---|---|---|---|
| DG-D1N | 1.1D | Boosters without detonators | 500 kg | 47,000 kg |
| | 1.1D | Explosive, type B | 12,000 kg | 47,000 kg |
| | 1.1D | Explosive, type E | 4,500 kg | 47,000 kg |
| | 5.1 | Ammonium nitrate emulsion | 30,000 kg | 47,000 kg |
| DG-D2N | 1.1B | Electric detonators | 500 | 50,000 |
| | 1.1B | Detonator assemblies – non electric | 49,500 | 50,000 |
| DG-D3N | 1.1B | Electric detonators | 500 | 50,000 |
| | 1.1B | Detonator assemblies – non electric | 49,500 | 50,000 |
| DG-D4N | 1.1D | Explosive, type B | 8,000 kg | 8,000 kg |

**Table 4.16 Dangerous goods stored at the New Cobar Complex**

| Storage facility ID | Class/Division | Name | Typical quantity | Maximum capacity |
|---|---|---|---|---|
| DG-D5N | 1.1D | Explosive, type E | 5,100 kg | 21,000 kg |
| | 1.1D | Explosive, type B | 10,000 kg | 21,000 kg |
| | 1.1D | Boosters without detonators | 500 kg | 21,000 kg |
| | 5.1 | Ammonium nitrate emulsion | 5,400 kg | 21,000 kg |

### 4.12.3 Detailed answer to HR4

In the HRPSA undertaken for the EIS, the threshold distance for considering ammonium nitrate (AN) emulsion as if it were a Class 1.1 explosive was determined using Figure 5 on Page 38 of the NSW Department of Planning document - *Hazardous and Offensive Development Application Guidelines – Applying SEPP 33* (DoP 2011).

A threshold distance of 440 m was calculated for the 40,000 kg of AN emulsion described in the HRPSA. With the updated quantities described in Table 4.16 above, the threshold distance for the above ground magazine with the maximum capacity of 47,000 kg would be approximately 490 m. The threshold distance for the underground magazine with the maximum capacity of 21,000 kg would be approximately 200 m. Both threshold distances are well below the distance to the nearest residence (R31, located 1.4 km to the west)..

PGM has a number of approved plans and procedures already in place at the New Cobar Complex to reduce the potential hazards and risks associated with the manufacture, supply, transport and storage of explosives on-site. On-site explosives storage has been designed and constructed in accordance with *Australian Standard 2187.1:1998 Explosives – Storage, Transport and Use: Storage* (AS2187.1:1998).

As described in the HRPSA and the EIS as a whole, the New Cobar Complex is an existing mining precinct and as such, the quantities of explosives described in the EIS and Table 4.16 above are already transported, stored and used on-site.

## 4.13 Social

**Table 4.17 Response to submissions summary – social**

| ID | Issue | Response |
|---|---|---|
| SO1 | Previous complaints about vibration and associated damage (structural damage, tiles cracking, dishes falling) have not been addressed by PGM, and that PGM do not take responsibility for the damage they cause. | Detailed answer in Section 4.13.1. |
| SO2 | CSC requests conditions for a blast notification procedure to include texts, calls and/or email alerts and to include residential and commercial property owners and CSC main office. | Noted. |
| SO3 | CSC notes and appreciates that more than half of the PGM workforce reside locally. | Noted. |
| SO4 | CSC requests a condition for PGM and workforce contractors implement a local participation strategy. The strategy should facilitate local sourcing of labour where practical, and provide training and skill enhancement opportunities for employees. | Detailed answer in Section 4.13.2. |
| SO5 | CSC supports the enhanced workforce stability through ongoing secure employment to the benefit of the local community and local business and services. This is particularly important due to local and regional population decline. | Noted. |

**Table 4.17 Response to submissions summary – social**

| ID | Issue | Response |
|---|---|---|
| SO6 | CSC request that PGM adopt workforce rosters and schedules in accordance with the Cobar Shire Local Strategic Planning Statement. | Detailed answer in Section 4.13.3. |
| SO7 | CSC requests a condition requiring PGM to develop and implement a community and stakeholder engagement strategy (CSES) aimed at strengthening social cohesion, capital and resilience in the local area by increasing project transparency and facilitating investment into the local community. CSC recommended that the CSES include the following matters:<br>- respect for the personal and property rights of the community including perceived and actual risks of damage to structures from project impacts;<br>- that PGM create a paid position for a local community engagement and social representative to be filled by a local resident to develop PGM and community relationships;<br>- promotion of consistent and ongoing engagement with the local community and reporting of feedback in the review of impacts, monitoring and management measures;<br>- development of an action plan for the enhanced identification of shared value opportunities in the local area;<br>- development and implementation of a definitive plan to hire locally where possible and procure goods and services locally;<br>- creation of training programs, apprenticeships in consultation with the TAFE mining school;<br>- development and implementation of a consistent blasting notification procedure;<br>- implementation of real time availability of environmental monitoring data on a website;<br>- inclusion of information about subsidence monitoring results in quarterly updates;<br>- inclusion of information about heavy metal monitoring in quarterly updates;<br>- revision of the accommodation strategy and development of a local business and local industry procurement strategy to increase local benefit;<br>- development of local catering arrangements for the project workforce and other local procurement activities; and<br>- use of the Great Cobar Heritage Centre to hold events and initiatives in a partnership that emphasises the history of mining in the local area and experiences today | Detailed answer in Section 4.13.4. |
| SO8 | CSC emphasises the importance of shared value opportunities emphasising the mutual dependency of the competitiveness of a local company and the health of the surrounding communities. CSC provided an example of a shared value opportunity as attending to community concerns about an increasingly non-resident workforce and demonstrating clear expectations of the intention for PGM to hire locally where possible. | Detailed answer in Section 4.13.5. |
| SO9 | CSC noted the importance of a CSES to help PGM to identify potential risks to their ongoing social licence to operate, and to establish adequate and appropriate means of community consultation to minimise negative impacts and maximise positive community and company benefits. | Noted |

### 4.13.1 Detailed answer to SO1

All blasts are monitored to ensure PPV is kept within the limits of the EPL. PGM has an exceptionally good level of compliance against its EPL criteria.

PGM maintains a community complaints register and a hotline via a dedicated phone line (phone no: 02 6830 2265. Stakeholders will be encouraged to raise any concerns they have using PGM's community grievance mechanism. PGM's grievance system documents:

- name of persons receiving grievance;
- name of person making the grievance;
- date and time of grievance;
- nature of the grievance;
- actions taken to rectify the grievance;
- actions to minimise risk of reoccurrence (if required); and
- name of person(s) responsible for undertaking the required actions.

PGM representatives will continue to address and manage received grievances.

### 4.13.2 Detailed answer to SO4

As committed to in the EIS, PGM will develop a local participation strategy to continue the encouragement of local sourcing of labour and services where possible, practical and commercially viable as part of the operation. The strategy will also set out principles to facilitate training and skill-enhancement opportunities for all employees. The local participation strategy will be developed following consultation with CSC, local businesses and services.

### 4.13.3 Detailed answer to SO6

Although the Cobar Shire Local Strategic Planning Statement does not explicitly refer to mining workforce rosters and schedules, it prioritises local workforce and accommodation of employees in town.

As described in the EIS, PGM actively encourages workers to reside locally, and sources labour (including contractors) locally where possible. Currently, more than half of the existing workforce at the Peak and New Cobar complexes reside within the local area. As of June 2021, 83% of PGM employees and 56% of contractors reside in Cobar and the surrounding area. Typically, PGM advertises all roles using *The Cobar Weekly*. For specialised roles, or if personnel are not available within the local area and for personal reasons (e.g. family commitments) they cannot move to Cobar, arrangements for FIFO or DIDO will be made. Wherever possible and practical, PGM will continue to work with CSC, local businesses, and the local community to encourage workers to relocate and/or stay in town. PGM's preference is for employees to reside locally however, to attract the right people, it is sometimes necessary to have flexible working arrangements.

PGM will continue to engagement with CSC and refer to the Cobar Shire Local Strategic Planning Statement to align workforce scheduling and accommodation practices with the visions outlined for the Cobar Shire community where practicable.

### 4.13.4 Detailed answer to SO7

As described in the social impact assessment (SIA) included as Appendix Q of the EIS, local stakeholders recognised the improvements to PGM's community consultation since ownership by Aurelia Metals commenced and appreciated PGM's contributions to the community. There was recognition during stakeholder consultation that community consultation has improved in the last two years (since being acquired by Aurelia Metals), which has

improved the relationship between the local community and PGM. Participants often mentioned that they appreciated the improved community engagement and were interested in the continued development and strengthening of this relationship. PGM will continue to engage with the local community in a regular and consistent way. To ensure this, PGM will develop and implement a community and stakeholder engagement strategy in accordance with conditions of consent which aligns with best practices as outlined in the DPIE document Undertaking Engagement Guidelines for State Significant Projects (DPIE 2021b).

As part of the community and stakeholder engagement strategy, stakeholders will be encouraged to raise any concerns they have using PGM's community grievance mechanism, including concerns regarding perceived and actual risks as a result of the project. PGM representatives will continue to address and manage received grievances. For further information on updates to PGM's grievance system please refer to Section 4.4.7of this report.

PGM already has a role acting in the capacity of "local community engagement and social representative", which is currently undertaken by a local resident. The Environment and Social Responsibility (ESR) Officer is response for community engagement, donation committee, organising community meetings and Community Consultative Committee meetings, supporting public events (e.g. Miner's Ghost Festival), etc. This position aids in the oversight of social impacts and fosters a transparent and meaningful relationship between PGM and the local community.

As described in the EIS and in answers above, PGM typically advertises all roles using *The Cobar Weekly*. For specialised roles or if personnel are not available within the local area, arrangements for FIFO or DIDO will be made. Wherever possible and practical, PGM will continue to work with CSC, local businesses, and the local community to encourage workers to relocate and/or stay in town. PGM also uses local suppliers for much of their maintenance and project contracting, as well as the purchasing of goods (including catering) – where local supply is available and price is deemed appropriate. In the last three years, approximately 60% of PGM's annual spend has been directly in the local community of Cobar. PGM will continue to implement these strategies in the sourcing of labour and procurement of goods and services for the project.

As described in the EIS, PGM has committed to continue provision of training, apprenticeships and upskilling opportunities for the project workforce. This will continue to be delivered through relevant training providers, including Cobar TAFE and other local providers, where relevant.

As discussed in Section 4.4.7, PGM will incorporate blasting notification procedures into a community and stakeholder engagement strategy. Inclusion of additional sensitive receivers in blast notification procedures will be explored and developed in further consultation with local residents to identify the preferred and most effective methods of communication with them.

PGM has a long history of compliance with air, noise and vibration criteria in the EPL. On this basis, PGM considers that real time or live monitoring on a website would not provide a measurable benefit the community over and above what is included in the monthly monitoring updates provided on Aurelia's website. PGM will comply with all conditions of consent, including those related to public reporting of information and monitoring results.

The community and stakeholder engagement strategy will include a commitment to explore shared value opportunities in the local area, including identification and feasibility of potential shared value opportunities. This may include opportunities for partnerships with local organisations such as the TAFE NSW Cobar and the Great Cobar Heritage Centre.

### 4.13.5 Detailed answer to SO8

As described in the SIA, creating shared value involves the interaction between company assets and expertise, business opportunities, and social need. Through the shared value approach, social challenges are solved through business activities themselves. Shared value opportunities contribute to the competitive advantage of a company while also strengthening the communities in which that company operates.

Strategies to address community concerns about an increasingly non-resident workforce and demonstrating clear expectations of the intention for PGM to hire locally where possible through shared value will be developed further in consultation with local residents and the local community. This will enable PGM to identify potential shared value opportunities and assess their feasibility and potential effectiveness in relation to the needs of the local community, as well as the sustainability and resilience of PGM operations.

## 4.14 Economics

**Table 4.18 Response to submissions summary – economics**

| ID | Issue | Response |
|---|---|---|
| EC1 | As an isolated community, Cobar relies heavily on mining operations for employment, therefore any project which extends mine life provides a positive contribution to the local community. | Noted. |
| EC2 | The New Cobar Complex Project will help to offset some of the losses experienced when the Endeavor mine ceased operations, and will continue to provide direct employment for mine workers and contractors, as well as indirect employment for community services and businesses. | Noted. |
| EC3 | With improvements to environmental performance of mining operations, and the oversight of the planning and environment departments within the NSW Government, the benefits to the town, peoples' lives and the State of NSW will far outweigh the minimised environmental impacts the project may have. | Noted. |
| EC4 | The New Cobar Complex Project is of great importance to the future of Cobar. Mining is the main driver of the economy in Cobar and Cobar Shire. Without mining, the town of Cobar would likely not exist. | Noted. |
| EC5 | Without mining, Cobar relies economically on agriculture and tourism which also have both positive and negative environmental impacts. Agriculture and tourism are also reliant on unpredictable weather and people, as the drought and the COVID-19 pandemic have shown. | Noted. |
| EC6 | The economic benefits of the project are important to maintain local services within Cobar town and the wider region, including roads, schools and healthcare. | Noted. |
| EC7 | As a metalliferous mining operation, the project will assist in industry diversification across the state and support a transition from fossil fuels, especially coal mining. | Noted. |
| EC8 | Primary industries such as mining are key to recovering financially from the long-term economic impacts of COVID-19. | Noted. |
| EC9 | Does not think the project will provide economic benefits to Cobar. | Noted. |
| EC10 | Concerned that the project will negatively impact land values on nearby properties. | Detailed answer in Section 4.14.1. |
| EC11 | The project will ensure local and regional companies can maintain skilled employment and provide appropriate career development based on the reliability and continuity of mining projects. | Noted. |
| EC12 | The project will ensure that regional and state-wide companies can maintain a physical presence and ongoing direct employment in Cobar. | Noted. |

### 4.14.1 Detailed answer to EC10

The economic impact assessment undertaken as part of the EIS (Appendix R) noted that the impact of the project on the local property market would be negligible. PGM is an existing mine operation, in an established mining town

which has been closely tied to the ups and downs of the mining sector. Therefore, there is no rationale for property prices to fall due to on-going mining operations. If the project does not proceed, this would be more likely to have a broad significant (negative) impact on property prices in Cobar.

# 5 Updated evaluation and conclusion

The New Cobar Complex Project is proposed as a positive economic opportunity based on the extraction and sale of gold, silver and base metals. The EIS process, including this response to submissions report has been managed to allow key stakeholders to make an informed decision as to whether this project should be approved. Should the project go ahead, it will achieve the following objectives:

- deliver net production benefits to the region, NSW and Australia, including additional contributions to local, regional and NSW household income.
- maintain continuity of operations at the New Cobar Complex through development of ore bodies that are economic and safe to mine by proven underground methods;
- the extraction of further gold, silver and base metals not accessible by current underground operations;
- continued production at the processing plant at the Peak Complex beyond 2023 through to 2035;
- provision of ongoing stability, secure employment for PGM's workforce and economic stimulation for local, regional and State communities; and

Aurelia has demonstrated a commitment to PGM and the community of Cobar and will continue to invest in and support the local community and the rich mining history in the region. These shared value schemes and community programs will increase levels of community wellbeing, cohesion and social capital, particularly for vulnerable community groups.

The project has strong economic justifications due to the net economic benefits and the economic stimulus it will provide locally, regionally and to NSW and Australia as a whole. Importantly, the project involves a mining operation that will, consistent with the objects of the Mining Act, extract a State-owned resource for the benefit of the State of NSW. Contributions to the regional economy will include direct economic activity (eg direct employment and wages), expenditure on inputs to production that can be sourced from the region such as repairs and maintenance etc, and expenditure of employee wages in the local and regional economy. The cost-benefit analysis for the project shows that, assuming a discount rate of 7%, the net present value of the project to the NSW economy is estimated at $281.4 million.

The project will assist in supporting the local, State and Australian-wide recovery from the COVID-19 pandemic and associated economic downturn by providing continuity of employment in the local and regional area, and flow-on economic benefits to local and regional businesses. Ongoing mining operations will continue to support the Cobar community, providing a stable base to investigate opportunities for economic diversification within the traditional, but historically variable tourism and agriculture sectors.

In addition, copper, gold, silver, lead and zinc are key materials vital to support the growing diversification of the energy and transport industries to reduce their reliance on fossil fuels by investing in renewable energy and electric vehicles.

The global demand for copper, in particular, is expected to grow by approximately 600% by 2030, based on the demand for materials to support the development new green technologies (Forbes 2021). Australia, and in particular Cobar, are well-placed to meet this demand; providing a stable, low-risk and consistent supply of material, supported by a skilled, productive workforce, established trading partners, well-connected infrastructure and robust regulatory frameworks.

The New Cobar Complex Project has been studied from many perspectives and its final design is considered the most sustainable response to economic, social, environmental and cultural values that exist in the area. It is considered that the predicted economic and social benefits will strongly outweigh, primarily minor and manageable adverse impacts in the region. Throughout the project, including the scoping phase, EIS and this response to submissions report, PGM has demonstrated acknowledgement of issues, and has changed aspects of the project design to address concerns. The project has been assessed in accordance with the principles of ecologically sustainable development in order for it to be considered for approval. The technical assessments for the EIS and this response to submissions report demonstrate that the project has been designed such that impacts are either avoided, or appropriate mitigation measures identified so that the residual impacts are reduced and on balance, and the project is in the public interest, and should be approved.

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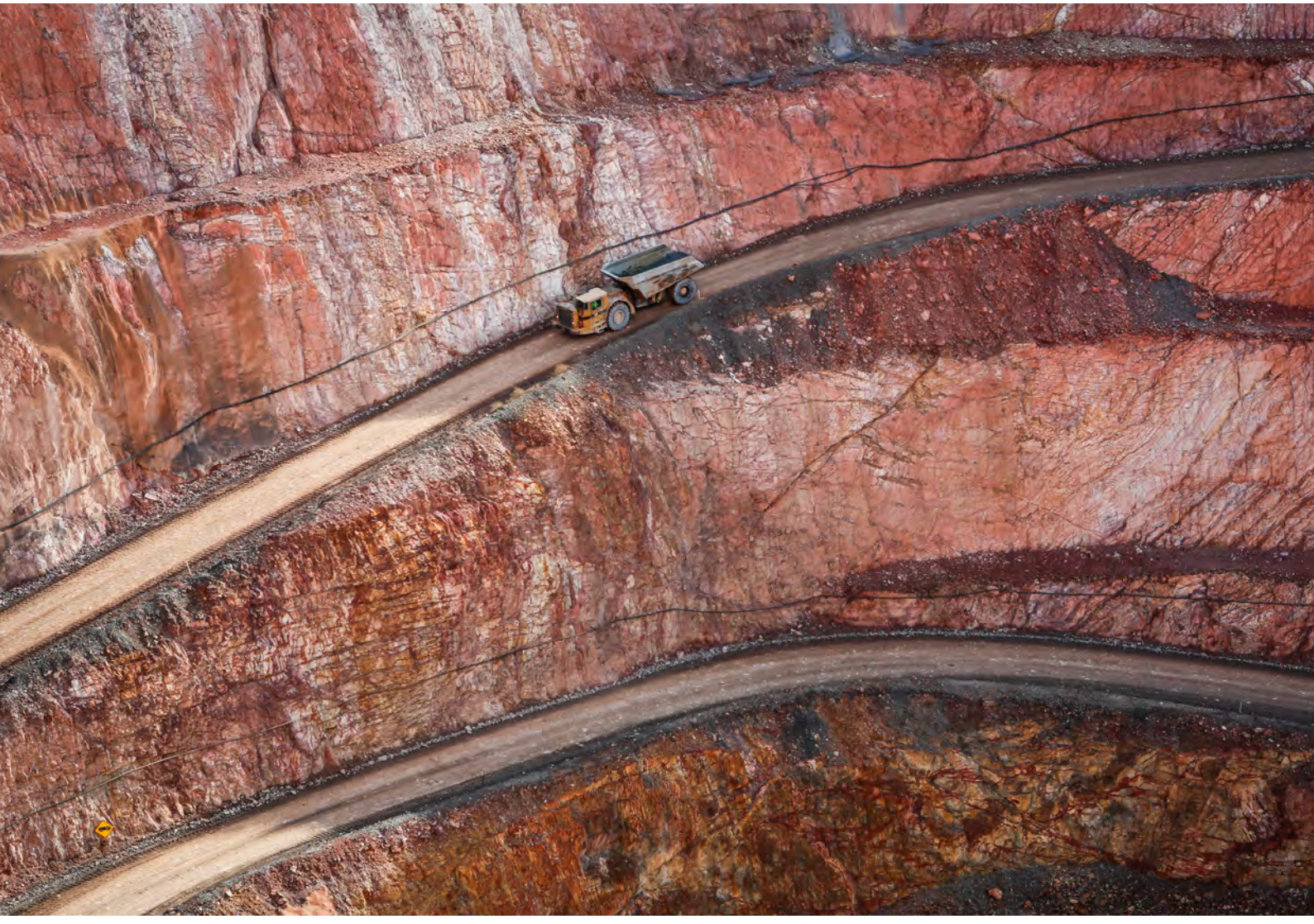

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