# **Project Approval**

# Section 75J of the Environmental Planning and Assessment Act 1979

I approve the project referred to in schedule 1, subject to the conditions in schedules 2 to 4.

These conditions are required to:

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

Frank Sartor MP Minister for Planning

Sydney 2007

**SCHEDULE 1** 

**Application Number:** 06\_0168

Proponent: BEMAX Resources Limited

Approval Authority: Minister for Planning

Land: See Appendix 1

**Project:** Snapper Mineral Sands Project

Red type – June 2009 modification Blue type – December 2009 modification

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#### **DEFINITIONS**

Annual Environmental Management Report **AEMR** 

Building Code of Australia **BCA** Council Wentworth Shire Council

The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Day

Sundays and Public Holidays

DECC Department of Environment and Climate Change

Department Department of Planning

Director-General Director-General of Department of Planning, or delegate

Dol Department of Lands

DPI Department of Primary Industries **DWE** Department of Water and Energy

The report titled Snapper Mineral Sands Project – Environmental Assessment EΑ

dated March 2007, and associated Responses to Submissions dated 22 June

2007

EP&A Act Environmental Planning and Assessment Act 1979 **EP&A Regulation** Environmental Planning and Assessment Regulation 2000 **EPL** 

Environment Protection Licence issued under the Protection of the

Environment Operations Act 1997 **Electricity Transmission Line** ETL The period from 6pm to 10pm Evening

The mineral sands mine the subject of DA 251-09-01 and described in the Ginkgo Mine

Environmental Impact Statement titled Ginkgo Mineral Sands Mine

Environmental Impact Statement dated September 2001

Hectares ha

HAR Highway Access Road

The extraction and processing of ore on site Mining Operations

Minister for Planning, or delegate Minister

BEMAX's Mineral Separation Plant located on the south-western outskirts of **MSP** 

Night The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on

Sundays and Public Holidays

Offset Area the land shown as Offset Area 1 and Offset Area 2 in the map in Appendix 2

Non-Proponent held land Land that is not held by the Proponent

**Project** The Snapper Mineral Sands Project described in the EA

Proponent BEMAX Resources Limited, or its successors

**RTA** Roads and Traffic Authority

The land bounded by the blue line (MLA area) plus the ETL from the Ginkgo Site

Mine and HAR extensions, shown in the map in Appendix 2

Statement of Commitments The Proponent's commitments in Appendix 4

# SCHEDULE 2 ADMINISTRATIVE CONDITIONS

## **Obligation to Minimise Harm to the Environment**

1. The Proponent shall implement all practicable measures to prevent and/or minimise any harm to the environment that may result from the construction, operation, or rehabilitation of the project.

## **Terms of Approval**

- 2. The Proponent shall carry out the project generally in accordance with the:
  - (a) EA
  - (b) statement of commitments;
  - (c) modification application 06\_0168 Mod 1 and accompanying Environmental Assessment titled Bemax Resources Limited Snapper Mineral Sands Mine Offset Modification Environmental Assessment dated April 2009;
  - (d) modification application 06\_0168 Mod 2 and accompanying Environmental Assessment titled Bemax Resources Limited Ginkgo Mineral Sands Mine and Snapper Mineral Sands Mine November 2009 Modification Environmental Assessment dated November 2009; and
  - (e) conditions of this consent.

#### Notes:

- The general layout of the project is shown in Appendices 2 and 3; and
- The statement of commitments is included in Appendix 4 (excluding the commitments which are reflected in, or inconsistent with, this approval).
- 3. If there is any inconsistency between the above, the conditions of this approval shall prevail to the extent of the inconsistency.
- 4. The Proponent shall comply with any reasonable and feasible requirements of the Director-General arising from the Department's assessment of:
  - (a) any reports, plans or correspondence that are submitted in accordance with the conditions of this approval; and
  - (b) the implementation of any actions or measures contained in these reports, plans or correspondence.

## **Limits on Approval**

5. Mining operations associated with the project may take place for 18 years from the grant of the mining lease for the project.

Note: Under this approval, the Proponent is required to rehabilitate the site and provide offsets to the satisfaction of the Director-General. Consequently, this approval will continue to apply in all other respects other than the right to conduct mining operations until the site has been rehabilitated and the offset provided to a satisfactory standard.

- 6. The Proponent shall not produce more than 450,000 tonnes of mineral concentrate a year.
- 7. The Proponent may only transport mineral concentrate off-site via the mineral concentrate transport route described in the EA, using RTA approved vehicles.
- 7A. The Proponent may transport up to 2 million tonnes of mineral sands ore to the Ginkgo Mine until 31 December 2009, limited to a maximum of 2 laden and 2 unladen vehicle movements per hour. All vehicle loads must be covered during transport.

## **Management Plans/Monitoring Programs**

8. With the approval of the Director-General, the Proponent may submit any management plan or monitoring program required by this approval on a progressive basis.

## Structural Adequacy

The Proponent shall ensure that all new buildings and structures, and any alterations or additions to
existing buildings and structures, are constructed in accordance with the relevant requirements of the
BCA.

Notes:

- Under Part 4A of the EP&A Act, the Proponent is required to obtain construction and occupation certificates for the proposed building works.
- Part 8 of the EP&A Regulation sets out the requirements for the certification of the project.

## **Demolition**

10. The Proponent shall ensure that all demolition work is carried out in accordance with *Australian Standard AS 2601-2001: The Demolition of Structures*, or its latest version.

## **Operation of Plant and Equipment**

- 11. The Proponent shall ensure that all plant and equipment used on site is:
  - (a) maintained in a proper and efficient condition; and
  - (b) operated in a proper and efficient manner.

# SCHEDULE 3 SPECIFIC ENVIRONMENTAL CONDITIONS

#### **SOIL AND WATER**

## **Discharges**

1. Except as may be expressly provided for by an EPL, the Proponent shall not discharge any water from the site

## **Water Management Plan**

- 2. The Proponent shall prepare and implement a Water Management Plan for the project to the satisfaction of the Director-General. This plan must:
  - be prepared in consultation with the DECC and DWE by suitably qualified expert/s whose appointment/s have been approved by the Director-General;
  - (b) be submitted to the Director-General for approval prior to carrying out any development on the site; and
  - (c) include:
    - · Erosion and Sediment Control Measures;
    - Surface Water Management Measures; and
    - · Borefield Management Measures.

#### **Erosion and Sediment Control Measures**

- 3. The Erosion and Sediment Control Measures must:
  - (a) be consistent with the *Managing Urban Stormwater: Soils and Construction* manual (Landcom, 2004 or its latest version);
  - (b) identify activities that could cause soil erosion and generate sediment;
  - (c) describe measures to minimise soil erosion and the potential for the transport of sediment;
  - (d) describe the location, function, and capacity of erosion and sediment control structures; and
  - (e) describe what measures would be implemented to monitor and maintain the integrity of the structures over time.

#### **Surface Water Management Measures**

- 4. The Surface Water Management Measures must:
  - (a) describe the salinity management measures on site including the design measures proposed to be used to minimise any lateral seepage of brackish water from the initial water dam, initial emplacement containing the overburden slurry, and initial sand residue dam which could contaminate adjacent soils and cause vegetation dieback;
  - (b) describe measures to manage dust suppression water along the HAR:
  - (c) include a program to monitor the effectiveness of these measures, with specific reference to vegetation and soil performance criteria; and
  - (d) describe the measures that would be implemented if any exceedances of the performance criteria are detected.

## **Borefield Management Measures**

- 5. The Borefield Management Measures must include:
  - (a) a site water balance;
  - (b) data to benchmark the natural variation in groundwater levels and quality prior to any development on site within the predicted drawdown impact zone (identified in the EA);
  - (c) groundwater impact trigger levels for relevant landholder bores (e.g. Chalky Well);
  - (d) a program to monitor the groundwater impacts of the project;
  - (e) the procedures that would be implemented if the groundwater impact trigger levels are exceeded; and
  - (f) measures to mitigate and/or compensate landholders who are adversely affected by the groundwater impacts of the project, including the provision of alternative water.

#### **WASTE MANAGEMENT**

## **Waste Management Plan**

- 6. The Proponent shall prepare and implement a Waste Management Plan for the project to the satisfaction of the Director-General. This plan must:
  - (a) be prepared in consultation with the DECC by suitably qualified expert/s whose appointment/s have been approved by the Director-General,
  - (b) be submitted to the Director-General for approval prior to carrying out any development on the site;
  - (c) include:
    - · Landfill Management Measures; and
    - · Waste Minimisation Measures.

#### **Landfill Management Measures**

- 7. The Landfill Management Measures must:
  - (a) generally meet the environmental goals listed in *Environmental Guidelines: Solid Waste Landfills* (DEC, 1996 or its latest version) and;
  - (b) include:
    - design and operation details of waste disposal areas;
    - a management program for backloaded MSP process waste;
    - a system to monitor the movement of backloaded MSP waste; and
    - disposal techniques and handling practices consistent with the Code of Practice and Safety Guide for Radiation Protection and Radioactive Waste Management in Mining and Mineral Processing (ARPANSA, 2005 or its latest version).

## **Waste Minimisation Measures**

- 8. The Waste Minimisation Measures must:
  - (a) identify the various waste streams of the project;
  - (b) describe what measures would be implemented to reuse, recycle or minimise the waste generated by the project; and
  - (c) include a program to monitor the effectiveness of these measures.

Note: The waste minimisation measures are not relevant to backloaded MSP process waste, overburden or sand residues.

## **RADIATION MANAGEMENT**

## **Radiation Management Plan**

- 9. The Proponent shall prepare and implement a Radiation Management Plan for the project to the satisfaction of the Director-General. This plan must:
  - (a) be prepared in consultation with the DECC by suitably qualified expert/s whose appointment/s have been approved by the Director-General;
  - (b) be submitted to the Director-General for approval prior to carrying out any development on the site;
  - (c) be consistent with the Code of Practice and Safety Guide for Radiation Protection and Radioactive Waste Management in mining and Mineral Processing (ARPANSA, 2005); and
  - (d) include:
    - a description of operation and control measures;
    - · a description of waste generating processes and waste;
    - demonstration of access to professional expertise;
    - details of radiation monitoring;
    - details of appropriate equipment, staff, facilities and operational procedures;
    - a description of induction and training courses;
    - reporting and periodic review procedures;
    - emergency plans;
    - baseline radiological information;
    - description of the waste management system;
    - radioactive waste monitoring; and
    - a conceptual decommissioning plan.

#### NOISE

## **Noise Impact Assessment Criteria**

10. The Proponent shall ensure that the noise generated by the project does not exceed 35dB(A) *L*<sub>Aeq(15 minute)</sub> at any residence on non-Proponent held land.

#### Notes:

- To determine compliance with the L<sub>Aeq(15 minute)</sub> limit, noise from the project is to be measured at the most affected point within the residential boundary, or at the most affected point within 30 metres of a dwelling (rural situations) where the dwelling is more than 30 metres from the boundary. Where it can be demonstrated that direct measurement of noise from the development is impractical, the DECC may accept alternative means of determining compliance (see Chapter 11 of the NSW Industrial Noise Policy). The modification factors in Section 4 of the NSW Industrial Noise Policy shall also be applied to the measured noise levels where applicable.
- The noise limit above applies under the following meteorological conditions:
  - wind speeds of up to 3 m/s at 10 metres above ground level: or
  - temperature inversion conditions of up to 3°C/100m, and wind speeds of up to 2 m/s at 10 metres above ground level.
- These limits do not apply if the Proponent has an agreement with the relevant owner/s of these residences to generate higher noise levels, and the Proponent has advised the Department in writing of the terms of this agreement.

#### **Traffic Noise Criteria**

- 11. The Proponent shall ensure that traffic noise generated by the project does not exceed the following noise goals at any residence on non-Proponent held land along the HAR:
  - L<sub>Aeq(1 hour)</sub> 50 dB(A) for 7:00 am to 10:00 pm; and
  - L<sub>Aeq(1 hour)</sub> 45 dB(A) for 10:00 pm to 7:00 am.

#### **Noise Monitoring**

- 12. The Proponent shall prepare and implement a Noise Monitoring Program for the project to the satisfaction of the Director-General. This program must:
  - (a) be prepared in consultation with the DECC;
  - (b) be submitted to the Director-General for approval prior to carrying out any development on the site;
     and
  - (c) use a combination of attended and unattended monitoring measures to monitor the performance of the project.

## **AIR QUALITY**

## Air Quality Impact Assessment Criteria

13. The Proponent shall ensure that dust generated by the project does not cause additional exceedances of the criteria listed in Tables 1 to 3 at any residence on non-Proponent-held land.

Table 1: Long term impact assessment criteria for particulate matter

Pollutant	Averaging period	Criterion
Total suspended particulate (TSP) matter	Annual	90 μg/m³
Particulate matter < 10 μm (PM <sub>10</sub> )	Annual	30 μg/m <sup>3</sup>

Table 2: Short term impact assessment criteria for particulate matter

Pollutant	Averaging period	Criterion
Particulate matter < 10 μm (PM <sub>10</sub> )	24 hour	50 μg/m³

Table 3: Long term impact assessment criteria for deposited dust

Pollutant	Averaging period	Maximum increase in deposited dust level	Maximum total deposited dust level	
Deposited dust	Annual	2 g/m <sup>2</sup> /month	4 g/m <sup>2</sup> /month	

Note: Deposited dust is assessed as insoluble solids as defined by Standards Australia, 1991, AS/NZS 3580.10.1-2003: Methods for Sampling and Analysis of Ambient Air - Determination of Particulates - Deposited Matter - Gravimetric Method

## Monitoring

- 14. The Proponent shall prepare and implement an Air Quality Monitoring Program for the project to the satisfaction of the Director-General. This program must:
  - (a) be prepared in consultation with the DECC;
  - (b) be submitted to the Director-General for approval prior to carrying out any development on the site;
  - (c) use dust deposition gauges to monitor the performance of the project.

#### **METEOROLOGICAL MONITORING**

15. During the life of the project, the Proponent shall ensure that there is a suitable meteorological station in the vicinity of the site that complies with the *Approved Methods for Sampling of Air Pollutants in New South Wales* (DEC, 2007 or its latest version).

#### **FLORA AND FAUNA**

## Flora and Fauna Management

- 16. The Proponent shall prepare and implement a Flora and Fauna Management Plan for the project to the satisfaction of the Director-General. This plan must:
  - (a) be prepared in consultation with the DECC by a suitably qualified expert(s) whose appointment(s) has been approved by the Director-General;
  - (b) be submitted to the Director-General for approval prior to carrying out any development on the site: and
  - (c) include a:
    - vegetation clearance protocol;
    - · threatened species management protocol;
    - description of the detailed measures that would be implemented to:
      - control weeds, feral pests, and access;
      - salvage and reuse material from the site for habitat enhancement;
      - collect and propagate seed;
      - manage grazing, fauna entrapment in the dredge pond, bushfires, and remnant vegetation on site; and
    - program to monitor the effectiveness of the protocols and management measures in the plan.

## Offset Management Plan

- 17. The Proponent must prepare and implement an Offset Management Plan to the satisfaction of the Director-General. This plan must:
  - (a) be prepared in consultation with the DECC by a suitably qualified expert(s) whose appointment(s) has been approved by the Director-General;
  - (b) be submitted to the Director-General for approval prior to carrying out any development on the site; and
  - (c) describe the measures to implement the flora and fauna offset (see statement of commitment 4 in Appendix 4 and the detailed description of this offset in the EA), including:
    - the objectives for the offset;
    - a description of the short, medium, and long term measures that would be implemented, including appropriate fencing to exclude grazing, incrementally de-stocking the offset area over three years, removal of unnecessary existing fences, erosion control, signage of the offset, revegetation of unnecessary access tracks, animal pest control, weed management, fire management and threatened species management;
    - detailed performance and completion criteria for the implementation of the offset;
    - a detailed description of how the performance of the offset would be monitored, using techniques such as photographic monitoring and permanent flora quadrats;
    - a description of how the offset would be protected in the long-term; and
    - details of who would be responsible for monitoring, reviewing and implementing the plan.
  - (d) be reviewed and amended by 31 December 2009 to reflect modification application 06\_0168 Mod 1.

#### Offset Bond

18. After the first Independent Environmental Audit (see Schedule 4) after year 10 of the mining operations, the Proponent shall lodge a suitable offset bond with the Director-General. This bond must be determined

by the audit team in consultation with the Proponent, and contain sufficient funds to ensure the remaining works in the Offset Management Plan are fully implemented. The Proponent shall revise this bond to the satisfaction of the Director-General after each subsequent audit.

#### Notes:

- Remaining works are those works required for areas for which completion criteria (as set out in the Offset Management Plan) have not been met, as determined by the Independent Environmental Audit.
- Areas for which completion criteria have been met, as verified by the relevant Audit, will not require a bond.
- Where offset completion criteria are met for a particular area, as verified by the Audit, the Director-General will release the bond for that area.

#### **REHABILITATION**

## Rehabilitation

19. The Proponent shall progressively rehabilitate the site to the satisfaction of the Director-General and the DPI, in a manner that is generally consistent with the final landform in the EA (shown conceptually in Appendix 5 of this approval).

Note: See statement of commitment 3 in Appendix 4.

#### **HERITAGE**

## **Aboriginal Cultural Heritage Management Plan**

- 20. The Proponent shall prepare and implement an Aboriginal Cultural Heritage Management Plan for the project to the satisfaction of the Director-General. This plan must:
  - (a) be prepared in consultation with the DECC and the registered Aboriginal stakeholders involved in the preparation of the EA;
  - (b) be submitted to the Director-General for approval prior to carrying out development on the site; and
  - (c) include a:
    - description of detailed management strategies outlined in statement of commitment 5 in Appendix 4;
    - description of the measures that would be implemented if any skeletal remains are discovered during the project; and
    - program to monitor the effectiveness of the proposed management strategies.

## Non-Indigenous Heritage

21. The Proponent shall protect non-Indigenous cultural heritage site SNH1 (see Appendix 6), and at a minimum erect temporary protective barriers around the site.

#### **TRANSPORT**

## **Road Works**

- 22. Prior to carrying out any development on the site, the Proponent shall install appropriate truck warning signs at locations approximately 300 metres in advance of the HAR intersection with the Silver City Highway and on both sides of the highway to the satisfaction of the RTA.
- 23. The Proponent shall:
  - (a) minimise the amount of dust and debris being carried onto the Silver City Highway by haul trucks from the project; and
  - (b) regularly remove this dust and debris from the highway, to the satisfaction of the RTA.

## **Transport Management**

- 24. The Proponent shall prepare and implement a Transport Management Plan for the project to the satisfaction of the Director-General. This plan must:
  - (a) be prepared in consultation with the DECC and RTA;
  - (b) be submitted to the Director-General for approval prior to carrying out development on the site; and
  - (c) include:
    - Transport of Hazardous Material Measures that would be implemented to address the relevant requirements in the Code of Practice for the Safe Transport of Radioactive Materials (ARPANSA, 2001 or its latest version);
    - Code of Conduct for all drivers transporting materials to and from the site; and

a description of the measures that would be implemented to comply with Condition 23.

## **GREENHOUSE GAS**

## **Energy Savings Action Plan**

- 25. The Proponent shall prepare and implement an Energy Savings Action Plan for the project to the satisfaction of the Director-General. This plan must be:

  (a) be prepared in accordance with the *Guidelines for Energy Savings Action Plan* (DEUS, 2005 or its
  - latest version);
  - (b) submitted to the Director-General for approval prior to carrying out any development on the site; and
  - (c) include a program to monitor the effectiveness of the measures to reduce energy use on site.

## **SCHEDULE 4**

## **ENVIRONMENTAL MANAGEMENT, MONITORING, REPORTING AND AUDITING**

#### **ENVIRONMENTAL MANAGEMENT STRATEGY**

- 1. The Proponent shall prepare and implement an Environmental Management Strategy for the project to the satisfaction of the Director-General. This strategy must be submitted to the Director-General for approval prior to carrying out any development on the site, and:
  - (a) provide the strategic context for environmental management of the project;
  - (b) identify the statutory requirements that apply to the project;
  - (c) describe in general how the environmental performance of the project would be monitored and managed;
  - (d) describe the procedures that would be implemented to:
    - keep the local community and relevant agencies informed about the operation and environmental performance of the project;
    - · receive, handle, respond to and record complaints;
    - resolve any disputes that may arise during the course of activities associated with the project;
    - respond to any non-compliance;
    - manage cumulative impacts: and
    - · respond to emergencies; and
  - (e) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the project.

#### **ENVIRONMENTAL MONITORING PROGRAM**

2. The Proponent shall prepare and implement an Environmental Monitoring Program for the project to the satisfaction of the Director-General. This program must consolidate the various monitoring requirements of this approval into a single document, and be submitted to the Director-General concurrently with the submission of the relevant monitoring programs.

## **INCIDENT REPORTING**

- 3. Within 24 hours of detecting an exceedance of the limits/performance criteria in this approval, or the occurrence of an incident that causes (or may cause) harm to the environment, the Proponent shall notify the Department and other relevant agencies of the exceedance/incident.
- 4. Within six days of notifying the Director-General and other relevant agencies of an exceedance/incident, the Proponent shall provide the Department and these agencies with a written report that:
  - (a) describes the date, time and nature of the exceedance/incident;
  - (b) identifies the cause (or likely cause) of the exceedance/incident;
  - (c) describes what action has been taken to date; and
  - (d) describes the proposed measures to address the exceedance/incident.

## **ANNUAL REPORTING**

- 5. Within 12 months of this approval, and annually thereafter, the Proponent shall submit an AEMR to the Director-General and relevant agencies. This report must:
  - (a) identify the standards and performance measures that apply to the project;
  - (b) describe the works carried out in the last 12 months;
  - (c) describe the works that will be carried out in the next 12 months;
  - include a summary of the complaints received during the past year, and compare this to the complaints received in previous years;
  - (e) include a summary of the monitoring results for the project during the past year;
  - (f) include an analysis of these monitoring results against the relevant:
    - · impact assessment criteria/limits;
    - monitoring results from previous years; and
    - predictions in the EA;
  - (g) identify any trends in the monitoring results over the life of the project;
  - (h) identify any non-compliance during the previous year; and
  - (i) describe what actions were, or are being, taken to ensure compliance.

#### INDEPENDENT ENVIRONMENTAL AUDIT

- 6. Within two years of this approval, and every three years thereafter, unless the Director-General directs otherwise, the Proponent shall commission and pay the full cost of an Independent Environmental Audit of the project. This audit must:
  - (a) be conducted by suitably qualified, experienced and independent team of experts whose appointment has been endorsed by the Director-General;
  - (b) include consultation with the relevant agencies;
  - (c) assess the environmental performance of the project and whether it is complying with the relevant requirements in this approval and any relevant mining lease or EPL (including any strategy, plan or program required under these approvals);
  - review the adequacy of the strategies, plans or programs required under these approvals; and, if appropriate,
  - (e) recommend measures or actions to improve the environmental performance of the project, and/or any strategy/plan/program required under these approvals.

Note: This audit team must include experts in the field of mine rehabilitation; and soil, water, and flora and fauna management.

- 7. Within six weeks of completing this audit, or as otherwise agreed by the Director-General, the Proponent shall submit a copy of the audit report to the Director-General, with its response to any recommendations contained in the audit report.
- 8. Within three months of submitting the audit report to the Director-General, the Proponent shall review, and if necessary revise the
  - (a) strategies/plans/programs required under this approval;
  - (b) Flora and Fauna Offset Bond,
  - to the satisfaction of the Director-General.

#### **ACCESS TO INFORMATION**

- 9. Within three months of the approval of any plan/strategy/program required under this approval (or any subsequent revision of these plans/strategies/programs), or the completion of the audits or AEMRs required under this approval, the Proponent shall:
  - (a) provide a copy of the relevant document/s to the relevant agencies, and provide a copy to members of the general public upon request; and
  - (b) put a copy of the relevant document/s on the Proponent's website;
- 10. During the project, the Proponent shall:
  - (a) make a summary of monitoring results required under this approval publicly available on its website;
     and
  - (b) update these results on a regular basis (at least every three months).

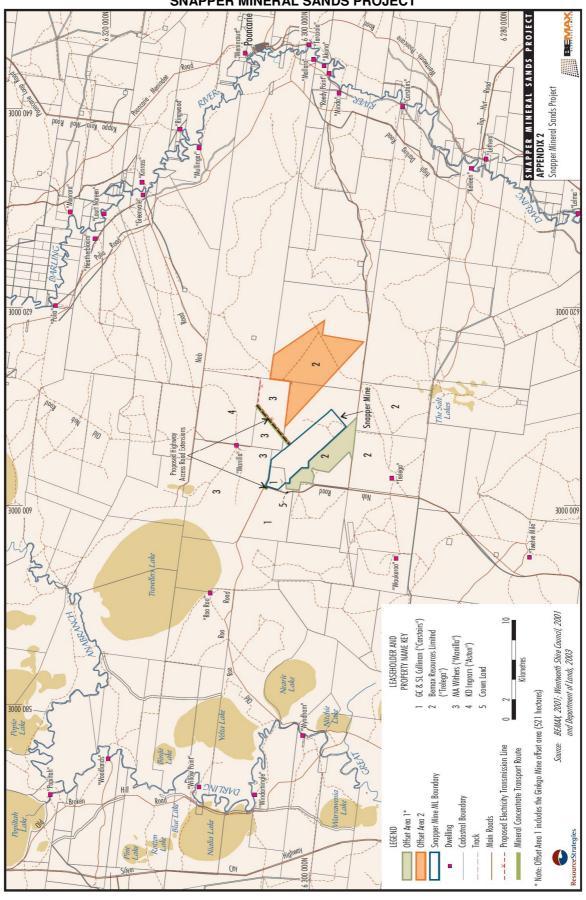
13

## APPENDIX 1 SCHEDULE OF LAND

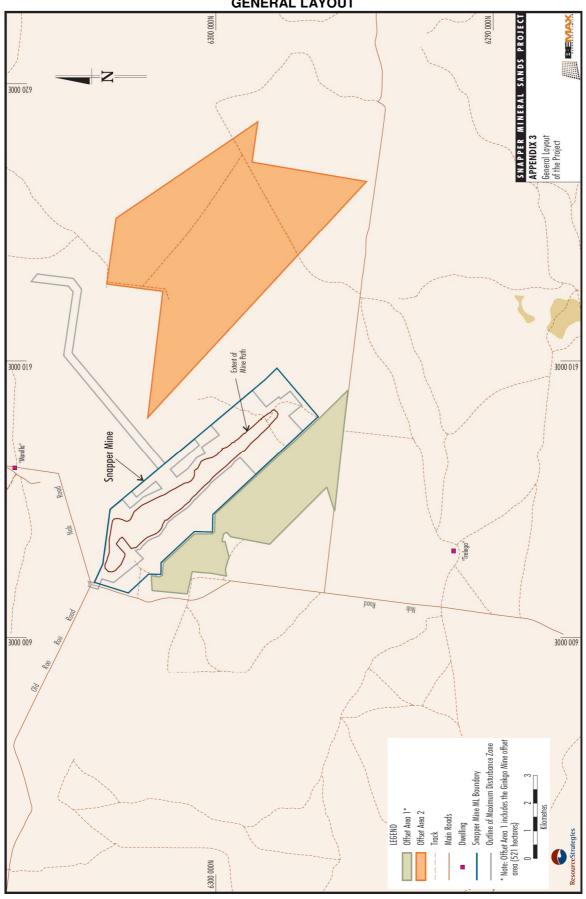
## Land Tenure Summary of the Site & Offset Area

Lot/DP	Leaseholder	Property Name
1929/763907	BEMAX Resources Limited	Trelega
5536/768446	BEMAX Resources Limited	Trelega
57/760337	BEMAX Resources Limited	Trelega
1927/763905	G.C. and S.L. Cullinan	Carstairs
1925/763903	M.A. Withers	Manilla
1924/763902	K.D. Ingram	Aston

APPENDIX 2 SNAPPER MINERAL SANDS PROJECT



APPENDIX 3 GENERAL LAYOUT



# APPENDIX 4 STATEMENT OF COMMITMENTS

## SOC 1 Emergency Response Plan (ERP)

An ERP will be prepared for the construction and operation of the Snapper Mine to detail responsibilities in the event of emergencies in and around the Snapper Mine area. Snapper Mine fire response will be coordinated with the local bushfire brigade.

## SOC 2 Community Consultation Plan (Ginkgo Mine CCP)

The Ginkgo Mine CCP (BEMAX, 2004a) will be revised to include the Snapper Mine. The CCP will provide for on-going consultation with local residents.

## **SOC 3** Mining Operations Plan (MOP)

A MOP will be prepared for operation of the Snapper Mine in accordance with the Mining, Rehabilitation and Environmental Management Process (MREMP) guidelines (DPI-MR, 2006 or its latest version) and in consultation with various regulatory and advisory agencies.

The MOP will provide information in regard to mining, processing and rehabilitation operations, relevant lease and development conditions, licences and other approvals. The MOP will also describe:

- (a) area(s) to be disturbed;
- (b) mining and rehabilitation method(s) to be used and their sequence;
- (c) existing surface infrastructure;
- (d) progressive rehabilitation schedules;
- (e) areas of particular environmental sensitivity;
- (f) land and water management systems;
- (g) resource recovery;
- (h) objectives and process to develop criteria for mine closure;
- (i) options for the future use of the site, including the HAR and ETL;
- (j) measures that would be implemented to manage closure-related environmental effects of the project (including any adverse impacts associated with the two final voids associated with the final dredge pond and water disposal dam); and
- (k) describe how the performance of these measures would be monitored over time.

Note: Rehabilitation aspects of the MOP will be progressively developed and implemented from the commencement of the life of the Snapper Mine. Further, the MOP will be revised periodically as well as prior to any significant alteration to mining and rehabilitation operations including cessation of mining.

## SOC 4 Flora and Fauna Offset

A flora and fauna offset will be implemented in the offset area (see Appendix 2). This offset area will

## (a) include an enhancement area (see table below); and

Area	Description	Size (ha)
Offset Area 1 and Offset Area 2 in	Enhancement of existing areas of native vegetation communities through natural regeneration and management for conservation.	5,216
Appendix 2		
Total Minimum Area Co	5,216	

Note: The offset shall be in addition to, and outside, the rehabilitated areas of the project disturbance area.

- (b) contain the following vegetation communities:
  - Black Box Woodland;
  - Black Oak-Rosewood-Wilga Woodland;
  - Chenopod Mallee Woodland/Shrubland
  - Irregular Dune Mallee Shrubland;
  - Bluebush Shrubland;
  - Linear Dune Mallee Shrubland; and
  - Austrostipa Grassland.

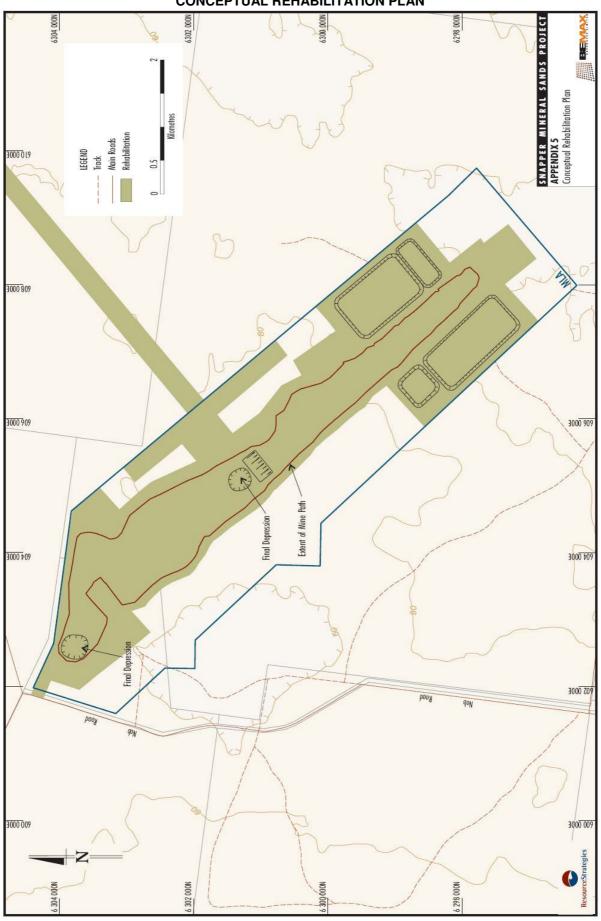
## SOC 5 Site Specific Cultural Heritage Management Strategies

The following site specific management strategies for the cultural heritage sites will be implemented:

Site name	Туре	Summary Significance	Potential impacts	Proposed Management Measures
SN01, SN11	Stone quarry, stone artefact scatter	Low-moderate	Direct	Representative sample of stone artefacts shall be recorded, collected, curated and stored at the 'Keeping Place' at BEMAX's Ginkgo Mine by an archaeologist and representatives of the local Aboriginal community. The collected artefacts shall be recorded in sufficient detail to allow a description of the lithic technologies and reduction strategies adopted. The regional and local contexts of the artefacts shall also be analysed and described. The representative sample shall be replaced within rehabilitated areas in consultation with the local Aboriginal community and the DECC.  Lithic technologies and reduction strategies adopted at the stone quarry sites and the relationship of these sites to other sites within the disturbance area shall be
SN02	Stone artefact scatter, hearth	Low-moderate	Direct	investigated.  Stone artefacts and heat retainers shall be recorded, collected, curated and stored at the 'Keeping Place' at BEMAX's Ginkgo Mine by an archaeologist and representatives of the local Aboriginal community. The collected artefacts shall be recorded in sufficient detail to allow a description of the lithic technologies and reduction strategies adopted. The regional and local contexts of the artefacts shall also be analysed and described. The
				artefacts and heat retainers shall be replaced within rehabilitated areas in consultation with the local Aboriginal community and the DECC.
				Hearths shall be excavated by an archaeologist and representatives of the local Aboriginal community. Radiocarbon and/or luminescence dating shall be used to determine the ages of the hearths.
SN03	Stone artefact	Low	Direct	The stone artefact shall be recorded, collected, curated and stored at the 'Keeping Place' at BEMAX's Ginkgo Mine by an archaeologist and representatives of the local Aboriginal community. The collected artefacts shall be recorded in sufficient detail to allow a description of the lithic technologies and reduction strategies adopted. The regional and local contexts of the artefacts shall also be analysed and described. The artefact shall be replaced within rehabilitated areas in consultation with the local Aboriginal community and the DECC.
SN04, SN06	Hearth	Low	Direct	The heat retainers shall be recorded, collected, curated and stored at the 'Keeping Place' at BEMAX's Ginkgo Mine by an archaeologist and representatives of the local Aboriginal community. The heat retainers shall be replaced within rehabilitated areas in consultation with the local Aboriginal community and the DECC.
SN05	Stone artefact	Low	Indirect	Avoid disturbing the site by erecting a temporary protective barrier around it.
SN07	Stone artefact scatter, hearth	Low	Direct	Stone artefacts and heat retainers shall be recorded, collected, curated and stored at the 'Keeping Place' at BEMAX's Ginkgo Mine by an archaeologist and representatives of the local Aboriginal community. The collected artefacts shall be recorded in sufficient detail to allow a description of the lithic technologies and reduction strategies adopted. The regional and local contexts of the artefacts shall also be analysed and described. The artefacts and heat retainers shall be replaced within rehabilitated areas in consultation with the local Aboriginal community and the DECC.

SN08,SN13, SN17	Stone artefact scatter	Low	Direct	Stone artefacts shall be recorded, collected, curated and stored at the 'Keeping Place' at BEMAX's Ginkgo Mine by an archaeologist and representatives of the local Aboriginal community. The collected artefacts shall be recorded in sufficient detail to allow a description of the lithic technologies and reduction strategies adopted. The regional and local contexts of the artefacts shall also be analysed and described. The artefacts shall be replaced within rehabilitated areas in consultation with the local Aboriginal community and the DECC.
SN09, SN16	Stone artefacts	Low	Direct	Stone artefacts shall be recorded, collected, curated and stored at the 'Keeping Place' at BEMAX's Ginkgo Mine by an archaeologist and representatives of the local Aboriginal community. The artefacts shall be replaced within rehabilitated areas in consultation with the local Aboriginal community and the DECC.
SN10,SN12, SN14, SN15, SN18, SN19, SN21	Stone artefact scatter	Low and Low- moderate	Direct/ indirect	Representative sample of stone artefacts shall be recorded, collected, curated and stored at the 'Keeping Place' at BEMAX's Ginkgo Mine by an archaeologist and representatives of the local Aboriginal community. The collected artefacts shall be recorded in sufficient detail to allow a description of the lithic technologies and reduction strategies adopted. The regional and local contexts of the artefacts shall also be analysed and described. The representative sample shall be replaced within rehabilitated areas in consultation with the local Aboriginal community and the DECC.
SN20, SN22	Stone quarry, stone artefact scatter	Moderate-high	Indirect	Temporary protective barriers shall be erected around the sites. BEMAX shall engage an archaeologist and representatives of the local Aboriginal community to supervise the erection of the barriers and monitoring of their maintenance.
SNH1	Kertne Nob outstation and stockyard ruin	Low-moderate	Indirect	Avoid disturbing the site by erecting a temporary protective barrier around it.

APPENDIX 5
CONCEPTUAL REHABILITATION PLAN



APPENDIX 6
CULTURAL HERITAGE SITES

