RASP Mine
Broken Hill, NSW

Project Application

for CBH Resources Limited

February 2007

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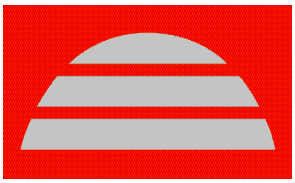
CBH Resources Limited



Broken Hill Operations Pty Ltd
Rasp Mining Project

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1 INTRODUCTION

1.1 BACKGROUND

Broken Hill Operations Pty Ltd (BHOP), a wholly owned subsidiary of CBH Resources Ltd (CBH), proposes to undertake an environmental assessment and prepare a Project Application under Part 3A of the *Environmental Planning and Assessment Act 1979* to gain Project Approval for the commencement of mining operations at its Rasp Mine, which is located on Consolidated Mining Lease 7 (CML7) in Broken Hill. The proposal will allow for the following activities:

- Extraction of 8.5 million tonnes of ore at an approximate rate of 750,000 tpa over 12 years;
- "Long Hole Open Stoping" mining, involving drilling and blasting to extract the resource;
- Transport of ore to the surface in 45-tonne mine trucks;
- Processing using a surface crusher, SAG mill/ball mill, and flotation concentrator ;
- Tailings management using a settling facility; and
- Reinstatement of a rail spur and transport of concentrate in rail wagons to smelter and/or port.

Environmental Resources Management Australia Pty Ltd (ERM) has been commissioned by BHOP to prepare the Project Application for this Project. Following receipt of the Director-General's requirements, an Environmental Assessment Report (EAR) will be prepared and submitted to the Minister for Planning for project approval.

1.2 PURPOSE OF THE PROJECT APPLICATION

This document has been prepared to:

- Provide a background for the Project;
- Outline the key components of the Project;
- Provide the statutory framework under which the assessment will be prepared; and
- Detail the Project environmental risks and provide a preliminary justification for the proposed focus of the EAR.

1.3 COMPANY PROFILE

CBH is an independent Australian resource company focussed on the exploration and development of major base and precious metals projects. CBH is listed on the Australian Stock Exchange (symbol CBH) with its head office located in Sydney, NSW. In addition to its Project in Broken Hill, CBH has the operating zinc-lead-silver Endeavor Mine at Cobar NSW and the Panorama zinc-copper deposit at Sulphur Springs WA. CBH also plans to re-open the zinc-gold mine at Mineral Hill NSW, and has developing exploration operations at Sorby Hills WA, Constance Range Qld and at Nymagee (Hera) in NSW.

The Broken Hill Field represented one of the world's largest zinc-silver-lead deposits, and this acquisition covers the central 3.8 km of the Broken Hill mineralisation. There is a high prospectivity for the discovery of new orebodies beneath and parallel to the main deposit at the Broken Hill Field and the extraction of remnant ore left behind by previous operators on the Lease.

Environmental management and occupational health and safety are high priorities for CBH. CBH supports ongoing improvements in industry standards and maintains an active awareness of issues through membership of industry groups.

1.4 REGIONAL SETTING AND STUDY AREA

The CML7 site is located in the City of Broken Hill, New South Wales approximately 1150 km west of Sydney. The site is bounded by Silver City Highway to the south-west, Crystal Street to the north, Menindee Road and Holten Drive to the east and Eyre Street to the south. The regional setting and study area are shown in *Figure 1.1*.

Broken Hill is a famous mining city in far west New South Wales. CML7 encompasses the original mine areas that commenced operations in the 1880's. CML7 is about 3.8 km long by about 1.2 km wide in the centre of the Line of Lode at Broken Hill. The site is considered by the people of Broken Hill as an historic site and is recorded on the Register of National Estate because of its significance in bringing industrialisation to Australia via the mining activities of Broken Hill Pty Ltd (BHP) and its subsequent start up of the Australian steel industry.

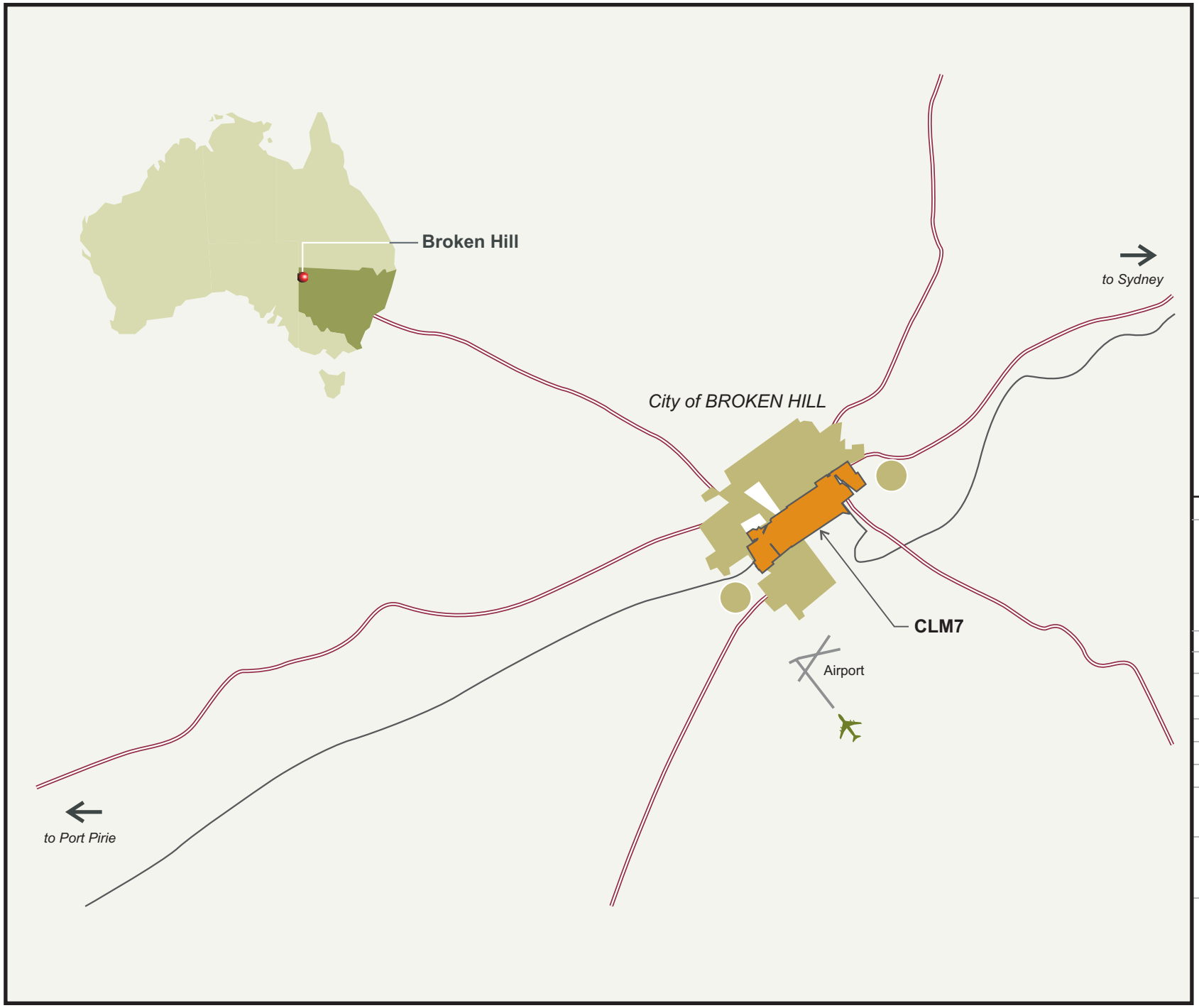

Figure 1.1

Site Location

Client:	CBH Resources Limited	
Project:	Project RASP	
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Date:	12/01/2007	Drawing size: A4
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1.5 SITE HISTORY

There is a long history of mining at CML7. The Kintore Pit (which will be the focal point for this project) was created in 1983, with the size and shape of the pit changing gradually over time. Mining in this area continued almost continuously until 1991, at which point Broken Hill South Limited ceased operations and sold its leases to Minerals, Mining and Metallurgy (MMM). Further mining was undertaken by MMM in the 1980s but this did not continue past 1991, mainly due to economic constraints. As technology and market conditions have improved, mining in this area has once again become economically feasible.

In 2001 a Statement of Environmental Effects (SEE) for trial mining was completed with the intention of establishing a new exploration decline into the western part of the mineralisation and conducting a bulk sampling program.

BHOP conducted an extensive surface drilling program to aid in resource definition. And with further confirmation of the quality of the resource involved, BHOP produced a Review of Environmental Factors (REF) for the construction of the exploration decline previously proposed. A Mining Operation Plan (MOP) for this activity was approved by the Department of Primary Industries (DPI) in 2006, and development of this decline will begin in February 2007.

The exploration decline will extend at a slope of 1:7 for approximately 1800 lineal metres, or 300 vertical metres, below surface. The purpose of the decline is to allow sufficient in-fill drilling of the Western Mineralisation zinc/lead/silver resource from suitable underground locations to enable the viability of an underground mine (the Rasp Mine) to be confirmed.

It is expected that the exploration decline will reach its target depth around April 2008, and the intention is to then continue its advance and conduct other underground activities to allow mining of the deposit to take place.

Before this mining can occur, approval under Part 3A of the EP&A Act will be required as this is considered a Major Project based on the fact that it will have a capital investment value of $110 million, which is greater than the $30 million referred to in Schedule 1 of the Major Projects SEPP.

1.6 ENVIRONMENTAL CONTEXT

Mining has been undertaken at the Project site for over 120 years. All original vegetation has been removed, landforms have been significantly altered and soils have been degraded. Any aboriginal heritage sites have been destroyed.

The Project site is considered of Industrial Heritage significance and the local community requires that current disturbed industrial sites associated with historic mining be preserved, for example slag heaps.

There are a number of Cultural Heritage items from historic mining activities located within the Project area.

2 *PROJECT DESCRIPTION*

BHOP is planning to develop an underground mine at its Broken Hill deposit. This lead-zinc deposit is located on the western side of the CML7 Lease which lies within the City of Broken Hill. It is proposed to mine the ore at a rate of 750,000 tonnes per year and process it through an on-site crushing and flotation plant to produce lead and zinc concentrates. These concentrates will be transferred by rail for shipment via Port Pirie or Newcastle facilities. The Project has a minimal 12 year life of mine.

2.1 MINING

The ore will be mined from underground using long hole open stoping. The ore will be drilled using 88-102 mm up and down holes of around 20-40 metres in length, and fired using conventional ammonium nitrate based explosives. Individual blasts will be limited in size and the detonations will be designed to minimise vibration impacts on the Broken Hill community.

Broken ore will be bogged from drawpoints at the bottom of each stope using 5 cubic metre LHD units. The ore will then be trammed in these units to loading points where it will be tipped into 45-tonne underground mine trucks for transport directly to surface.

Individual primary stopes will be back-filled with deslimed mill tailings to minimise rock stress build-ups and facilitate the recovery of pillars between the primary stopes. The majority of mining will occur from approximately 200 metres below surface downwards; there is not expected to be any surface subsidence as a result of these activities.

This proposal also intends to recover remnants of ore that have been left behind by previous mining activities in the Kintore Open Pit. Ore recovery will use drilling and blasting techniques to recover the ore and load it into mine trucks for transport to the ROM pad. Although additional diamond drilling is required to determine the volume of material remaining in the bottom of the pit, it is anticipated that approximately 180,000 cubic metres is available for recovery. Of this, approximately 100,000 tonnes is expected to be ore.

2.2 VENTILATION

Fresh air will enter the mine down the access decline and footwall ventilation raise, and return across the mining area before it is vented back to surface via ventilation raises to be developed to the hanging wall (western side) of the orebody. Axial fans will be installed at the top of these ventilation raises to extract the return air and exhaust it to atmosphere.

Ventilation outlets including fans will be suitably sited with air filtration and noise attenuation mechanisms installed to cause minimal disturbance to the local community. Noise modelling will be carried out to assess the impact of these fans once their location is established.

2.3 ORE TRANSPORT

Full mine trucks will travel to surface via the decline and the Kintore Pit haul road before tramming on surface to a Run of Mine (ROM) stockpile and crushing facility. The location of these facilities is yet to be determined; air and noise modelling will be used to assist in the identification of suitable locations to minimise noise and dust impacts to the local community. Empty trucks will then return underground via the same route. All truck movements will be confined within the boundaries of CML7.

2.4 PROCESSING

2.4.1 *Crushing*

Ore will be loaded from the ROM stockpile into the primary jaw crusher using a Front End Loader (FEL). The ore will then be crushed down to ~ 20 mm particles through primary and secondary crushing stages before being conveyed to fine ore bins adjacent to a concentrator located near the crushing facility .

2.4.2 *Concentration*

After recovery from the fine ore bins, the ore will be ground down using SAG and ball mills to a size suitable for flotation recovery. It will then pass through rougher and cleaner flotation banks to produce a zinc concentrate product stream and a lead concentrate product stream.

These product streams will be filtered and dried sufficiently before loading at the railway loading point. This loading point will be located on an extension of the existing spur line which will terminate inside the lease area at a point just east of the concentrator (*Figure 2.1*).

2.4.3 Tailings Management

The waste stream from the flotation process will be thickened and separated by cycloning to produce two waste streams. The coarser stream will be mixed with suitable materials and redirected underground to use as stope fill; the finer stream will be pumped to the existing tailings storage facility (TSF) to the north east of Kintore Pit (*Figure 2.1*) for containment and settling. At this stage a number of extra lifts are proposed for the TSF, extending the lifespan of this method of disposal.

After the TSF has been filled to capacity, the tailings stream will be diverted to other sites for the remainder of the Project life. The exact nature and extent of these sites is currently being investigated.

2.5 WASTE MANAGEMENT

The construction and operation of the Project will generate waste. The EAR will describe the type and volumes of:

- Domestic wastes (eg waste water and putrescible wastes, recyclable wastes);
- Process wastes (eg tailings, used chemicals and workshop wastes such as oil and grease),;
- Industrial waste (eg heavy equipment and vehicle tyres, metals)
- Construction wastes

The environmental impacts of these wastes will be identified and appropriate disposal locations and procedures specified.

2.6 EMERGENCY MANAGEMENT

The EAR will describe the types of emergencies that could pose a threat to the environment, for example spillage of hazardous materials, and provide principles for emergency response management. Areas to be included are:

- Transportation to/from site;
- Onsite storage facilities.

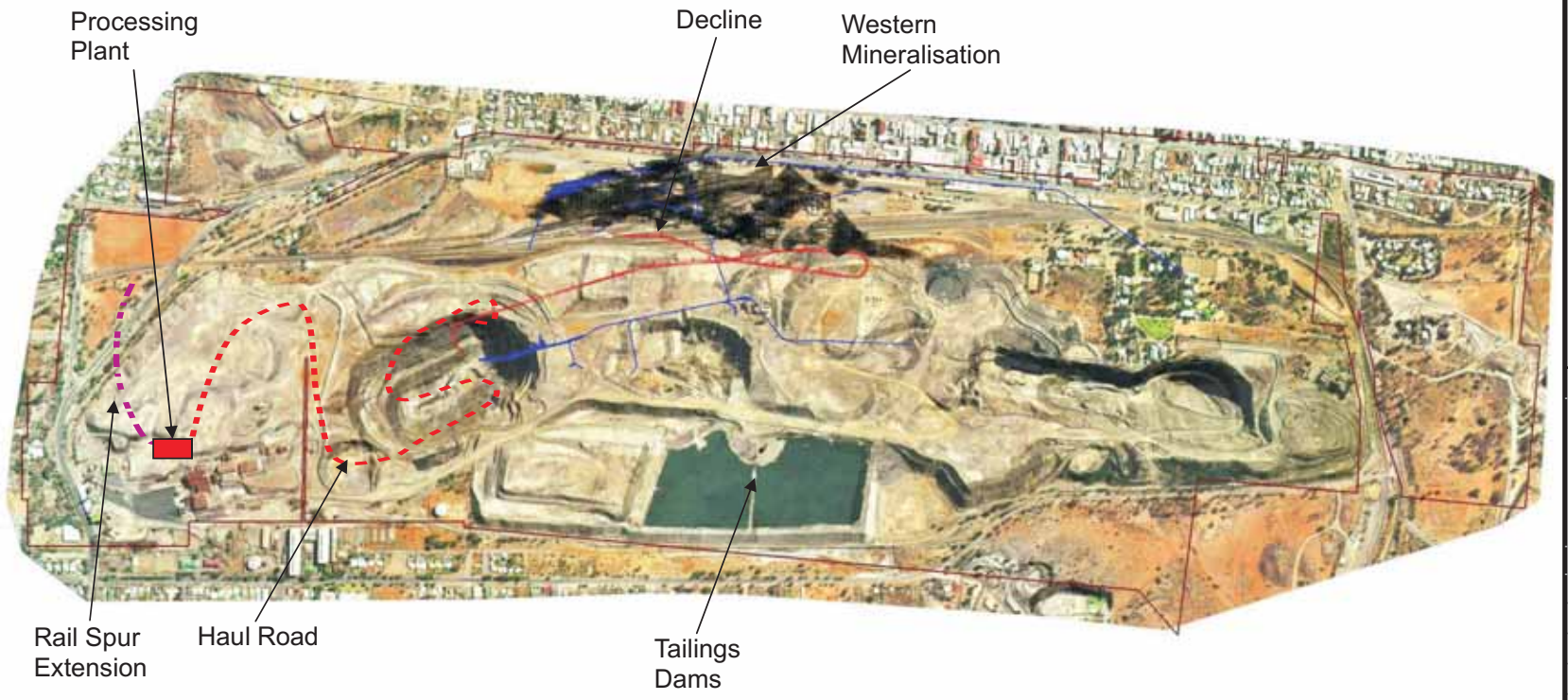

Figure 2.1

Plan of CML7 showing proposed exploration decline

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Project:	Project RASP	
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Drawn by:	ML	Reviewed by: -
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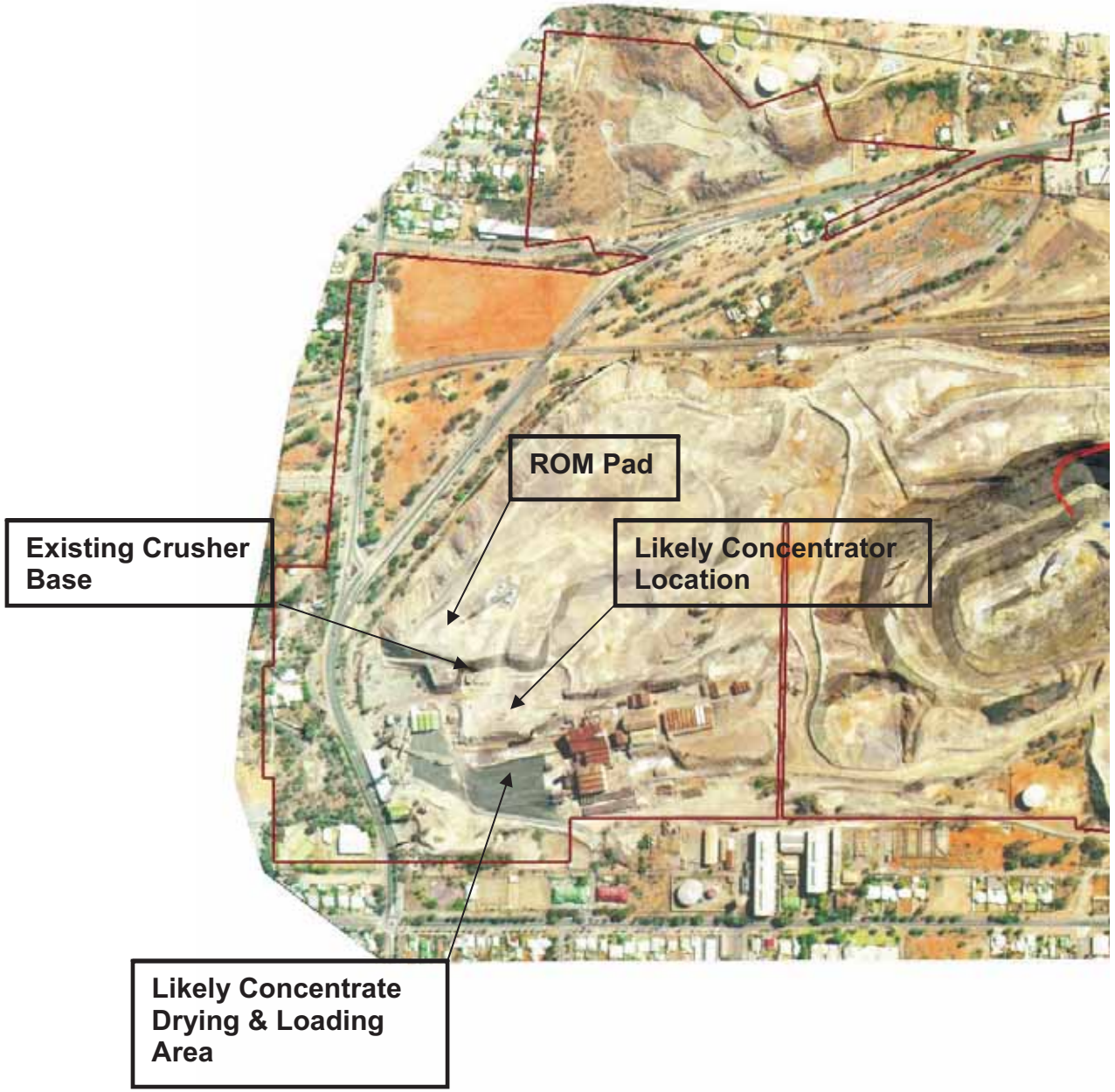

Figure 2.2

Indicative Layout

Client:	CBH Resources Limited	
Project:	Project RASP	
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Date:	22/01/2007	Drawing size: A4
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2.7 *PRODUCT TRANSPORT*

After drying concentrates will be loaded into rail wagons. The wagons will be covered to prevent excessive drying and dust generation during transport.

The material will be transported to either Port Pirie or Newcastle for loading onto ocean-going vessels.

2.8 *ASSOCIATED INFRASTRUCTURE*

Existing structures on the CML7 lease will be used wherever possible to house such things as mine office and changerooms, first aid station, lamproom, warehouse, workshops, assay laboratory, and control centre. This will be detailed in the EAR. Care will be taken to preserve heritage-listed structures in this program with the implementation of a Conservation Management Program.

2.9 *PROJECT TIMING*

It is expected that the development of the exploration decline will be completed by April 2008. Once the necessary approvals are in place, construction will then begin on the surface infrastructure and development of the required underground openings will commence. It is expected that production from the Rasp mine would then commence during the first calendar quarter of 2009.

3 STATUTORY CONSIDERATIONS

This chapter sets out the statutory framework to be considered for the commencement of operations at CML7.

3.1 ENVIRONMENTAL PLANNING AND ASSESSMENT ACT 1979

Part 3A of the *Environmental Planning and Assessment Act 1979* (*EP&A Act*) details the approval of major infrastructure and other significant 'projects'. It applies to:

"*… the carrying out of development that is declared under this section to be a project to which this Part applies:*

(a) by a State environmental planning policy, or

(b) by order of the Minister published in the Gazette" (Section 75(b)).

State Environmental Planning Policy Major Projects (SEPP MP) 2005 defines certain developments that are major projects under Part 3A of the *EP&A Act* and to be determined by the Minister for Planning. The proposal is referred to as a Major Project in SEPP MP and therefore Part 3A applies.

Under Section 75(R) of the *EP&A Act,* environmental planning instruments (EPIs) (other than State environmental planning policies) do not apply to a 'Major Project'. A discussion of the State Environmental Planning Policies (SEPPs) applicable to the proposed development follows.

The Environmental Assessment Report, which assesses the likely impact of a project on the environment, will be prepared in accordance with Section 75(F) of the *EP&A Act*.

3.2 MINING ACT 1992

Under the Mining Act 1992, a Mining Lease is required before commencement of any mining operation in NSW. The site is already the subject of a consolidated mining lease. The Minister for Mineral Resources approved the transfer of title for the CML7 site on the 15th of March 2001, with transfer of the actual lease occurring on 28th March 2001. The CML7 mining lease has recently been renewed for 20 years (until 31 December 2026) by the Department of Primary Industries – Mineral Resources.

3.3 STATUTORY FRAMEWORK

Table 3.1 summarises legislation relevant to this project.

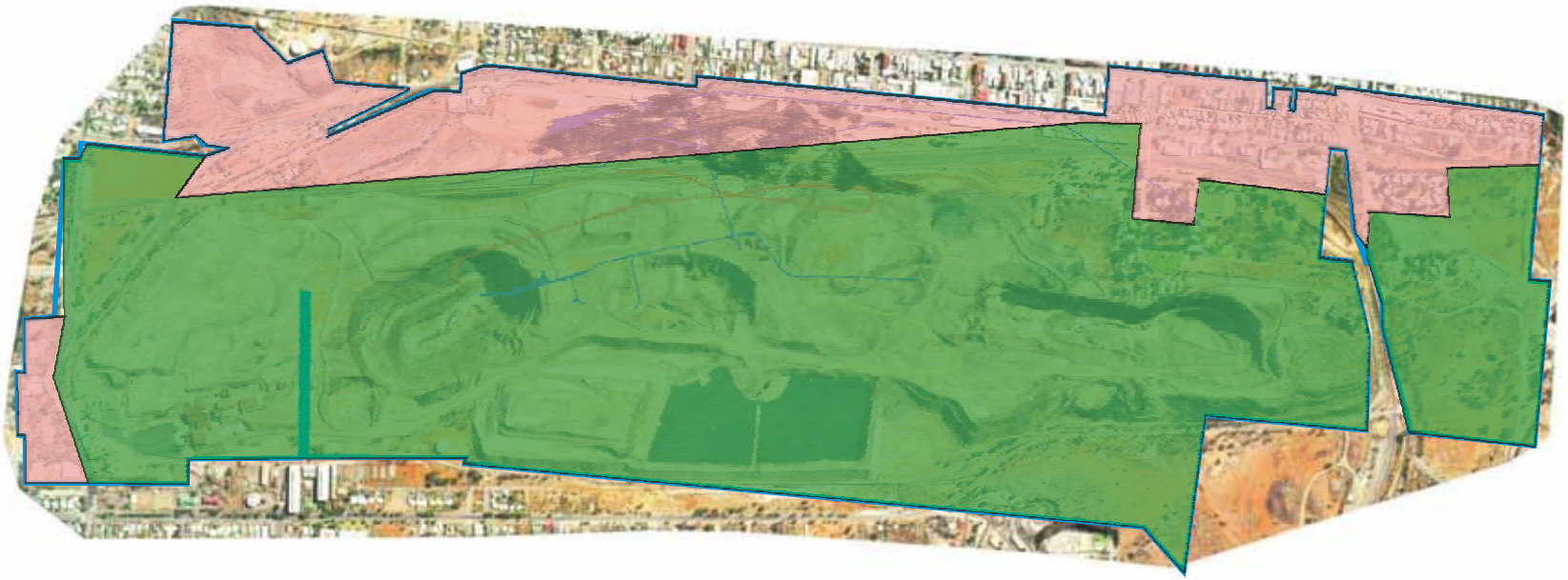
Table 3.1 Statutory Framework

Legislation	Standard / Requirement	Comment
Commonwealth		
Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)	The *EPBC Act* requires approval of the Commonwealth Minister for the Environment for actions that may have a significant impact on matters of national environmental significance.	The site is not a world heritage property, a natural heritage place, Ramsar wetlands of international importance, or a Commonwealth marine environment, and the proposal does not include nuclear actions.
New South Wales		
EP&A Act 1979	Refer to *Section 3.1*.	Refer to *Section 3.1*.
Mining Act 1992	Refer to *Section 3.2*	Refer to *Section 3.2*.
Protection of Environment Operation Act 1997 (POEO Act)	Section 48 of the *POEO Act* requires scheduled activities listed in Schedule 1 to hold a premises-based environment protection licence.	A review of the existing licences will be completed to accommodate the proposal.
Water Management Act 2000 (WM Act)	The *WM Act* incorporates the provisions of various acts relating to the management of surface and groundwater in NSW.	Section 75U of the *EP&A Act* excludes projects approved under Part 3A from water use approval under *section 89*, a water management work approval under *section 90* or an activity approval under *section 91*.
Threatened Species Conservation Act 1995 (TSC Act)	Projects determined by a statutory authority of the NSW State Government, are required to be assessed in accordance with the *EP&A Act*, as amended by the *TSC Act*.	The site is highly disturbed and the proposal does not involve clearing of vegetation therefore no impact on threatened species is anticipated. It is not intended to undertake any species impact assessment in the EAR.
State Environmental Planning Policy No. 11 – Traffic Generating Developments (SEPP 11)	Under Section 7 of SEPP 11 a consent authority is required to forward a copy of for scheduled development applications to the RTA. Mining is one of the development activities listed in the schedule.	As the proposal requires an approval under Part 3A, the Department of Planning is required to forward the application to the RTA for comment. A detailed traffic report will be prepared as part of the EAR.

Legislation	Standard / Requirement	Comment
State Environmental Planning Policy No 45 – Permissibility of Mining (SEPP 45)	SEPP 45 allows mining on land, with consent, where an environmental planning instrument requires the consent authority to make a value judgement as to whether such development is permissible.	Mining is permissible.
State Environmental Planning Policy (Major Projects) 2005 (SEPP MP)	Mining is included in Schedule 1 to the SEPP MP and therefore a Major Project to which Part 3A of the *EP&A Act* applies.	The proposal requires consent from the Minister for Planning under Part 3A of the *EP&A Act*.
State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33)	Requires that a proposal be assessed for the potential to be hazardous or offensive.	The guidelines "Applying SEPP 33" will be used to assess the likely hazards and risks associated with the proposal in the EAR.
Other plans that apply to the site but do not limit development in a Part 3A application pursuant to Section 75R of EP&A Act		
Broken Hill Local Environmental Plan 1996 (BHLEP)	The majority of the site is zoned 1(m). The objectives of this zone promote and facilitate the efficient extraction of resources, to ensure the protection of the natural environment and to conserve heritage values associated with the area A small section of the site is zoned 2(c) City zone. Mining is prohibited in this zone. .	Part 3A enables the minister to approve a development that is not wholly prohibited by a LEP. In this case, whilst mining is prohibited on a small section of the site, it is permitted in zone 1(m) and therefore the minister is able to consent to the development. An extract of BHLEP is found in *Figure 3.1* This proposal is located within a current mining lease and is consistent with the objectives of zone 1(m) as it will utilise a known resource and appropriate mitigation measures. A number of historical mining facilities are still in situ and a will be protected with the implementation of the Conservation Management Plan.

3.4 OTHER APPROVALS

Construction of additional tailings storage capacity may require an approval from the Dam Safety Committee. This will need to be investigated, having regard to the final size and capacity of the TSF.



Legend

- Zone 1 (m)
- Zone 2 (c)

Figure 3.1

lindicative Zoning Map of CML7

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Project:	Project RASP	
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Date:	22/01/2007	Drawing size: A4
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4 ENVIRONMENTAL RISKS

4.1 ISSUES IDENTIFICATION

The environmental assessment process seeks to ensure that all relevant environmental matters are considered and the community and interest groups are consulted throughout the environmental assessment. The environmental assessment will quantify and assess potential adverse impacts and document the likely benefits of the proposal. It will also outline the type of environmental management measures available to reduce adverse impacts, and discuss opportunities created by the proposal. The information in the environmental assessment will also provide a basis for future monitoring of the environmental performance of the proposal.

4.2 COMMUNITY CONSULTATION

BHOP acknowledges the importance of engaging all relevant stakeholders throughout the life of the Project, and in particular during the environmental approvals stage. Strategies to promote consultation and communication include presentations, consultative group meetings, site visits and other communication tools.

The objectives for consultation are to ensure stakeholders:

- Have access to up-to-date, relevant information regarding the Project;
- Are provided with the opportunity to raise their concerns and have these concerns responded to by the Company; and
- Are provided with opportunity to raise suggestions to improve the Project

A community consultation group has been established by BHOP to capture any community issue raised with regards to the establishment of the exploration decline. This committee is comprised of a number of community stakeholders, including representatives from local Council, local health and community bodies, business, unions, Lead Centre and the Indigenous community. This committee will be further utilised for this project, providing a way for BHOP to disseminate information to the community and gauge community opinion of the Project.

It is anticipated that additional consultation will be required and the EAR will include a comprehensive community consultation strategy. Stakeholder meetings, information sessions and newsletters will be the main aspects of the community consultation for this project.

4.3 *ENVIRONMENTAL ISSUES*

The expected key environmental issues are detailed below. Stakeholders, including local residents and regulatory agencies will be provided with information in relation to these issues at the outset of the Project through discussion about the scope of the Project and at the conclusion of the environmental assessment in regards to the outcomes of specialist findings.

Air Quality

With the proximity of residences in the City of Broken Hill to the Rasp Mine, there is potential for dust and particulate matter to have an adverse impact on these receivers. The lead content of the particulate matter is also a parameter that has the potential to impact upon the air quality of the region.

As a condition of the MOP approval DEC has required the establishment of monitoring stations which will monitor air quality at the site. In addition, background monitoring for PM_{10} and lead concentrations will be established to provide baseline data for air quality modelling that will be undertaken as part of the EAR.

Noise and Vibration

Noise generated by mine operations as well as noise and vibration associated with blasting also have the potential to impact upon surrounding sensitive receivers. While the depth of the Kintore Pit should mitigate most of the acoustic impacts arising from mining activities, a baseline monitoring program is being undertaken to provide data for noise and vibration modelling that will occur as part of the EAR.

A geotechnical assessment will be made to confirm safe mining depths beneath road and railway facilities to ensure the protection of these public facilities.

Historical Heritage

The Broken Hill LEP 1996 lists nearly 50 items of industrial heritage associated with the mining history of Broken Hill and located within the CML7 lease area. The CML7 lease area also includes the "Line of Lode", which is identified as a Historic Place on the Register of National Estate. The characteristics of the Line of Lode that have heritage value are those items that relate to the site's industrial heritage, including features such as the remnant timber slopes in Kintore Pit, the foundation remains of retaining walls and chimney stacks, the headframes and the concentration mills. There is the potential for mining in CML7 to impact upon the historical heritage values of this site. This will be assessed in the EAR and a Conservation Management Plan developed.

Waste

As noted in the project description, the waste stream resulting from ore processing will be thickened and separated by cycloning to produce two waste streams. The coarser stream will be redirected underground to use as stope fill and the finer stream will be pumped to the existing TSF to the north east of Kintore Pit for containment and settling (Figure 2.1). A number of extra lifts will be added to the existing TSF to provide additional capacity. After the existing TSF has been filled to capacity, the tailings stream will be diverted to another location or locations for the remainder of the Project life.

The impacts of the additional lifts to the existing TSF and depositing of tailings in other identified locations will be addressed in the EAR.

Dispersion of soluble lead

As the proposal involves the crushing of virgin, primary sulphide ores there is the potential for the dispersion of soluble lead which could pose a risk to public health. As mentioned in the notes for Air Quality above, there is also the potential for lead contamination to be generated in the form of atmospheric dust. This will be addressed in the EAR.

Water supply

Excessive use of water together with poor reuse of water has the potential to impact on local water supplies. An impact of the Project's water usage on the City's water supply will also be included in the EAR. A water balance model will be undertaken to allow maximum reuse of water and ground water will be studied to determine its quality and quantity for use as process water. Water will also be returned from the TSF and used in processing. A Water Management Plan will be developed to ensure efficient use.

4.4 *RISK ASSESSMENT*

Table 4.1 contains a risk assessment of the potential environmental risks identified for this project. This risk assessment is intended to guide the level of assessment undertaken in the EAR. It is important to note that all risk ratings are based on the proposed activity taking place with no management measures in place.

Table 4.1 Environmental Risk Assessment

Aspect	Sub Topic	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Noise and vibration	Construction noise impacts	Construction noise associated with traffic and establishment of infrastructure at the site generating noise impacts to surrounding sensitive receivers.	Low	Calculations of predicted noise levels at surrounding residences will be made for the construction/establishment phase of this project. These will be conducted in accordance with DEC policy, and will include onsite and off site vehicle movements associated with this phase of the project.	This scope is considered appropriate for the level of construction work being undertaken as part of this project.
	Operational noise impacts	Crushing and resource transport generating noise impacts to surrounding sensitive receivers.	High	Extensive modelling will be undertaken to assess the noise impacts arising from this activity. The noise assessment will be undertaken based on DEC's Industrial Noise Policy (INP) and a methodology that has been agreed as appropriate with DEC.	The high potential for impacts to surrounding residences warrants this level of assessment.
		Operations within the Kintore Pit and underground.	Low	The noise assessment will be undertaken based on DEC's Industrial Noise Policy (INP).	This scope is considered appropriate as the high walls surrounding the pit act as an effective buffer to noise impacts associated with mining activities.

Aspect	Sub Topic	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
		Rail and external road traffic generating noise impacts to surrounding sensitive receivers.	Low	The noise assessment will be undertaken based on DEC's Industrial Noise Policy (INP) and predicted vehicular movements and site access routes.	The relatively low proposed number of vehicle movements occurring each day will be adequately assessed by using these guidelines as the scope.
	Blasting impacts	Blasting generating noise and vibration impacts to surrounding residences.	Medium	Blasting impacts will be assessed in accordance with the DEC recommended ANZECC criteria. These criteria are used to assess human annoyance, discomfort and potential property impacts from blasting activities.	Assessments will identify mining areas that may require additional management of blasting practices to reduce potential blast and vibration impacts.
Air Quality	Dust and particulate matter	Adverse impacts to surrounding residences arising from the generation of dust and particulate matter. Potential for dust from ROM, TSF and concentrate transfer points.	Medium	An analysis of existing conditions would be undertaken followed by a quantification of emissions sources. Dispersion modelling (AUSPLUME 6.0) would be conducted and legislative compliance assessed. The assessment would capture both construction and operational impacts.	The Air Quality Assessment will be conducted in accordance with the NSW DEC guidelines; NSW EPA (2005) Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW. It is anticipated that a Level 2 impact assessment will be required.

Aspect	Sub Topic	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
	Airborne Lead	Contamination and human health risks arising from airborne lead particulate matter.	Medium	An analysis of existing conditions would be undertaken followed by a quantification of emissions sources. Dispersion modelling (AUSPLUME 6.0) would be conducted and legislative compliance assessed.	The Air Quality Assessment will be conducted in accordance with the NSW DEC guidelines; NSW EPA (2005) Approved Methods and Guidance for the Modelling and Assessment of Air Pollutants in NSW. It is anticipated that a Level 2 impact assessment will be required.
Waste	Disposal of tailings	Inappropriate disposal of tailings material.	Low	Consideration of the proposed disposal strategy in the existing TSF and examination of disposal options after this disposal method is exhausted.	This level of assessment is considered appropriate for the risk level assigned to this aspect.
	Trade Waste	Impact on reticulated waste disposal	low	Consider and identify trade waste facilities in consultation with Country Water	Country Water Manage local water and sewerage supply services
	General industrial waste	Potential health and amenity impacts	low	Identify waste streams and appropriate management and disposal strategies.	Limitations of municipal waste disposal, need for alternative solutions will be considered in the EAR
Contamination	Soluble Lead	Impacts to human health	Low	Review of previous environmental assessments undertaken for mining in the area and a comparison of the proposed activities in relation to the results of these assessments. Undertake appropriate sampling strategy to provide background data for future monitoring	Lead contamination as a result of mining this ore body has been considered unlikely in previous assessments.

Aspect	Sub Topic	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Groundwater	Local and regional groundwater quality	Contamination of local or regional groundwater resources from operational activities	Low	A desktop review of previous groundwater assessments completed for the study area and a comparison of the proposed activities in relation to the results of these assessments.	The local and regional groundwater systems are considered to be well documented and the previous reports undertaken (including the 2001 SEE) were for activities of a similar nature and scope.
Surface water	Surface water drainage	Off-site surface water / wastewater discharges.	Low	Review of previous surface water assessments undertaken for the site and an evaluation of the water needs of the proposed activities. Review the Stormwater Management Plan . and prepare a water balance strategy for the site.	There is a Stormwater Management Plan currently in place for the site. This needs to be reviewed having regard to the proposal and to ensure on going best practice water management. .
	Water supply	Inefficient or excessive consumption of water resources	Low	Water balance model and consideration of a water supply strategy for the site including assessment of reuse opportunities across the site. Impact assessment on the City's water supply.	There is currently a Stormwater Management Plan currently in place for the site, which allows for the possibility of some reuse of runoff captured in the Old Kintore Pit. Additional water supply will be provided by the town's reticulated water system.

Aspect	Sub Topic	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Ecology	Threatened flora and fauna species, endangered ecological communities.	The proposed mining activities will have no impact on the habitat of threatened flora and fauna species as no clearing or other disturbing processes will be undertaken	Low	No ecological assessment will be undertaken as part of this project.	This level of assessment is justified as there will be no clearing of vegetation or other ecologically disturbing activities undertaken as part of this proposal.
Aboriginal heritage	Impacts to Aboriginal heritage values as a result of construction or operational activities	There is no known Aboriginal archaeology identified at the site.	Low	Review of 2001 SEE study and database searches.	Previous studies have indicated that it is extremely unlikely that any Indigenous archaeology evident at the site before mining operations in the area commenced would still be present.
Historical heritage	Listed heritage structures/values present at the site	Impacts to existing structures as a result of mine operations	Medium	Desktop assessment of the 2001 SEE, 2006 REF, heritage database searches and a comparison with proposed activities. Identify potential impacts of mining activities on heritage items and consider mitigation measures. Consider and recommend principles for a Conservation Management Plan.	The number of heritage surveys already conducted at the site provides an adequate amount of information for this heritage assessment.

Aspect	Sub Topic	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Traffic and transport	Site access and local traffic movements	Disruption to traffic on local roads due to increased vehicle movements	Low	Review of the traffic assessment found in the 2001 SEE completed for trial mining at the site, as well as an examination of current traffic data in comparison to the Project details provided.	The number of vehicles involved with the operation of Rasp Mine is not expected to differ markedly from what was describe in the 2001 SEE.
	Rail movements associated with ore transport and operation of the rail spur	Additional rail movements resulting from the proposed operations may disrupt rail traffic	Low	An assessment of existing rail traffic and the impact of the additional rail movements resulting from the proposal will be put conducted. An examination of rail movements will be included in the acoustic and visual sections of the EAR.	Approximately 1 rail movement a day is predicted for this project. These rail movements will predominantly occur during daylight hours and for brief periods of time.
	Mining under railways and roads	Potential subsidence of road and rail infrastructure	low	Geotechnical studies to assess likely impacts	Results will be considered in EAR
Access	Access to existing public utility infrastructure	Potential impact on access due to mining operations	Low	Identify easement and access arrangements and consider opportunities and constraints due to potential conflicts	This will be reported in EAR

Aspect	Sub Topic	Identified Environmental Risks associated with the Project	Level of Risk	Proposed Scope of Works for Environmental Assessment	Justification
Landscape Management and Restoration	Mine Rehabilitation	Unsatisfactory landscape management concept. Potential soil erosion and inappropriate rehabilitation and final landforms.	Low	The EAR will contain a chapter that details the conceptual landscape management for Rasp Mine comprising rehabilitation, final voids and final landform.	This will be reported in the EAR.
Visual	Surrounding residences in the Broken Hill area.	Negative visual impacts associated with the operation of the Rasp Mine.	Low	A review of previous environmental reports completed for the study area and a site inspection will be undertaken to assess the projects visual impacts.	The activity of mining is considered to be an integral part of the visual character of the Broken Hill area and the proposal will not substantially alter this.
Socio-economic considerations	Economic benefits to local and regional communities and government from the project; potential impacts to amenity; and social benefits from mining.	Socio-economic impacts associated with loss of amenity as a result of mining. Employment opportunities and increased revenue are some of the positive impacts predicted as a result of operations.	Low	Document the relationship between mining and the socio-economic status of the community; assess potential social and economic impacts (positive and negative) associated with the project; and provide management measures.	The proposed overview of potential socio-economic impacts is considered to be appropriate as the socio-economic impacts of mining on Broken Hill are well understood.

Note – Risk weightings are based on the activity taking place with no management measures in place.

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