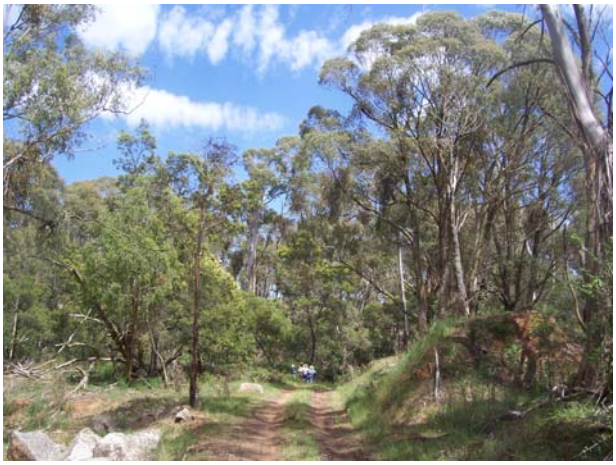
BIG ISLAND MINING PTY LTD

ABN 12 112 787 470



Response to Government Agency and Public Submissions

for the

Dargues Reef Gold Project

Major Project Application No.
PA 10_0054

December 2010

Prepared by:

R.W. CORKERY & CO. PTY. LIMITED

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Dargues Reef Gold Project

Major Project Application No. PA 10_0054

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1. INTRODUCTION

Following the public exhibition of the *Environmental Assessment* for the proposed Dargues Reef Gold Project, submissions were received by the Department of Planning (DoP) from:

- eight government agencies;
- 12 individual members of the general public or private companies supporting the Project;
- 50 individual members of the general public or private companies opposing the project.
- 1 074 members of the public who submitted a form letter which, with minor variations;
- two specialists providing technical submissions; and
- ten special interest groups;

All non-confidential submissions were forwarded by the DoP to R.W. Corkery & Co. Pty Limited (RWC) for the preparation of a response to the issues raised. Each of the submissions from government agencies and non-confidential public submissions was comprehensively reviewed to enable an appropriate response to be prepared.

This document presents a consolidated set of responses prepared by RWC on behalf of the Proponent, Big Island Mining Pty Ltd. In addition, responses to maters of a technical nature have been prepared by the following specialist consultants.

- Ecology – Gaia Research Pty Ltd (Gaia).
- Heritage – Archaeological Surveys & Reports Pty Ltd (ASR).
- Noise and blasting – Spectrum Acoustics (Spectrum).
- Air quality and greenhouse gasses – PAEHolmes (PAEH).
- Surface water, soils and land capability – SEEC Pty Ltd (SEEC).
- Groundwater – Australasian Groundwater & Environmental Consultants Pty Ltd (AGE).
- Traffic and transportation – Transport & Urban Planning (TUP).

Where a response has been prepared by one of these specialist consultants, the response is prefaced by the relevant acronym noted above.

This document was reviewed by a range of employees of the Proponent, the Proponent's legal representatives and the Proponent's engineering consultants, namely Mining Plus.

This document is structured as follows

Section 1 Provides an introduction to the document and identifies the contributing authors.

Section 2 Provides an overview of principal the amendments that have been made to the Project description as a result of the submission received and information that has become available since the *Environmental Assessment* was made publicly available.

Section 3 Provides clarification and correction of a number of minor omissions in the *Environmental Assessment* that were identified through the submissions received. Where appropriate, further analysis of the anticipated environmental impacts are provided.

Section 4 Provides a response to those government agency submissions received. Where appropriate, the submissions have been reproduced in their entirety (in italics) and a response is provided (in normal text) to each issue raised. It is noted that a submission from the NSW Office of Water was not received until this document was in the final stages of preparation. As a result, a separate response has been prepared in relation to that submission

Section 5 Provides a response to those submissions received from the public. Those submissions have been divided into non-pro forma, pro forma, technical and special interest group submissions. Where appropriate, submissions have been reproduced (in italics) either as representative extracts or in their entirety, and a response is provided (in normal text) to each issue raised. Where an issue is addressed elsewhere in the document, a cross reference is provided.

Section 6 Provides an updated and final version of the Statement of Commitments originally included as Section 5 in the *Environmental Assessment*. Where the commitments have been amended, the amended text has been tracked and is underlined and in red

Appendices A range of supporting documentation is provided.

2. SUMMARY OF AMENDMENTS TO THE PROJECT

2.1 INTRODUCTION

The Proponent proposes the following minor amendments to the Project as a result of the submissions received.

- Reduced hours of crushing operations.
- Capping of the tailings storage facility.
- Hours of Off-Site Heavy Vehicle Movements.

This sub-section provides an overview of those amendments and an assessment of the anticipated impacts. It is noted that in both cased the Proponent contends that the environmental impacts associated with the amended Project would be less that those associated with the Project as described in the *Environmental Assessment*.

2.2 REDUCED HOURS OF CRUSHING OPERATIONS

2.2.1 Introduction

The Proponent notes that a significant number of submissions from the surrounding community identified noise-related impacts, particularly noise during the evening and night as an issue of concern. The Proponent notes that Spectrum (2010a) identifies that the Project, as presented in the *Environmental Assessment*, complied with all relevant noise assessment criteria. However, in recognition of the level of concern in relation to that aspect of the Project, the Proponent proposed to restrict the hours of crushing operations

This sub-section provides an overview of the proposed amended hours of operation and an assessment of the anticipated noise-related impacts in light of the amended hours of operation.

2.2.2 Hours of Crushing Operations

Section 2.11.2 of the *Environmental Assessment* identifies that processing operations, including crushing operations, would be undertaken 7 days per week, 24 hours per day.

The Proponent would, with the exception of 20 days per year, commit to restrict the proposed hours of crushing operations, including operation of the associated front-end loader, to 7:00am to 7:00pm, 7 days per week. The ability to undertake occasional or limited crushing operations 24-hours per day would be required to allow building of sufficient crushed ore stockpiles to permit ongoing processing operations during maintenance of the crushing circuit or to rebuild crushed ore stockpiles following an unplanned shutdown of the crushing circuit.

The Proponent notes that the crushing circuit was designed to operate at a greater capacity than the processing plant for the reasons identified in the previous paragraph. As a result, the Proponent originally intended that the crushing circuit would only operate for part of the any 24-hour period. It is acknowledged, however, that is was not identified in the *Environmental Assessment*. As a result, the proposed amendment would merely formalise the intended operational procedures for the crushing circuit.

No amendments to the proposed crushing and screening equipment would be required as a result of the proposed amendment.

The Commitment 3.1 has been adjusted to reflect the proposed amendment.

2.2.3 Potential Impacts

Crushing operations would be principally associated with the following environmental impacts.

- Noise - Table A1 in Appendix 1 of Spectrum (2010a) identifies the crushing plant and from-end loader as two of the most significant noise contributions in the noise model. This, combined with the fact that the crushing operations would be undertaken at a fixed, elevated location, means that the crushing plant and associated front-end loader are two of the most significant noise sources within the Project Site.

- Air quality - Crushing operations, by their nature, have the potential, in the absence of management and mitigation measures, to result in significant dust emissions. It is noted that PAEH (2010) determined that the Project, including 24-hour crushing operations, would not result in air quality impacts that would exceed the relevant air quality assessment criteria. As a result, reducing the proposed crushing operations to 11-hours per day would result in lower air quality impacts. As a result, no further assessment of air quality-related impacts is required.
- Visual amenity – 24-hour crushing operations would have required night-time lighting. While the Proponent would have designed the lighting to minimise impacts on surrounding residents, the lights may have still had an adverse impact on surrounding residents. As the proposed amended hours of crushing operations would be limited to the day time, such lights would, with the exception of a maximum of 20 days per year, not be used. This would result in reduced visual amenity impacts. As a result, no further assessment of visual amenity-related impacts is required.

Finally, it is noted that reduced hours of crushing operations would not have a significant impact on ecology, groundwater, surface water, Aboriginal or non-Aboriginal heritage, bushfire, traffic or soils-related matters. As a result, no further assessment of those aspects is required.

2.2.4 Assessment of Impacts

Spectrum Acoustics Pty Limited undertook an assessment of Noise Scenario 2, namely Project operation, in the absence of crushing operations. The resulting report is presented in **Appendix 1** and is referred to hereafter as Spectrum (2010b).

In preparing that assessment, Spectrum (2010b) used the same assessment methodology as that identified in Section 4.2.4 of the *Environmental Assessment* and 6.2 of Spectrum (2010a), with the exception of noise inputs from the crushing plant, rock breaker and the associated front-end loader.

Appendix 1 presents the results of that assessment. Those results may be summarised as follows.

- The anticipated operational noise levels at surrounding receivers are generally 3dB(A) to 4dB(A) lower that the predicted levels with crushing operations. As the predicted operational noise levels at all residences including crushing operations were lower than the relevant assessment guidelines, the predicted operational noise levels without crushing operations are also predicted to be all lower than the relevant assessment criteria.
- Spectrum Acoustics Pty Limited note that maximum noise levels (as opposed to operational $L_{Aeq(15minute)}$ noise levels) are generally attributable to the movement of a haul truck at the surface in the ROM area. Transportation of ore material would continue to be undertaken 24-hours per day. As a result, maximum noise levels

are not predicted to be reduced as a result of limitation of the hours of crushing operations. Spectrum, however, notes that these levels are at least 3dB(A) below the sleep disturbance criterion of 45dB(A),$L_{1(1minute)}$. Finally, the Proponent would limit surface operation of haul trucks during the night to the greatest extent practicable.

2.3 CAPPING OF THE TAILINGS STORAGE FACILITY

Section 2.14.8 of the *Environmental Assessment* identifies that the tailings storage facility was originally to be shaped to form a free draining landform and capped with suitable soil material prior to being revegetated. In light of comments received in the submissions, the Proponent would during rehabilitation of the facility, cap the upper surface with suitable clay material to limit the potential for infiltration of surface water. This amendment to the proposed rehabilitation operations would have no adverse environmental impacts.

2.4 OFF SITE HEAVY VEHICLE MOVEMENTS

The Proponent would commit to restricting all heavy vehicle movements to or from the Project Site between the hours of 7:00am and 8:30am and 3:00pm and 5:00pm on school days to avoid potential conflict with the local school bus services. Commitments 3.1 and 10.6 have been amended to reflect this change.

3. CLARRIFICATION AND CORRECTION OF THE ENVIRONMENTAL ASSESSMENT

3.1 INTRODUCTION

Following completion of the *Environmental Assessment*, the Proponent was made aware of a number of minor omissions in the document. These included the following.

- Omission of an approved but not constructed residence on Property 100.
- Omission of a reference to the ownership of Residence R33.

This section provides additional information in relation the omitted residence and property.

3.2 RESIDENCE R108

3.2.1 Introduction

A submission was received from John and Kate Spring stating that they owned Property 100, located, at its closest, approximately 400m west of the Project Site. Mr and Mrs Spring identified that they had received building approval from Palerang Council in April 2009 but had not commenced construction. As a result, the approved building location had not been assessed as a residence in the *Environmental Assessment*. Upon receiving the submission, the Proponent, through its community consultation consultant, contacted Mr and Mrs Spring with a request for further details in relation to the approved building location. That information was provided and the residence location, Residence R108, is shown on **Figures 1** and **2.**

Potential Project-related environmental impacts at Residence R108 include noise, groundwater, air quality, blasting and visual amenity-related impacts. The remainder of this sub-section provides an assessment of those potential impacts and a summary of discussions held with Mr and Mrs Spring in relation to those potential impacts.

3.2.2 Noise

Spectrum Acoustics undertook further point-to-point noise calculations for Residence R108. The resulting findings are presented in **Appendix 2.** In summary, noise calculations were performed for Residence R108 for all scenarios included in the original noise assessment and are summarised in **Table 1**. Descriptions the assessment criteria and methodology and scenarios assessed are provided in Section 4.2 of the *Environmental Assessment.*

Table 1
Noise Assessment – Residence R108

Criterion ($L_{eq(15\ minutes)}$)	Predicted Noise Level (dB(A), $L_{eq(15\ minutes)}$)			Differential (dB)
	Neutral	Inversion	NNW Wind	
Scenario 1a – 24-hour Site Establishment – Excluding bulk earthworks				
35	20	34	33	-1
Scenario 1b – Site Establishment and initial Mine Development – including bulk earthworks				
35	33	-	-	-2
Scenario 2 – Project Operation (24 hours)				
35	28	34	30	-4
Sleep Disturbance				
45	-	41	-	-4
Source – Spectrum Acoustics (2010b)				

In summary, all relevant noise criteria are expected to be achieved at Residence R108. As a result, the Proponent contends that no further sound mitigation measures would be required at the ROM pad as requested by Mr and Mrs Spring. However, see Section 2.2 which identifies that the Proponent would commit to restricting crushing, screening and related operations during the evening and night-time.

In light of the request by Mr and Mrs Spring that noise levels be monitored regularly at their house site, the Commitment 15.2 has been amended to include Residence R108 in the list of regular noise monitoring locations. In addition, the Proponent would include Mr and Mrs Spring in regular consultation programs during the life of the Project and would ensure that any concerns raised are adequately addressed.

3.2.3 Blasting

As indicated in Section 4.2.6.5 of the *Environmental Assessment*, the blasting assessment concluded that relevant blasting criteria would be achieved at the closest non-project-related residence, namely Residence R31, located approximately 750m from the box cut. As residence R108 is located approximately 1 400m from the box cut and blasting impacts are proportional to distance from source to receiver, then the relevant blasting criteria would be achieved at Residence R108.

\\SERVER\RWC\752\75204\Cad\752EA_Response 1 Land Ownership.DWG

TN
MN

SEE INSET A

SEE INSET B

INSET A

INSET B

SCALE 1:15 000
250 0 250 500

Note: See **Table 4.3** of the Environmental Assessment for the Land Ownership details of each property

SCALE 1:25 000
250 0 250 500 750 1000 1250 m

SCALE 1:10 000
100 0 100 200 300 400 500 m

REFERENCE
- Project Site Boundary
- Cadastral Boundary
- (1) Landowner Reference
- R1 Residence & Identifier
- R108 Approved Residence - Yet to be Constructed

Land Ownership Source: Land and Property Management Authority - March 2010

Figure 1
SURROUNDING LAND OWNERSHIP - Amended

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