



**Applicant:**

Bongani Minerals (Pty) Ltd  
Suite 2.1 On the Greens  
Golf Village  
De Beers Avenue  
Somerset West  
7130  
Tel: 060 785 2780  
Email: [lionel@strata-africa.com](mailto:lionel@strata-africa.com)

**BACKGROUND INFORMATION DOCUMENT**

3 December 2018

To whom it may concern

**RE: NOTICE OF APPLICATION IN TERMS OF SECTION 22 OF THE MINERALS AND PETROLEUM RESOURCES DEVELOPMENT ACT, 2002 (ACT NO 28 OF 2002) AND THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998 NEMA) AS WELL AS THE ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 (AS AMENDED)**

**BACKGROUND INFORMATION**

Tungsten is considered a strategic metal by China and the European Union, and was confirmed this year by the United States Department of the Interior as a 'critical commodity'. Strategic metals, also known as critical metals, technology metals, or minor metals, are elements that are necessary for technological and industrial processes, but are in short supply and have no known alternatives. Strategic metals can be found in most consumer electronics products, medical equipment, jet engines, semiconductors, LEDs, as alloying agents in numerous metal products, and many more applications. Definitions of what constitutes the "strategic metals" vary and sometimes overlap, often encompassing a variety of metals considered "critical" to the world economy.

Tungsten (W) is known for its strength and high melting point. It is used in electrical, heating, and welding applications, aerospace and defence applications, and in light bulbs, heating elements, and rocket engine nozzles. Tungsten is also used in electrodes because of its conductive properties, and its strength makes it a common metal alloy.

A tungsten deposit was located in the Moutonshoek Valley (also known as the Krom Antonies River Valley) near Piketberg in the Western Cape Province of South Africa, and Bongani Minerals (Pty) Ltd ("Applicant") is interested in applying for a mining right in respect of the following properties within the West Coast magisterial district of the Western Cape Province:

- Portion 1 of the Farm 297 RD;
- Portion 6 (Remaining Extent) of the farm Namaquasfontein 76 RD
- Portion 21 of the farm Namaquasfontein 76 RD

**the goal isn't to live forever, it is to protect a planet that will**

---

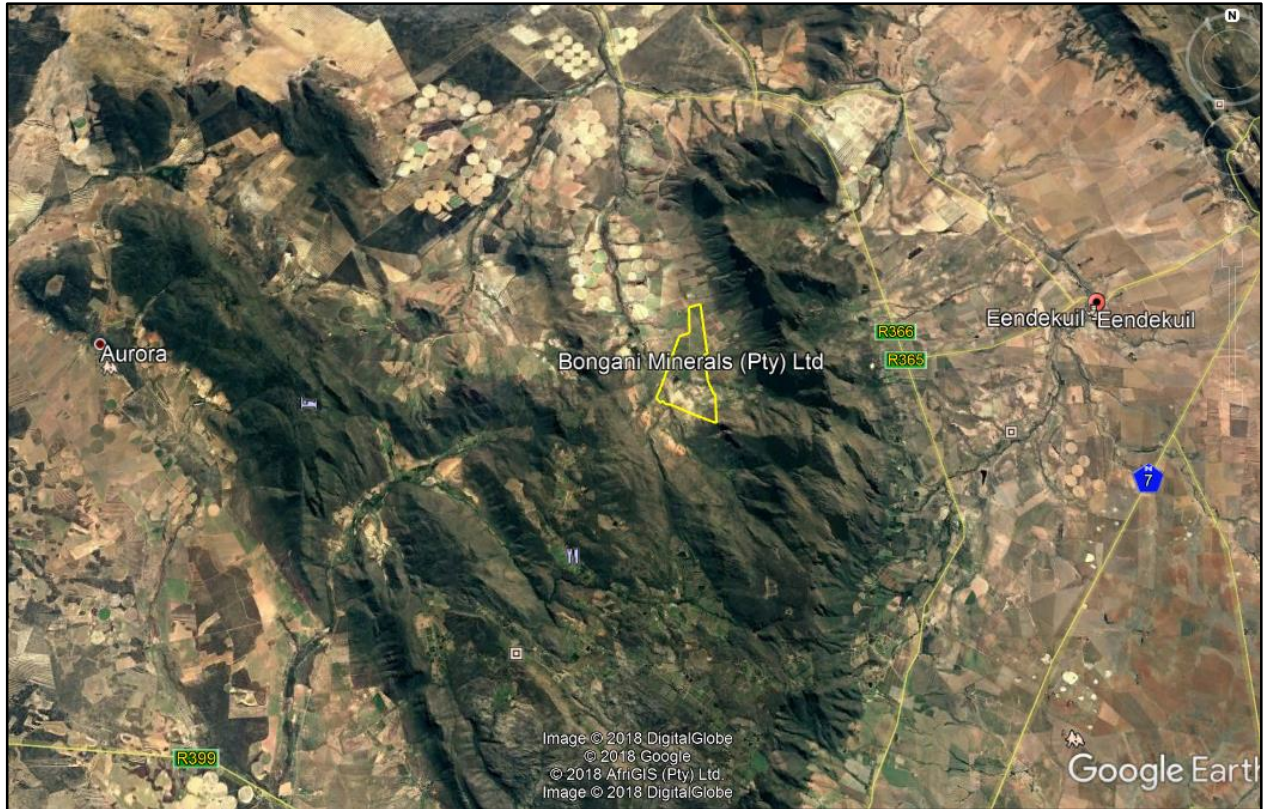
Greenmined Environmental (Pty) Ltd | Tel: 021 851 2673 | Fax: 086 546 0579  
Unit M01, Office No 36, AECI Site, Baker Square, Paardevlei, De Beers Avenue, Somerset West, 7130  
Postnet Suite 62, Private Bag x15, Somerset West, 7129  
Directors: S Smit; R L Shedlock; C Weideman | Reg No: 2012/055565/07 | VAT No. 4040263032

**BACKGROUND INFORMATION DOCUMENT**

**SITE DESCRIPTION**

As mentioned the proposed application area is located in the Moutonshoek Valley (also known as the Krom Antonies River Valley, ±53 km north-west of Piketberg by road. Redelinghuys is situated ±40 km north-west of the study area. The extent of the proposed mining footprint is 531.44 ha, and the GPS coordinates of the area to be applied for are as listed below.

<b>GPS COORDINATES OF MINING RIGHT AREA</b>	
<b>DEGREES MINUTES SECONDS</b>	<b>DECIMAL DEGREES</b>
A. 32°41'07.36"S; 18°43'26.55"E	A. -32.68538°S; 18.72404°E
B. 32°42'11.53"S; 18°43'35.50"E	B. -32.70320°S; 18.72653°E
C. 32°42'12.01"S; 18°43'30.66"E	C. -32.70334°S; 18.72518°E
D. 32°42'45.46"S; 18°43'35.32"E	D. -32.71263°S; 18.72648°E
E. 32°43'00.71"S; 18°43'42.75"E	E. -32.71686°S; 18.72854°E
F. 32°43'03.20"S; 18°43'45.68"E	F. -32.71756°S; 18.72936°E
G. 32°43'39.12"S; 18°43'46.03"E	G. -32.72753°S; 18.72945°E
H. 32°43'14.81"S; 18°42'41.84"E	H. -32.72078°S; 18.71162°E
J. 32°43'13.74"S; 18°42'33.54"E	J. -32.72048°S; 18.70932°E
K. 32°43'09.68"S; 18°42'30.71"E	K. -32.71936°S; 18.70853°E
L. 32°43'12.62"S; 18°42'27.27"E	L. -32.72017°S; 18.70757°E
M. 32°43'06.35"S; 18°42'21.63"E	M. -32.71843°S; 18.70601°E
N. 32°42'53.17"S; 18°42'28.09"E	N. -32.71477°S; 18.70780°E
P. 32°41'48.19"S; 18°42'55.56"E	P. -32.69672°S; 18.71543°E
Q. 32°41'44.04"S; 18°43'10.22"E	Q. -32.69557°S; 18.71951°E
R. 32°41'11.02"S; 18°43'10.04"E	R. -32.68640°S; 18.71946°E

**BACKGROUND INFORMATION DOCUMENT**

**Figure 1:** Satellite view of the proposed mining right area of Bongani Minerals (Pty) Ltd.

**LEGAL COMPLIANCE**

The proposed project triggers the following listed activities in terms of the National Environmental Management Act, 1998 (Act 107 of 1998) and the Environmental Impact Assessment Regulations 2014 (as amended 2017) and therefore requires an environmental impact assessment (EIA) that assess project specific environmental impacts and alternatives, consider public input, and propose mitigation measures in cooperation with specialists, to ultimately culminate in an environmental management programme that informs the competent authority (Department of Mineral Resources) when considering the environmental authorisation:

■ GNR 324 Listing Notice 3 of 2017 Activity 4:

*The development of a road wider than 4 metres with a reserve less than 13.5 metres.*

*i. Western Cape*

- i) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;*
- ii) Within critical biodiversity areas identified in bioregional plans.*

## **BACKGROUND INFORMATION DOCUMENT**

■ GNR 324 Listing Notice 3 of 2017 Activity 12:

*The clearance of an area of 300 square metres or more of indigenous vegetation.*

*ii. Western Cape*

*ii) Areas outside urban areas:*

*(aa) Areas containing indigenous vegetation.*

■ GNR 324 Listing Notice 3 of 2017 Activity 18:

*The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.*

*iii. Western Cape*

*iii) Areas outside urban areas:*

*(aa) Areas containing indigenous vegetation.*

■ GNR 325 Listing Notice 2 of 2017 Activity 15:

*The clearance of an area of 20 hectares or more of indigenous vegetation.*

■ GNR 325 Listing Notice 2 of 2017 Activity 17:

*Any activity including the operation of that activity which requires a mining right as contemplated in section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), including –*

- a) Associated infrastructure, structures and earthworks, directly related to the extraction of a mineral resource; or*
- b) The primary processing of a mineral resource including winning, extraction, classifying, concentrating, crushing, screening or washing.*

■ GNR 327 Listing Notice 1 of 2017 Activity 14:

*The development and related operation of facilities or infrastructure, for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 cubic metres or more but not exceeding 500 cubic meters.*

■ GNR 327 Listing Notice 1 of 2017 Activity 22:

*The decommissioning of any activity requiring –*

- iii) a closure certificate in terms of section 43 of the Mineral and Petroleum Resources Development Act, 2002 (act No. 28 of 2002); or*
- iv) a prospecting right, mining right, mining permit, production right or exploration right, where the throughput of the activity has reduced by 90% or more over a period of 5 years excluding where the competent authority has in writing agreed that such reduction in throughput does not constitute closure.*

## **BACKGROUND INFORMATION DOCUMENT**

■ GNR 327 Listing Notice 1 of 2017 Activity 24:

*The development of a road –*

*ii) with a reserve wider than 13.5 meters, or where no reserve exists where the road is wider than 8 metres.*

■ GNR 327 Listing Notice 1 of 2017 Activity 28:

*Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:*

*ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare.*

■ GNR 327 Listing Notice 1 of 2017 Activity 56:

*The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre –*

*ii) Where no reserve exists, where the existing road is wider than 8 metres.*

### **OTHER LEGISLATION TRIGGERED BY THE PROPOSED PROJECT:**

- An application for a Mining Right in terms of Section 22 of the Mineral and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) has to be submitted to the Department of Mineral Resources – Western Cape Province.
- An application for a Water Use License in terms of the National Water Act, 1998 (Act No 36 of 1998) has to be submitted to the Department of Water and Sanitation.
- A heritage impact assessment and palaeontological impact assessment has to be submitted to Heritage Western Cape in terms of the National Heritage Resources Act, 1999 (Act No 25 of 1999).
- A land development application has to be submitted to the Department of Environmental Affairs and Development Planning in terms of the Land Use Planning Act, 2014 (Act No 13 of 2014).
- An application for a waste licence will be included in the NEMA EA application in terms of the National Environmental Management: Waste Act, 2008 (Act No 59 of 2008).



## **BACKGROUND INFORMATION DOCUMENT**

### **PROJECT DESCRIPTION**

The Applicant currently holds a prospecting right (WC 30/5/1/1/2/10197 PR) over the proposed mining right application area for tungsten (W) ore, molybdenum (Mo) ore, rare earths, copper ore, zinc ore, gold ore and silver ore. Owing to the outcome of the prospecting operation, the applicant wishes to apply for a mining right for the winning of tungsten and molybdenum.

The proposed mining method to be implemented will be executed in two phases. The first phase will focus on pre-stripping the top layer material, of which the topsoil will be stored separately for rehabilitation, then waste stripping to access the ore body, and then 20 m of open cast mining ( $\pm 400$  m) on the shallowest region of the ore body (dome shaped deposit). The mining technology to be used during years 1-4 (phase 1) will include drilling and blasting with associated truck and shovel operations. Phase 2 will commence after the initial open cast mining, and entail decline shafts to be mined from the existing pit both north and south, as well as an eventual west expansion later in the life of mine. Plant slimes and sand will be used as backfill when applicable. When mining proceed to the decline shafts drilling, blasting and a load and haul operation will be maintained, with machinery reducing in size due to height restrictions. The mining operation is proposed to extend to a depth of 220 m maximum. A geohydrologist will advise, during the EIA process, on the water table and potential impact of the proposed mining activity on the groundwater of the study area.

All excavated material (run of mine / ROM) will be trucked to a ROM stockpile in front of the primary crusher or tipped directly into the crusher itself. Except for drilling and blasting that will work day shift, all mining operations will be run on a 24 hour 7 days a week schedule.

At the processing plant the excavated material will be crushed through a jaw crusher and then screened. Upon being milled the material will be spiralled, de-slimes, dewatered, and vibrated to produce a concentrate that will contain the tungsten and molybdenum. This concentrate will be floated to produce a high grade concentrate that will undergo an acid leach to produce a saleable product called APT (ammonium paratungstate). APT is a white crystalline salt of ammonium and tungsten produced when tungsten is separated from its ore. The APT will be transported from the mining area to a metallurgical plant in the industrial development zone of Saldanha Bay Harbour, where further beneficiation can be applied if needed. The tungsten and molybdenum products from the proposed mining operation will be exported via the multi-purpose terminal in Saldanha bay.

The layout of the mining area is expected to consist of the following:

- Open cast pit with access to decline shafts;
- Waste rock stockpiles;
- Processing plant;
- ROM stockpiles;

## **BACKGROUND INFORMATION DOCUMENT**

- A slimes dam;
- Offices and ablutions;
- Maintenance and store rooms;
- Laboratory;
- APT product warehouse;
- Water storage;
- Diesel depot; and
- Internal roads.

Currently it is proposed that  $\pm 350$  ha of the 531.44 ha mining right area will be altered by the proposed mining activity. The total life of mine of the project is expected to be 21 years from start of project and 15 years from start of production, and the applicant will apply for the mining right to be valid for a 30-years period.

### **ACCESS ROUTE:**

- Access to the proposed mining area will be from the existing roads currently used by landowners and the public. It is proposed that  $\pm 12$  trucks will visit the mining area/day.
- The applicant will strive to make use of the existing farm roads as far as possible, however some new roads, or upgrading of existing roads will be required to reach allowable mining areas. The construction of a new access road will be in consultation with the landowner and will as far as possible be kept to already disturbed areas following fence lines or similar infrastructure.
- Haul roads will be extended as the open cast mining progress, and will be rehabilitated as part of the final reinstatement of the area.
- Detail with regard to roads and traffic requirements will be discussed in the engineering services report that will form part of the EIA documentation.
- A traffic impact assessment will (as part of the EIA process) identify the potential impact that the proposed activity may have on the study area.

### **WATER USE:**

- Currently it is proposed that the process water, needed on site, will be obtained from a reverse osmosis plant based within an offsite industrial zone. Water from this plant will then be trucked to the mining area.
- It is proposed that all plant water will be recirculated through past thickening and then filter presses to minimise process water requirements. The plant is expected to recirculate  $\pm 8\ 000$  m<sup>3</sup>/day, but only consume  $\pm 80$  m<sup>3</sup>/day.
- Potable water will be extracted from the boreholes within the mining area. Approximately 20 000 litres will be needed per day.

## **BACKGROUND INFORMATION DOCUMENT**

- The grey water will be directed to a sewerage package plant to be emptied by a registered contractor when needed.
- Detail with regard to water use and associated management of waste water and runoff will be discussed in the engineering services report that will form part of the EIA documentation.

### **ELECTRICITY:**

- In the interim the operation will be powered by generators, until a connection to the national grid (Eskom) can be secured. The generators will then be replaced, only to be used as a backup.
- The Applicant will also investigate the implementation of renewable energy sources at the mining area.
- Detail with regard to electricity needs will be discussed in the engineering services report that will form part of the EIA documentation.

### **EMPLOYMENT:**

- It is proposed that the project will create ±170 employment opportunities.

## ***BRIEF SITE DESCRIPTION***

### **GEOLOGY:**

Tungsten and molybdenum mineralization is hosted by the Riviera pluton, which forms part of Neoproterozoic-Paleozoic Cape Granite Suite. This magmatic suite intruded greenschist facies meta-volcano-sedimentary rocks of the Malmesbury Group in the south-western Cape. The Group forms part of the Saldania Sub-province, the southern continuation of a Pan-African mobile belt system that extends along the west coast of southern Africa and includes the Gariep and Damara Sub-provinces in Namibia. Tectonostratigraphically, the Riviera pluton intruded along the boundary between the Swartland and Boland Terranes and is hosted by a polyphase deformed greenstone sequence correlated with the Bridgetown Formation. The Riviera pluton consists of at least three intrusive phases namely early quartz monzonite porphyry (QMP), biotite monzogranite (BMG), and late-stage aphanitic granite - monzogranite (AGM). A late stage W-Mo mineralized quartz-carbonate vein system has traversed the pluton and consists of at least three different orientations and phases. The project specific geology as well as the correlating potential impact of the proposed project thereto will be discussed in detail during the environmental impact assessment process to follow.

### **HYDROLOGY:**

The proposed mining site is located in the Verlorenvlei River catchment and includes the following quaternary catchments that drain the major tributaries:



## **BACKGROUND INFORMATION DOCUMENT**

- G30B The Kruis River;
- G30C The Bergvallei River;
- G30D The Krom Antonies River & the Hol River;
- G30 E The Verlorenvlei River

A comprehensive freshwater ecological assessment will form part of the EIA process. The scope of works of the specialist study will include an investigation of the watercourses within the study area, as well as the delineation of those watercourses. The assessment will fulfil the ecological assessment requirements of the EIA process as required in terms of the NEMA, 1998, and will provide the required information for water use licensing in terms of the NWA, 1998. The report will include an assessment of the wetland ecology as well as aquatic ecology.

A hydrogeological assessment will be performed to apprise the potential impact of the proposed project on the groundwater of the study area. The study will include, amongst others, a hydro census, chemical water analysis, and a geophysical investigation.

### **FAUNA AND FLORA:**

The following vegetation types were identified within the study area:

- Swartland Shale Renosterveld;
- Leipoldtville Sand Fynbos;
- Piketberg Sandstone Fynbos;
- Piketberg Quartz Succulent Shrubland;
- Cape Lowland Alluvial Vegetation; and
- Cape Lowland Freshwater Wetlands.

An ecologist was appointed to conduct a full ecological study of the proposed footprint area. This report will be available as part of the EIA documentation.

### **LAND USE:**

The project is located in the Bergrivier municipal area, with Piketberg being the main centre. Places of importance within 20 km of the proposed area include Aurora, Eendekuil, Goedverwacht. Within the area 20 km from the study area the tertiary sector employs  $\pm 47\%$  of the economically active population followed by the primary sector, which includes agriculture, with  $\pm 37\%$ . The Bergrivier economy is dominated by agriculture, forestry and fishing, followed by manufacturing, wholesale and retail trade, catering and accommodation, and lastly finance and business services.

## **BACKGROUND INFORMATION DOCUMENT**

The Riviera tungsten development will create a need to align the social investment objectives of the proposed project with the need/priorities of the communities within the Piketberg district. In light of this a socio-economic specialist was appointed to investigate the socio-economic impact of the proposed project on the receiving environment.

A social and labour plan (SLP) will be developed for the proposed mining project to be approved by the DMR prior to execution of the mining right. The SLP will form the basis for the implementation of programmes and projects as key activity drivers of the development and operation of the proposed project, and will offer the building blocks for future economic development and growth of the local area.

An agricultural impact assessment will assess the potential impacts of the proposed mining operation on soils, agricultural potential and -production. Further to this a traffic impact study will assess the impact that the proposed project will have on the road infrastructure and traffic of the study area.

The Applicant will also submit a land use development application in terms of the Land Use Planning Act, 2014 (Act 13 of 2014), read with the Western Cape Land Use Planning Regulations, 2015 for the footprint area to be affected by the mining activities.

### **AIR AND NOISE QUALITY:**

A specialist was appointed to inform on the baseline air quality and noise ambiance of the study area as well as advice on the potential impact of the proposed mining activity on the receiving environment.

### **HERITAGE:**

An archaeologist will perform a heritage impact assessment to ascertain if any archaeological or historical remains occur in the study area and identify aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological valuable areas. A qualified palaeontologist will comment on the palaeontological significance of the study area and will discuss all findings in the palaeontological impact assessment that will also form part of the EIA documentation.

## **FINAL REHABILITATION**

Upon closure of the mining operation the entire footprint area will be rehabilitated so as to allow the affected area to return to agricultural use. At this stage the following baseline rehabilitation actions are proposed from which a detailed closure plan will be developed:

## **BACKGROUND INFORMATION DOCUMENT**

- Rehabilitation of all the disturbed surface areas shall entail landscaping, levelling, sloping, top dressing, land preparation, seeding (if required), and weed / alien clearing.
- All infrastructures, equipment, and other items used during the mining period will be removed from the site in accordance with section 44 of the MPRDA, 2002.
- Waste material of any description, including receptacles, scrap, rubble and tyres, will be removed entirely from the mining area and disposed of at a recognized landfill facility. It will not be permitted to be buried or burned on the site.
- The rehabilitation area will be cleared of weeds and invader plant species. Priority will be given to species regarded as Category 1a and 1b invasive species in terms of NEM:BA (National Environmental Management: Biodiversity Act 10 of 2004 and regulations applicable thereto).
- Final rehabilitation shall be completed within a period specified by the Regional Manager.

### ***APPLICATION FOR CLOSURE***

Once the full mining area was rehabilitated the mining right holder will submit a closure application to the Department of Mineral Resources in accordance with section 43(4) of the MPRDA, 2002 that states: “An application for a closure certificate must be made to the Regional Manager in whose region the land in question is situated within 180 days of the occurrence of the lapsing, abandonment, cancellation, cessation, relinquishment or completion contemplated in subsection (3) and must be accompanied by the prescribed environmental risk report”. The Closure Application will be submitted in terms of Regulation 62 of the MPRDA, 2002, and Government Notice 940 of NEMA, 1998.

### ***PUBLIC INVOLVEMENT***

This document is to inform you about the proposed activity and to determine whether there are any concerns or objections from interested and affected parties (I&AP's) that need to be considered.

As interested and affected party you are kindly requested to complete the comments form and give any comment/concern or input with regard to the current land use of the area, the environment as well as socio-economic conditions that you feel might be affected by the proposed activity. When submitting response please provide suggestions to mitigate the anticipated impact of each identified activity.

Please contact Christine Fouche at the contact details as presented in the letterhead or at [christine.f@greenmined.co.za](mailto:christine.f@greenmined.co.za) through any means should you need more information, have additional language requirements, have concerns or comments that need to be considered or if you want to be registered as an interested and/or affected party and would like to receive a copy of the Draft Scoping Report (DSR) on or before 5

## **BACKGROUND INFORMATION DOCUMENT**

February 2019. If we do not receive any comments from you on or before 5 February 2019, it will be accepted that you do not have any objections/comments with regard to the project and do not require any further documentation.

A register of interested and affected parties (I&AP's) will be opened and maintained containing the names, contact details and address of all persons who have submitted written comments, attended meetings or have in writing requested to be registered and all organs of state which have jurisdiction in respect of the activity. Please note that only registered I&AP's and stakeholders will be entitled to comment on reports and plans to be submitted to the Department provided that the party provide its name, contact details and address and discloses any direct business, financial, personal or other interest which he/she may have in the approval or refusal of the applications.

The Draft Scoping Report (DSR) will be submitted to the Department of Mineral Resources – Western Cape (DMR) for review purposes. This report will also be made available to the public for a 30 days review period. An electronic copy of the report will be published on the Greenmined Environmental website ([www.greenmined.com](http://www.greenmined.com)). All registered I&AP's and stakeholders will be notified of the commenting period in advance as above.

The DSR will then be updated to reflect the comments received during the public commenting period. Thereafter, the Final Scoping Report (FSR) will be submitted to DMR for its consideration as part of the authorization process in terms of the NEMA, 2014 regulations (as amended 2017). A copy of the FSR will be made available on the Greenmined Environmental website. Once the Final Scoping Report has been accepted by the DMR, the Draft Environmental Impact Assessment Report (DEIAR) will be prepared, inclusive of all the specialist studies, and also made available to the public for a 30-day commenting period. An electronic copy of the DEIAR report will also be published on the Greenmined Environmental website. All registered I&AP's and stakeholders will be notified of the commenting period in advance.

Upon expiry of the commenting period the DEIAR will be updated to reflect the comments received during the public commenting period. Thereafter, the Final EIAR will be submitted to the DMR for its consideration as part of the authorization process in terms of the NEMA 2014 regulations (as amended by GNR 326 effective 7 April 2017). A copy of the final report will be made available on the Greenmined Environmental website. All registered I&AP's and stakeholders will be notified in writing within 14 days of the date of the decision of the outcome of the application, including the reasons for the decision and the right of appeal.

## **BACKGROUND INFORMATION DOCUMENT**

### **CONTACT DETAILS**

<b>Name/Name</b>	
<b>Organisation/Instansie</b>	
<b>Interest/Belange</b>	
<b>Postal Address/Pos Adres</b>	
<b>Tel</b>	
<b>Fax/Faks</b>	
<b>E-mail/E-pos</b>	

### **COMMENTS/ OPMERKINGS**

<b>Object / No Objection:</b>	
<b>Request additional information:</b>	
<b>Concerns:</b>	

**Signature:** \_\_\_\_\_





DMR Reference Number: To be confirmed



## BACKGROUND INFORMATION DOCUMENT

**Are there any other organisations or individuals that you feel should be invited to comment? If so, please provide their contact details:**

Contact name:
Organisation (if applicable):
Address:
Tel:
Fax
E-mail

Your feedback is valued and will be addressed appropriately.

Kind Regards

A handwritten signature in black ink that reads 'Fouche'.

.....  
Christine Fouche  
Greenmined Environmental