



# Rasp Mine

## Zinc–Lead–Silver Project

# Preferred Project Report – Annexures

Project Application No. 07\_0018

September 2010



**Broken Hill Operations Pty Ltd**  
a wholly owned subsidiary of CBH Resources Ltd

***ANNEXURE A: REVISED STATEMENT OF COMMITMENTS***

## **REVISED STATEMENT OF COMMITMENTS**

### **INTRODUCTION**

BHOP has made a number of commitments for managing potential environmental impacts of the Project. These commitments along with other management and mitigation measures were documented in the following sections of the EAR:

- Stakeholder Engagement, *Section 4.10*;
- Noise and Vibration, *Section 7.5*;
- Air Quality and Greenhouse Gas, *Section 8.3*;
- Water Resources, *Section 10.6 and 10.7*;
- Heritage, *Section 11.5*;
- Visual Amenity, *Section 13.5*;
- Traffic and Transport, *Section 14.5*;
- Waste Management, *Section 15.3*;
- Rehabilitation and Closure *Sections 17.3 and 17.4*.

The draft Statement of Commitments provided in Section 18 of the EAR has been revised to consider the issues raised in the response to submissions. The revised Statement of Commitments details the measures proposed by BHOP for environmental mitigation, management and monitoring of the Project. Amendments and additions to the draft Statement of Commitments have been marked in yellow.

If approval is granted under Part 3A of the EP&A Act, BHOP will commit to the following actions and controls.

### **STAKEHOLDER ENGAGEMENT**

BHOP is committed to ongoing consultation with stakeholders and the local Broken Hill community. BHOP believes the building of relationships with the community based on trust and mutual advantage is essential to business success and sustainability. This is recognised by the commitment of BHOP to further developing the community consultation programme, which includes:

- continued support of the Community Consultation Group who will continue to meet on a regular basis;
- provision of the Rasp Mine News Updates to local neighbours surrounding the mine to outline information on activities;
- Rasp Mine information notice board to be located at the Café and Miner's Memorial;
- annual distribution of a Rasp Mine magazine providing a summary of environmental monitoring, initiatives and activities;
- targeted consultation involving presentations and briefings on specific issues as they arise;

- consultation with relevant stakeholders during the preparation of the final closure plan; and
- continued implementation of the complaints procedure to address individual issues as they arise.

## **NOISE AND VIBRATION**

BHOP understands that intrusive noise, vibration and overpressure levels are a concern for community members and can affect their standard of living. In recognition of this concern BHOP have made a number of commitments to mitigate noise levels from the Project including:

- re-location of the processing plant to the north-eastern end of the site, away from residential dwellings to the south;
- re-location of mine ventilation fans to Little Kintore Pit and away from residential and commercial areas and installing noise suppression on the fan units;
- smaller stope designs to reduce blast vibrations, designing blasts and arranging firing times to minimise potential community impacts;
- construction of noise barriers with 4 m high bunding along the southern side of the haul road and the southern perimeter of the ROM pad mine truck haul route;
- silencers installed on haul trucks and noise suppression kits on the FEL(s) used on the ROM pad, container stockpile and rail loading areas;
- limiting crushing to dayshift (7:00am to 7:00pm) seven days a week;
- limiting shunting of concentrate wagons to between 7:00am and 6:00pm seven days a week;
- prohibiting production rock blasting between 7:15pm and 6:45am seven days a week;
- restricting construction activities to day shift;
- cladding of the primary crusher and installing noise abatement bunding to the north and south of the crusher;
- installing a building around the flotation facility providing shielding of the SAG and Ball mills;
- covered conveyors and transfer stations prior to the grinding circuit; and
- installation of two overlapping bunds at the northern side of the wagon stockpile area to shield Crystal Street residences.

In addition, BHOP will ensure that:

- operational noise is within limits of the NSW Industrial Noise Policy.
- rock blast vibration levels are within guidelines issued by the Australian and New Zealand Environmental and Conservation Council.
- rock blast overpressure limits are within guidelines issued by the Australian and New Zealand Environmental and Conservation Council.

The current noise, vibration and overpressure management plan will be updated to address potential impacts from new Project activities prior to the commencement of those activities. Without limiting the contents of this plan, the plan will include:

- trigger limits for noise levels with response actions plans;
- details of major emission sources and their mitigation measures;
- details of inspection and monitoring programmes;
- details and requirements for a noise awareness programme for employees and contractors;
- details of the community complaints procedure; and
- internal and external reporting requirements.

The construction environmental management plan will outline specific requirements for noise, vibration and overpressure mitigation and reduction during construction activities.

### **AIR QUALITY**

BHOP recognises that of particular concern to the local community is the generation of dust and lead dust. BHOP is committed to implementing the following dust mitigation and suppression measures:

- use of water spray / chemical dust suppressant system at the tailings storage facilities;
- installation of vehicle wash facilities with a wash facility installed post concentrate loading to accommodate both the truck and concentrate container ;
- extensive sealing of haul roads and other primary roadways;

#### **Roads to be Sealed**

	Road	Length (m)
Existing	Front gate to truck wash	292
	'Diamond' intersection to core shed	360
	Front gate road to car park	132
Proposed	Truck wash to haul road connection from Kintore Pit	690
	Kintore Pit intersection (truck wash and haul roads) to ROM pad (haul road for ore mine trucks)	1186
	ROM pad to and through mill	354
	Mill to rail load out (concentrate trucks)	910
	Truck wash road to workshop	190
	Haul road to backfill plant	400

- application of chemical dust suppression as per the manufacturer's specification, or more often as required, on all "free areas" of the site as per the following figure;
- enclosure of all above ground conveyors and transfer points prior to the grinding circuit (SAG and ball mills);
- restricted height of ROM stockpile and installation of static wind breaks (orientated perpendicular to the dominant wind direction) along with top-mounted water sprays;
- water sprays on all permanent stockpiles;

- maintaining a concentrate moisture level of around 9 percent;
- service roads and tip points around the stockpile will be laid with compacted road base (high moisture and low silt content);
- installation of real-time air quality monitoring to assist in the active management of emissions;
- limitation of vehicle or work access in exposed areas;
- maintaining of surface crust to minimise potential wind erosion;
- identification and remediation of areas where fines or silt has built up (typically after heavy rain storms);
- remediation of disturbed areas including but not limited to, removal and burial of fine material, capping with inert waste rock, or use of dust suppressants;
- undertaking sampling to quantify road surface silt loadings on an ongoing basis; and
- installation of video recording equipment to assist in the active management of emissions for the TSF.

In addition to mitigation measures, best practice will be employed during the operations. This includes:

- adoption of a lead management plan to address specific issues dealing with personal hygiene of employees, blood lead action guidelines, sampling and environmental monitoring;
- continuation and expansion of the existing air quality management program to include high volume samplers, dust deposition jars and real time monitors;
- regular maintenance of pollution control equipment to ensure that it is functioning at optimal performance levels. A maintenance schedule will be documented and implemented for all pollution control equipment as part of an environmental management plan;
- maintain and operate all plant and equipment installed or used at the site in a proper and efficient manner;
- maintaining the premises in a condition which minimises or prevents the emission of dust from the premises; and
- ensuring visible dust emissions from any tailings storage facility are negligible.

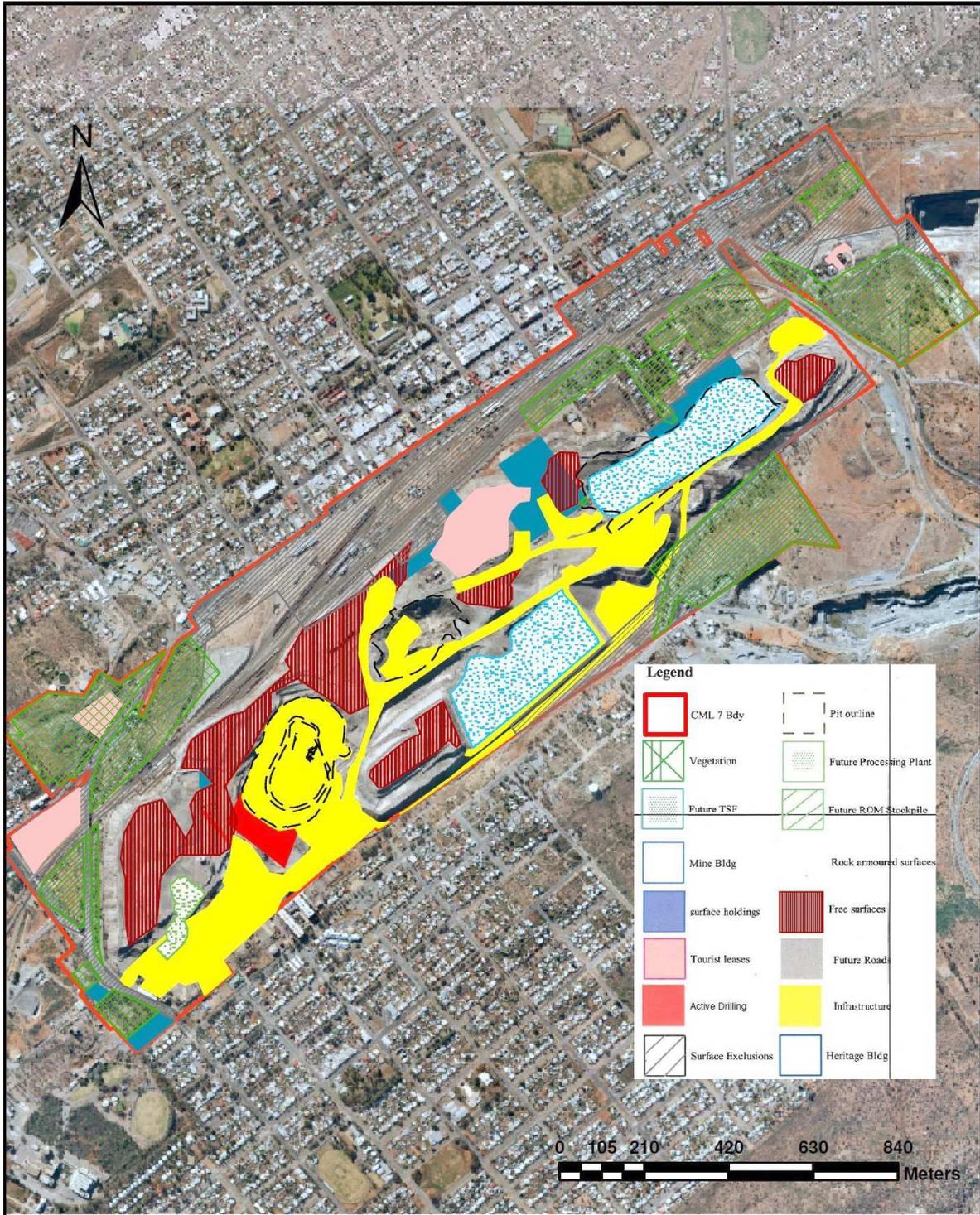
A CEMP will also be developed prior to construction. The plan will include management and monitoring measures relating to air quality that will be implemented during all construction works.

A Tailing Construction and Operation Manual will be completed and implemented prior to the commencement of any construction activities at the site.

In addition the following measures will be undertaken to minimise and monitor greenhouse gases:

- efficiency of all new mobile and fixed equipment will be considered during procurement for both diesel and electric powered equipment;

- within 12 months of commencement of underground mining, an energy audit will be conducted to compare predicted and actual energy consumption;
- equipment will be maintained to retain high levels of energy efficiency;
- the inventory of emissions developed for this assessment will be regularly updated and maintained; and
- emissions and abatement strategies will be reported annually in the AEMR.



***Chemical Dust Suppressants to be applied to “Free Areas”***

## **COMMUNITY HEALTH**

Community feedback has emphasised their concern with the potential of the Project to impact on blood lead levels. BHOP is committed to implementing dust mitigation and suppression measures (Section 18.4) to manage emissions and prevent adverse impacts from its operations contributing to increased blood lead levels in the local community through a lead management plan. In addition the lead management plan will include:

- requirements for employee and contractor hygiene;
- requirements for washing lead soiled articles, for example laundering of work clothes;
- requirements for washing vehicles prior to leaving the site;
- requirements for monitoring of lead blood levels with actions to be taken when designated trigger levels are reached; and
- requirements for inspections and housekeeping for each operational area to minimise dust build-up and the potential for subsequent off-site movement.

In addition, BHOP will conduct bi-annual assessment of soil contamination on land in Eyre Street and land adjacent to TSF1 until TSF1 is decommissioned and rehabilitated.

If the dust suppressant chosen to be used at the site is not included in the Screening Assessment undertaken as part of the EAR (Annexure I(b)), then a new health risk assessment of the dust suppressant will be undertaken and forwarded to Greater Western AHS and NSW Health for approval prior to its use on-site.

BHOP is also committed to maintaining a high level of lead awareness within the local community by contributing to lead awareness education programmes.

## **WATER RESOURCES**

Conservation of water resources is increasing seen as a critical activity and BHOP is committed to the following water conservation measures:

- treatment of mine dewatering to enable usage in the processing plant;
- tailings water to be returned to the processing plant for reuse;
- water to be recycled from Horwood Dam to the processing plant;
- investigation of the use of the silver tank as water holding tank for water to be recycled to the processing plant, reducing the potential for evaporation from open type storages;
- investigate the use of grey water from domestic facilities for use in ground management; and
- installation of flow metres to monitor water usage.

If sufficient water is not available, the scale of their operations will be adjusted to match the licensed water entitlements.

Measures to manage water quality that will be included in BHOP's water management programme include:

- provision and location of spill kits and requirements for training;
- design and installation of chemical storage to include bunds with suitable sumps, and where appropriate roofed to prevent stormwater entry;
- bunding of the diesel refuelling station;
- oil / water separators to be installed at vehicle wash facilities and the diesel refuelling station;
- management of sediment and sludge from vehicle washing facilities;
- water quality monitoring including groundwater (represented by mine dewatering) and at locations to the east of TSF1, and surface water represented by Horwood Dam;
- monitor the quality and quantity of water captured by the toe drains on the Tailings Storage Facility (TSF); and
- monitor the movement of seepage sourced from the TSF and to monitor the quality of the local groundwater system.

In addition the recommendations from the Stormwater Management Plan as proposed by Golder Associates (Golder 2010, Annexure K) will be implemented and will address potential impacts from new Project activities prior to the commencement of those activities. This Plan includes:

- erosion and sediment control measures;
- design requirements for on-site retention evaporation basins;
- requirements for management of catchment areas, including drains, pipework, bunding and sumps; and
- quarterly inspections of the site storm water management structures to confirm that they are operational.

In addition, a Groundwater Management Plan will be prepared to provide details of the monitoring of seepage movement within and adjacent to the TSF.

Finally, all necessary licences under the *Water Act 1912* will be obtained prior to the commencement of activities on site.

## **HERITAGE**

BHOP recognises the historical value of the site as the original BHP operations and representing mining from the 1880s and the importance this has to the local community. BHOP is committed to protecting the historical value of the site through the implementation of a **Conservation Management Plan that will provide the strategic framework for all heritage items located on the Lease based on the principles of the Burra Charter. The Conservation Management Plan will include:**

- photographic record of listed heritage buildings;

- programmes for each building for adaptive reuse outlining measures to maintain its structural stability and identify requirements for retention, renovations, permitted re-use and ongoing maintenance;
- preservation requirements for buildings not to be reused;
- inspection and monitoring programme;
- inventory of all mobile items remaining on site;
- agreement with a mining history organisation to preserve and care for relocated items; and
- procedures for the preservation of opportunistic finds, including Aboriginal and European objects.

The Conservation Management Plan will outline specific requirements for the management of historical heritage.

In addition, the Conservation Management Plan will include appropriate management measures to be implemented in the event that an Aboriginal object is identified on-site.

### ***VISUAL AMENITY***

Visual impacts will be minimised by implementation of the following management measures:

- material stockpiles, waste, plant, equipment and vehicle parking will be restricted to designated areas;
- where possible, avoid the use of highly reflective materials and colours on the site, unless necessary for safety reasons;
- lighting being kept to a minimum necessary to safely carry out operations;
- lighting being directed away from residences through the use of directional lighting equipment and shielding; and
- implementation of a rehabilitation and mine closure strategy post operations, aimed at retaining the mining character of the site.

### ***TRAFFIC AND TRANSPORT***

BHOP is committed to providing a safe road network for its employees, contractors and the surrounding community. The major measures to manage road safety include:

- sealing of all main traffic routes including the roads indicated in the table located at 3.4;
- placing compacted moisture conditioned road base on other internal roads and chemical dust suppressant as required to minimise off site dust levels;
- requiring heavy vehicles associated with deliveries to the mine to use approved B-Double routes;
- restrict trucking movements for off site ore transport to between 7 am and 6 pm.

- providing sufficient parking spaces on-site for employee and contractor vehicles;
- implementing safety procedures to be adhered to during temporary usage of the South Road access; and
- assessing the capability of the existing road pavement along Eyre Street to withstand the intended road and traffic movement associated with the Project. This assessment would be undertaken prior to the commencement of construction. If it is found that the road pavement is inadequate, then BHOP will consult with BHCC to agree on any feasible contributions for road pavement improvement and/or maintenance works.

The construction environmental management plan will outline specific requirements for the management of traffic and transport, and a traffic management plan will be developed for operations.

Additional works to be implemented at the Eyre Street site entrance/exit would be undertaken at the costs of BHOP.

### **WASTE MANAGEMENT**

Prior to commencement of operations, the procedures for managing wastes will be detailed in the waste management programme. The waste management programme will describe the following:

- recycling of wastes, where practicable;
- storage of general waste, which cannot be recycled, in bins on-site prior to collection and off-site disposal by a licensed waste disposal contractor;
- burying of packaging from explosive products in a separated, designated site in the bottom of BHP Pit or disposed of as part of the back fill for stopes;
- storage of other regulated or hazardous waste in drums or designated bins on-site in a bunded area until collected by a licensed contractor for recycling or disposal off-site at a regulated facility;
- depositing mineralised waste rock in the BHP Pit or used as rock fill in underground stoping voids;
- using non-mineralised waste rock as road base, fill material for earth bunding, rehabilitative covering for disturbed areas or rock fill in underground stoping voids; and
- using tailings as part of the back fill mix for stopes underground.

The construction environmental management plan will outline specific requirements for the management of waste.

### **REHABILITATION AND CLOSURE**

BHOP intend to return the Project Area to the community at the cessation of mining activities in a suitable condition to achieve agreed closure objectives. The rehabilitation and mine closure strategy will include:

- preparing and implementing a Rehabilitation Environmental Management Plan (or any such plan as required by the project approval), which addresses all aspects of rehabilitation and mine closure;

- development of a conceptual mine closure plan;
- objectives for landscape management and rehabilitation;
- methodology for decommissioning, landscape management and rehabilitation of the Project Area;
- post-mining care and maintenance, and ongoing monitoring and management requirements; and
- mine planning to consider and implement rehabilitation and closure strategy on an ongoing basis for the life of mine through progressive rehabilitation.

In addition the strategy will address the rehabilitation and mine closure requirements for the following key areas;

- final land form – confirm that the resulting landform will be similar to the current landform;
- drainage and erosion control – re-assessment and implementation of stormwater management plan for post-mining activities;
- safety – audit of Project Area to identify potential post-mining hazards and implement the appropriate controls;
- tailings – contain tailings to provide for long-term stability and prevention of dust generation; and
- heritage items – preserve the heritage value of the Project Area for future use by the community