MAJOR PROJECT ASSESSMENT: Hera Project

Director-General's
Environmental Assessment Report
Section 75I of the
Environmental Planning and Assessment Act 1979

July 2012

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Cover image: Hera Project, http://www.ytcresources.com/i/View_HeraNymagee.aspx

EXECUTIVE SUMMARY

Hera Resources Pty Limited proposes to develop and operate the Hera Project, located approximately 100km south east of Cobar in Western New South Wales, and 4km south of the village of Nymagee. The project consists of a single underground mine and involves the extraction and processing of up to 355,000 tonnes per annum of ore containing gold, silver, lead and zinc, over eight and a half years.

The proposal constitutes a "transitional Part 3A project" under Schedule 6A of the *Environmental Planning & Assessment Act 1979* (EP&A Act). It was originally classified as a major project under Part 3A as it is development for the purpose of mining with a capital investment value of more than $30 million, and consequently requires the Minister's approval. However, under the Minister's delegation the Deputy Director-General, Development Assessment and Systems Performance, may determine the project application.

The Department exhibited the Environmental Assessment (EA) for the project between 17 November 2011 and 19 December 2011. During that time, the Department received seven submissions, all of which were received from State and local government agencies. All public authority submitters are now satisfied with the project, and do not object to its approval. The key issues raised in submissions included surface and groundwater impacts, biodiversity offsets and traffic impacts.

The Department has carried out a detailed assessment of the merits of the project, in accordance with the requirements of the EP&A Act. This assessment has found that given the relatively small scale of the project, its general isolation and configuration well within a large, screened site, the project has limited potential for significant impacts outside of the site boundaries. Key issues including water, biodiversity and traffic impacts have been carefully assessed and adequate mitigation measures have been developed in consultation with the relevant agencies to ensure that the potential impacts of the project are minimised.

Although the project may result in the localised drawdown of groundwater, the Department is satisfied that impacts are unlikely to be significant given the limited number of bores and groundwater users in the vicinity, the generally poor quality of the water and the absence of groundwater dependent ecosystems in the vicinity of the site. With the implementation of appropriate storage design and surface water control measures, including a comprehensive water management plan, the Department is satisfied that the potential water quality impacts of the project can be adequately managed.

The project would require the removal of 75.2 hectares (ha) of remnant native vegetation, which would be offset by the conservation of vegetation in perpetuity on a portion of the 'Chelsea' property, located approximately 14.5 kilometres south-east of the project site. The Department has recommended conditions of approval requiring the preparation of a Biodiversity Offset Strategy, in consultation with the Office of Environment and Heritage, which would identify the appropriate area of land and describe the management measures to be implemented to conserve and improve biodiversity values over time.

The Department has recommended a range of conditions to ensure that the impacts are suitably mitigated, managed and/or offset. These conditions include requirements for Hera Resources to:

- provide compensatory measures to off-site bore users in the event of adverse impacts on the supply of water from existing bores as a result of the project;
- enter into a Planning Agreement with Cobar Shire Council for contributions towards a community fund, road maintenance and public infrastructure and services;
- monitor and regularly report on its environmental performance; and
- commission independent audits of its operations to ensure that it is complying with its conditions of approval and implementing best practice on the site.

The Department's assessment also found that the project would provide economic and social benefits to both the region and NSW, including employment of up to 100 employees during site establishment and 100 employees during operation, a capital investment of $80 million, and royalties and payroll taxes for the State Government.

On balance, the Department believes that the project's benefits sufficiently outweigh the potential impacts and that it is in the public interest. The project should therefore be approved subject to the recommended conditions.

1. BACKGROUND

Hera Resources proposes to develop the Hera Project, an underground mine located approximately 100km south east of Cobar in Western New South Wales (see **Figure 1)**.

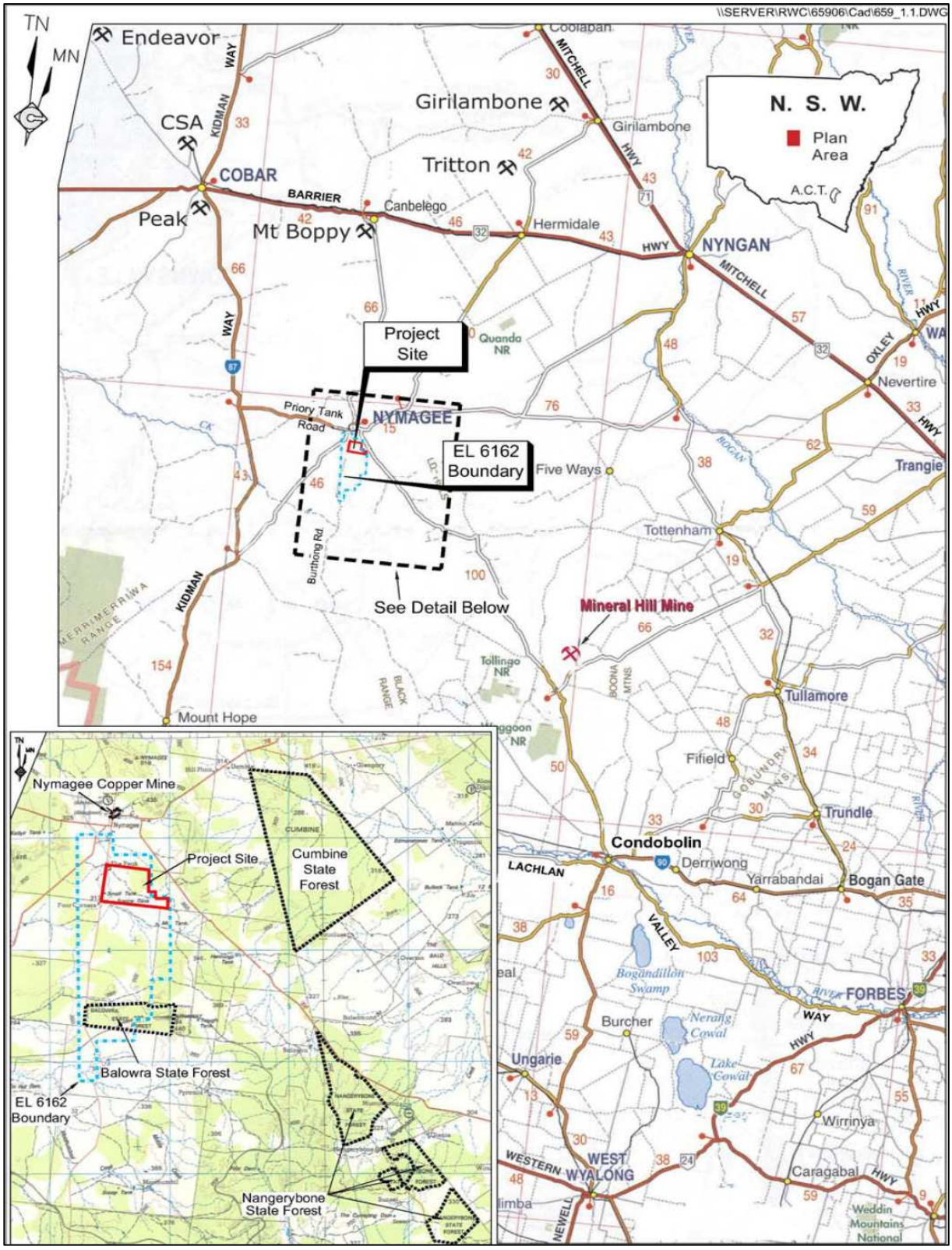

Figure 1: *Regional context*

1.1 Project Setting

The Hera Project is located approximately 4km south of the village of Nymagee, east of Kidman Way in the Cobar Shire Local Government Area (LGA). The project site is bounded by land held under five perpetual leases, and a section of land owned by the State of NSW, as well as Burthong Road in the west and Nymagee-Condobolin Road to the east.

The land surrounding the project is used for several purposes including agricultural activities, principally sheep grazing, nature conservation and forestry, mineral exploration and mining, and areas of rural and rural residential development.

The then Department of Primary Industries (now the Division of Resources and Energy (DRE), within the Department of Trade and Investment, Regional Infrastructure and Services (DTIRIS)) approved the construction of an exploration decline in April 2007 for the purposes of bulk sampling as a Category 3 exploration activity under Part 5 of the EP&A Act. These works have mostly been implemented, with the exception of a few ongoing operations. The project would include the continued use of this infrastructure following approval.

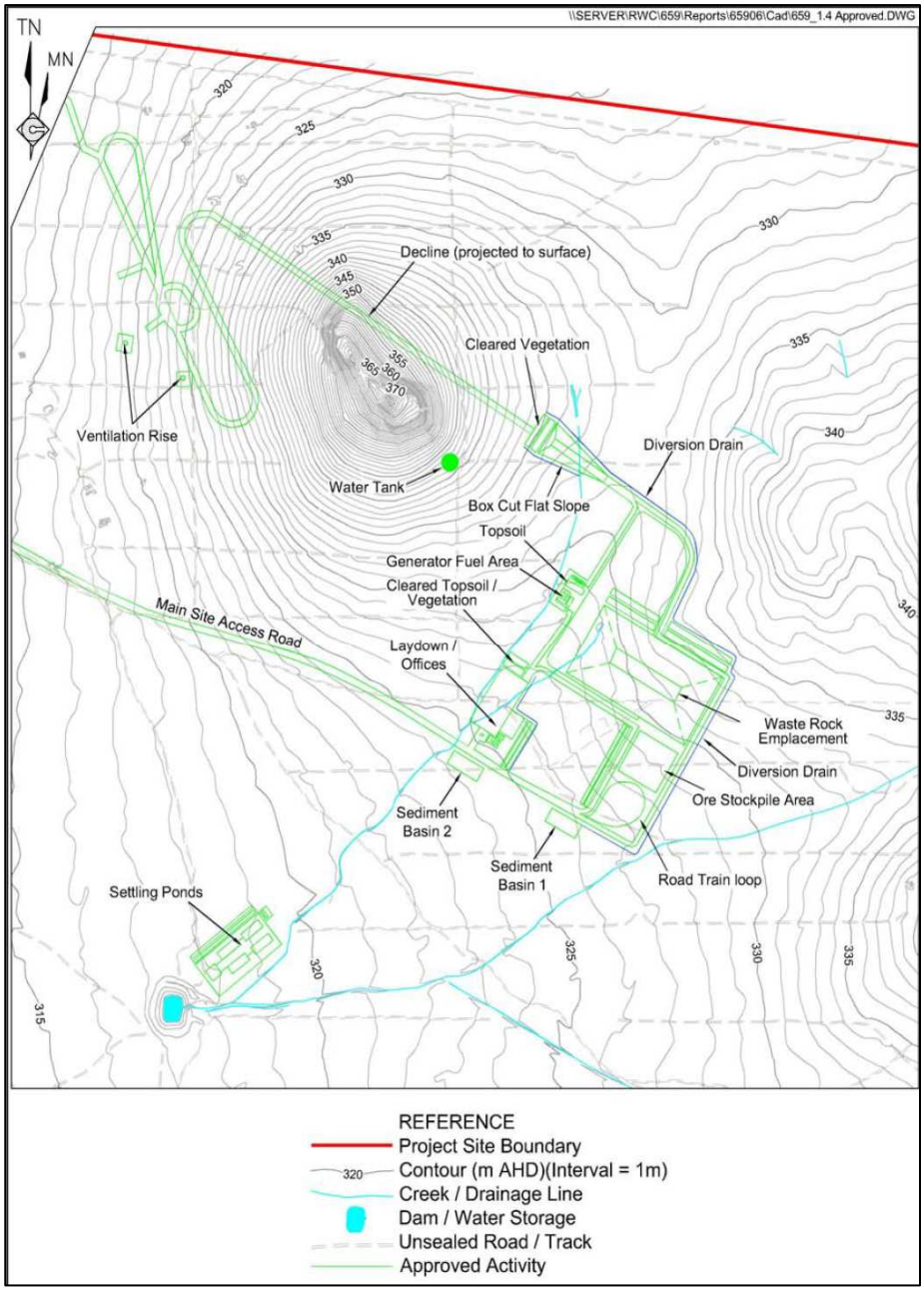

Figure 2: *Existing Approved Site Infrastructure*

2. PROPOSED PROJECT

Hera Resources proposes to develop a new underground mine for the production of gold, silver, zinc and lead for domestic and international markets (the Hera Project). The key components of the project are summarised in **Table 1** and depicted in **Figure 3**. The project is described in detail in Hera Resources' Environmental Assessment (EA), which is attached as **Appendix A**.

Table 1: *Major Components of the Hera Project*

Aspect	***Summary***
Project Summary	Development of an underground mine and ancillary infrastructure, including: • extracting and processing up to approximately 355,000 tonnes of ore per year; • producing approximately 50,000 tonnes of bulk lead and zinc concentrate and gold-silver doré (unrefined bars) per year; • constructing and operating ancillary infrastructure; and • progressively rehabilitating disturbed areas.
Project Area	Approximately 1,532 hectares
Disturbance Area	Approximately 77.3 hectares
Mining and Reserves	Extraction of approximately 1.9 million tonnes using conventional sublevel open stoping mine techniques.
Processing and Facilities	Mined ore would be processed through the on-site processing plant and would comprise a crushing and grinding circuit, cyanide leach circuit (including leach tanks, Merrill-Crowe treatments and the use of calcining ovens for the production of gold-silver doré) and flotation circuit for the production of land and zinc concentrate.
Project Life	Eight and half years
Proposed surface infrastructure	The project would require construction of: • a box cut, portal, decline, processing plant and a run-of-mine (ROM) pad; • a temporary waste rock emplacement and a tailings storage facility; • a site access road and intersection to allow site access from Burthong Road; • ancillary infrastructure, including site offices, soil stockpiles, core yards, internal roads and tracks and surface water management structures.
Water Demand and Supply	The maximum predicted project-related water requirement is 187 million litres per year (ML/year) comprising water required for processing operations (167 ML/year) and dust suppression (20 ML/year). This water would be sourced from: 1. groundwater extracted from the mine void and pumped to the raw water dam; 2. stormwater run-off stored in on site storage tanks; and 3. groundwater sourced from four bores located within the project site. The maximum groundwater entitlement for the site is 240 ML/year.
Tailings Management	Approximately 1.6 million cubic metres (m^3) of tailings would be produced during the life of the project. The tailings would be directed to the tailings storage facility, which would cover an area of approximately 44 ha, south of the processing plant.
Waste Rock Management	Approximately 280 000 m^3 of waste rock would be generated over the life of the project. It would be used in construction of surface infrastructure, during stope backfilling operations or placed in a temporary waste rock emplacement (with a maximum designed volume of approximately 100 000 m^3). No waste rock material would remain on the surface at the completion of mining operations.
Transport	Final products would be transported via public roads to either the Endeavour mine, the Hermidale rail siding or the Cobar rail siding for onward transport by rail.
Employment	Approximately 100 full-time equivalent positions during the establishment phase and up to 100 full time equivalent positions during the operational phase.
Hours of Operation	• Processing, maintenance, mining and construction operations – 24 hours per day; • Vegetation clearing and topsoil stripping – 7:00am to 6:00pm; and • Transportation operations: 7:00am to 10:00pm.
Biodiversity Offset	The project would result in the removal of 75.2 ha of native vegetation. To compensate for this loss, Hera Resources has committed to conserving part of the 'Chelsea' site in perpetuity (located approximately 14.5 km to the southeast of the project).
Final Landform and End Land Use	The site would be progressively rehabilitated to create a shaped and geotechnically stable final landform suitable for a mixed end land use of grazing and nature conservation.
Capital Investment Value:	Approximately $80 million

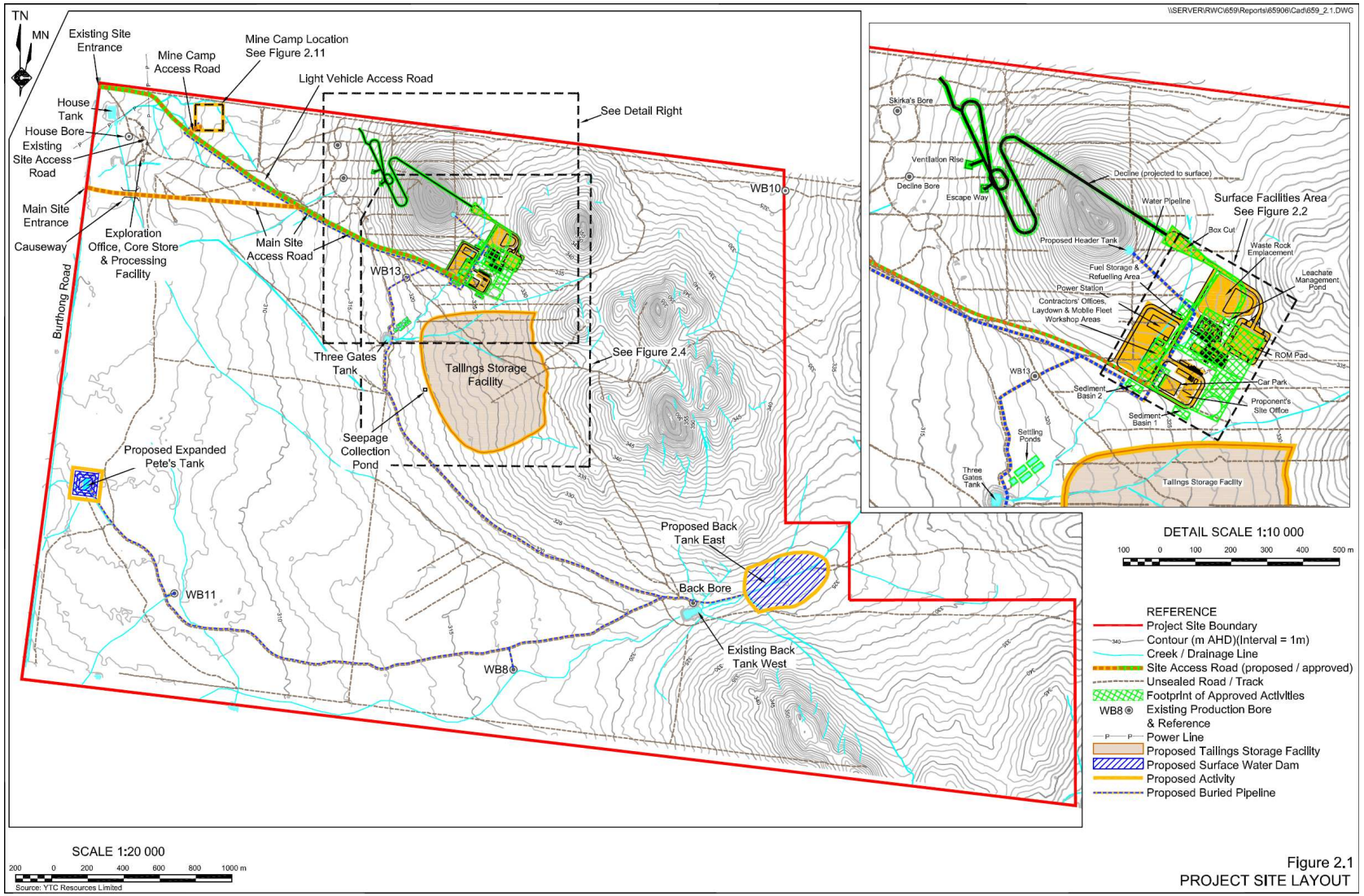

Figure 3: *Project Layout*

3. STATUTORY CONTEXT

3.1 Major Project

Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act), as in force immediately before its repeal on 1 October 2011 and as modified by Schedule 6A to the Act, continues to apply to the project application, since it is a "transitional Part 3A project" for the purposes of Schedule 6A. The proposal was originally classified as a major project under Part 3A, because it constitutes development for the purpose of mining with a capital investment value of more than $30 million, and therefore meets the criteria under clause 5(1)(c), Schedule 1 of the then *State Environmental Planning Policy (Major Development) 2005.*

Consequently, the Minister for Planning and Infrastructure is the approval authority for the project application. However, the Deputy Director-General, Development Assessment and Systems Performance, may determine the project application under the Minister's delegation of 14 September 2011, since:

- there were less than 25 public submissions in the nature of objections; and
- the local Council did not object to the application.

3.2 Permissibility

The project is permissible with development consent under *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* (the Mining SEPP) because it is development for the purpose of mining on land on which industry or agricultural are permissible uses. Relevantly, the project site is zoned 1(a) General Rural under the *Cobar Local Environmental Plan 2001*. Both agriculture and industry are innominate permissible uses in the 1(a) General Rural zone.

3.3 Other Approvals

Under section 75U of the EP&A Act, a number of other approvals have been integrated into the major project approval process and are not required to be separately obtained for the project. These include various water-related approvals to take and use water, and to undertake works within 40 metres of a watercourse, under the *Water Act 1912* and *Water Management Act 2000*.

Under section 75V of the Act, a number of further approvals are required to be obtained, but these must be approved in a manner that is consistent with any Part 3A approval for the project. These include:

- a mining lease under the *Mining Act 1992*;
- an Environment Protection Licence under the *Protection of the Environment Operations Act 1997*; and
- consent under the *Roads Act 1993* to undertake works within a road reserve.

The Department has consulted with the relevant Government authorities responsible for these other approvals (see Section 4) and has considered the issues relating to these approvals in its assessment of the project (see Section 5). None of these authorities object to the project on grounds related to these other approvals.

3.4 Exhibition and Notification

Under section 75H(3) of the EP&A Act, the Director-General is required to make the EA for the project publicly available for at least 30 days. After accepting the EA for the project, the Department:

- made the EA publicly available from 17 November 2011 until 19 December 2011:
  - on the Department's website;
  - at the Department's Information Centre, Cobar Shire Council's office and at the office of the Nature Conservation Council;
- notified relevant State Government authorities and Cobar Shire Council by letter; and
- advertised the exhibition in local media.

During the assessment process, the Department also made a number of documents available for viewing or download on its website, including the project application, the Director-General's environmental assessment requirements, the EA and the Response to Submissions.

3.5 Environmental Planning Instruments

Under Section 75I of the EP&A Act, the Director-General's report is required to include a copy of, or reference to, the provisions of environmental planning instruments that substantially govern the carrying out of the project.

The Department has reviewed section 3.3 of the EA and considers that Hera Resources has adequately considered the application of environmental planning instruments to the project. Of note with respect to the application of environmental planning instruments:

- the site does not constitute State or regional significant agricultural land under *State Environmental Planning Policy (Rural Lands) 2008*;
- dangerous goods to be stored and handed on the site would not exceed the trigger thresholds for the preparation of a Preliminary Hazard Analysis under *State Environmental Planning Policy No. 33 – Hazardous and Offensive Development*; and
- Hera Resources has considered and addressed the potential interactions with infrastructure and the heads of consideration outlined under *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007* in relation to those matters.

The Department is satisfied that Hera Resources has adequately considered the requirements of applicable environmental planning instruments as part of the assessment of the project and that none of these instruments substantially govern the carrying out of the project.

3.6 Objects of the Environmental Planning and Assessment Act 1979

Decision-makers should consider the objects of the EP&A Act when making decisions under the Act. These objects are detailed in section 5 of the Act, and include:

'The objects of this Act are:

(a) to encourage:

(i) the proper management, development and conservation of natural and artificial resources, including agricultural land, natural areas, forests, minerals, water, cities, towns and villages for the purpose of promoting the social and economic welfare of the community and a better environment,

(ii) the promotion and co-ordination of the orderly and economic use and development of land,

…

(vi) the protection of the environment, including the protection and conservation of native animals and plants, including threatened species, populations and ecological communities, and their habitats, and

(vii) ecologically sustainable development (ESD)'

The Department is satisfied that the project encourages the proper use of resources (Object 5(a)(i)) and the promotion of orderly and economic use of land (Object 5(a)(ii)).

The encouragement of environmental protection (Object 5(a)(i)) is considered in detail in Section 5 of this report. Based on this consideration, the Department is satisfied that the impacts of the project can be mitigated and/or managed to ensure an acceptable level of environmental performance.

Finally, the Department has fully considered the encouragement of ecologically sustainable development (ESD) (Object 5(a)(vii)) throughout its assessment of the merits of the project application, and sought to integrate all significant economic and environmental considerations and avoid any serious or irreversible damage to the environment, based on an assessment of risk-weighted consequences. Based on this consideration, the Department is satisfied that the project can be carried out in a manner that is consistent with the principles of ESD.

3.7 Statement of Compliance

Under section 75I of the EP&A Act, the Director-General's report is required to include a statement relating to compliance with the Director-General's environmental assessment requirements issued with respect to the project. The Department is satisfied that the environmental assessment requirements have been complied with.

4. CONSULTATION

During the exhibition period, the Department received a total of seven submissions on the project, all of which were made by State and local government agencies. A full copy of the submissions is attached in **Appendix B**. A summary of the issues raised in submissions as well as any concerns and clarifications required is provided below.

4.1 Issues Raised in Submissions

Cobar Shire Council did not object to the proposal, however recommended a number of conditions of approval. Council initially recommended that Hera Resources make contributions towards ongoing road maintenance and community consultation, and that Hera Resources be required to construct the access road to the mine for heavy vehicles and the associated intersection, along with improved guide posting and reflectorisation on the roads used by the mine. These recommendations have been taken into account in drafting the recommended approval conditions. Council has reviewed these conditions and has no residual concerns.

The **Environment Protection Authority (EPA)** stated that it could support the project, subject to the provision of further information on some key issues and the implementation of recommended conditions. EPA recommended the imposition of appropriate conditions of approval, including that:

- an appropriate biodiversity offset is acquired;
- measures are implemented to protect groundwater resources, especially around the tailings storage facility including adequate lining;
- appropriate limits are placed on the levels of cyanide in both the tailings storage facility and the process water dam; and
- a water management plan be required in order to protect and manage both surface and ground water resources, including a site water balance, ongoing monitoring and contingency measures.

Hera Resources provided further information to EPA in its Response to Submissions (RTS) document and through further email correspondence. The Department has taken EPA's recommendations into account in drafting recommended approval conditions. EPA has reviewed these conditions and has no residual concerns.

The **NSW Office of Water (NOW)** submission raised some concerns about uncertainty in the groundwater modelling and the potential for drawdown impacts, however noted that appropriate conditions of approval, including ongoing modelling requirements and a comprehensive monitoring program, would adequately address these concerns. NOW recommended conditions of approval that would require Hera Resources to obtain the relevant water licences under the *Water Act 1912* and ensure it has sufficient water for all stages of the project.

The **Department of Primary Industries (DPI) - Catchment and Lands Division** raised no significant concerns, however recommended some conditions of approval. DPI recommended dust suppression measures including spraying water (non-saline and non-contaminated) on ore handling/stockpile areas and roads. Additionally, DPI requested that further information be provided about how potentially contaminated waste rock and polluted materials would be sealed from groundwater flows within the mine's underground workings after rehabilitation had been completed and the groundwater levels had recovered.

DRE, within DTIRIS recommended a condition requiring a Rehabilitation Environmental Management Plan (REMP) to provide further details regarding the site's rehabilitation post-mining. DRE also requested that an ore reserve estimate be provided. In addition, DRE recommended that any Part 3A approval should cover the on-going use of the temporary works on site which were approved under Part 5 of the EP&A Act. Hera Resources provided further information to DRE in its RTS document. DRE has reviewed the recommended conditions of approval and has no residual concerns

The **DPI – Aquaculture, Conservation and Marine Parks Branch** recommended that any road or causeway construction over key fish habitat (third order streams or above) should not block fish passage and should be undertaken in accordance with the DPI Fisheries *Policy and Guidelines for Fish Friendly Waterway Crossings* and *Why Do Fish Cross the Road?*

NSW **Roads and Maritime Services (RMS)** did not object to the project and raised no concerns.

4.2 Response to Submissions

Following the public exhibition period, Hera Resources prepared a RTS to address the issues raised in submissions (refer to **Appendix C**). The RTS provided further information as requested by EPA, NOW and DPI, particularly in relation to groundwater impacts and in particular the tailings storage facility. It also provided the following additional information:

- further detailed assessment of Aboriginal heritage and European heritage, including updates to older assessments and further field work in areas that were not previously surveyed or limited in terms of survey intensity; and
- assessment of the alternative biodiversity offset site for the project, given that Hera Resources' preferred offset site could not secured.

The RTS was notified on the Department's website and provided to all of the agencies who made a submission on the project. Hera Resources also provided further information to both the Department and EPA in relation to the technical specifications for the proposed tailings storage facility. All issues raised by the agencies in submissions have now been resolved or adequately addressed through the recommended conditions of approval.

5. ASSESSMENT

The Department considers that the key issues associated with the project are:

- water issues, particularly in relation to the potential for adverse impacts on groundwater through drawdown or contamination;
- flora and fauna impacts; and
- traffic impacts.

5.1 Water Resources

The project raises two key water-related issues:

1. groundwater drawdown impacts associated with mine dewatering; and
2. potential contamination of groundwater or surface water with hazardous materials handled on the site (particularly cyanide-containing materials).

Groundwater Drawdown

The EA includes a groundwater assessment undertaken by the Impax Group that considers the potential impacts of the project on local and regional hydrogeology, including potential drawdown. Impax undertook a review of available groundwater bore information from the NOW database and supplementary information from groundwater studies undertaken by GeoTerra Pty Ltd.

The project site is typically underlain by less than 3 metres of soil and alluvium, which do not contain significant groundwater resources. However, groundwater is encountered in the fractured rock aquifers in the sandstone and siltstone layers below the alluvium. The uppermost water bearing zone is typically located between 70 and 140 metres below ground level.

There are only nine registered bores within ten kilometres of the site (four associated with the project, and five private third-party bores). Of the five non-project bores, two are monitoring bores and three are registered for stock watering. Under the most recent groundwater exploration program, an additional 10 exploration bores have been drilled as pumping and monitoring bores. Groundwater quality testing in the EA indicates that the groundwater is not suitable for human consumption or irrigation (except for the most salt-resistant species).

The EA states that the four registered bores located within the project site (WB8, WB11, WB13 and the 'Back Bore') would only be used for water supply as a last preference i.e. in the event that there is insufficient water supply from either the groundwater associated with mine dewatering or stormwater storage (from the Three Gates Tank, the proposed expanded Pete's Tank or the proposed Back Tank East). The EA reports that during the early stages of the project, groundwater dewatering and stormwater runoff would be sufficient to meet the maximum water demands of the project, although this is unlikely to be the case at full production.

Results of analytical modelling in the EA predict that groundwater inflows would increase from a range of nil-4.6L/s to a range of 12-93L/s as a result of the proposed mining operations. Based on these levels of groundwater inflow, the predicted extent of the radius of influence (the depression zone)

would be between 5,880 and 15,850 metres from the centre of the mine. The EA predicts that groundwater would return to pre-mining levels within 20 to 100 years of cessation of mining.

However, the EA also states that a conservative modelling methodology was used, which overestimates both the groundwater inflow and extent of groundwater drawdown as it assumes that the aquifer is infinite in lateral extent. The EA reports that standing water levels in the registered bores range from 15 to 100 metres. This large variation may indicate the presence of several discrete aquifers, which are likely to have a low or nil recharge boundary within 1,000m of the proposed underground mine. This means groundwater is unlikely to flow laterally as far as it would otherwise, so groundwater inflow would likely be significantly reduced (to approximately 0.4 L/s).

Under the conservative modelling presented in the EA, at the maximum mining depth (200 metres below ground level), mine dewatering may result in groundwater drawdown up to 3.52 kilometres from the centre of the mine. There are only two non-Project bores located within this area – GW017386 (3.1 kilometres from the mine) and GW017385 (2.4 kilometres from the mine) – however, the EA concludes that potential adverse impacts on standing water levels would only occur at GWO17386. However, the Department notes that significant impacts on these bores are unlikely if a low or nil recharge boundary is encountered within 1 000m of the mine, as predicted in the EA.

Notwithstanding, Hera Resources has committed to monitoring GW017386, and if adverse impacts are observed, to implement mitigation measures such as deepening and re-equipping the bore or providing alternative water supplies. In addition, for all non-Project bores, the Department has included a recommended condition of approval requiring Hera Resources to provide compensatory water supply to any owner of privately-owned land whose water entitlements are adversely impacted.

Taking into account the limited number of bores and groundwater users in the vicinity, the generally poor quality of the water and the absence of groundwater dependent ecosystems in the vicinity of the project site, the Department, EPA and NOW are satisfied that the compensatory and mitigatory measures required in the recommended conditions of approval are adequate to manage any drawdown impacts from mine dewatering.

Contamination of Surface Water and Groundwater

Given that the proposal involves the storage and use of hazardous materials, including cyanide-containing tailings, there is a potential for contamination of surface waters (in the event of a site overflow/discharge) and groundwater (through site seepage).

The site is typically not subject to flooding as it is characterised by a series of ill-defined, ephemeral drainage lines. Hera Resources has committed to a tailings storage facility which would be designed, constructed and maintained to prevent overtopping from the probable maximum flood. Subject to the implementation of appropriate surface water management measures as required in the recommended conditions of approval, the Department is satisfied that the risk of overtopping of the tailings storage facility during wet weather, and consequential contamination of surface water, is considered to be negligible.

To prevent seepage of cyanide-containing materials from water storage structures, Hera Resources has committed to achieve a maximum permeability of 1×10^{-8} m/s in the floor and walls of the tailings storage facility to a depth of 600 mm. The tailings storage facility is also underlain by at least 20 m of in-situ bedrock with a permeability of 2×10^{-9} m/s to 3×10^{-9}, which would further impede seepage of process waters.

EPA initially recommended a maximum permeability of 1×10^{-9} m/s in the floor and walls of the tailings storage facility to a depth of 900 mm as it had residual concerns about potential lateral movement of any seepage within a layer of gravelly/sandy material (approximately 600 mm) above the in-situ bedrock. However, Hera Resources has committed to the construction of a collection drainage system down to the level of the bedrock to ensure that any seepage is captured and then transferred to a lined collection pond.

Following consultation with EPA, the Department has recommended conditions of approval requiring a Water Management Plan which must include detailed documentation of the operation of the seepage collection and storage system relating to the tailings storage facility and associated maintenance requirements. In addition, the recommended conditions of approval specifically require ongoing monitoring and management of the tailings storage facility and the seepage collection system.

The Department has also included a further condition of approval requiring that the leachate management pond, seepage collection pond, process water dam and raw water dam are lined to achieve the lower permeability of 1 x 10^{-9} m/s to a depth of at least 900 millimetres of clay.

The Department has confirmed, in consultation with the EPA and NOW, that the proposed design measures to be applied to the project to prevent overtopping of contaminated water storages and seepage into the groundwater system are adequate and consistent with good environmental practice. Provided these design outcomes are achieved, the Department is satisfied that the project presents a minimal contamination risk to groundwater and surface water.

Conclusion

The Department is satisfied that the project can be suitably managed to ensure there are no significant impacts on the region's surface or groundwater resources. However, the recommended conditions of approval require Hera Resources to:

- ensure that it has sufficient water for all stages of the project and if necessary, adjust the scale of mining operations to match its available water supply;
- provide suitable compensation or compensatory measures to the owners of any privately-owned land whose water supply is adversely affected by the project;
- ensure all surface water discharges from the site comply with limits in any environment protection licence granted by EPA;
- design storage facilities to achieve conservative permeability standards and with the capacity to contain significant rainfall events;
- prepare and implement a Hazardous Materials Management Plan (focussing on management of sodium cyanide) in consultation with NOW, EPA, Council, RMS, WorkCover NSW and DRE; and
- prepare and implement a comprehensive Water Management Plan for the mine in consultation with EPA and NOW.

5.2 Flora and Fauna

The EA includes an assessment of the potential biodiversity impacts of the project, prepared by OzArk Environmental and Heritage.

The key flora and fauna impact associated with the project would be loss of habitat caused by vegetation clearing on the site. The use of cyanide in dissolving gold from the crushed ore also poses potential impacts to avian and other fauna, if not managed in a manner that avoids fauna access to toxic materials.

Flora and fauna

The EA presents the outcomes of vegetation surveys and estimates of areas within the project site. This information is summarised in the table below, with the distribution of vegetation communities across the site shown in **Figure 4**. Overall, 75.2 ha of native vegetation would be cleared.

Table 2: *Vegetation Clearing*

Vegetation Community	Area to be Disturbed (ha)	Percentage of Project Site Vegetation (%)	Percentage of 'The Peak' Vegetation (%)
Benson 103 - Poplar Box – Gum-barked Coolibah – White Cypress Pine	58.4	3.8%	2.74%
Benson 103 – Bimble Box dominated	10.2	0.7%	0.48%
Benson 103 – White Cypress Pine dominated	1.7	0.1%	0.08%
Benson 103 – Eremophila and hopbush regrowth	1.6	0.1%	0.08%
Benson 103 – Yarren (*Acacia hemaphylia*)	0	0%	0%
Benson 174 – Mallee – Smooth-barked Coolibah	3.2	0.21%	0.15%
Benson 180 – Grey Mallee – White Cypress Pine	0.1	0.01%	0.01%
Bothriochloa biloba	0	0%	0%
Cleared/ disturbed areas	2.1	0.13%	0.10%
TOTAL	**77.3**	**5.0%**	**3.6%**

Flora surveys of the proposed mine site identified 135 flora species, of which 133 are native and 2 are exotic. None of the vegetation communities on the site are classified as Endangered Ecological Communities, although a small area of the threatened Lobed Blue-grass (*Bothriocloa biloba*) (listed under the *Environment Protection and Biodiversity Conservation Act 1999*) has been identified in the north-west corner of the site. Identified individuals of this species would be located outside the disturbance footprint of the project.

A further EPBC and TSC listed threatened species, the Cobar Greenhood Orchid (*Cryptostylis cobarensis*), has not been identified on the site, but its presence cannot be entirely discounted. The EA concludes that the potential presence of this species on the site is low given the level of historical disturbance.

Fauna surveys undertaken to inform the EA, and early surveys conducted in 2006, have identified 103 (97 native and six introduced) and 145 (139 native and six introduced) species, respectively. Of these, 13 are listed as threatened under the TSC and/ or the EPBC Act:

- Spotted Harrier (*Circus assimilis*);
- Major Mitchell's Cockatoo (*Cacatua leadbeateri*);
- Diamond Firetail (*Stagonopleura guttata*);
- Hooded Robin (*Melanodryas cucullata*);
- Grey-crowned Babbler (*Pomatostomus temporalis temporalis*);
- Turquoise Parrot (*Neophema pulchella*);
- Speckled Warbler (*Pyrrholaemus sagittatus*);
- Pied Honeyeater (*Certhionyx variegates*);
- Chestnut Quail-thrush (*Cinclosoma castanotus*);
- Black-chinned Honeyeater (*Melithreptus gularis gularis*);
- Superb Parrot (*Polytelis swainsonii*);
- Yellow-bellied Sheathtail Bat (*Saccolaimus flaviventris*); and
- Little Pied Bat (*Cahlinolobus picatus*).

The EA presents tests of significance for each of these fauna species, and concludes that the project is unlikely to significantly affect threatened species. More than 50 high habitat value stag trees have been identified in the area west of the tailings storage facility, along the mine access road. The White Cypress Pine community on the site is dominated by hollow bearing trees, although the EA reports that a lack of ground debris reduces the potential for used by ground-dwelling fauna.

The Department considers that Hera Resources has applied reasonable endeavours to minimise the need for vegetation clearing on the site, and that particularly sensitive areas of vegetation such as the small area of Lobed Blue-grass on the site have been avoided.

Notwithstanding, the Department considers it important to prevent disturbance of Lobed Blue-grass and Cobar Greenhood Orchid individuals, and minimise impacts on any hollow-bearing trees. To facilitate this, the Department has recommended a condition of approval requiring the preparation of a Biodiversity Management Plan which must describe short, medium and long term measures to prevent or minimise impacts on these features.

Biodiversity Offset

The EA initially proposed an offset area in the residual component of the project site which would not be affected by the project. However, this component of the site is subject to Travelling Stock Reserve TSR8792 and requires concurrence of the Darling Livestock Health and Pest Authority. Hera Resources consulted with the Authority but failed to gain concurrence.

Hera Resources has since acquired the Chelsea property (Western Lands Lease WLL3881), located approximately 14.5 kilometres south-east of the project site, which is available as an offset area (refer to **Figure 5**). Hera Resources has undertaken a Biobanking Assessment, which indicates that the clearing proposed on the project site represents 4,142 credits, while the Chelsea property is characterised with more than 14,000 credits.

Hera Resources has not identified a specific portion of the Chelsea site for conservation, nor any management actions to be carried out on that portion. However, the Department is satisfied that these matters can be dealt with through post approval conditions.

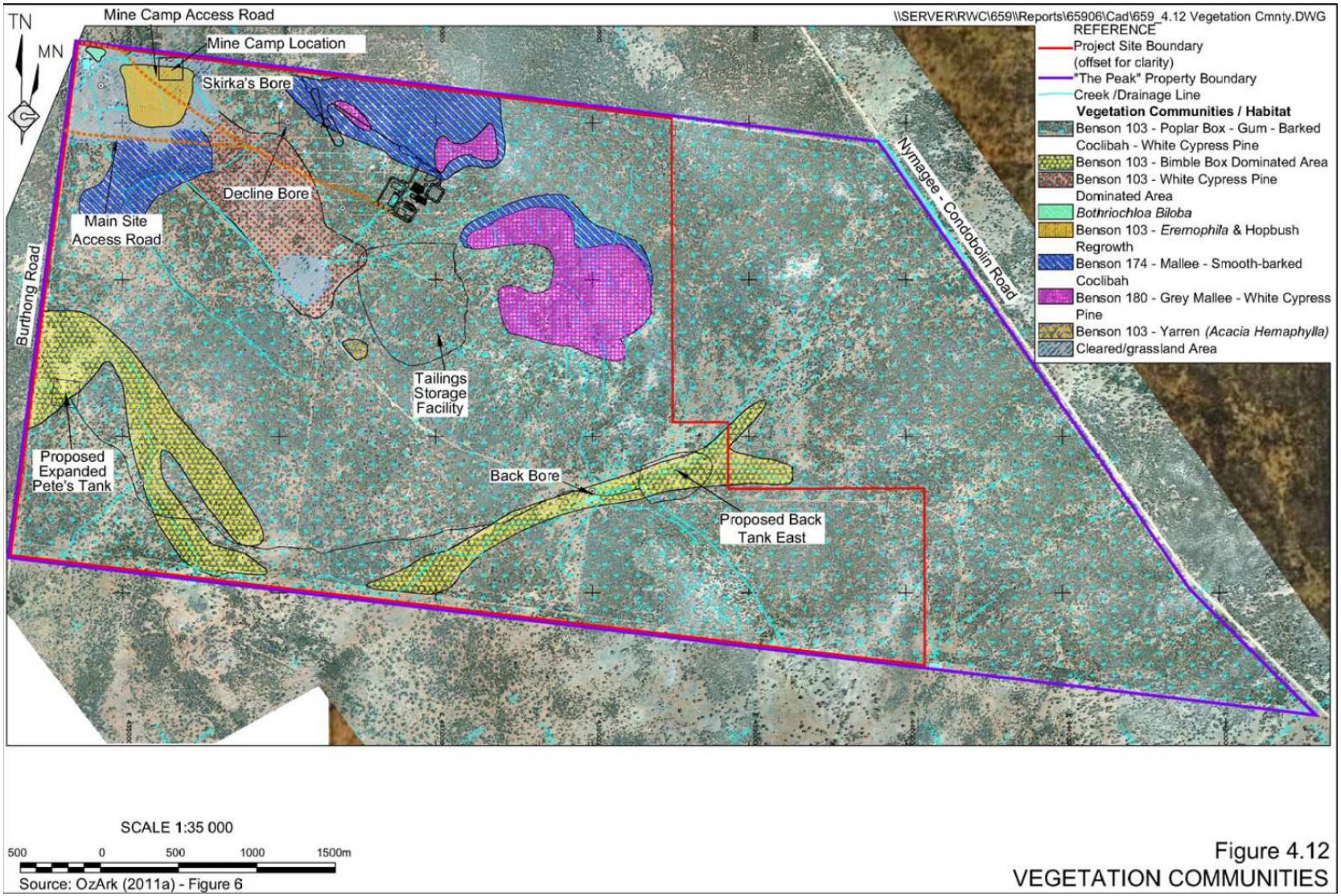

Figure 4: *Vegetation communities on the existing site*

The Department has recommended a condition of approval requiring Hera Resources to prepare a Biodiversity Offset Strategy, in consultation with the Office of Environment and Heritage. This Strategy would identify the appropriate area of land and describe the management measures to be implemented to conserve and improve biodiversity values over time.

Following approval of the Biodiversity Offset Strategy by the Director General, Hera Resources would be required to implement the Strategy and provide protection of the site in perpetuity. The Department has also recommended a condition of approval requiring a conservation bond to ensure that biodiversity offsets are implemented.

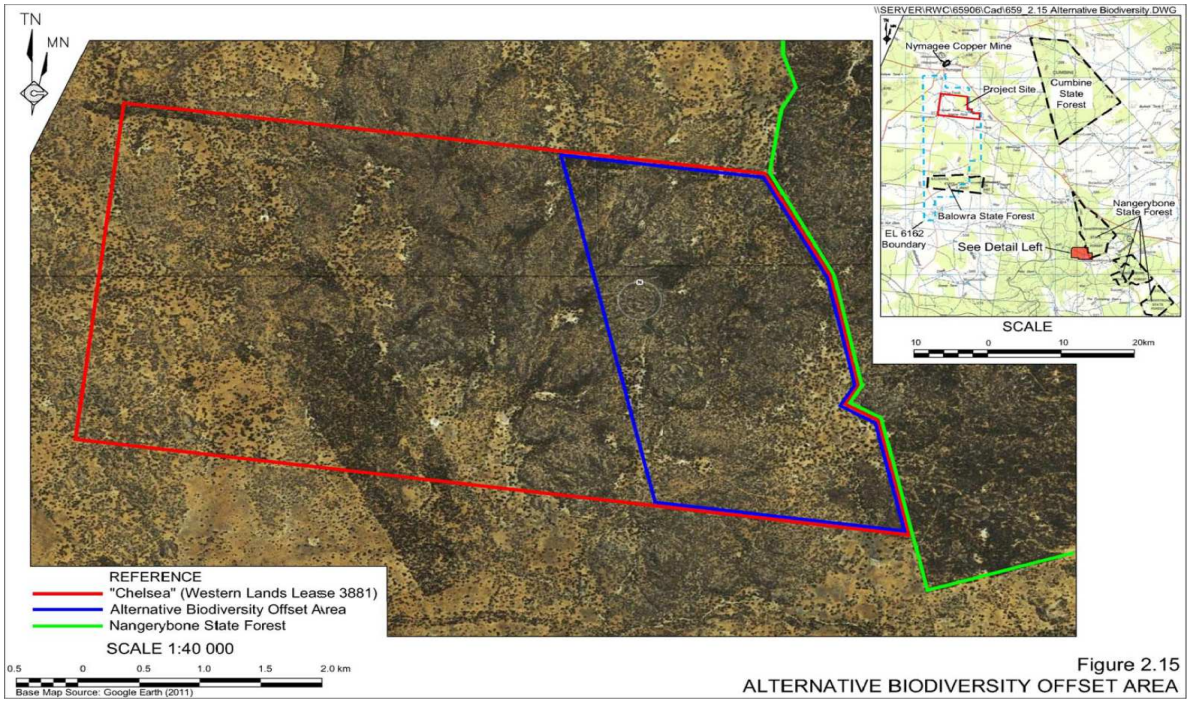

Figure 5: *Biodiversity Offset Site*

Impacts of Cyanide on Fauna

Residue from gold processing on the site would contain weak acid dissociable (WAD) cyanide compounds that, when exposed to weak acid (such as in the stomachs of fauna), could produce toxic cyanide ions.

Hera Resources has committed to maintaining a WAD cyanide concentration of less than 10ppm in the tailings storage facility. This would characterise the facility as 'Category 1' under the National Industrial Chemicals Notification and Assessment Scheme (NICNAS) set out within the *Framework for Management of Risks to Wildlife from Sodium Cyanide Use in Gold Mining*. Category 1 is the lowest risk category under the NICNAS, which states that in this category "*no acute mortalities and minimal sublethal effects are expected*".

Hera Resources has also committed to maintain the WAD cyanide concentration of the material in the process water dam at less than 20 mg/L (90th percentile) and less than 30 mg/L (maximum). This concentration requires some management measures to be implemented in order to minimise risks to fauna. These measures may include development of mechanisms to keep fauna away, such as the use of netting and fencing, and making the area non-conducive to wildlife habitats, and have been used effectively at other mines NSW.

Following consultation with the EPA, the Department has recommended conditions of approval requiring Hera Resources to include a program to monitor impacts on wildlife from exposure to cyanide or other toxic chemicals within the Water Management Plan. This Plan must include the management measures to ensure those impacts are reduced and it must be submitted to the Director General for approval prior to the commencement of mining operations.

Additionally, the Department has recommended conditions requiring the preparation of a Hazardous Materials Management Plan consistent with the *International Cyanide Management Code for the Manufacture, Transport and Use of Cyanide in the Production of Gold* and to ensure sodium cyanide and other hazardous materials are transported, stored and handled in accordance with the relevant Australian Standard.

The Department is satisfied that Hera Resources has adequately demonstrated that there is limited likelihood of cyanide impacts on native fauna. The Department and EPA are satisfied that the recommended conditions of approval requiring low levels of WAD cyanide in the tailings storage facility and process water dam, and the requirement for cyanide management measures within the Water Management Plan, would provide adequate protection for fauna from cyanide and other toxic chemicals.

Conclusion
Given the limited remnant vegetation proposed to be cleared and its current quality, there is limited potential for significant impacts on threatened species (particularly fauna) through habitat loss.

The Department is satisfied that Hera Resources has made all reasonable endeavours to avoid vegetation clearing where possible. With the implementation of these avoidance measures, the protection and enhancement of existing vegetation and additional rehabilitation of previously disturbed areas, the Department is satisfied that the biodiversity impacts of the project can be managed such that it would maintain or improve biodiversity outcomes for the site and region in the medium to long term.

5.3 Traffic and Transport Impacts

The project involves two separate access roads within the site, including:
- an existing road for light vehicle access from Burthong in the northwest corner of the site; and
- a proposed road for heavy vehicle access from Burthong Road at the west of the site.

Heavy vehicles would follow Burthong Road from the site to the southern side of Nymagee, before turning west and following Priory Tank Road to Kidman Way. Kidman Way would then be followed north to Cobar where ore concentrate trucks would either:
- access the Cobar Rail Siding for transfer of concentrates to rail;
- continue to the Hermidale Rail Siding, approximately 67 kilometres east of Cobar for transfer of concentrates to rail; or
- continue to the Endeavour Mine to the north-west of Cobar.

It is expected that the construction phase would generate 52 vehicle movements per day (40 light vehicles and 12 heavy vehicles), while ongoing operation would generate 36 vehicle movements per day (30 light vehicles and 6 heavy vehicles).

The traffic impact assessment in the EA indicates that given the low level of traffic generated by the project, there is unlikely to be significant impacts on the surrounding road network in terms of capacity, efficiency or safety. The Department agrees with this assessment.

The submission from RMS raised no objection to the use of State roads (Kidman Way) for the project. With respect to local roads (Burthong Road and Priory Tank Road), Cobar Shire Council requested the following upgrade works and contributions:
- upgrade of the intersection between the heavy vehicle site access road and Burthong Road;
- upgrade of the intersection between Burthong Road and Priory Tank Road;
- provision of improved guide posting and reflectorisation over the length of the roads used; and
- contribution of $1.82 per tonne hauled over the life of the project for maintenance of the roads affected by the project.

Hera Resources has committed to constructing and upgrading the intersection associated with the heavy vehicle access road from Burthong Road to facilitate safe access to the site for heavy vehicles. The Department has recommended a condition of approval requiring that this intersection is constructed to the satisfaction of Council and in accordance with AUSTROADs standards.

In relation to the intersection between Burthong Road and Priory Tank Road, and the provision of guide posting and reflectorisation, the Department has also recommended conditions of approval that

first requires the preparation of an independent review to the satisfaction of the Director General. The review must determine whether there are any deficiencies and whether upgrades are required as a result of the project. Implementation of the recommendations of these independent reviews regarding intersection upgrades and improved guide posting and reflectorisation must then be undertaken by Hera Resources to the satisfaction of Council within 6 months of the date of the approval. Council has reviewed these conditions and is satisfied with this approach.

Hera Resources and Council have also reached agreement on a contribution towards local road maintenance and community consultation. The Department is satisfied that the proposed contribution is appropriate. The Department has recommended a condition of approval requiring a formal Planning Agreement between Hera Resources and Council and has included the general terms of this agreement in Appendix 2 of the conditions.

The Department has also recommended a condition of approval requiring Hera Resources to develop and implement a Traffic Management Plan for the project in order to minimise potential conflicts with other roads users (particularly along Burthong Road and Priory Tank Road, in the vicinity of Nymagee).

5.4 Other Issues

The project application raises a number of other relevant issues, which are addressed in **Table 3** below.

***Table 3**: Assessment of Other Relevant Issues*

Issue	*Consideration*	*Conclusion*
Noise and Vibration	• The site and surrounding areas are characterised by low ambient noises and as a consequence, the project is subject to the most stringent noise limits under the NSW Industrial Noise Policy (35 dB(A)). • The potential most affected receiver is a residential receiver (R3) located approximately 600 metres from the closest site boundary. • Noise modelling presented in the EA demonstrates that at this receiver: - during site establishment, noise impacts would be 20 dB(A) (calm conditions) and 33 dB(A) (inversion conditions); - during operation, noise impacts would be 25 dB(A) (neutral conditions) and 35 dB(A) (inversion conditions); - Worst-case sleep disturbance impacts (39 dB(A)) would be comfortably below the applicable standard (45 dB(A)). • The EA also predicts that vibration and airblast impacts from blasting events would meet applicable standards at the potentially most affected receiver (R3). • Traffic noise from the project is predicted to be 44.3 dB(A), which is below both daytime (55 dB(A)) and night time (50 dB(A)) criteria.	• The Department is satisfied that Hera Resources has adequately demonstrated that the project would have negligible noise and vibration impacts. • The EPA has recommended noise limits consistent to comply with project specific noise limits and standard blasting limits, which the Department recommends adopting as a condition of approval. • The Department also recommends application of standard vibration and airblast criteria for blasting activities, to ensure protection of amenity and structural integrity.
Air Quality	• The EA presents the outcomes of air quality modelling at surrounding residential receivers, including: - dust impacts, including 24-hour and annual average PM10 concentrations, annual total suspended particular (TSP) concentrations, and dust deposition (incremental and total); - metal emissions, including antimony, arsenic, barium, cadmium, chromium, copper, lead, manganese, mercury, nickel and silver; - combustion emissions from proposed power generation on the site, including carbon monoxide, oxides of nitrogen,	• The Department is satisfied that Hera Resources has adequately demonstrated that the project would not significantly affect local or regional air quality. • The Department recommends that the project approval reflect ambient air quality outcomes, particularly in relation to suspended and deposited dust, and that the project be required to operate within these levels. It is also recommended that the approval reflect the need for point source discharges to comply with the requirements of the *Protection of the Environment (Clean Air) Regulation 2005*.

Air Quality	sulphur oxides and benzene; and - fugitive emissions from ore processing, including hydrogen sulphide, carbon disulfide and hydrogen cyanide. • The EA demonstrates that ambient air quality criteria can be comfortably met at all off-site receiver locations, generally by a significant margin. • One on-site receiver location (receiver R6) is predicted to experience a slight exceedence of the 24-hour PM_{10} standard (52.9 µg/m^3 compared with the standard of 50 µg/m^3). The EA identified that this impact is dominated by vent rise emissions, which are variable, which means the exceedence represents an upper bound estimation. Given the conservative nature of the predictions, and the location of R6 on-site, the Department is satisfied that the air quality impacts are likely to be insignificant.	• A key potential dust source on the site is the tailings storage facility. The EPA has recommended that Hera Resources be required to maintain a wet facility with dust emissions restricted to no more than 25% of the facility. The Department agrees and notes that it is included in the Statement of Commitments.
Socio-economics	• The project would generate 100 full-time equivalent direct employment positions during construction and 100 during operation. • The project would involve capital investment of approximately $80 million, and is expected to inject approximately $15 million into the local and regional economy annually. It is expected to contribute a further $25 million to the State and Commonwealth economies each year. Approximately $3 million per year is expected to be contributed through royalties, taxes and rates. • Hera Resources has committed to contribute $16,300 per year during operation and $50,000 per year during construction to Cobar Shire Council towards a community fund, in addition to contributions to local road maintenance. It has also offered $63,700 per year toward public infrastructure and services during construction.	• The Department is satisfied that the project would have a positive socio-economic effect on the locality and region through direct investment and the generation of employment opportunities. • The Department has recommended a condition requiring Hera Resources to enter into a Planning Agreement with Council (or such other arrangement as may be agreed by the Director-General if the terms of a Planning Agreement cannot be agreed between the parties).
Heritage	• No known Aboriginal heritage items are recorded within ten kilometres of the site, and none were identified on the site through several surveys from 2004 until present. • The site is considered to hold little potential for Aboriginal heritage items to be uncovered in future. • No non-Aboriginal heritage items have been previously listed as occurring on the site and no items were identified during surveys of the site. • Two items of potential significance, a rubbish tip including a car wreck and some bottles, and trees marked with toe-holds, have been assessed as not having heritage significance.	• The Department is satisfied that Hera Resources has undertaken an adequate and appropriate level of assessment of potential impacts on Aboriginal and non-Aboriginal heritage. • The Department has recommended a condition of approval requiring the preparation of a Heritage Management Plan to manage any unidentified items of heritage significance found on site in the future.
Visual Amenity	• The proposed mine site is isolated from surrounding residential and public area visual receiver locations, and the site is largely screened by surrounding vegetation. • Mine infrastructure would generally be located towards the eastern portion of the site, away from the site access point. • Taking these factors into account, the EA assesses the potential for visual amenity	• The Department is satisfied that the project presents minimal potential for visual impacts. • As a general requirement, the Department recommends that the project be required to be implemented in a manner that minimises potential visual impacts, including from external lighting.

	impacts from the project to be low.	
Waste Rock Management	• It is estimated that approximately 280,000 m^2 of waste rock would be generated during the life of the project. Where appropriate, some of this rock would be used for construction works on the site. Other waste rock would be disposed of underground. • As some of the waste rock has the potential to be acid forming, Hera Resources has committed to placing the waste rock underground as soon as possible, and appropriately designing surface and underground facilities to accommodate the potential for acid generation.	• The Department considers that the key mitigating factor against impacts associated with acid generating from waste rock would be effective and timely management. It is important to carefully manage waste rock on the surface of the site to minimise the potential for acid generation and to emplace the waste rock material in the storage area underground in a timely manner. • The Department has recommended a condition of approval requiring Hera Resources to develop and implement a Waste Rock Management Plan to articulate how it would manage acid generation issues.
Rehabilitation	• The site would be progressively rehabilitated to create a shaped and geotechnically stable final landform suitable for a mixed end land use of grazing and nature conservation. Post mining landforms would include: - bunded and fenced box cut with sealed portal; - appropriately sealed ventilation rises; - appropriately shaped and covered, free draining tailings storage facility with embankment slopes of 1:3 (V:H) or less; and - shaped, covered and vegetated surface facilities area with all infrastructure removed.	• The Department is satisfied the general rehabilitation outcomes proposed by Hera Resources and has recommended conditions of approval requiring the preparation of a Rehabilitation Management Plan.

6. RECOMMENDED CONDITIONS

The Department has prepared recommended conditions of approval for the Hera Project (see **Appendix E**). These conditions and summarised in **Appendix D**. The conditions are required to:

- prevent, minimise, and/or offset adverse impacts of the project;
- set standards and performance measures for acceptable environmental performance;
- ensure regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

Hera Resources has accepted the recommended conditions of approval.

7. CONCLUSION

The Department has carried out a detailed assessment of the merits of the project, in accordance with the requirements of the EP&A Act.

This assessment has found that given the relatively small scale of the project, its general isolation and configuration well within a large, screened site, the project has limited potential for significant impacts outside of the site boundaries. Key issues including water, biodiversity and traffic impacts have been carefully assessed and adequate mitigation measures have been developed in consultation with the relevant agencies to ensure that the potential impacts of the project are minimised.

Although the project may result in the localised drawdown of groundwater, the Department is satisfied that impacts are unlikely to be significant given the limited number of bores and groundwater users in the vicinity, the generally poor quality of the water and the absence of groundwater dependent ecosystems in the vicinity of the site. With the implementation of appropriate storage design and

surface water control measures, including a comprehensive water management plan, the Department is satisfied that the potential water quality impacts of the project can be adequately managed.

The project would require the removal of 75.2 hectares (ha) of remnant native vegetation, which would be offset by the conservation of vegetation in perpetuity on a portion of the 'Chelsea' property, located approximately 14.5 kilometres south-east of the project site. The Department has recommended conditions of approval requiring the preparation of a Biodiversity Offset Strategy, in consultation with the Office of Environment and Heritage, which would identify the appropriate area of land and describe the management measures to be implemented to conserve and improve biodiversity values over time.

The Department has recommended a range of conditions to ensure that the impacts are suitably mitigated, managed and/or offset. These conditions include requirements for Hera Resources to:

- provide compensatory measures to off-site bore users in the event of adverse impacts on the supply of water from existing bores as a result of the project;
- enter into a Planning Agreement with Cobar Shire Council for contributions towards a community fund, road maintenance and public infrastructure and services;
- monitor and regularly report on its environmental performance; and
- commission independent audits of its operations to ensure that it is complying with its conditions of approval and implementing best practice on the site.

The Department's assessment also found that the project would provide economic and social benefits to both the region and NSW, including employment of up to 100 employees during site establishment and 100 employees during operation, a capital investment of $80 million and royalties and payroll taxes for the State Government.

On balance, the Department believes that the project's benefits sufficiently outweigh the potential impacts and that it is in the public interest. The project should therefore be approved subject to the recommended conditions.

RECOMMENDATION

It is RECOMMENDED that the Deputy Director-General, as delegate for the Minister:

- consider the findings and recommendations of this report;
- approve the project application, subject to conditions, under section 75J of the EP&A Act; and
- sign the attached project approval (see **Appendix E**).

27/7/12

David Kitto
Director
Mining and Industry Projects

27.7.12

Chris Wilson
Executive Director
Major Project Assessments

31/7/12

Richard Pearson
Deputy Director-General
Development Assessment and Systems Performance

APPENDIX A – ENVIRONMENTAL ASSESSMENT

See relevant link.
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4384

APPENDIX B – SUBMISSIONS

See relevant link.
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4384

APPENDIX C – RESPONSE TO SUBMISSIONS

See relevant link.
http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4384

APPENDIX D – SUMMARY OF CONDITIONS OF APPROVAL

Aspect	Condition	Requirement
Schedule 2: Administrative Conditions		
Obligation to Minimise Harm	1	Hera Resources shall work to prevent harm occurring to the environment.
Terms of Approval	2-4	Hera Resources shall carry out the development in accordance with the EA, Statement of Commitments, and the conditions of approval.
Limits on Approval	5-7	Limits extraction of ore to 355,000 tonnes per annum until 31 December 2020.
Hours of Operation	8	Permits mining operations 24 hours per day, seven days per week.
Structural Adequacy and Demolition	9-10	Specifies structural adequacy and demolition standards.
Protection of Public Infrastructure	11	Requires the protection of public infrastructure and the reparation of any damage caused.
Operation of Plant and Equipment	12	Requires maintenance and operation of plant and equipment in a proper and efficient manner.
Staged Submissions	13	Permits the staged submission of strategies, plans or programs under the approval
Surrender of Approvals	14	Requires the surrender of existing approvals on the site, to be replaced by the project approval.
Planning Agreement	15	Requires Hera Resources to enter into a Planning Agreement with Cobar Shire Council with respect to a community fund, public infrastructure and services and road maintenance.
Schedule 3: Specific Environmental Conditions		
Noise	1-3	Specifies noise limits, requirements for noise attenuation, operating conditions and a Noise Management Plan
Blasting	4-9	Specifies blasting criteria, blasting hours, blasting frequency and operating conditions.
Air Quality	10-15	Prohibits odour emissions and requires minimisation of greenhouse gas emissions. Specifies ambient air quality criteria, operating conditions, and requires an Air Quality and Greenhouse Gas Management Plan
Meteorological Monitoring	16	Requires meteorological monitoring at a location representative of the site.
Soil and Water	17-25	Requires that licences be secured for water supply for all stages of the project, and specifies that mine water and harvested water must be used in preference to potable water. Sets water quality limits within the site, and prohibits the pollution of waters. Requires compensatory measures to be implemented in the event of loss of allocations for local water users. Specifies capacity and permeability requirements contaminated water storages on site. Requires a Water Management Plan including a Site Water Balance, a Surface Water Management Plan and Groundwater Management Plan.
Biodiversity	26-29	Requires Biodiversity Offset, to be secured in perpetuity, and managed in accordance with a Biodiversity Management Plan. Requires a conservation bond to ensure that biodiversity offsets are achieved.
Heritage	30	Requires Heritage Management Plan including development of mitigation and management measures in the event that heritage items are uncovered on the site.
Transport	31-39	Requires dangerous goods to be transported in accordance with the Dangerous Goods Code. Requires review and subsequent implementation of review recommendations for intersection and guide posting upgrades

Transport	31-39	Requires road maintenance contributions in accordance with the Planning Agreement between Hera Resources and Council. Requires the site access intersection to be constructed in accordance with Council's requirements. Requires monitoring of traffic movements and limits traffic movement times. Requires the preparation of a Traffic Management Plan.
Visual	40	Specifies visual amenity and lighting requirements.
Hazardous Materials	41-42	Required preparation of Final Hazard Analysis and Hazardous Materials Management Plan.
Waste	43-44	Specifies waste management requirements. Requires the preparation and implementation of a Waste Rock Management Plan.
Rehabilitation	45-47	Sets rehabilitation objectives and requires preparation of a Rehabilitation Management Plan.
Schedule 4: Additional Procedures		
Notification of Landowners	1-2	Requires notification of affected landowners of a breach of performance standards in the approval.
Independent review	3-5	Enables an affected landowner to request that the Director-General requires an independent review of the project to identify the cause of non-compliance with performance standards, and that Hera Resources identify and implement additional reasonable and feasible mitigation measures.
Schedule 5: Environmental Management, Reporting and Auditing		
Environmental and Adaptive Management	1-3	Requires preparation of Environmental Management Strategy and consideration of adaptive management.
Annual Review	4	Requirement to undertake an annual review of the performance of the project.
Revision of Strategies, Plans and Programs	5	Requires that strategies, plans and programs are updated at key times during the life of the project.
Community Consultative Committee	6	Requirement to establish a Community Consultative Committee.
Incident Report	7	Requirement to report incidents.
Independent Environmental Audit	8-9	Requirement to regularly report performance of the project.
Access to Information	10	Requirement to undertake regular independent environmental audits.

APPENDIX E – PROJECT APPROVAL