



Federation Project

State Significant Development Assessment

SSD 24319456

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Cover image: Underground portal at the existing Hera Mine (Source: DPE Site Visit)

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Executive Summary

Hera Resources Pty Limited (Hera Resources) currently operates the Hera Mine located around 5 kilometres (km) south of the township of Nymagee and approximately 80 km south east of Cobar in the Cobar Shire local government area (LGA) within the traditional lands of the Wongaibon (Ngiyampaa Wangaaypuwan) and Wiradjuri peoples.

Hera Resources is seeking approval to develop a new mining project (the project) involving the development of an underground metalliferous mine (the Federation Mine) around 10 kilometres (km) south of the existing Hera Mine, and the continuation of mining and mineral processing at Hera Mine. The project would include the transport of ore from the Federation Mine to Hera Mine by public road for processing, changes at the existing Hera Mine to facilitate the processing of ore from the Federation Mine, the consolidation of the existing Hera Mine consent and a new services corridor to connect the Federation Mine and the Hera Mine.

Strategic context

The region surrounding the project site¹ is a sparsely populated rural environment. The nearest residential receiver is located around one kilometre from the project site. The nearest township is the village of Nymagee, with a population of around 20 people in the township and a population of around 100 people in the surrounding area. Nymagee is located around five kilometres north of the Hera Mine.

The project would target an approximate 6.95 million tonne deposit comprising lead, zinc, gold, silver and copper at Federation Mine. Forecasting of major Australian resources and energy commodity exports indicate an existing and future demand for these minerals. The *NSW Critical Minerals and High-Tech Metals Strategy (2021)* identifies copper, silver and zinc as critical minerals for a range of future industries.

The Department's Far West Regional Plan 2036 (2022) importance of the mining industry in the Far West Region, contributing almost 28 per cent to the gross regional product.

Assessment Process

The project is classified as State significant development under the *Environmental Planning and Assessment Act 1979* (EP&A Act) and the Minister for Planning is the consent authority for the application. However, under the Minister's delegation, the Director Resources Assessments may determine the project.

Hera Resources amended the application on one occasion. The amendment involved changes to the surface infrastructure layout and a reduction in ore, tailings and concentrate haulage truck movements.

Engagement

The Department considers that its engagement process met the community participation requirements of the EP&A Act and associated EP&A Regulation.

¹ This report uses the definition of project site to mean the combined area covering the existing Hera Mine and proposed Federation Mine, connected by a proposed services corridor

The Department publicly exhibited the environmental impact statement (EIS) from 9 March 2022 to 5 April 2022. During the exhibition period the Department received advice from 12 government agencies and public authorities (including Cobar Shire and Bogan Shire Councils). The Department did not receive submissions from the community.

Assessment

The Department considers that the key issues associated with the project relate to impacts to the road network and traffic safety, impacts to native vegetation and the management of waste rock and tailings to minimise potential impacts on water resources.

Traffic and transport

The project would increase traffic movements along local and state roads between the project site and Cobar and the Hermidale Rail Siding respectively. Hera Resources is proposing to transport ore, concentrates and tailings during daylight hours only, and to restrict transport during times of heavy rainfall to minimise the risk of road crashes due to wet conditions. The company has also committed to reducing heavy vehicle movements on Burthong Road between Hera Mine and Federation Mine by using larger haulage trucks.

The traffic impact assessment identified that the additional traffic generated by the project during construction and operation would not alter the levels of service at any road or intersection.

In the Environmental Impact Statement (EIS) for the project, Hera Resources committed to funding the sealing of Burthong Road and to construct the Federation Mine access points to the required intersection standard under the Austroads guidelines. Following consultation with Cobar Shire Council and Transport for NSW, the Department considers that additional road and intersection upgrades are warranted and has included the following in the recommended conditions of consent:

- a requirement for Hera Resources to upgrade to the intersection of the Barrier Highway/Hermidale Rail Siding and Hermidale-Nymagee Road/Barrier Highway to provide dedicated turning lanes to mitigate potential traffic safety impacts; and
- a requirement for Hera Resources to fund the upgrade to the section of the Nymagee-Hermidale Road that currently has a seal less than six metres wide to mitigate potential traffic safety impacts.

The Department has also included a condition that requires Hera Resources to pay an annual road maintenance contribution to the local councils.

The Department considers that with the recommended conditions of consent, the potential traffic and transport impacts of the project are acceptable.

Biodiversity

The project would disturb approximately 71.11 ha of native vegetation. The native vegetation that would be cleared does not include any endangered or critically endangered ecological communities listed under the *Biodiversity Conservation Act 2016* (BC Act) or the *Environment Protection and Biodiversity Conservation Act 1999* (BC Act). Hera Resources has designed the project to avoid and minimise biodiversity impacts where practicable and would retire ecosystem credits in accordance with the BC Act to mitigate residual impacts to native vegetation.

The Department accepts that Hera Resources has minimised vegetation clearing to the extent practicable and that the retirement of ecosystem and species credits would sufficiently compensate for residual biodiversity impacts.

Waste Rock and Tailings

Exposure of potentially acid forming (PAF) waste rock and tailings can cause acid and metalliferous drainage. Hera Resources is proposing to implement a range of management measures to avoid adverse impacts, including specific engineering and water management controls and the development of a Waste Rock Management Plan and Tailings Management Plan.

All PAF waste rock would ultimately be returned underground and tailings would be stored in the existing tailings storage facility at Hera Mine, which would be appropriately capped at the end of mining operations, or would be used in paste-fill for backfilling completed stopes.

The Department considers this risk can be suitably managed under strict conditions of consent and generally in accordance with the existing management practices that are implemented by Hera Resources at the Hera Mine.

Economic

The project would employ an operational workforce of up to 250 people. The Department notes that Hera Resources has recently announced that it would operate the mine in care and maintenance from 2023 due to uneconomic ore grades at the Hera Mine. The construction and operation of the Federation Mine would allow the Hera Mine facilities to be fully utilised and provide further employment opportunities in the region. The project would result in economic benefits to the surrounding regional area and to NSW of up to around \$60 million in royalties and \$214 million in direct and flow-on expenditure, as well as direct financial contributions to the local councils.

The Department has recommended conditions of consent requiring Hera Resources to enter into a planning agreement with Cobar Shire Council or make a contribution to council of \$2 million in accordance with Section 7.12 of the EP&A Act, if a planning agreement is unable to be executed. The Department has also recommended that Hera Resources either enter into a planning agreement with Bogan Shire Council that includes a contribution to road safety upgrades of Nymagee-Hermidale Road, or directly fund the upgrade of a section of this road.

Other impacts

The project would also have other minor environmental and social impacts associated with amenity, Aboriginal heritage, hazards, waste and greenhouse gas emissions. The Department considers that these impacts could be appropriately managed to an acceptable level in accordance with NSW government policies, guidelines and statutory requirements.

Evaluation

The Department recognises that the project would facilitate the efficient recovery and processing of mineral resources utilising existing mining and surface facilities at Hera Mine. The proposed use of underground stope mining methods would facilitate the safe and efficient extraction of the resource with negligible subsidence impacts.

The Department considers that the project would result in important economic benefits and is consistent with NSW strategic policies for minerals, metals and the Far West Region. The project

would employ an operational workforce of up to 250 including the transition/ reinstatement of 150-200 existing workforce positions from Hera Mine.

The Department recognises that the project would result in a range of incremental environmental impacts. These impacts would occur in a sparsely populated rural environment which includes existing mining activities.

The Department considers that the predicted and potential environmental and social impacts of the project could be appropriately managed and mitigated under recommended conditions of consent. In particular, the Department has recommended conditions to manage impacts to the traffic network and traffic safety, biodiversity, waste rock handling and tailings storage. On this basis, the Department considers that the project's benefits significantly outweigh its costs and the project is in the public interest and should be approved, subject to strict conditions of consent.

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1 Introduction

1.1 Background

Hera Resources Pty Limited (Hera Resources) currently operates the Hera Mine located south of the township of Nymagee and approximately 80 kilometres (km) south east of Cobar in the Cobar Shire local government area (LGA) (see **Figure 1**). The development is located within the traditional lands of the Wongaibon (Ngiyampaa Wangaaypuwan) and Wiradjuri peoples. Mining at Hera Mine is currently approved until December 2025.

In April 2019, high grade lead, zinc and gold mineralisation was discovered at the Federation deposit, around 10 km south of Hera Mine, and Hera Resources is proposing to develop that deposit.



Figure 1 | Regional Context Map (Source: EIS)

2 Project

Hera Resources is seeking approval to develop a new mining project (the project) involving the development of an underground metalliferous mine (the Federation Mine) around 10 kilometres (km) south of the existing Hera Mine, and the continuation of mining and mineral processing at Hera Mine.

The project would include the transport of ore from the Federation Mine to Hera Mine for processing, changes at the existing Hera Mine to facilitate the processing of ore from the Federation Mine, the consolidation of the existing Hera Mine consent, and a new services corridor to connect the Federation Mine and the Hera Mine

The major components of the project are summarised in **Table 1** and **Figure 2** to **Figure 4** and described in detail in the Environmental Impact Statement (EIS) and Amendment Report for the project (see **Appendix A1** and **Appendix A4**)

Table 1 | Main Components of the Project

Aspect	Approved Hera Mine	Federation Project
Mining method	Underground conventional open stoping techniques ²	Underground conventional open stoping techniques.
Mineralisation	2.4 Mt deposit comprising lead, zinc, gold, silver and copper.	6.95 Mt deposit comprising lead, zinc, gold, silver and copper within the Federation Mine.
Project disturbance area	88.7 ha footprint	74.59 ha additional incremental disturbance area
Life of mine	Up to 13 years, commenced in 2012.	Up to 14 years, commencing in 2023.
Annual ore processing	Up to 505 kilotonnes per annum (ktpa).	Up to 750 ktpa.
Annual concentrate/dore production	Gold-silver doré, lead concentrate and zinc concentrate	Up to 6 ktpa copper concentrate, 51 ktpa lead concentrate, 98 ktpa zinc concentrate, 115,000 ounces of gold dore and 985,000 ounces of silver dore
Surface infrastructure at Federation Mine	n/a	Refer Figure 3.
Surface infrastructure at Hera Mine	Refer Figure 4.	Refer Figure 4.
Services corridor	n/a	Services corridor approximately 23 metres wide including electricity transmission line, water line, access track and tailings pipeline and return water line. Refer Figure 2.

² This mining method involves the extraction of minerals and other material to leave an open space or 'stope' which is later backfilled

Aspect	Approved Hera Mine	Federation Project
Traffic movements	<p>Approved operations involve light and heavy vehicle traffic from Hera Mine along the following routes:</p> <ul style="list-style-type: none"> to Cobar, via Burthong Road, Priory Tank Road and Kidman Way; and to Hermidale, via Burthong Road, Hartwood Street, Milford Street, Whitbarrow Way, Nymagee Road, Hermidale Road and Barrier Highway. 	<p>The project would involve light and heavy vehicle traffic along the following routes:</p> <ul style="list-style-type: none"> from Hera Mine to Cobar, via Burthong Road, Priory Tank Road and Kidman Way; and from Hera Mine to Hermidale, via Burthong Road, Hartwood Street, Milford Street, Whitbarrow Way, Nymagee Road, Hermidale Road and Barrier Highway between Hera Mine and Federation Mine, via Burthong Road.
Tailings management	<p>Placement of tailings into the existing tailings storage facility at Hera Mine.</p>	<p>Placement of tailings into the existing tailings storage facility at Hera Mine or transport (via road or pipeline) for placement underground at Federation Mine.</p>
Waste rock management	<p>Storage of waste rock on designated pads and utilised for backfilling underground stopes or final landform depending on suitability of material.</p>	<p>Storage of waste rock on designated pads and utilised for backfilling underground stopes or final landform depending on suitability of material.</p>
Water management	<p>Tailings storage facility.</p> <p>Diversion of surface water flows to separate clean and dirty water.</p> <p>Sediment basins, seepage and leachate collections ponds, process water dam and raw water dam.</p> <p>Groundwater bore network.</p>	<p>Ongoing operation of the existing water management system at Hera Mine.</p> <p>Establishment of water management infrastructure at Federation Mine including leachate ponds, a dewater and a stormwater retention pond.</p> <p>Dirty or contaminated water would be recirculated for reuse within the Hera Mine water management system via the proposed water pipeline.</p> <p>Offsite discharge at Hera Mine would only occur during high rainfall events.</p> <p>Water requirements would be sourced from underground workings and a proposed network of groundwater production bores.</p>
Other facilities and infrastructure	<p>Mine accommodation village including accommodation facilities, ablution facilities, a water treatment facility, communal facilities and a communal car park.</p> <p>Power generators and solar farm.</p>	<p>Expanded solar farm at Hera Mine, new solar farm and gas power plant at Federation Mine to provide energy supply up to 11 megawatts.</p>
Workforce	<p>Operational workforce of up to full time equivalent (FTE) 150-200 positions.</p>	<p>Construction workforce of up to 150 FTE people.</p> <p>Operational workforce of up to 250 including the transition of 150-200 existing workforce positions from Hera Mine.</p>

Aspect	Approved Hera Mine	Federation Project
Capital Investment Value	Approximately \$80 million.	Approximately \$200 million.

2.1 Amended Project

Hera Resources submitted a request to the Department in October 2022 seeking amendments to the project application including changes to the surface infrastructure layout, including an increase to the size of the solar farm and a reduction in ore, tailings and concentrate haulage truck movements.

The amendment request included an Amendment Report that described the proposed amendments to the application in detail and provided an updated environmental assessment of the amended project. The Department accepted Hera Resources' request to amend the project in accordance with section 38 of *Environmental Planning and Assessment Regulation 2021*.

2.2 Minimisation and avoidance of impacts

The project has been designed to minimise and avoid impacts by:

- using existing infrastructure at Hera Mine where appropriate to minimise the requirement for new infrastructure;
- locating new infrastructure within previously disturbed areas and away from ecological constraints and Aboriginal heritage items where practical;
- using waste rock and tailings for backfill material to minimise the volume of this material required to be stored above ground; and
- using larger haulage trucks (increased from A-doubles to B-triples during the assessment process) and backfilling of ore trucks with tailings to reduce heavy vehicle movements to reduce the number of trips on Burthong Road between Hera Mine and Federation Mine.

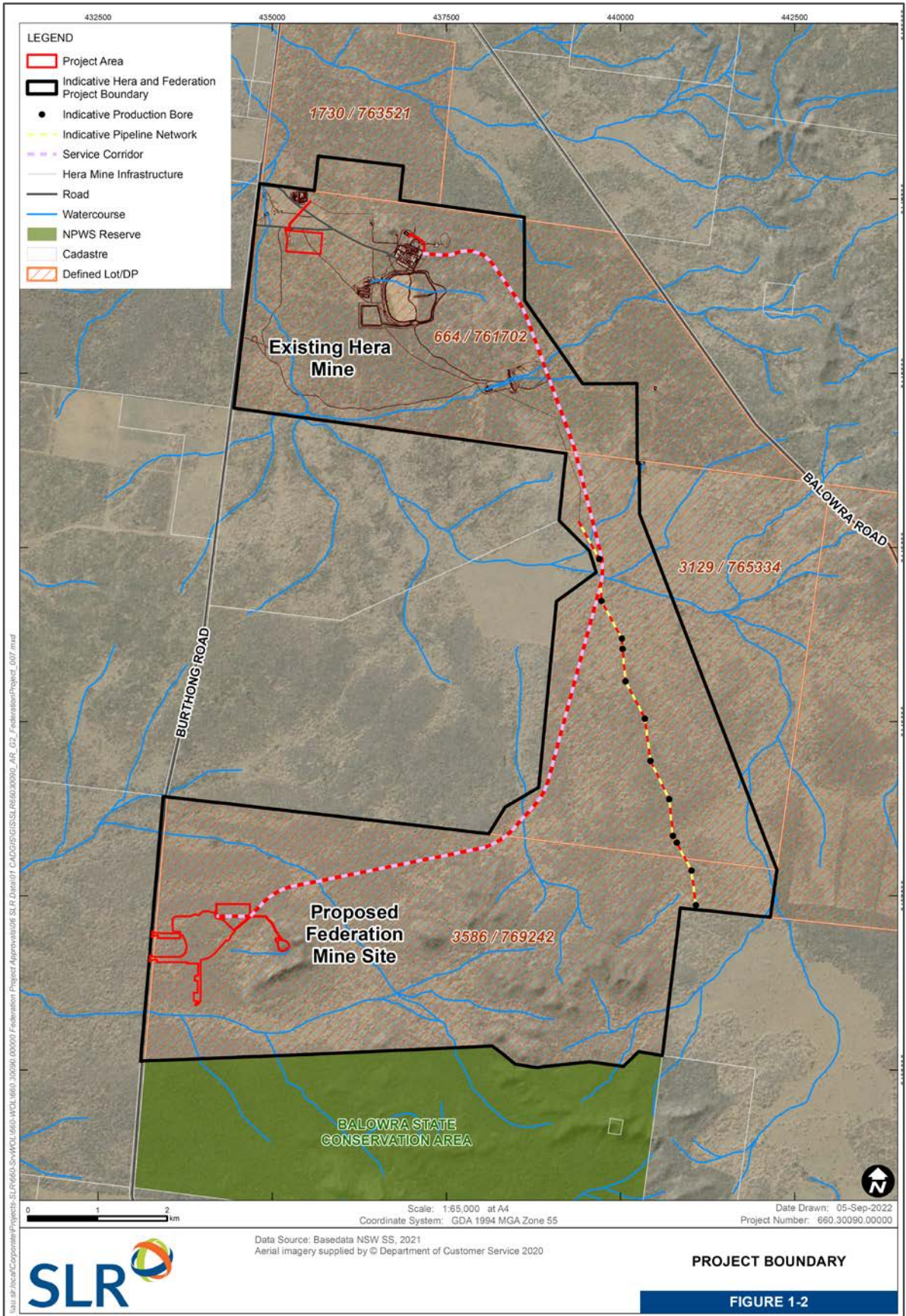


Figure 2 | Project overview (Source: Amendment Report)

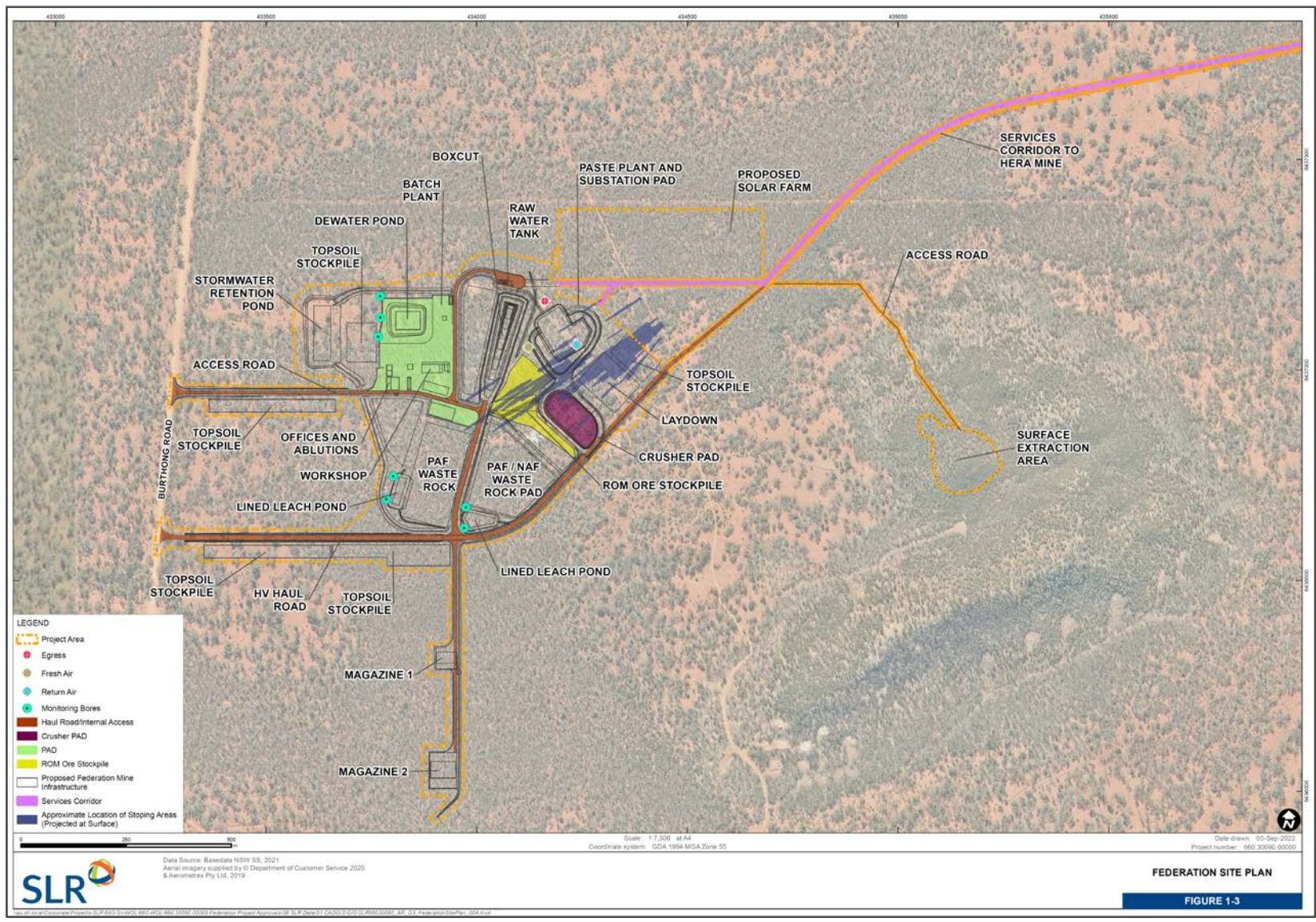


Figure 3 | Proposed Federation Mine (Source: Amendment Report)

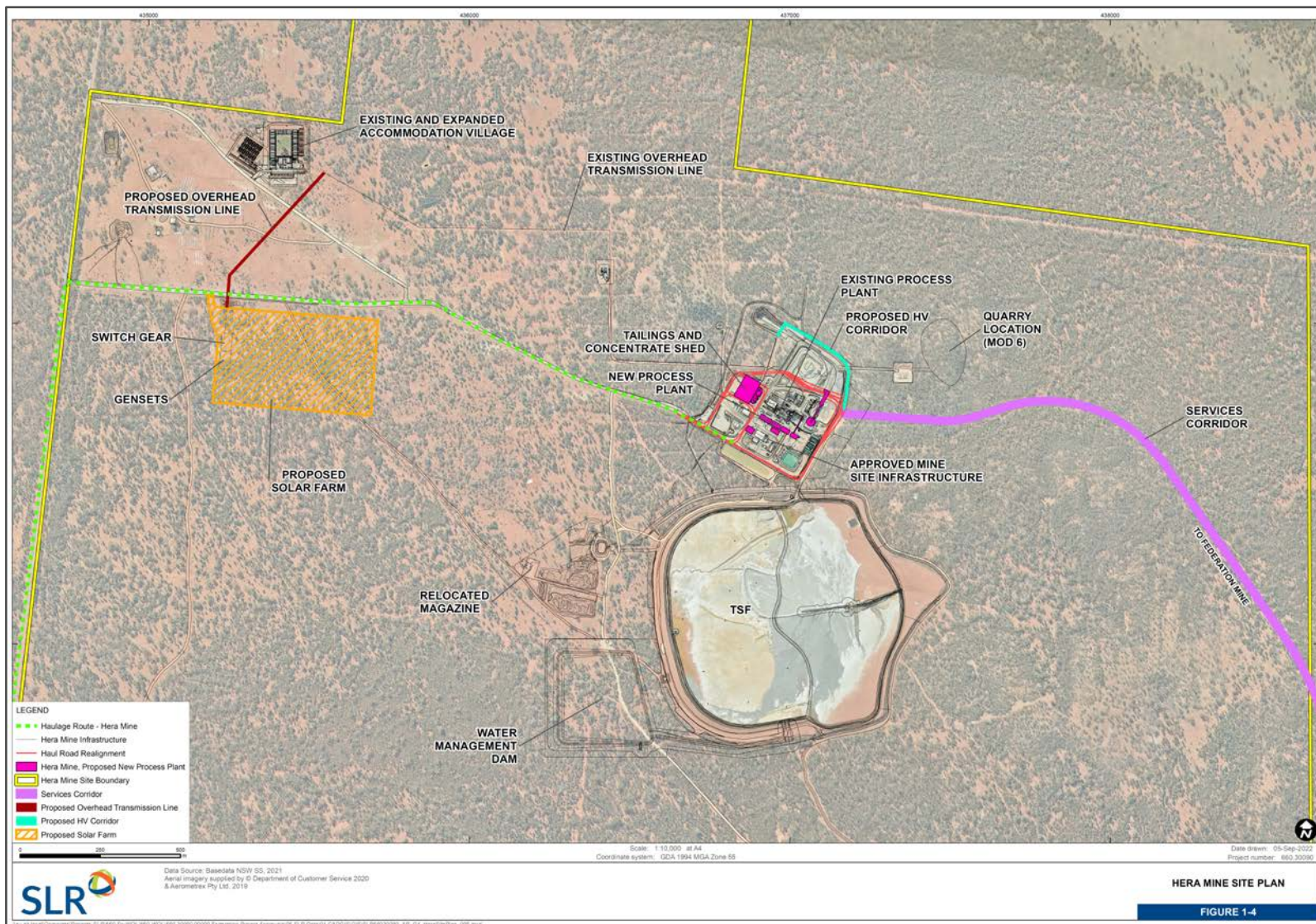


Figure 4 | Proposed amendments to the existing Hera Mine (Source: Amendment Report)

3 Strategic context

3.1 Site and surrounds

The project is located on land zoned RU 1 – Primary Production under the *Cobar Local Environment Plan 2011* (LEP 2011). The region surrounding the project site is a sparsely populated rural environment. There are five residential receivers within five kilometres of the project site, all located on Burthong Road. The closest residential receiver to Hera Mine is located adjacent to Burthong Road, around one kilometre north east of the proposed solar farm and 2.5 kilometres from the mine. The closest residential receiver to Federation Mine is located around five kilometres to the south east.

The nearest township is the village of Nymagee, with a population of around 20 people in the township and a population of the around 100 people in the surrounding area. Nymagee is located around five kilometres north of the Hera Mine.

The Federation Mine and Hera Mine are accessed via Burthong Road (Shire Road 19). Burthong Road is sealed for approximately 6 km south of Nymagee and unsealed over the remaining 48 km. Priory Tank Road (MR461) is a regional road that provides an east-west link between Kidman Way and Nymagee. Kidman Way is a state road that connects the project with Cobar (see **Figure 1**).

The Federation Mine site and the services corridor is comprised of predominantly woodland vegetation and there are no permanent watercourses running through them. There are some minor ephemeral watercourses traversing the Hera Mine site.

3.2 Mining operations

The Cobar Basin has significant gold, copper and other mineral resources, and mining and exploration activities has been occurring in and around Cobar since the late 1800's. Aurelia Metals Limited (Aurelia), wholly owns subsidiaries that operate the Hera Mine, the New Cobar Complex, which is located 3 kilometres south east of Cobar, and Peak Gold Mine, which is located 10 km south east of Cobar. Aurelia manages the efficient mining and processing of ore as required across its operations, with ore transported from one mine to another if required for processing depending on demand and processing infrastructure capacity.

Mining is currently active at Peak Gold Mine and the New Cobar Complex. Hera Mine has been under care and maintenance since December 2022.

3.3 Mineral demand and economic context

The Department of Industry, Science, Energy, and Resources - Office of the Chief Economist Resources and Energy Quarterly June 2021 (Office of the Chief Economist, 2021) contains forecasts for values, volumes and prices of major Australian resources and energy commodity exports.

The forecasts indicate existing and future demand for gold, silver, zinc, copper and lead. The minerals have a variety of uses including use in the production of jewellery, electronics, batteries, photovoltaics, electric vehicles, energy transmission infrastructure, medical equipment and steel.

The NSW Critical Minerals and High-Tech Metals Strategy (2021) identifies copper, silver and zinc as critical minerals for a range of future industries including renewables, recycling and waste management, advanced manufacturing and aerospace

The Department's *Far West Regional Plan 2036* (2022) notes that the mining industry generates direct employment and provides flow-on benefits to regional communities. The Plan also notes the mining industry is the primary economic driver for many towns in the Far West Region, including Cobar, Broken Hill, Wentworth and Balranald. Mining contributes almost 28 per cent to the Far West Region gross regional product.

4 Statutory Context

4.1 State significance

Under the *State Environmental Planning Policy (Planning Systems) 2021*, the project is classified as State Significant Development (SSD), as it constitutes development for the purpose of mining works with a capital investment value of more than \$30 million.

The Minister for Planning is the consent authority for the application. However, under the Minister's delegation of 9 March 2022, the Director Resources Assessments may determine the project because there were less than 15 unique submissions by way of objection, Cobar Shire and Bogan Shire Councils did not object to the proposal and Hera Resources did not make any political donations.

4.2 Permissibility

The project is located on land zoned as RU 1 – Primary Production under LEP 2011 and is permissible with consent. Mining is permissible on all land in accordance with Section 2.9(1) of the *State Environmental Planning Policy (Resources and Energy) 2021*.

4.3 Integrated and Other Approvals

Under Section 4.41 of the EP&A Act, several approvals are integrated into the SSD approval process and consequently are not required to be separately obtained for the proposal. These include:

- approvals relating to heritage required under the *National Parks and Wildlife Act 1974* and the *Heritage Act 1977*; and
- certain water approvals under the *Water Management Act 2000* (WM Act).

Under Section 4.42 of the EP&A Act, several other approvals are required but must be substantially consistent with any consent granted for the project. These include:

- an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997*;
- consents under the *Roads Act 1993*; and
- water access licences under the *Water Act 1912* and/or the WM Act.

Hera Resources currently holds relevant leases and licences under these Acts and can obtain any other licences required for the project where required. The Department has consulted with the relevant government authorities responsible for these other approvals (see **Section 5**), and considered the relevant issues relating to these approvals in its assessment of the project (see **Section 6**).

4.4 Mandatory Matters for Consideration

The Department's assessment of the project has given careful consideration to all necessary statutory requirements. These include the:

- the provisions of any environmental planning instruments (EPIs);

- the terms of the Applicant's offer to enter into planning agreements and whether it should impose a condition on the project;
- the likely impacts of the project, including the environmental impacts on both the natural and built environments, and social and economic impacts in the locality;
- the suitability of the site for the project;
- the public interest, which includes considering the relevant objects of the EP&A Act and Ecologically Sustainable Development (ESD).
- objects of the EP&A Act; and
- matters listed under section 4.15(1) of the EP&A Act.

The Department has considered all of these matters in its assessment of the project and has provided a summary in this report. A summary of this consideration has been provided in **Appendix B**.

4.5 Surrender of Development consent

Section 4.63 of the EP&A Act (voluntary surrender of development consent) provides that if a development consent is surrendered as a condition of a new development consent and the new consent includes continuation of development that was authorised, then the consent authority:

- is not required to re-assess the likely impact of the continued development to the extent that it could have been carried out but for the surrender of the consent;
- is not required to re-determine whether to authorise that continued development under the new development consent (or the manner in which it is to be carried out); and
- may modify the manner in which that continued development is to be carried out for the purpose of the consolidation of the development consents applying to the land concerned.

If the project is approved, Hera Resources would surrender the Hera Mine project approval PA10_0191 and the mining operations on the current site would be regulated under the new development consent. Relevant conditions specific to the Hera Mine have been recommended to be transferred into the new consent.

4.6 Biodiversity Development Assessment Report

Section 7.9(2) of the *Biodiversity Conservation Act 2016* (BC Act) requires all applications for SSD to be accompanied by a Biodiversity Development Assessment Report (BDAR) unless it is determined that the proposed development is not likely to have any significant impact on biodiversity values.

The EIS contained a BDAR which was prepared to the satisfaction of the Department's Biodiversity, Conservation and Science Directorate (BCS). The Department's assessment of impacts to biodiversity values is provided in **Section 6.2**.

5 Engagement

5.1 Department's engagement

The Department publicly exhibited the EIS from 9 March 2022 to 5 April 2022, advertised the exhibition in the Cobar Weekly and notified landowners in proximity to the project site. Hera Resources provided a hardcopy of the EIS and Cobar Shire Library and Nymagee Library.

The Department consulted with Cobar Shire Council, Bogan Shire Council and relevant government agencies throughout its assessment.

Department staff visited the site on 7 March 2022.

5.2 Hera Resources' Engagement

Hera Resources carried out engagement with the local community as detailed in the EIS, including:

- community information sessions and consultation meetings, workshops and forums;
- individual meetings with stakeholders including landowners to discuss specific issues;
- newspaper advertisements and project leaflets; and
- maintenance of project website and project information and complaints phone number.

Hera Resources also undertook consultation with the Department and relevant government agencies during the assessment process.

5.3 Summary of submissions

During the exhibition period, the Department received advice from 12 government agencies and public authorities (including Cobar Shire and Bogan Shire Councils). The Department did not receive submissions from the community.

Copies of all advice is available on the Department's website (see **Appendix A5**) and the key issues are summarised below.

Following the exhibition of the EIS, the Department requested Hera Resources provide a response to the issues raised in the advice.

5.4 Government Agency Advice

A summary of the key matters raised in the government agency submissions is provided in **Table 2**

Table 2 | Summary of Agency Advice

Government Agency	Key issues
Transport for NSW (TfNSW)	<ul style="list-style-type: none">• Requested additional assessment of road upgrades at key intersections along the proposed traffic routes.
Cobar Shire Council and Bogan Shire Council	<ul style="list-style-type: none">• Concerned about increase in traffic impacts and potential health and wellbeing impacts to residents.• Requested the upgrade of local roads impacted by the project, real time monitoring of noise and dust, employment of the local community, a Communications and

Government Agency	Key issues
	<p>Engagement Plan, and that Hera Resources should enter into a planning agreement with each council.</p> <ul style="list-style-type: none"> Neither council objected to the project during the exhibition period.
Heritage NSW	<ul style="list-style-type: none"> Requested further assessment of Aboriginal heritage including a synthesis of the archaeological and ethnohistory of the region, and a significance assessment of cultural values. No issues were raised regarding non-Aboriginal heritage.
Environment Protection Authority (EPA)	<ul style="list-style-type: none"> Requested additional information to ensure all emission sources were accounted for in the air quality and greenhouse gas assessments and that best-practice dust control measures be implemented for the project.
DPE Water	<ul style="list-style-type: none"> Requested updates to the groundwater model and water balance and that monitoring bores be installed to the full depth of the proposed Federation Mine and around the leachate ponds and rock containment area.
Mining Energy and Geoscience	<ul style="list-style-type: none"> Noted efficient and optimised resource outcomes can be achieved for the project Requested further details of the resource to be mined.
DPE Hazards Division	<ul style="list-style-type: none"> Requested clarification regarding hazard assessments at Hera Mine.
Biodiversity, Conservation and Science Directorate	<ul style="list-style-type: none"> Noted administrative issues regarding the certification of the BDAR and advised that the proposed staging of credits would be acceptable.
Resources Regulator	<ul style="list-style-type: none"> Requested further information regarding the final land use for the solar farm and the potential for establishing trees on the tailings storage facility as part of rehabilitation.
DPI Agriculture	<ul style="list-style-type: none"> Noted the development would have only a minor impact on agricultural productivity.
Crown Lands	<ul style="list-style-type: none"> Noted the project site includes a Travelling Stock Route and encouraged further consultation with Crown Lands for a compensation agreement for a mining lease over the route.

5.5 Submissions and Amendment Report

In October 2022, Hera Resources provided a Submissions Report and Amendment Report to the Department (see **Appendix A3** and **A4**). The Submissions Report and Amendment Report included revised or additional assessment of environmental aspects in response to agency advice and the amendments to the project.

The Department made the Submissions Report publicly available on its website and referred it to relevant government agencies. The Department also requested Hera Resources to provide additional information during its comprehensive assessment process to assist in addressing residual issues

raised by government agencies and local councils. The additional agency advice and information provided by Hera Resources is available in **Appendix A5**.

Following a review of the additional information provided by Hera Resources and through ongoing consultation with government agencies, the Department identified residual issues that were not addressed to the satisfaction of relevant government agencies and local councils including:

- Transport for NSW, which raised residual concerns regarding traffic safety on the Barrier Highway; and
- Cobar Shire Council and Bogan Shire Council which both raised residual concerns regarding traffic safety and the terms of the planning agreement offered by Hera Resources.

Residual concerns related to traffic safety are considered by the Department in **Section 6.1** and residual concerns regarding the terms of the planning agreements are considered by the Department in **Section 6.4**.

The Department is satisfied that all other residual concerns raised by government agencies were primarily related to assessment methodology or input clarifications and have been addressed by Hera Resources in its Submissions Report, Amendment Report and additional information.

6 Assessment

The Department has assessed the merits of the project in accordance with the requirements of the EP&A Act and applicable NSW policies and guidelines. The Department considers that the key issues of the project relate to impacts to the road network and traffic safety, impacts to native vegetation and the management of waste rock and tailings.

6.1 Traffic and Transport

The Department considers the key traffic and transport impacts are the potential impact of increased traffic movements on the road network and traffic safety. The Department has considered the need for the potential upgrade of roads and intersections impacted by project traffic as this was a key issue raised by both the TfNSW and local councils.

During construction on a shift change day, the project would involve up to around:

- 162 movements (including 117 heavy vehicles) per day between Hera Mine and Federation Mine
- 277 movements (including 105 heavy vehicles) per day between Hera Mine and Nymagee
- 151 movements (including 77 heavy vehicles) per day between Nymagee and Peak Mine/Cobar
- 126 trips (including 28 heavy vehicles) per day between Nymagee and Hermidale

During operation on a shift change day, the project would involve up to around:

- 138 trips (including 92 heavy vehicles) per day between Hera Mine and Federation Mine
- 217 trips (including 59 heavy vehicles) per day between Hera Mine and Nymagee
- 93 movements (including 41 heavy vehicles) per day between Nymagee and PeakMine/Cobar
- 135 movements (including 29 heavy vehicles) per day between Nymagee and Hermidale

Average and maximum trips³ for road trains hauling concentrate, waste rock and tailings are summarised in **Figure 5**.

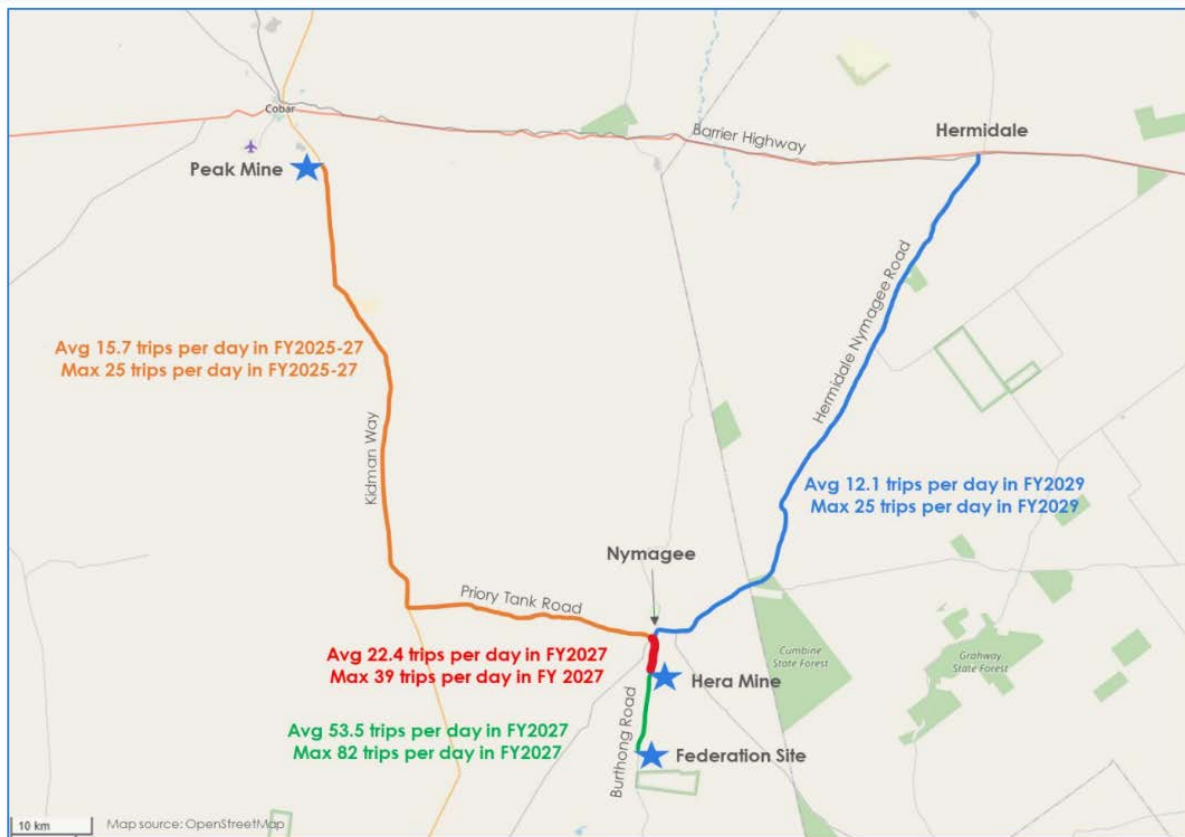


Figure 5 | Operational road train trips (Source: Amendment Report)

Hera Resources completed a traffic impact assessment, which was updated as part of the Amendment Report. The assessment considered traffic movements associated with construction and operation and included modelling of intersection performance based on a worst-case scenario for traffic movements, including a shift change day for the operational workforce. TfNSW raised some residual concerns regarding the traffic assessment which were addressed by Hera Resources in additional correspondence. Residual concerns regarding the traffic safety assessment were limited to road safety concerns at the Barrier Highway and the Department has addressed this matter below.

As part of the amendment to the project, Hera Resources committed to reducing ore, tailings and concentrate haulage truck movements by increasing the size of haulage trucks (from A-double to B-triple) and selecting a single fleet of trucks for ore and tailings transport, rather than two separate fleets. The amendment resulted in the following changes to the maximum heavy vehicle trips for the project:

- A reduction of around 100 trips per day between Hera Mine and Federation Mine;
- A reduction of around 10 trips per day between Hera Mine and Nymagee;
- A reduction of around 10 trips per day between Nymagee and Hermidale; and
- An increase of around 5 trips per day between Nymagee and Peak Mine/Cobar (due to other operational changes in the amendment).

³ A vehicle trip consists of two vehicle movements

Road and intersection performance

The traffic impact assessment identified that the additional traffic generated by the project during construction or operation would not alter the Level of Service (LoS) at any road or intersection. All intersections would continue to operate at a good (LoS A) or acceptable (LoS B) level of service.

Hera Resources is proposing to transport ore, concentrates and tailings during daylight hours only, and to restrict transport during times of heavy rainfall to minimise the risk of road crashes due to wet conditions.

Road safety and upgrades

Hera Resources originally proposed the following as part of the project:

- to contribute funds to seal Burthong Road between Hera Mine and the southern site access into the Federation Mine; and
- to construct the Burthong Road / Federation Mine access points (northern and southern) as road intersections with Basic Auxiliary Left (BAL) and Basic Auxiliary Right (BAR)

The traffic impact assessment did not identify any road safety issues associated with the project based on a review of road crash history of the surrounding road network and existing intersection design and sight distances.

However, TfNSW identified a traffic safety issue associated with slow moving trucks travelling between the intersections of the Barrier Highway / Nymagee – Hermidale Road and the Barrier Highway / Hermidale Rail Siding. TfNSW noted that given the short distance (around 600 metres) between these two intersections, haulage vehicles would not be able to accelerate to the posted speed limit (100km/h) before turning right. TfNSW identified that this creates a traffic safety issue for other vehicles travelling on the Barrier Highway at higher speeds and recommended that the intersections be upgraded to provide a dedicated right turn lane for haulage vehicles to allow for the movement of through traffic.

The local councils also identified potential traffic safety impacts associated with local roads that would be used for haulage for the project and recommended a range of road upgrades to address these safety issues.

Hera Resources' and the Department's consideration of the issues raised by TfNSW and the local councils is provided in **Table 3**.

Table 3 | Potential road upgrades

Road/intersection upgrade	Consideration by Hera Resources	Consideration by the Department
Barrier Highway/Rail Siding Access intersection	<ul style="list-style-type: none">• The existing intersections are not compliant with minimum required intersection treatments (for a new intersection) independent of existing or proposed traffic	<ul style="list-style-type: none">• Following consultation with TfNSW, the Department considers that a channelised right turn treatment and basic auxiliary left turn treatment at these two respective intersections is warranted to provide through movements for traffic travelling at high speeds on the Barrier Highway.
Barrier Highway/Nymagee – Hermidale Road intersection	<ul style="list-style-type: none">• Commitment to provide funding to upgrade the intersection, with	

Road/intersection upgrade	Consideration by Hera Resources	Consideration by the Department
	<p>funding proportional to Hera Resources use of the intersection</p>	<ul style="list-style-type: none"> The Department has recommended that Hera Resources complete these upgrades, or identify alternative measures to manage road safety, prior to haulage through these intersections increasing above existing operations at Hera Mine.
<p>Nyngan Street, Nymagee Road intersection</p>	<ul style="list-style-type: none"> There is only a safety issue at the intersection if two road trains pass through the intersection simultaneously. The chance of two vehicles passing simultaneously was calculated to be less than 1% Commitment for the Driver Code of Conduct to require drivers travelling eastbound to communicate with other haulage trucks and give-way to heavy vehicles approaching from the north. 	<ul style="list-style-type: none"> The Department accepts Hera Resources' position that an upgrade to the intersection is not required subject to the implementation of the identified inclusions in the Driver Code of Conduct.
<p>Whitbarrow Way / Nymagee – Hermidale Road</p>	<ul style="list-style-type: none"> The road is already sealed and authorised for B-triple trucks The project represents a minor increase to traffic movements along the road compared to approved movements under the existing Hera Mine consent based on annual averages over the life of the mine (around 6/7 movements per day) Upgrades are therefore not required. 	<ul style="list-style-type: none"> The Department considers that in the years of peak operation (2028 to 2023), there would be between a 14-84% increase in the number of movements compared to existing haulage rates with 7.5 to 12.1 trips per day on average and up to a total of a maximum of 15 to 25 trips in this period While the road is an approved B-triple route, there are sections of the Nymagee – Hermidale Road where the seal is less than six metres wide and this creates a safety risk Haulage vehicles from the project would result in approximately 23 – 34% of total heavy vehicle movements on the road The Department has therefore recommended that Hera Resources fund the upgrade the widening of the section of the road with a seal currently less than six metres wide, in addition to making road maintenance contributions.

TfNSW and the local councils also requested the upgrade of the intersections at Burthong Road/Priory Tank Road and Kidman Way/Priory Tank Road. The Department notes that Hera Resources is already required to upgrade these intersections prior to commencing the transport of ore to Peak Mine under the consent for Hera Mine. These requirements have been included in the recommended conditions of consent.

The Department has recommended a condition of consent that Hera Resources make road maintenance contributions to Cobar Shire Council and Bogan Shire Council to mitigate impacts to local road infrastructure. The contributions are to be calculated in accordance with the *Cobar Shire Local Infrastructure Contributions Plan 2012* and both councils were satisfied with this approach.

Summary

The Department considers that the project has been designed to avoid, mitigate and manage impacts to the road network and notes that the amendment of the application included a substantial reduction in heavy vehicle movements compared to the original project.

The Department considers that all intersections would continue to operate at a good to acceptable level of service and that the proposed haulage routes are suitable for the proposed haulage vehicles, subject to the upgrades proposed by Hera Resources and additional upgrades included in the recommended conditions of consent.

The Department has recommended conditions of consent including maximum haulage limits, preparation and implementation of a Traffic Management Plan, road maintenance contributions to the local councils, road upgrade requirements from the existing Hera Mine consent and the requirement to upgrade the two intersections with the Barrier Highway to provide a channelised right turn. Overall, the Department considers the potential traffic and transport impacts of the project are acceptable.

6.2 Biodiversity

The Department considers that the key biodiversity impacts of the project are direct impacts to biodiversity values through native vegetation clearing during construction.

Hera Resources assessed biodiversity impacts in a BDAR and provided a revised BDAR as part of the Amendment Report to the satisfaction of BCS.

The project site is generally located on areas of disturbed land at the existing Hera Mine site and areas that have been historically cleared that now consist of high vegetation cover comprising remnant or regenerating native vegetation and woodland.

Avoidance and mitigation

The Department considers that Hera Resources has designed the project to avoid and minimise impacts on high quality vegetation and habitat as far as practicable, including:

- locating infrastructure on areas cleared under previous approvals where possible;
- minimising the disturbance footprint by locating surface infrastructure as close together as possible without compromising functionality; and
- utilising existing infrastructure at the Hera Mine to minimise the need for new infrastructure and associated disturbance.

Native Vegetation

The construction footprint (74.6 ha) would disturb approximately 71.1 ha of native vegetation as summarised in **Table 4** and shown in **Figure 6**. The native vegetation that would be cleared does not include any endangered or critically endangered ecological communities listed under the BC Act or *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

Table 4 | Native vegetation clearance

Plant Community Type (PCT) description	PCT Number	Vegetation Clearance	Credit liability
Poplar Box - Gum Coolabah - White Cypress Pine shrubby woodland mainly in the Cobar Peneplain Bioregion	103	38.35	1,492
Gum Coolabah woodland on sedimentary substrates mainly in the Cobar Peneplain Bioregion	104	4.97	127
Mallee - Gum Coolabah woodland on red earth flats of the eastern Cobar Peneplain Bioregion	174	24.68	924
Green Mallee - White Cypress Pine very tall mallee woodland on gravel rises mainly in the Cobar Peneplain Bioregion	176	0.06	1
Grey Mallee - White Cypress Pine woodland on rocky hills of the eastern Cobar Peneplain Bioregion	180	2.35	54
Gum Coolabah - Mugga Ironbark - White Cypress Pine woodland on granite low hills in the eastern Cobar Peneplain Bioregion and central NSW South Western Slopes Bioregion	258	0.70	21
Total		71.11	2,619

Threatened fauna and flora species

No listed BC Act or EPBC Act threatened flora species were recorded within the disturbance area.

Three threatened bat species listed under the BC Act were identified through surveys including the Eastern Bent-wing bat (vulnerable), Little Pied bat (vulnerable) and Yellow-bellied sheath-tail bat (vulnerable). Three threatened fauna species listed under the BC Act were identified outside the project disturbance area including the Hooded Robin (vulnerable), Major Mitchell's Cockatoo (vulnerable) and the Grey-crowned babbler (vulnerable). Clearance of native vegetation would impact potential habitat for these threatened fauna species.

The BDAR identified that the project would have a minor effect on habitat connectivity in the immediate vicinity, but overall connectivity would not be reduced in any significant capacity given the project disturbance area is well connected to native vegetation from all directions.

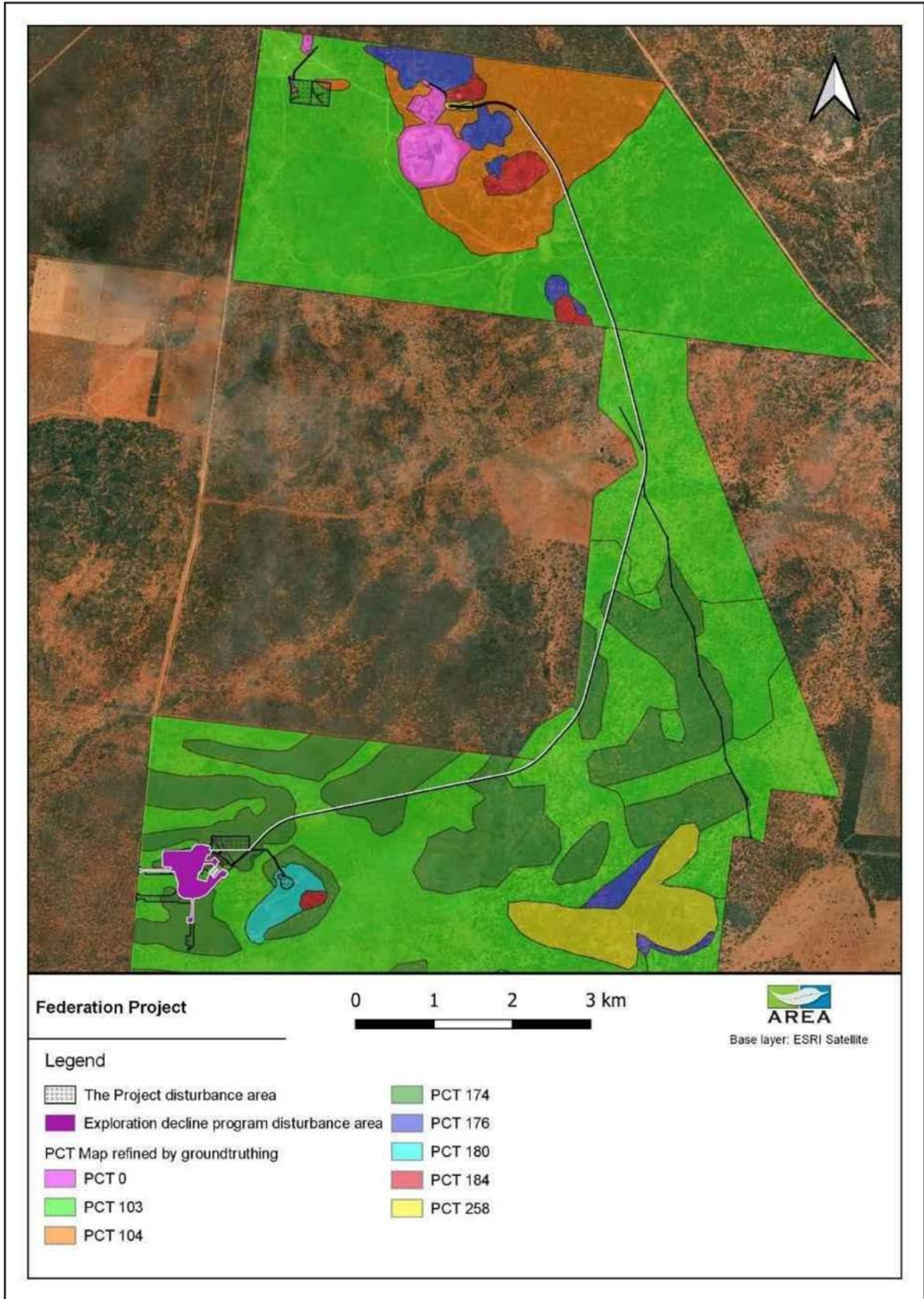


Figure 6 | Native vegetation (Source: Amendment Report Appendix F - Amended BDAR)

Serious and Irreversible impacts

The BDAR identified that no candidate species were considered to be SIAIs. The Department agrees with the conclusion in the BDAR.

Biodiversity Offset

The impact on native vegetation and species would generate 2,619 ecosystem credits (see **Table 4**). Impacts to threatened fauna species habitat is included in the calculation of ecosystem credits.

Hera Resources has nominated a staged approach to the retirement of credits consisting of seven stages relevant to separate components of the project. Hera Resources has identified a credit allocation for each stage and would retire the credit prior to disturbance occurring. The staged approach to the retirement of credits was accepted by BCS.

Recommendations

The Department has recommended conditions to mitigate and manage potential residual impacts on biodiversity, including requiring Hera Resources to:

- prepare and implement Biodiversity Management Plan that incorporates proposed avoidance and mitigation measures;
- retire biodiversity credits prior to vegetation clearing; and
- progressively rehabilitate the site as reasonably practicable following disturbance.

Summary

The Department considers that the project has been designed to avoid, mitigate and manage biodiversity impacts where practicable given the location of the resource. However, the project would result in a range of residual impacts on biodiversity including the clearance of 71.11 ha of native vegetation. The native vegetation does not comprise any listed endangered or critically endangered ecological communities or threatened flora species but does provide potential habitat for threatened bat and bird species.

The Department has carefully considered these impacts on biodiversity values, and accepts that they would be suitably managed, mitigated and/or offset under the recommended conditions of consent. The Department considers that the retirement of ecosystem credits would sufficiently compensate for these residual biodiversity impacts, in accordance with the BC Act. Overall, the Department considers the impacts of the project on biodiversity are acceptable.

6.3 Water Resources

The key potential impacts to water resources from the project include the management of tailings and potentially acid forming (PAF) waste rock that could result in acid and metalliferous drainage. The project would also have the potential to result in other impacts to surface and groundwater resources.

The EIS included a geochemical assessment of potential waste rock, surface water impact assessment and groundwater impact assessment including groundwater modelling. The peer review of the groundwater assessment concluded that is consistent with best practice and concludes that the groundwater model is fit for purpose.

Hera Resources updated the assessments in response to comments from DPE Water completed as part of the Submissions Report and Amendment Report.

Tailings and Potential-Acid Forming Waste Rock

The geochemical assessment completed for the project identified that that weathered rock was non-acid forming (NAF), around 85% of fresh rock was classified as PAF and tailings was classified as PAF.

Exposure of PAF waste rock and tailings can cause acid and metalliferous drainage and which poses risks to both surface and groundwater quality if not appropriately managed. The assessment also identified that fresh waste rock and tailings have a moderate to high potential to generate low-salinity leachate when oxidised.

The groundwater assessment concluded that the existing groundwater quality is suitable for stock watering and industrial use and that leachate from PAF waste rock or tailings is considered unlikely to change the beneficial use category of groundwater.

Hera Resources manage waste rock and tailings at the Hera Mine under existing operations in accordance with a Waste Rock Management Plan and Water Management Plan. Monitoring data from existing operations does not indicate any impact on groundwater quality or the beneficial use category of groundwater. Existing and proposed management measures for the project include:

- separation of PAF and NAF material with PAF to be placed underground and NAF to be used in the final landform design;
- temporary storage of PAF waste rock aboveground on designated waste-rock pads that capture run-off, prior to emplacement underground;
- water management infrastructure to capture and monitor run-off and seepage (leachate) from waste-rock pads in lined leach ponds and treated as appropriate before use in the mine water management system;
- removal of all PAF rock at the surface at mine closure;
- placement of tailings into the existing Hera Mine tailings storage facility or returned to Federation for backfilling of underground stopes as pastefill; and
- development of a Waste Rock Management Plan and Tailings Management Plan.

The Department considers that appropriate management of PAF waste rock and tailings is critical in avoiding adverse water quality outcomes. The Department has recommended conditions of consent including performance measures for water quality, waste rock emplacement and the tailings storage facility and comprehensive surface and groundwater monitoring programs as part of a Water Management Plan.

Groundwater

The project would result in potential groundwater impacts including potential drawdown of the fractured rock aquifer within the project site and potential impacts to nearby groundwater users. The groundwater assessment included modelling of the cumulative impacts to groundwater associated with the existing Hera Mine and new mining at Federation.

The groundwater assessment identified that the water table is too deep to support groundwater dependent ecosystems. The depth of the water table varies between 45 to 90 m below ground surface across the project site.

Groundwater modelling predicted the drawdown of the water table of about one metre up to approximately 6.2 km from the Hera Mine workings, consistent with existing observed impacts. The

model predicted drawdown of the water table of about one metre up to 8 km to the west and 10.5 km to the east of the Federation Mine workings.

Groundwater inflows into the proposed Federation Mine workings are predicted to peak at 0.34 ML/day (or 124 ML/year) in 2028 with groundwater inflows into the existing Hera Mine workings predicted to remain at the current rate of groundwater inflow (0.3-0.5 ML/day).

There are four registered landholder groundwater bores with the potential to be impacted by groundwater drawdown. The groundwater modelling predicted groundwater drawdown of around 4 m associated with mining at Federation Mine at one bore, around 2.7 m associated with mining at Hera Mine at another bore and that the other two bores would be drawdown by less than two metres.

Given modelled groundwater drawdown exceeds two metres at two bores, which would exceed the Level 1 minimal impact considerations for less productive water sources in the NSW Aquifer Interference Policy, the Department has recommended a condition requiring Hera Resources to provide a compensatory water supply to the potentially affected bore owners.

The project would require the use of around 550 ML/year of water for site operations and 122 ML/year would be lost to evaporation from water storages. The project would collect around 208 ML/year from direct rainfall and runoff. Hera Resources has identified that the total production bore usage and forecast groundwater inflows of up to 460 ML/year would be within the existing groundwater entitlement held by Hera Resources under water access licence (WAL) 43173, equivalent to 543 ML/year.

Monitoring data do not show any impact from operations at Hera Mine on groundwater quality or the beneficial use category of groundwater.

DPE Water raised no residual concern with Hera Resources existing water allocations and the Department considers that water use associated with the project is unlikely to have a significant impact on water availability and supply in the applicable water sources.

The Department has recommended conditions requiring Hera Resources to prepare and implement a Groundwater Management Plan including a comprehensive groundwater monitoring program.

Surface water, flooding and hydrology

Except for managing the potential water quality risks associated with PAF material described above, risks to surface water associated with the project are considered minimal. The Hera Mine and Federation Mine would operate as nil-discharge sites during operations, except in the event storm events less frequent than the 8% Annual Exceedance Probability (AEP) event for the sediment basins at Hera Mine and less than the 1% AEP event for the stormwater retention pond at Federation Mine.

Dirty or contaminated water from Federation Mine would be recirculated for reuse within the Hera Mine water management system via the proposed water pipeline. Any discharge from Hera Mine would be regulated through the site's EPL.

Hera Resources currently implements a Water Management Plan that includes a surface water monitoring program and sediment and erosion control measures. Hera Resources has committed to updating this plan for the project.

Potential impacts to flooding and hydrology would be minor given the limited surface disturbance impacts at the Hera Mine and relatively small catchment area of the Federation Mine compared to the

catchment of Sandy Creek located immediately downstream. The project is expected to reduce catchment of Sandy Creek by less than 1% compared to its pre-development catchments.

Due to the elevated topography of the Federation Site and the inclusion of clean water diversion drains designed to convey the 1% Annual Exceedance Probability (AEP) design flow from the upslope catchment around the site, the Federation Mine site is not expected to be subject to regional or localised flooding.

The EPA, BCS and DPE Water did not raise any residual issues regarding surface water, flooding and hydrology, and the Department considers that surface water issues can be appropriately managed. The Department has recommended conditions requiring the preparation of a Surface Water Management Plan, including water management performance measures and performance criteria.

Summary

The key potential water quality impact of the project relates to the proper management of PAF material. The Department considers this risk can be suitably managed under strict conditions of consent and generally in accordance with the existing management practices that are implemented by Hera Resources at the Hera Mine.

Groundwater drawdown would be unlikely to adversely impact the regional groundwater table or groundwater quality in the vicinity of the site. Two landholder bores would require compensatory water supply conditions.

Hera Resources has identified that it has sufficient existing groundwater entitlements to accommodate the water take from the project.

The Department has recommended conditions of consent including performance measures for water quality, waste rock emplacement and the tailings storage facility and comprehensive surface and groundwater monitoring programs as part of a Water Management Plan. Overall, the Department considers that impacts on water resources would be relatively localised and could be appropriately managed under the recommended conditions of consent.

6.4 Other issues

Apart from the key issues considered in detail above, there are a number of other issues that were raised in the EIS. The Department’s consideration of these other issues is summarised in **Table 5** below.

Table 5 | Assessment of Other Issues

Issue	Findings	Recommendations
Amenity and Human Health	<ul style="list-style-type: none"> The area surrounding the project site is a sparsely populated rural environment. The closest residential receiver to Hera Mine is located adjacent to Burthong Road, around one kilometre north east of the proposed solar farm and 2.5 kilometres from the mine. The closest residential receiver to Federation Mine is located around five kilometres to the south east. 	<p>The Department recommends:</p> <ul style="list-style-type: none"> noise limits for residential receivers set at the minimum limits prescribed by the NPfI; air quality limits for particulate matter;

Issue	Findings	Recommendations
	<ul style="list-style-type: none"> • The project would result in potential amenity impacts through the generation of dust, other air emissions, noise, vibration and changes to the visual landscape. • Hera Resources completed a noise assessment, air quality assessment, human health risk assessment and visual impact assessment in accordance with relevant guidelines. • The assessments were updated to address government agency advice and to consider the amendments to the project as part of the Submissions Report and Amendment Report. • The noise assessment predicted that noise levels would meet the construction noise management levels under the <i>Interim Construction Noise Guideline</i> and the operational noise management levels under the <i>Noise Policy for Industry</i> (NPfI). Traffic travelling to and from the site would also meet the road noise criteria for the nearest residential receivers adjacent to each of the proposed haul routes under the <i>Road Noise Policy</i>. • In regard to blasting, the airblast overpressure and ground vibration levels would meet the relevant criteria at all assessed receivers for surface and underground blasting. • The air quality assessment identified that exceedances of the NSW EPA impact assessment criteria are limited to a predicted exceedance of the 24-hour average PM₁₀ criteria at all modelled receptor locations, however this is due to background concentrations that already exceed the criteria and the project would not result in additional days of exceedance of this criteria. • The human health risk assessment identified that potential risks to human health associated with air quality, noise and vibration are negligible. The assessment included consideration of acute and chronic exposure risks from heavy metals that are potentially present in particulate matter. • The visual impact assessment identified that visual impacts would generally be negligible to minor due to the project infrastructure and activities being relatively hidden by adjoining vegetation and local landforms. A minor to moderate impact is predicted for vehicular users on Burthong Road and it is proposed maintain and protect the existing vegetation buffer. • The NSW EPA did not raise residual concerns regarding amenity or human health impacts and no submissions were received from nearby landowners. • The Department considers that amenity and health impacts are minor to negligible and can be appropriately managed under the mitigation measures proposed by Hera Resources and the recommended conditions of consent. 	<ul style="list-style-type: none"> • airblast overpressure and ground vibration limits for blasting; • operating conditions to minimise noise and air quality emissions; • requirement to minimise the visual and off-site lighting impacts and • the preparation and implementation of management plans for noise/ blasting and air quality.

Issue	Findings	Recommendations
Subsidence	<ul style="list-style-type: none"> Hera Resources completed a subsidence assessment for the project including the development of a numerical model to predict subsidence levels. The assessment noted that the chosen mining method generally results in negligible subsidence, subject to the long-term stability of stopes. Completed stopes would be backfilled with waste rock and paste-fill where required in as short a timeframe as possible. The assessment identified that the extent of vertical or horizontal subsidence above the mining footprint would be within the range of 1-2 centimetres and that the top level of stopes would remain stable. Given there are no sensitive infrastructure or natural features above the mining footprint, the subsidence assessment determined that subsidence impacts would be negligible. The Resources Regulator did not raise any concerns in relation to subsidence impacts. The Department considers that the predicted potential subsidence impacts are negligible and can be appropriately managed under the recommended conditions of consent. 	<p>The Department recommends:</p> <ul style="list-style-type: none"> a performance measure that the development results in negligible subsidence impacts or environmental consequences.
Aboriginal and historic heritage	<ul style="list-style-type: none"> The project is within the traditional lands of the Ngiyampaa Wangaaypuwan people. Hera Resources completed an Aboriginal cultural heritage assessment (ACHA) in accordance with relevant guidelines which was updated as part of the Amendment Report. Both versions of the ACHA were prepared in consultation with Registered Aboriginal Parties (RAPs). One comment was received from a RAP regarding the methodology of the ACHA, however no comments were received regarding potential impacts associated with the project. Surveys completed for the ACHA identified 31 Aboriginal sites in the vicinity of the disturbance area for the project. Of these 31 sites, 29 are located outside of the disturbance area. The two sites within the disturbance area are culturally modified trees (The Peak CMT 6 and Federation Deposit CMT 18). The Peak CMT 6 is located in the solar farm area. Hera Resources propose to preserve the tree in-situ in this location with a 10 m buffer. Federation Deposit CMT 18 is located within the services corridor. Hera Resources committed to avoiding the tree as far as reasonably practical, but noted there is a residual risk that the tree cannot be avoided and would be directly impacted. If the tree cannot be avoided, Hera Resources would consult with RAPs to determine future management recommendations. 	<p>The Department recommends:</p> <ul style="list-style-type: none"> that the development does not cause any direct or indirect impact on any identified Heritage item located outside the approved disturbance areas; and requirements in the event any unknown Aboriginal object is discovered on the site.

Issue	Findings	Recommendations
	<ul style="list-style-type: none"> Heritage NSW were supportive of the proposed approach to Federation Deposit CMT 18 and the other recommendations in the ACHA to manage potential impacts to Aboriginal heritage. The Department considers that the predicted potential impacts can be appropriately managed under the recommended conditions of consent. There are no non-Aboriginal heritage items of local, state or national significance recorded in the vicinity of the project. 	
Soil and land capability	<ul style="list-style-type: none"> Hera Resources completed a land and soil capability assessment for the project. The assessment identified that land to be disturbed by the project has low agricultural productivity and is used for grazing of sheep and goats Hera Resources would salvage and manage soil resources during construction and operations and propose to rehabilitate the majority of land to pre-mining land capability, with the exception of infrastructure that could be used for agriculture or nature conservation activities. The Department considers that potential impacts to soil and land capability would be acceptable given the existing condition of the land and that the proposed management measures identified by Hera Resources are sufficient to minimise soil deterioration. 	<ul style="list-style-type: none"> Refer to rehabilitation conditions below
Hazards and risk	<ul style="list-style-type: none"> A preliminary risk screening identified that the project would involve the storage and transport of dangerous goods above thresholds identified in <i>State Environmental Planning Policy (Resilience and Hazards) 2021</i> and therefore the project is a potentially hazardous development and subject to a Preliminary Hazard Analysis (PHA) Hera Resources completed a PHA in accordance with the Department's hazard analysis guidelines. The PHA identified that the key risks related to the storage of chemicals for the processing plant at Hera Mine and the storage and transport of explosives for blasting at Federation Mine. The PHA identified that the proposed development would be identified as potentially hazardous but the risks would be acceptably low with the implementation of the engineering controls, operational controls and management controls recommended in the PHA. The Department's hazards team was satisfied the PHA was completed in accordance with relevant guidelines and provided recommended conditions of consent. 	<ul style="list-style-type: none"> Transport and store dangerous goods in accordance with relevant guidelines.
Greenhouse Gas	<ul style="list-style-type: none"> The project would generate around 32,635 t CO_{2-e}/year of Scope 1 greenhouse gas (GHG) emissions and would not generate Scope 2 emissions as all power would be 	<ul style="list-style-type: none"> Take all reasonable steps to improve energy efficiency

Issue	Findings	Recommendations
	<p>generated on site via the gas power plant and solar farms, which represent approximately 0.007% of Australia's GHG emissions.</p> <ul style="list-style-type: none"> • The Department notes Hera Resources approach of generating power from the proposed solar farm (25% of site power requirements) and on-site generators (75% of site power requirements) would result in the following minimisation to potential greenhouse gas impacts over the life of the project: <ul style="list-style-type: none"> ○ a saving of 110,000 t CO_{2-e} compared to a scenario where the solar farm is not included in the project; and ○ a saving of 163,500 t CO_{2-e} compared to a scenario where the project sourced electricity from the grid. • Hera Resources is required to calculate and report scope 1 and 2 GHG emissions annually under the National Greenhouse and Energy Reporting (NGER) scheme, in accordance with the requirements of the NGER Act 2007. • The Department considers that the predicted potential greenhouse gas impacts are acceptable and can be appropriately managed under the recommended conditions of consent. 	<p>and reduce greenhouse gas emissions of the development;</p> <ul style="list-style-type: none"> • Preparation of an Air Quality and Greenhouse Gas Management Plan
<p>Waste Management</p>	<ul style="list-style-type: none"> • Waste rock and tailings are the primary waste stream generated by the project and the Department's assessment of these matters is provided in Section 6.3. • Waste streams for the project would be generally consistent with existing operations at Hera Mine. Hera Resources would manage waste consistent with existing operations with wastes being managed, segregated and stored in accordance with relevant guidelines and best waste management practices. • The Department is satisfied that waste from the project would be handled and disposed of in accordance with current guidelines. 	<ul style="list-style-type: none"> • Minimise the waste generated by the development • Classify all waste in accordance with relevant guidelines; • dispose of all waste, except for waste rock, at appropriately licensed waste facilities.
<p>Rehabilitation</p>	<ul style="list-style-type: none"> • Hera Resources prepared a rehabilitation strategy which was updated as part of the Amendment Report. • The strategy identified that following the completion of mining, all surface infrastructure not suitable the final land use would be removed and all PAF material would be placed underground. • The proposed post-mining land use would include returning the site to a combination of agriculture (limited pastoral activities) and native vegetation. • Hera Resources proposed to manage potential long-term risks to the environment associated with the tailings storage facility through capping with a cover that would mimic a natural soil profile to limit rainfall infiltration and facilitate vegetation growth 	<ul style="list-style-type: none"> • rehabilitate the site in accordance with the conditions imposed on the mining leases(s) associated with the development under the <i>Mining Act 1992</i> • rehabilitate the site in accordance with the recommended rehabilitation objectives

Issue	Findings	Recommendations
	<ul style="list-style-type: none"> The Resources Regulator did not have any residual concerns regarding the proposed rehabilitation strategy. The Department notes that the Resources Regulator would be responsible for regulating rehabilitation outcomes under the <i>Mining Act 1992</i>. The Department considers that appropriate rehabilitation outcomes can be achieved for the project. 	<ul style="list-style-type: none"> prepare and implement a rehabilitation strategy
Social	<ul style="list-style-type: none"> Hera Resources prepared a social impact assessment in accordance with the Department's <i>Social Impact Assessment Guideline for State Significant Developments (2021)</i>. The Department notes that there is low population density in the immediate vicinity of the project and that social impacts would be experienced by individuals in the context of existing approved mining operations at Hera Mine, which is now in care and maintenance. The sections above have identified that amenity and health impacts would be low. The workforce accommodation at Hera Mine would mitigate potential impacts to rental and accommodation availability at Nymagee and Cobar. The social impact assessment identified that negative social impacts based on the aspects assessed above (amenity, traffic and Aboriginal heritage) would generally be of low significance and that positive impacts associated with ongoing employment and contributions to the Nymagee and Cobar community and local businesses would be of high significance. The Department accepts that the project would provide continuity and/or reinstatement of a significant number of local jobs, noting that Hera Mine has recently entered care and maintenance at the end of 2022. It is estimated around 15% of the workforce live within a 30 minute drive of Hera Mine and 50% live within a two hour drive. The Department has recommended conditions of consent requiring Hera Resources to enter into a planning agreement with Cobar Shire Council or make a Section 7.12 of the EP&A Act contribution to of \$2 Million. The planning agreement is in addition to road contributions Hera Resources must pay to maintain roads impacted by haulage. The planning agreement would provide the opportunity to offset some negative social impacts of the development subject to the allocation of funding by Council. Cobar Shire Council was not supportive of the recommended conditions and was concerned that there was the potential for the planning agreement value to be higher based on ongoing negotiations with Hera Resources. The Department notes that the \$2 million contribution has been 	<ul style="list-style-type: none"> Enter into a planning agreement with the local councils or make direct funding contributions

Issue	Findings	Recommendations
	<p>calculated in accordance with the <i>Cobar Shire Local Infrastructure Contributions Plan 2012</i> and that the conditions do not prevent the two parties from negotiating a planning agreement with a higher value.</p> <ul style="list-style-type: none"> The Department has also recommended that Hera Resources either enter into a planning agreement with Bogan Shire Council that includes a contribution to road safety upgrades of Nymagee-Hermidale Road directly fund the upgrade of a section of this road. Bogan Shire Council was generally supportive of the conditions. 	
Economic	<ul style="list-style-type: none"> Hera Resources prepared a social impact assessment in accordance with the NSW Government's <i>Guideline for the economic assessment of mining and coal seam gas proposals (2015)</i>. The economic evaluation identified that the project would provide a range of economic benefits including: <ul style="list-style-type: none"> around \$214 million (M) in annual direct and indirect regional output; around \$41 M in annual direct and indirect household income; employment of an operational workforce of up to 250 including the transition of 150-200 existing workforce positions from Hera Mine; and around \$74 M in royalties to NSW. A cost benefit analysis included in the EIS identified that the economic benefits of the project would outweigh the costs, with an estimated net present value (NPV) of \$162 million (7% discount rate). The Department accepts that the project would provide continuity and/or reinstatement of a significant number of direct and indirect jobs, noting that Hera Mine has recently entered care and maintenance at the end of 2022. The Department considers that the project would be an efficient use of resources which would foster significant economic benefits local and regional areas, and to NSW. 	<ul style="list-style-type: none"> None required

7 Evaluation

The Department has carried out a detailed assessment of the merits of the project, in accordance with the relevant requirements of the EP&A Act and EP&A Regulation, including relevant EPIs and agency advice. Apart from advice from Cobar and Bogan councils, the Department did not receive public submissions during the exhibition of the project.

The project is located within a sparsely populated rural environment and the project site is subject to existing approved mining operations at Hera Mine at its northern extent and would involve the continuation of existing mineral processing operations at Hera Mine.

Based on its assessment, the Department considers that the project has been designed in a way that avoids and minimises impacts on the environment to the extent practicable including:

- **Biodiversity and Aboriginal cultural heritage:** minimising and avoiding impacts by using existing infrastructure and disturbance areas at Hera Mine, and locating new infrastructure away from ecological constraints and Aboriginal heritage items where practical; and
- **Traffic and transport:** changes during the assessment of the project including an increased haulage truck size (from A-doubles to B-triples) and backfilling of ore trucks with tailings to reduce heavy vehicle movements, including the reduction of around 100 trips per day on Burthong Road between Hera Mine and Federation Mine.

The Department considers that the key issues of the project relate to impacts to the road network and traffic safety, impacts to native vegetation and the management of waste rock and tailings.

The Department considers that the project has been designed to avoid, mitigate and manage impacts to the road network and notes that the amendment of the application included a reduction in heavy vehicle movements compared to the original project.

The Department considers that all intersections would continue to operate at a good level of service and that the proposed haulage routes are suitable for the proposed haulage vehicles, subject to the upgrades proposed by Hera Resources and additional upgrades included in the conditions of consent, which the Department identified as being required to mitigate road safety risks in consultation with TfNSW and the local councils.

The Department has recommended conditions of consent including maximum haulage limits, preparation of a Traffic Management Plan, road maintenance contributions to the local councils and road upgrade requirements. Overall, the Department considers the potential traffic and transport impacts of the project are acceptable.

The project would disturb approximately 71.11 ha of native vegetation. The native vegetation that would be cleared does not include any endangered or critically endangered ecological communities listed under the BC Act or EPBC Act. The Department is satisfied that Hera Resources has designed the project to avoid, mitigate and manage biodiversity impacts where practicable. Hera Resources would retire ecosystem credits in accordance with the BC Act to offset residual impacts to native vegetation.

Exposure of PAF waste rock and tailings can cause acid and metalliferous drainage. The Department notes that this is an existing risk managed at Hera Mine and Hera Resources has advised that it would implement a range of management measures to avoid adverse impacts, including specific

engineering and water management controls and the development of a Waste Rock Management Plan and Tailings Management Plan. PAF waste rock would ultimately be returned underground for backfilling and tailings would be stored in the existing tailings storage facility at Hera Mine or used in paste-fill for backfilling completed stopes.

The project would also have other minor environmental and social impacts associated with amenity, Aboriginal heritage, hazards and greenhouse gas emissions.

The Department recognises that the project would facilitate the efficient recovery and processing of mineral resources utilising existing mining and surface facilities at Hera Mine.

The project would employ an operational workforce of up to 250 staff including the transition/reinstatement of 150-200 existing workforce positions from Hera Mine, noting the mine is currently in care and maintenance. The project would result in economic benefits to the surrounding regional area and to NSW of up to \$59.7 M in royalties and \$214 M in direct and flow on expenditure, as well as financial contributions to the local councils.

The Department considers the project represents a logical continuation of the workforce at Hera Mine, and is consistent with NSW strategic policies for minerals, metals and the Far West Region.

The Department considers that the predicted and potential environmental and social impacts of the project would occur in a sparsely populated rural environment which includes existing mining activities and could be appropriately managed and mitigated under recommended conditions of consent. In particular, the Department has recommended comprehensive measures to manage impacts to the traffic network and traffic safety, waste rock handling, tailings storage impacts to native vegetation. On this basis, the Department considers that the project's benefits significantly outweigh its costs, is in the public interest and should be approved, subject to strict conditions of consent.

8 Recommendation

It is recommended that the Director Resource Assessments, as delegate of the Minister for Planning:

- **considers** the findings and recommendations of this report
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant consent to the application
- **grants consent** for the State significant development application for the Federation Project (SSD 24319456) as amended, subject to the conditions in the attached development consent (see **Appendix C**)
- **signs** the attached development consent and recommended conditions of consent (see **Appendix C**).

Recommended by:



27/02/2023

Jack Turner

Senior Environmental Assessment Officer
Resources Assessment

Recommended by:



27/02/2023

Rose-Anne Hawkeswood

Team Leader
Resources Assessments

9 Determination

The recommendation is **Adopted / Not adopted**-by:

Stephen O'Donoghue

Director

Resource Assessments

Appendices

Appendix A – List of Key Documents

A1 – Environmental Impact Statement (EIS): Refer to folder “EIS” under the “Assessment” tab on the Department’s website at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/federation-project>

A2 – Submissions: Refer to folder “Submissions” tab on the Department’s website at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/federation-project>

A3 –Submissions Report: Refer to folder “Response to Submissions” under the “Assessment” tab on the Department’s website at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/federation-project>

A4 – Amendment Report: Refer to folder “Amendments” under the “Assessment” tab on the Department’s website at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/federation-project>

A5 – Agency Advice: Refer to folder “Agency Advice” under the “Assessment” tab on the Department’s website at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/federation-project>

A6 – Additional Information: Refer to folder “Additional Information” under the “Assessment” tab on the Department’s website at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/federation-project>

Appendix B – Statutory Considerations

The Department’s assessment of the Project has given consideration to all applicable statutory requirements (see Section 4). These include:

- the objects found in Section 1.3 of the EP&A Act; and
- the matters listed under Section 4.15(1) of the EP&A Act, including applicable environmental planning instruments and regulations.

Some of the key statutory requirements are addressed in further detail below.

B1 – Objects of the EP&A Act

A summary of the Department’s assessment against the current relevant objects (found in section 1.3 of the EP&A Act) are provided in **Table B1**.

Table B1 | Consideration of the Project against relevant objects of the EP&A Act

Objects of the EP&A Act	Consideration
(a) <i>to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State’s natural and other resources;</i>	<p>The project meets this object because it would:</p> <ul style="list-style-type: none"> • optimise recovery of mineral resources utilising existing surface facilities and infrastructure; • represent continuation of an existing land use at Hera Mine; • provide substantial royalties to the State; and • provide substantial ongoing employment and economic benefits to the State and region. <p>The Department considers that residual environmental and social impacts of the project could be appropriately managed under recommended conditions.</p>
(b) <i>to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment;</i>	<p>The Department’s assessment has sought to integrate all significant environmental, social and economic considerations. The Department considers that the project can be carried out in a manner that is consistent with the principles of ecologically sustainable development.</p>
(c) <i>to promote the orderly and economic use and development of land;</i>	<p>The project represents a continuation of an existing land use at Hera Mine the Federation Mine would be located in the vicinity (10km) of this land use. The project would facilitate the efficient recovery and processing of mineral resources utilising existing mining and surface facilities at Hera Mine. The Department considers this represents an orderly and economic use of the land.</p>
(e) <i>to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats;</i>	<p>The project would utilise existing surface infrastructure components at Hera Mine and new surface infrastructure has been designed to minimise requirements for vegetation clearing. The BDAR for the project identified that no listed threatened vegetation communities or flora species existing within the project site and that potential impacts to threatened species would not be significant.</p>
(f) <i>to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage);</i>	<p>The Department has assessed the likely impacts of the Project on Aboriginal cultural heritage and non-Aboriginal heritage. The Department recognises that the Project has the potential to impact one Aboriginal site however, considers that these impacts can be appropriately managed and mitigated under recommended conditions of consent. The project would not impact listed non-Aboriginal heritage items.</p>

Objects of the EP&A Act	Consideration
(i) <i>to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State; and</i>	The Department notified and consulted with Cobar Shire Council, Bogan Shire Council and other NSW government agencies. The Department has considered the issues raised by these agencies in its assessment.
(j) <i>to provide increased opportunity for community participation in environmental planning and assessment.</i>	The Department publicly exhibited the Project and did not receive submissions from the community.

B2 – Ecologically Sustainable Development

The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*, as follows:

“ecologically sustainable development requires the effective integration of economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:

- (a) the precautionary principle;*
- (b) inter-generational equity;*
- (c) conservation of biological diversity and ecological integrity; and*
- (d) improved valuation, pricing and incentive mechanisms.”*

The Department has considered ESD and its related principles and programs as follows:

Precautionary Principle

The ESD precautionary principle requires that: *“if there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation”*.

The Department has assessed the project’s threat of irreversible environmental damage and considers that there is sufficient scientific certainty to enable the determination of the application. The Department has considered all the available information presented and consulted closely with key Government agencies to obtain advice on various aspects of the proposal.

While it is acknowledged that the project would result in a number of environmental impacts of varying significance, the key matters that could result in serious or irreversible damage relate to unmitigated impacts on water resources.

The EIS, Submissions Report, Amendment Report and Department’s assessment has identified management and mitigation measures to address potential environmental impacts, and includes commitments and requirements to implement monitoring, auditing and reporting mechanisms.

Overall, the Department has assessed these potential impacts in detail (see **Section 6**) and considers that the recommended risk-based conditions and performance measures would provide appropriate protection for the environment and minimise the potential for any serious or irreversible environmental damage.

Intergenerational equity

The ESD principle of intergenerational equity requires that: *“the present generation should ensure that the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations”*.

The Department considers that the project does not conflict with the principle of intergenerational equity.

Intergenerational equity has been addressed through maximising efficiency and mineral resource recovery and developing environmental management measures which are aimed at ensuring the health, diversity and productivity of the environment are maintained or enhanced for the benefit of future generations.

The recommended performance measures and other conditions of consent would provide an appropriate degree of protection for the health, diversity and productivity of the environment and not constrain the ability of future generations to use or enjoy the project site in a similar way as in the present and recent past.

The Department acknowledges that emissions generated from mining operations are a contributor to climate change, which has the potential to impact future generations. However, the Department also recognises that there is a clear and increasing need to develop such mineral deposits, with copper, silver and zinc recognised as critical minerals for a range of future industries including renewables, recycling and waste management, advanced manufacturing and aerospace. Hera Resources will be required to review and implement best practice greenhouse gas emissions reduction and energy efficiency measures and detail these measures in an Air Quality and Greenhouse Gas Management Plan.

The Department's assessment of direct energy use and associated greenhouse gas emissions has found that these emissions would be low and comprise a very small contribution towards climate change at both the national and global scale.

The Department considers that the Project's socio-economic and positive downstream benefits generated by the production of mineral resources would benefit future generations in the short to medium term, particularly through the provision of gold as a rare and valuable commodity and copper for its use in low-carbon technologies.

Conservation of Biological Diversity and Ecological Integrity

The ESD principle of conservation of biological diversity and ecological integrity requires that: "*conservation of biological diversity and ecological integrity should be a fundamental consideration*" in decision making processes, such as the development consent process and the environmental impact assessment process which supports it.

The project's potential impacts on biodiversity have been outlined in the Department's assessment of the project. The Department considers that the conservation of biological diversity and ecological integrity has been applied through avoiding and minimising biodiversity impacts.

Improved Valuation, Pricing and Incentive Mechanisms

The ESD principle of improved valuation, pricing and incentive mechanisms requires that: "*environmental factors should be included in the valuation of assets and services*" in decision making processes, including by such means as the 'polluter pays' principle, full life cycle costing and cost-effective pursuit of environmental goals.

Valuation and pricing of resource has been considered through economic, social and cost-benefit analyses which have been completed as part of the EIS. The cost benefit analyses sought to weigh up the project's costs and benefits based on its full range of environmental, social and economic impacts. The Department has carefully considered the costs and economic benefits of the proposal and support the conclusion that it would deliver a significant net benefit to the local region and NSW (see **Section 6.4**).

B3 – Environmental Planning Instruments

Under section 4.15 of the EP&A Act, the consent authority is required to consider, amongst other things, the provisions of the relevant EPI's, including any exhibited draft EPIs⁴.

State Environmental Planning Policy (Planning Systems) 2021

The proposed development is declared to be State significant development under Division 4.7 of the EP&A Act as it is development for the purposes of mining and mining-related works that has a capital investment value of more than \$30 million, as specified in clause 5 of Schedule 1 of the State Environmental Planning Policy (Planning Systems) 2021.

The Minister for Planning is the consent authority for the application, however under the Minister's delegation of 26 April 2021, the Director Resources Assessments may determine the project because there were less than 15 unique submissions by way of objection, Cobar Shire and Bogan Shire Councils did not object to the proposal and Hera Resources did not make any political donations.

State Environmental Planning Policy (Transport and Infrastructure) 2021

The Transport and Infrastructure SEPP requires the consent authority to notify relevant public authorities about developments that may affect public infrastructure or public land. The Department notified Cobar Shire Council, Bogan Shire Council TfNSW and Crown Lands about the proposed project.

The Department has consulted with public authorities and considered the matters raised in its assessment of the project (see section 6). Where appropriate, the Department has also developed conditions of consent to address the recommendations and advice of these public authorities. The Department considers that such conditions would provide appropriate protection for public infrastructure. As such, the Department considers that the requirements of the Infrastructure SEPP have been satisfied.

State Environmental Planning Policy (Resilience and Hazards) 2021

Hazardous and offensive development (chapter 3)

Chapter 3 of this SEPP requires persons proposing to carry out development for the purposes of potentially hazardous industry to prepare a Preliminary Hazard Analysis (PHA) and to submit this with the development application. The EIS has considered the potential hazards and risks associated with the project, including the storage and transportation of hazardous goods.

The Department considers that suitable mitigation measures could be incorporated into the design of the project to ensure that it would meet relevant standards and be compatible with the existing or likely future use of land surrounding the mine. With the proposed measures in place, the Department considers that the potential hazards associated with the project can be managed.

The Department considers that the project would not increase risks to public safety and would not alter the consequences or likelihood of a hazardous event on the site or during materials transport. As such, the Department considers that the project is consistent with the provisions of this SEPP.

⁴ Note that due to the effect of clause 11 of the SRD SEPP, development control plans do not apply to SSD.

Remediation of land (chapter 4)

Chapter 4 of this SEPP relates to the remediation of contaminated land. Hera Resources has considered the potential land contamination matters associated with the project in its EIS (see section 8.1.4.2). The majority of proposed disturbance area at Federation Mine has previously been used for grazing and/or exploration activities.

The Department considers that the project would not have a significant risk of existing contamination and that the proposal is generally consistent with the aims, objectives, and provisions of this SEPP.

Environmental Planning Policy (Resources and Energy) 2021

Section 2.9 of the SEPP identifies that mining is permissible with consent on any land where development for the purposes of agriculture or industry may be carried out (with or without development consent). Consequently, the proposed development is permissible with consent under this SEPP, and the Commission may determine the application.

In addition, Part 2.3 of the SEPP lists a number of matters that a consent authority must consider before determining an application for consent to undertake development for the purposes of mining. The Department has considered these matters in its assessment of the proposed project and has included a brief summary of these considerations below.

Non-discretionary development standards for mining (section 2.16)

Section 2.16 identifies non-discretionary development standards for the purposes of section 4.15(2) of the EP&A Act in relation to the carrying out of development for the purposes of mining. Throughout section 6 of the projects EIS, Hera Resources has provided consideration of the applicable standards and whether or not the project meets them.

The Department agrees with the conclusions provided in this assessment.

Compatibility with other land uses (section 2.17)

The Department's assessment has considered the potential impacts of the project on other land uses in the area. This assessment has been undertaken in consideration of the public benefits of the project, surrounding land uses and measures to avoid, mitigate or minimise any land use incompatibility.

Overall, the Department is satisfied that with the implementation of the recommended conditions, including performance measures and adaptive management, the project could be managed to minimise any potential land use conflicts and meet the aims, objectives, and provisions of section 2.17.

Compatibility with mining, petroleum and extractive industries (section 2.19)

There are no other mining operations immediately near the project, and the Department is satisfied that the project has been designed in a manner that is compatible with, and would not adversely affect, adjacent current or future mining-related activities.

Natural resource management and environmental management (section 2.20)

The Department has recommended a number of conditions aimed at ensuring that the project is undertaken in an environmentally responsible manner, including but not limited to, conditions in relation to water resources, amenity and biodiversity.

Resource recovery (section 2.21)

The Department has considered resource recovery in its assessment of the project and is satisfied that the project can be carried out in an efficient manner that optimises resource recovery within environmental constraints.

The Department has recommended conditions to ensure the project can be carried out in an efficient manner that optimises resource recovery, while giving appropriate recognition and protection for the environmental values that may be affected.

Transport (section 2.22)

Section 2.22 aims to limit the transport of coal, other minerals and their ores, and extractive materials on public roads. All ore extracted from the mine would be processed on site and the concentrate would be transported off site.

The Department has consulted with the applicable road authorities in relation to the project and taken this advice into consideration in its assessment. The Department has also recommended conditions in relation to limit traffic impacts from the project.

Rehabilitation (section 2.23)

Section 2.23 outlines particular requirements relating to consideration of whether any consent granted should be subject to conditions aimed at ensuring rehabilitation of land disturbed by mining and, in particular, whether conditions should require preparation of a rehabilitation management plan, appropriate treatment of waste, remediation of soil contamination and the avoidance of public safety risks.

Hera Resources has provided a rehabilitation strategy for the project. The strategy seeks to, where practicable, progressively create final landforms and integrate the sustainable development principles into all components of the project, including rehabilitation and mine closure.

The Department has considered the final landform proposed by Hera Resources and considers that the proposed final landforms and rehabilitation plans could be achieved to meet contemporary best practice in the NSW mining industry, and has recommended a comprehensive suite of conditions relating to rehabilitation of land disturbed by the project.

Summary of this SEPP (Chapter 2)

Based on its assessment of the project, the Department considers that it can be managed in a manner that is generally consistent with the aims, objectives and provisions of Chapter 2 of this SEPP

Appendix C – Recommended Instrument of Consent

Refer to folder “Recommendation” under the “Assessment” tab on the Department’s website at:

<https://www.planningportal.nsw.gov.au/major-projects/projects/federation-project>