

# **COMMENTS AND RESPONSE REPORT**

**VAN ZYL SILLIMANITE APPLIED FOR A MINING PERMIT  
AND RELATED INFRASTRUCTURAL ACTIVITIES ON THE  
FARM WORTEL 42, PORTION 1, KHAI MA LOCAL  
MUNICIPALITY, NAMAKWA DISTRICT MUNICIPALITY,  
NAMAQUALAND MAGISTERIAL DISTRICT, NORTHERN  
CAPE PROVINCE**

**REFERENCE NUMBER: NC 30/5/1/3/2/10799 MP**

## **PLEASE NOTE:**

VZS previously (28 June 2019) applied for a mining permit (NC 30/5/1/3/2/10771 MP) for the mining of sillimanite on 5 ha of Portion 1 of the farm Wortel 42, Namaqualand RD, Northern Cape. Initial public participation started on 10 of July 2019. This application (10771 MP) was subsequently rejected by the Department of Mineral Resources (DMR) due to the presence of another dormant mining permit on the same footprint. The dormant application was withdrawn, and a new mining permit application (NC 30/5/1/3/2/10799 MP) for environmental authorisation was submitted by VZS on 21 November 2019 that was accepted by the DMR on 20 January 2020.

As the project proposal remains similar, and the same I&AP's and stakeholders are involved, the comments received on the first application (10771 MP) are deemed applicable to this application (10799 MP) and were therefore incorporated into this DBAR. The current proof of public participation in this document therefore resembles the correspondence conducted for mining permit application 10771 MP. Upon lapse of the commenting period on the DBAR of mining permit application 10799 MP, this document will be updated to include both public participation processes.

**NOTIFICATION OF APPLICATION TO STAKEHOLDERS DURING INITIAL PUBLIC PARTICIPATION PHASE**

*COMMENTING PERIOD: 10 JULY – 21 AUGUST 2019*

<b>TITLE, NAME AND SURNAME</b>	<b>AFFILIATION/KEY STAKEHOLDER STATUS</b>	<b>CONTACT DETAILS</b>	<b>CONTACTED DATE</b>	<b>RESPONSE RECEIVED</b>
Head of Department: Mr W.V.D Mothibi	Department of Agriculture, Land Reform and Rural Development	cfortune@agri.ncape.gov.za	10 July 2019	No Comments Received
Mr Brian Fisher	Department of Environment and Nature Conservation	bfisher@ncpg.gov.za	10 July 2019	No Comments Received
Head of Department: Mr S Mabilo	Department of Economic Development and Tourism	ungomane@ncpg.gov.za	10 July 2019	No Comments Received
Head of Department: Mr. Kholekile Nogwili	Department of Roads and Public Works	KNogwili@ncpg.gov.za	10 July 2019	No Comments Received
Chief Director: Mr A Abrahams	Department of Water Affairs	AbrahamsA@dwa.gov.za	10 July 2019	No Comments Received
Head of Department Zolile Albanie	Department of Labour	zolile.albanie@labour.gov.za	10 July 2019	No Comments Received
Municipal Manager: Mr Christiaan Fortuin	Namakwa District Municipality	munmansec@namakwa-dm.gov.za	10 July 2019	No Comments Received

TITLE, NAME AND SURNAME	AFFILIATION/KEY STAKEHOLDER STATUS	CONTACT DETAILS	CONTACTED DATE	RESPONSE RECEIVED
Municipal Manager: Mr Obegang	Khâi-Ma Local Municipality	munman@khaima.gov.za	10 July 2019	No Comments Received
Ward Councillor: Mr Quincy	Khâi-Ma Local Municipality Ward 4	ron.quincy@gmail.com	10 July 2019	No Comments Received
Ms Nicole Abrahams	SANRAL	abrahamsn@nra.co.za	10 July 2019	No Comments Received
M Mokonoto	SANBI	m.mokonoto@sanbi.org.za	10 July 2019	No Comments Received
E Marinus	Succulent Karoo Ecosystem Programme (SKEP)	E.Marinus2@sanbi.org.za	10 July 2019	No Comments Received
Me Suzanne Erasmus	WESSA	wessanc@yahoo.com	10 July 2019	No Comments Received
Dr Ian Little	Endangered Wildlife Trust	ianl@ewt.org.za	10 July 2019	No Comments Received
Mr. Mark Botha	Botanical Society of South Africa	Mark@botanicalsociety.co.za	10 July 2019	No Comments Received

TITLE, NAME AND SURNAME	AFFILIATION/KEY STAKEHOLDER STATUS	CONTACT DETAILS	CONTACTED DATE	RESPONSE RECEIVED
Mr. Danie Jacobs	Agri Namakwa and Associated Farmers Associations	kammasoas@vodamail.co.za	10 July 2019	No Comments Received
Me Nqabisa Mkalipi	Regional Land Claims Commission Northern Cape	nqabisa.mkalipi@drdlr.gov.za	17 April 2019	25 April 2019
Letter received to confirm that there is no claim in respect of the property.				
Mr. Pieter van Den Heever Land owner	Wortel 42 Ptn 0 (RE)	renosterkopdruive@oseiland.co.za	10 July 2019	No Comments Received
Petronella (Petru) Catharina Van Den Heever	Wortel 42 Ptn 1	pcvdheever50@gmail.com	10 July 2019	No Comments Received
Mr Isak Jacobus Van Niekerk	Rozyboch 41, Portion 2	1 Penge Road, Aggeneys, Northern Cape RSA	10 July 2019	No Comments Received
Mr Pieter Venter	Black Mountain Mining Pty Ltd	pventer@vedantaresources.co.za	10 July 2019	No Comments Received
Mr Edmund Agenbag	Oonab Boerdery CC Koenabib 43, Portion 1	edmund.agenbach@gmail.com	10 July 2019	No Comments Received

TITLE, NAME AND SURNAME	AFFILIATION/KEY STAKEHOLDER STATUS	CONTACT DETAILS	CONTACTED DATE	RESPONSE RECEIVED
Municipal Manager: Mr Obegang	Pofadder Municipality	munman@khaima.gov.za	10 July 2019	No Comments Received
Me Glenda Goosen	Klein Pela Gastehuis	Kpgastehuis@karsten.co.za	10 July 2019	No Comments Received
Upload onto SAHRIS on 11 July 2019				
Request received for a Heritage Impact Assessment study on 2 August 2019				

### SUMMARY OF INITIAL PARTICIPATION PROCESS

1. The I&AP's and stakeholders were informed of the proposed project through:

- telephonic discussions,
- direct communication with notification letters,
- placement of on-site notices, and
- placement of advert in the Gemsbok on 12 July 2019

See attached Appendix A as proof of the correspondence with the I&AP's and stakeholders during the public participation process.

## NOTIFICATION OF STAKEHOLDERS AND I&AP'S OF THE AVAILABILITY OF THE DBAR

*COMMENTING PERIOD: 16 AUGUST – 22 SEPTEMBER 2019*

During the second public participation process the stakeholders and I&AP's were informed of the project by means of email notifications. A 30-days commenting period was allowed which expired on 22 September 2019. The following table provides a list of the I&AP's and stakeholders that were informed of the project:

TITLE, NAME AND SURNAME	AFFILIATION/KEY STAKEHOLDER STATUS	CONTACT DETAILS	CONTACTED DATE	RESPONSE RECEIVED
Head of Department: Mr W.V.D Mothibi	Department of Agriculture, Land Reform and Rural Development	cfortune@agri.ncape.gov.za	16 August 2019	No Comments Received
Mr Brian Fisher	Department of Environment and Nature Conservation	bfisher@ncpg.gov.za	16 August 2019	No Comments Received
Head of Department: Mr S Mabilo	Department of Economic Development and Tourism	ungomane@ncpg.gov.za	16 August 2019	No Comments Received
Head of Department: Mr. Kholekile Nogwili	Department of Roads and Public Works	KNogwili@ncpg.gov.za	16 August 2019	No Comments Received
Chief Director: Mr A Abrahams	Department of Water Affairs	AbrahamsA@dwa.gov.za	16 August 2019	No Comments Received

TITLE, NAME AND SURNAME	AFFILIATION/KEY STAKEHOLDER STATUS	CONTACT DETAILS	CONTACTED DATE	RESPONSE RECEIVED
Head of Department Zolile Albanie	Department of Labour	zolile.albanie@labour.gov.za	16 August 2019	No Comments Received
Municipal Manager: Mr Christiaan Fortuin	Namakwa District Municipality	munmansec@namakwa-dm.gov.za	16 August 2019	No Comments Received
Municipal Manager: Mr Obegang	Khâi-Ma Local Municipality	munman@khaima.gov.za	16 August 2019	No Comments Received
Ward Councillor: Mr Quincy	Khâi-Ma Local Municipality Ward 4	ron.quincy@gmail.com	16 August 2019	No Comments Received
Ms Nicole Abrahams	SANRAL	abrahamsn@nra.co.za	16 August 2019	No Comments Received
M Mokonoto	SANBI	m.mokonoto@sanbi.org.za	16 August 2019	No Comments Received
E Marinus	Succulent Karoo Ecosystem Programme (SKEP)	E.Marinus2@sanbi.org.za	16 August 2019	No Comments Received
Me Suzanne Erasmus	WESSA	wessanc@yahoo.com	16 August 2019	No Comments Received



TITLE, NAME AND SURNAME	AFFILIATION/KEY STAKEHOLDER STATUS	CONTACT DETAILS	CONTACTED DATE	RESPONSE RECEIVED
Dr Ian Little	Endangered Wildlife Trust	ianl@ewt.org.za	16 August 2019	No Comments Received
Mr. Mark Botha	Botanical Society of South Africa	Mark@botanicalsociety.co.za	16 August 2019	No Comments Received
Mr. Danie Jacobs	Agri Namakwa and Associated Farmers Associations	kammasoas@vodamail.co.za	16 August 2019	No Comments Received
Mr. Pieter van Den Heever	Wortel 42 Ptn 0 (RE)	renosterkopdruive@oseiland.co.za	16 August 2019	No Comments Received
Petronella Catharina Van Den Heever (Land Owner)	Wortel 42 Ptn 1	pcvdheever50@gmail.com	16 August 2019	No Comments Received
Mr Isak Jacobus Van Niekerk	Rozyboch 41, Portion 2	1 Penge Road, Aggeneys, Northern Cape RSA	16 August 2019	No Comments Received
Mr Pieter Venter	Black Mountain Mining Pty Ltd	pventer@vedantaresources.co.za	16 August 2019	27 September 2019

TITLE, NAME AND SURNAME	AFFILIATION/KEY STAKEHOLDER STATUS	CONTACT DETAILS	CONTACTED DATE	RESPONSE RECEIVED
<p>Comments received from Vedanta on 27 September 2019 regarding this application:</p>				
<p><b>BMM would kindly comment on the Background Information Document as follows:</b></p>				
<ol style="list-style-type: none"> <li>1. Portion 1 of the farm Wortel 42 was identified by DENC as a B1 List Property (Annexure B1) to the Biodiversity Offset Agreement between BMM and DENC. The Offset Agreement forms part of the Environmental Authorization of the BMM Gamsberg Zinc Mine and instruct BMM to sign a Biodiversity Offset Agreement with DENC. Properties identified as part of the B1 list have IUCN red listed flora species as well as sensitive plant communities that requires protection;</li> <li>2. This farm was therefore identified as a potential biodiversity offset farm due to its biodiversity sensitivity;</li> <li>3. BID only include the following authorizations: <ol style="list-style-type: none"> <li>a. NEMA – BAR;</li> <li>b. MPRDA – EMP</li> <li>c. What water uses will be required and will this require a Water use license and/or GA regarding 21 c and I water uses? Was this investigated?</li> <li>d. Will any watercourse be crossed and are there any 21 c and I water uses that will be triggered?</li> <li>e. Any other water uses under National Water Act that will be triggered?</li> </ol> </li> <li>4. Biophysical <ol style="list-style-type: none"> <li>a. Climate and Rain <ol style="list-style-type: none"> <li>i. Please provide the references used for rainfall and temperature descriptions.</li> <li>ii. To our information – Aggeneys average rainfall is 87.2 mm per annum</li> <li>iii. Where will vehicles be services?</li> </ol> </li> </ol> </li> <li>5. Sensitive Landscape <ol style="list-style-type: none"> <li>a. The Gamsberg Nature Reserve was declared on 5 August 2019 and is located adjacent to the farm Wortel 42 Portion 1 - Gamsberg Nature Reserve was proclaimed under the Protected Areas Act – and includes the follow surface areas: <ol style="list-style-type: none"> <li>i. REM of the farm Rozynbosch 41</li> <li>ii. Ptn 2 of the farm Rozynbosch 41;</li> <li>iii. Farm Achab 57; and</li> <li>iv. REM of the farm Vogelstruishoek 88</li> </ol> </li> <li>b. Information in BID is therefore outdated.</li> <li>c. Sensitive areas described in the BID refers to Protected areas and dry river beds – was any detailed site specific vegetation conducted?</li> </ol> </li> </ol>				

6. Flora

- a. Sensitive vegetation types and IUCN red listed species are present in the areas and a site specific flora assessment must be conducted to identify any sensitive plant communities, IUCN red data listed species, as well as any protected species as listed by the Northern Cape Nature Conservation Act, The NEMBA TOPS list and IUCN red data listed species;
- b. Should any of the above be present, a search and rescue protocol must be compiled and submitted as well as a protection plan to protect these sensitive areas in the surrounding areas;
- c. Contradicting statements – stated that no Protected plant was observed during site visit and the recommend permit applications:
- d. Sensitive vegetation within surrounding areas include an extensive list and should be properly investigated and assessed. A detailed infield assessment needs to be conducted by arid ecologist / Botanist familiar with succulent plants. Please refer to Table 1 below regarding BMM information as compiled by Dr Phil Desmet and Mark Botha as part of Portion 2 of the farm Wortel vegetation contribution as part of Biodiversity vegetation types and habitats.

7. Fauna

- a. A detailed fauna assessment must be conducted

8. Access roads

- a. All road crossing that crosses water courses / river beds that will be upgrade will require a 21 c and i water use.
- b. Please provide a map showing all water courses as well existing roads and planned roads that will be upgrade;
- c. Erosion management plan must be compiled to prevent/limit erosion

Black Mountain Mining would like to comment on the Draft Basic Assessment Report – with special reference to Flora section and biodiversity sensitivity as follows:

1. The Applicant, Van Zyl Sillimanite intends to apply for a mining permit, 5ha, Wortel 42, Portion 1, Khâi Ma Local Municipality, Namakwa District Municipality, and Namaqualand Magisterial District, Northern Cape Province. The area earmarked for the proposed mining falls on a section of the farm that was previously used for mining activities and the intention of this application is to increase the area to a quarry.  
**BMM comment:** BMM want to put on record that Portion 1 of the farm Wortel 42 is located adjacent to the newly declared Gamsberg Nature Reserve that was declared as a Nature Reserve under the Protected Area Act on the 5 August 2019. The farm was included in Annexure B\_ B1 properties to the Biodiversity Offset Agreement between DENC and BMM as per requirement of the Environmental Authorization that was granted by DENC to BMM in 2013. Portion 1 of the farm Wortel 42 was therefore identified as a biodiversity sensitive and important for conservation of biodiversity.
2. An application for environmental authorisation will be submitted in terms of section 16 of The Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 Of 2002) And The National Environmental Management Act, 1998 (Act No. 107 Of 1998 NEMA) As Well as The Environmental Impact Assessment Regulations as Amended 2017.  
**BMM comment:** Will the applicant also apply for a Water Use license for water uses that will be triggered due to the proposed development? Especially regarding Section 21 c and I water uses associated with access road crossing of rivers/streams and the associated upgrade of such roads?

3. The environmental impact assessment identified a Critical Biodiversity Area (CBA) that extend throughout the property of the proposed mining area. This area is also highlighted in terms of the Mining and Biodiversity Guideline as an area of high biodiversity importance with a corresponding rating of high risk for mining.  
**BMM comment** Will Biodiversity Offset consider compensating for loss of sensitive Biodiversity? CBA must be avoided at all times. What will the impact of drilling and blasting and associated dust be on CBA vegetation types and Species of special concern? Will any IUCN red listed species, endemic and near endemic species be translocated? Any search and rescue plan and protection plan for such species being developed that will be implemented?
4. As the prevalent wind direction is in a southern direction, the hills and ridges in the surrounding environment will screen dust generated at VZS from the operations/residents. Should the applicant implement the mitigation measures proposed in this document and the EMPR the impact on the air quality of the surrounding environment is deemed to be of low-medium significance.  
**BMM comment:** Was the impact of dust on sensitive vegetation types and/or IUCN red listed species considered? What will the residual impact be on such species? This must be investigated and search and rescue and protection plan must be compiled.
5. Other legislation:  
**BMM comment:** Was the following consulted:
  1. National Environmental Management: Biodiversity Act as wells as the Threatened and Protected species regulations considered?
  2. The Northern Cape Nature Conservation Act considered – Protected Species Lists;
  3. The National Forest Act (*Boscia albitrunca* and *Acacia erioloba*; amongst others)
  4. The National Water Act?
6. In the circumstance, upon receipt of the EA and prior to site establishment, a qualified botanist will conduct a plant identification walkthrough with site management to identify the plants in need of a destruction/removal permit. Bush clearance will only commence upon receipt of the destruction/removal plant permit. The environmental control officer (ECO) will assess the compliance of the permit holder with the conditions of the plant permit.  
**BMM comment:** It is recommended that a detailed infield vegetation assessment be conducted and that a sensitivity map, from a flora point of view be compiled and that a list of all red listed, endemic and near endemic species, as well as all species with Conservation importance and listed as protected by Northern Cape Conservation Act as well as NEMBA: TOPS listed species be identified.
7. Due to the nature of the project and the fact that no infrastructure will be established on site, very little if any general waste will be generated as a direct result of the mining activities. Any waste generated during the operational phase, will be contained in a sealable refuse bin to be taken to the local landfill site at Pofadder.  
**BMM comment:** Access road to Pofadder – through which properties will this access road cross?
8. Figure page 16  
**BMM comment:** Please indicate all stream/river crossing on Figure as well as sensitive vegetation types/infrastructure developments. Adjacent farms that will be crossed by the access roads

9. Figure Page 17

**BMM comment:** Please indicate all stream/river crossing on Figure as well as sensitive vegetation types/infrastructure developments. Adjacent farms that will be crossed by the access roads

10. National Environmental Management Act: Biodiversity Act, 2004 (Act No. 10 of 2004) and amendments

**BMM comment:** The document only refers to NEMBA regarding Alien Invader Species. What about TOPS listed species?

11. Northern Cape Nature Conservation Act No. 9 of 2009 - No aspects on site could be identified that needs protection –

Was a proper infield assessment conducted to identify any flora sensitive areas? As the area is located in CBA area, an infield assessment should be conducted and a sensitivity map compiled based on flora sensitivity such as sensitive plant communities, IUCN, NEMBA: TOPS and Northern Cape Conservation Act Red listed species. The area falls within the Bushmanland Inselberg Region and Succulent Karoo Biome – an area of Plant Endemism and therefore a proper vegetation assessment is required.

12. Flora section:

**BMM comment:** Information provided needs to be re-assessed. The fact that the area is located in CBA will require that an infield assessment be conducted to groundtruth the flora component. A fine scale vegetation map must be compiled and a proper infield assessment is required to determine the presence and distribution of IUCN red listed plants, the presence of Threatened or Protected Species as listed by the National Environmental Management Biodiversity Act regarding the threatened or protected species regulations and lists, as well as the presence and distribution of protected species as listed by both the Northern Cape Nature Conservation Act and the National Forest Act. Information regarding protected plants as well as threatened and protected species in the DBAR is not acceptable and a proper infield assessment is required by a registered botanist/arid ecologist.

Available information as compiled by Desmet 2013 that are useful for the BAR but that was not consulted or included in the DBAR but a true reflection of the flora species and plant communities on the relevant farm are summarized below:

The area is located with Bushmanland Inselberg Regions and the Succulent Karoo Biome and are located within the Centre of Plant Endemism. The farm Wortel lies within an area of what is termed the “Bushmanland Inselberg Region” (BIR Desmet 2013, described the areas as follows:

This BIR includes all the large, quartzite-capped inselbergs located in the northern Bushmanland plains in South Africa covering an area of about 6300km<sup>2</sup> (Figure 1). These inselbergs are distributed in an east-west line marking approximately the southern edge of the Orange River valley. A feature of all these inselbergs is their relatively flat, quartzite-capped plateaus and associated quartzite rock/boulder covered scree-slopes and aprons. The richness and diversity of the flora is dramatically associated with the presence of quartzite rock. The “BIR and plains region” (Figure 1) includes the Bushmanland plains as far south as Gamoep. The plains in the south-west shares flora affinities with the plains around the core area (e.g. *Ihlenfeldtia excavata*, *Conophytum calculus* subsp. *vanzylii*, *Titanopsis hugoschlechterii*). The BIR boundary in the east is defined by the distribution of the Aggeneys Gravel Vygiveld vegetation types. This vegetation type is endemic to the BIR and its distribution is strongly linked to the influence of winter rainfall. The BIR could be regarded as that area of Bushmanland significantly under the influence of the winter rainfall climate. The BIR is located on the boundary between winter and summer rainfall systems of southern Africa. The vegetation of the

plains and warmer north-facing aspects is characteristic of the Nama Karoo Biome whereas that of cooler higher-elevation plains and south-facing aspects is characteristic of the Succulent Karoo Biome. The overlap of two biomes is a unique feature of the BIR flora and sets these inselbergs apart from other inselbergs elsewhere in the Nama Karoo. Most rainfall arrives in the form of thunderstorms in late-summer/autumn and averages 70mm/year. The moisture regime of the inselbergs is augmented by fog during winter months coming from valley fog associated with the Koa River valley (see title page picture) or low cloud from passing winter cold fronts. Therefore, the vegetation of the inselbergs is adjusted to a narrow growth period from about February to May accommodating the grown requirements of both summer and winter rainfall species. The low annual rainfall; erratic timing of rainfall events; occurrence of fog; and, the availability of moisture in the late summer through autumn period are important determinants of the flora allowing both summer and winter rainfall floras to co-exist which in part contribute to the uniqueness of the BIR. The flora of these inselbergs forms a distinct centre of plant endemism located within the larger Eastern Gariep Centre of Endemism. The Eastern Gariep Centre of endemism encompasses the arid Orange River valley between Vioolsdrif and Pofadder/Onseepkans. Although geographically close (<50km), the large mountains of the Orange River valley such as Pella Berg and Dabenoris are floristically distinct housing many Eastern Gariep endemics that do not occur outside the valley on the comparatively cooler Bushmanland inselbergs. There are many species endemic to the Bushmanland Inselbergs and the BIR in itself defines a distinct centre of endemism termed the “Bushmanland Inselberg Centre of Endemism” or sometimes the “Gamsberg Centre of Endemism” as this inselberg lays at the floristic centre of this region and also drawing attention to the fact that the endemism is associated with the inselbergs and not the sandy Bushmanland plains that comprise 90% of the region. The Bushmanland inselbergs effectively comprise an archipelago of rocky “islands” within a “sea” of sand. These “islands” share common floristic affinities but show distinct east-west and north south gradients in species turnover and population-level variation. The surrounding sandy plains form a continuous vegetation fabric that is widespread beyond this region. The inselbergs have almost no floristic affinities with the vegetation on the surrounding sandy plains – chalk and cheese!

The inselbergs at the core of the BIR are of significant conservation importance:

- a. The Gamsberg is the largest inselberg located in the center of a “Centre of Endemism” that includes the major inselbergs of (from east to west) Namies, Achab, Gamsberg, Aggeneysberg, Witberg, Haramoep and Wortel. These inselbergs define the core area of the Bushmanland Inselberg Region.
- b. Relative to the surrounding sandy plains, and other world deserts, the inselbergs and associated rocky plains have very high levels of species diversity.
- c. Many species are range restricted being associated with specific regionally rare habitats mainly different types of gravel patches, namely quartz, calcrete and feldspar.
- d. Some of the azonal habitats associated with the inselbergs such as the kloofs and freshwater springs are regionally very rare features and fulfil vital ecological process functions such as providing climate change refuges.
- e. The Gamsberg is the largest inselberg in Bushmanland and has the greatest diversity of habitats of conservation concern, the largest extent of these habitats and also the highest number of species compared to all other inselbergs in the BIR.

In addition, the vegetation wise contribution of Portion 1 of the farm Wortel 42, as provided to BMM by Desmet and Botha 2013 as part of the Biodiversity Offset calculation Tables as part of the Biodiversity Offset Agreement between DENC and BMM summarized the property wise contribution as followed:

The above vegetation types are not described within the DBAR report due to lack of site specific flora assessment.

13. The DBAR reports described the following:

According to Marsh et al. (2009) a total of 854 plant species have been recorded in the Khâi Ma Local Municipality area. As many as 41 species are known to be endemic to the area and a further 20 are potentially endemic. Many of the most special plants can be found within the fine grained quartz patches – an area that

typically contains a number of special dwarf succulents (Marsh et al. 2009). The Bushmanland Inselbergs are a remarkable feature of this landscape. In total, this 31,400- hectare area includes 429 plant species, of which 67 are found only in this hotspot and 87 are Red List species (Marsh et al. 2009). A Threatened Species and Species of Conservation Concern list was obtained from the POSA database on the SANBI website. Threatened species are those that are facing high risk of extinction, indicated by the categories Critically Endangered, Endangered and Vulnerable. Species of Conservation Concern include the Threatened Species, but additionally have the categories Near Threatened, Data Deficient, Critically Rare, Rare and Declining. This is in accordance with the new Red List for South African Plants (Raimondo et al. 2009). In addition to the list above (Table 5 of the DBAR), *Aloe dichotoma* Masson (Vu) are also found within the area. The majority of the threatened species and species of conservation concern may potentially occur on the rocky inselbergs and/or quartz plains. The only protected tree which may occur within the area is *Acacia erioloba* (Camel Thorn). This tree may be present within the mining permit area on the sandy plains, but has not been observed during the site investigation. A further protected species is the halfmens *Pachypodium namaquanum*. The majority of succulent plants are classified as protected plant species. It can be concluded that although no statutory conservation area exists within the distribution range of the identified vegetation type, very little of the area has been transformed. A local exception is the mine area close to Aggeneys, where mining infrastructure and mine dumps, and also residential areas, transformed some areas. The proposed mining permit area is situated in an area of biodiversity importance. The most important areas are the Inselbergs, including their quartz gravel foot slopes. The dry grassy plains are of relatively less biodiversity importance. Although the proposed mining permit campaign will not result in a progressive loss of ecological sensitive and important habitat units or ecosystem functioning, the areas identified as being of high ecological sensitivity must be avoided and the proposed activities must be in accordance with the conservation policies of the relevant authorities.

**BMM Comment:** The inclusion of the list of Species of Conservation Concern (SANBI website, Quarter degree square Grid 2918BB) as include in Table 5 as well as species listed in Table 6 requires that a detailed infield assessment within the proposed development footprint are conducted in order to determine if any of the SCC are present that may be impacted on. Without the groundtruthing, infield assessment and mapping of such species and the compilation of a sensitivity map – the impact assessment cannot be seen as accurate and a true reflection of the associated impacts. It is therefore required that a detailed flora assessment within the 5ha development footprint area are conducted to determine the presence and distribution of SCC as well as sensitivity plant communities and the distribution of red listed species. Should any Endemic, near-endemic, IUCN red listed species, NEMBA TOPS and Protected species as per Northern Cape Nature Conservation Act and the National Forest Act be recorded, a proper Search and Rescue as well as Protected Plan must be compiled.

14. The DBAR described the Endemic Taxon as follows:

The small tree *Ozoroa namaquensis* and the leaf succulent dwarf shrub *Tylecodon suphurreus* is endemic to the region. The study site is located within the area of jurisdiction of the Khâi Ma Local Municipality (KMLM). The KMLM comprises virtually the entire extent of the Bushmanland Inselberg priority area. The latter is one of the nine zones identified through the Succulent Karoo Ecosystems Project (SKEP) process as important conservation areas in the Succulent Karoo. Inselbergs are important refugia for plants and animals and act as steppingstones for rock-loving species migrating east west across the sand-covered plains of Bushmanland. The isolation of populations has led to diversification within the dwarf succulent shrublands, creating remarkable local populations of plant life. The area is unique, containing many rare and fragile habitat types. These unique and confined areas are host to a remarkable number of endemic plants (Marsh et al. 2009). According to SANBI & DEAT (2009) none of the ecosystems occurring on the mining permit area are considered as threatened ecosystems. Nonetheless, the areas north of Aggeneys are considered as Critical Biodiversity Areas (CBAs) within the Namakwaland District. The main vegetation types occurring on the mining permit area are classified in terms of Mucina & Rutherford (2006), as Eastern Gariiep Plains Desert and Eastern Gariiep Rocky Desert. An additional unit is the Dry Drainage Lines (Spruits).

**BMM Comment:** The two species listed in DBAR can be seen as an underestimation of the presence of endemic taxon and it is recommended that a site specific infield assessment are conducted to assess the presence and distribution of other endemic taxon in the development footprint area. In addition, the presence of CBA within and/or adjacent to the proposed development needs to be assessed and groundtruth and if required a Biodiversity Offset Report should be compiled and submitted with the FBAR for consideration as Portion 1 of the farm Wortel has been identified as land with conservation importance and as an area earmarked for Biodiversity Offset.

15. Surface water:

**BMM Comment:** Was a desktop study conducted regarding the presence of any NFEPA wetlands, rivers and/or pans within the proposed area of development? If not, please include in FBAR

16. Figure 31

**BMM Comment:** The Gamsberg Nature Reserve was proclaimed under the Protected Area Act on 5 August 2019 and include the farms Rozynebosch 41 Portion 2 and REM;

17. Page 94

**BMM Comment:** Contradicting Statement – Refers to the Bushmanland Nama Karoo Biome versus the Desert Biome under the flora description earlier on in the document:

18. Page 95 stated that there are no Protected Areas in the area

**BMM Comment:** This is incorrect as the Gamsberg Nature Reserve was proclaimed on 5 Aug 2019 and includes the adjacent properties namely Portion 2 and REM of the farm Rozynebosch 41

19. Mining and Biodiversity Guidelines

**BMM Comment:** The Gamsberg Nature Reserve are located adjacent to the proposed development on Portion 2 and REM of the farm Rozynebosch 41. In addition, the area is located within a CBA area. According to Mining and Biodiversity Guideline, the proposed development falls with an area that is high risk for mining as the area is located in an area of high biodiversity. An EIA should therefore be undertaken with the potential of Biodiversity Offset. Detailed Flora assessment within the development footprint area is therefore required to map the flora sensitivity as well as the presence and distribution of threatened and protected species. The DBAR does refers that a Biodiversity Offset Report will be compiled and submitted as part of FBAR – please share this report for comments prior to inclusion n FBAR.

20. Biodiversity Priority Area - Page 97 refers to “10km wide buffers around National Parks and World Heritage Sites (or alternatively specifically defined buffers approved by the Minister according to DEA’s buffer zone policy for National Parks or gazetted under the. Parks, World Convention Act) and 5km buffers around other protected areas, Heritage excluding Gauteng where there are no buffers around protected areas. In these areas environmental impact assessments should



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<p>be required for a range of activities that impact on biodiversity value, sense of place, visual sensitivity of the natural landscape and cultural value of Nature Reserves.</p>				
<p><b>BMM Comment:</b> This means that due to the Proclamation of the Gamsberg Nature Reserve adjacent, and most probably closer than 5km from the proposed development – that a full EIA is required.</p>				
<p>21. Page 100 - CBAs in the Namakwa District Municipality. CBAs are terrestrial (T) and aquatic (A) features in the landscape that are critical for retaining biodiversity and supporting continued ecosystem functioning and services (Namakwa District Biodiversity Sector Plan, 2008). The purpose of CBAs is to indicate spatially the location of critical or important areas for biodiversity in the landscape. The legend can be clarified as follows:</p>				
<p>a. CBA 2: Natural landscapes:</p> <ul style="list-style-type: none"> <li>i. Ecosystems and species fully intact and undisturbed</li> <li>ii. These are areas that have been selected as the best option for meeting biodiversity targets, based on complementarity, efficiency, connectivity and avoidance of conflict with other land or resources uses.</li> <li>iii. These are areas with high irreplaceability or low flexibility in terms of meeting biodiversity pattern targets. If the biodiversity features targeted in these areas are lost, then targets will not be met.</li> <li>iv. These are landscape that are at or past their limits of acceptable change</li> </ul>				
<p><b>BMM Comment:</b> It is therefore of critical importance that a site specific assessment of vegetation be conducted to identify the site specific fine scale plant communities as well as presence of any threatened or protected species with the proposed area of development and then re-assess the vegetation impact assessment. A biodiversity Offset Reports should be compiled based on the outcome of the infield site specific vegetation assessment.</p>				
<p>22. An offset study is needed as the development falls in a CBA area. From this it has been concluded that an Ecological and Wetland Specialist needs to be consulted. This report will be included into the Final BAR.</p>				
<p><b>BMM Comment:</b> This is in line with recommendation made in the BMM review. Engagement with Elsabe Swart and other DENC representatives are therefore important to take this forward.</p>				
<p>23. Impact Assessment Tables</p>				
<p><b>BMM Comments:</b> Without a fine scale flora assessment and sensitivity map of the representative vegetation types as well as the presence and distribution of threatened and protected species (IUCN Red list flora species; NEMBA: TOPS list species and Protected Species as listed by the Northern Cape Nature Conservation Act) an accurate impact assessment due to the proposed development within the CBA area cannot be assessed. It is recommended that these be conducted and once completed that the Impact Assessment of the flora be update accordingly. The impact of fall out dust on such species should also be addressed. The impact on flora and the reversibility of the impact is questionable and should be revised. Impact of dust on these threatened and protected species should be re-evaluated to determine the impact of dust on these species.</p>				

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<p><u>Response to BBM's comments on the BID (of the previous application – 10771 MP):</u></p> <p>1 &amp; 2: Your comment is noted, however the footprint of the offset agreement is unclear as no appendices/maps accompanied your comments. Greenmined did consult the EIA Screening toolkit as per the NEMA legislation and the results showed that the application area falls within a CBA2 area with sensitive plant species, but no off-set/exclusion area could be identified. Greenmined also looked at the SANBI LUDS report but were unable to find such an exclusion area. The botanical study showed that the proposed footprint of the mining area is highly disturbed and no listed Red Data plant species were noted within the earmarked area. The protected species, identified by the botanist, will either be protected or permits will be obtained for the removal of the plants prior to commencement. This process will be guided by a qualified botanist. It must be noted that all the mining activities will be contained within the 5 ha mining boundary and that the natural areas outside of the boundaries will not be affected by the proposed activity. It is therefore believed that the potential biodiversity offset area can still be applied to the farm Wortel 42.</p> <p>3. A borehole will be drilled on the farm for the abstraction of process water. This water use will be registered with DWS in accordance with NWA (Act No. 104 of 1998), Section 21 activities. The applicant will make use of the existing roads to access the mining area (as discussed in the DBAR). Should the upgrade of any of the road sections fall within the footprint of a watercourse the DWS will be contacted to confirm the necessity of a Section 21 C &amp; I application in terms of the NWA, 1998. If needed, such an application will be submitted before commencement.</p> <p>4. The references were added to the DBAR. Regular vehicle maintenance will take place within the service bay area of an off-site workshop. Should emergency services be needed this will be performed at the on-site workshop at a designated area developed for such purposes.</p> <p>5. The Gamsberg Nature Reserve was declared on the 5<sup>th</sup> of August 2019, after the first application for a mining permit (10771MP) was made to the DMR. The BID was distributed to the I&amp;APS on the 10<sup>th</sup> of July 2019, before the reserve was proclaimed. The findings of the botanical study was incorporated into this DBAR to be distributed for public comments. Should the proposed activity stay within the approved footprint area and the mitigation measures listed in this document be implemented the activity will not have an impact on the nearby Gamsberg Nature Reserve.</p> <p>6. The findings of the botanist were incorporated into this document and a search and rescue protocol is part of the mitigation measures proposed for the project.</p> <p>7. As stated in the DBAR, fauna will be able to move away from site during the mining activities. Greenmined is of the opinion that based on the nature, size and site specific conditions a detailed faunal assessment is not warranted.</p> <p>8. As stated above, the necessary WUL applications will be made before commencement of any listed activities in terms of the NWA, 1998. Please refer to Appendix D for a copy of the Road Map. Erosion control will be managed and mitigated as part of the EMPR (Part 2 of the DBAR).</p>				

Response to BBM's comments on the DBAR (of the previous application – 10771 MP):

1. Greenmined takes note of your comment and supports the continued use of the sensitive areas on Portion 1 of the farm Wortel 42 as a biodiversity offset area. The proposed mining activity will not affect the newly declared Gamsberg Nature Reserve as mining will be contained to the approved 5 ha footprint.
2. A borehole will be drilled on the farm for the abstraction of process water. This water use will be registered with DWS in accordance with NWA (Act No. 104 of 1998), Section 21 activities. The applicant will make use of the existing roads to access the mining area (as discussed in the DBAR). Should the upgrade of any of the road sections fall within the footprint of a watercourse the DWS will be contacted to confirm the necessity of a Section 21 C & I application in terms of the NWA, 1998. If needed, such an application will be submitted before commencement.
3. As mentioned in this report, the footprint of the proposed mining area was kept to the previously disturbed historic mining area. The botanist concluded that the vegetation of the study site is severely modified and transformed. The specialist did recommend a pre-construction walkthrough of the access roads that was added to the mitigation measures/conditions of the EMPR. The study further stated that it is highly unlikely that this development will have an impact on the status of the Ecosystem and Vegetation Types due to the limited extent of the mine as well as the presence of already disturbed areas within the footprint. Furthermore, this mine will not have a significant impact on the services and functions provided by the surrounding natural habitats and development within this area and is regarded as acceptable.
4. The potential impact of dust on plants was considered, and the assessment showed it to be of low significance should the mitigation measures proposed in this document be implemented.
5. The listed legislation were considered as part of the environmental impact assessment. Refer to Part A(3)(e) Policy and Legislative Context.
6. The botanical specialist study was conducted and the findings of the report were incorporated into this DBAR. Also refer to Appendix O1 for a full copy of the document.
7. The general waste will be transported along either Access Road Option 1 or 2 (as discussed in the DBAR), and then along the provincial gravel road that links up with the tarred Pella road. The road will either travel through Wortel 42/1 and Rozybosch 41/1 or Wortel 42/1 and Wortel 42/RE before joining the provincial gravel road.
8. Please refer to Part A(3)(d)(ii) *Description of the scope of the proposed overall activity* and Part A(3)(h)(iv) *The Environmental attributes associated with the alternatives* for this information.
9. See comment above.

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				<p>10. The presence of listed species within the study area were considered as part of the botanical study attached as Appendix O1 to this report.</p> <p>11. The botanical study was conducted and incorporated into the DBAR.</p> <p>12. Prior to his inspection, the botanist was furnished with the information provided by BBM and as such it was considered during the assessment.</p> <p>13. The comment was noted and a botanical study was commissioned and incorporated into the DBAR.</p> <p>14. The comment was noted and a botanical study was commissioned and incorporated into the DBAR.</p> <p>15. The desktop study was conducted and is discussed in this report under Part A(3)(h)(iv)(1)(c)(v) Site Specific Surface Water.</p> <p>16. Comment noted.</p> <p>17. Comment noted and addressed in this report.</p> <p>18. Comment noted and addressed in this report.</p> <p>19. The footprint of the proposed mining operation was contained to the previously disturbed area so as to prevent disturbance to the surrounding sensitive areas. The botany study was conducted and incorporated into this report. Based on the findings of the report and the highly disturbed nature of the proposed development area no offset area was deemed applicable.</p> <p>20. The proposed mining operation on Portion 1 of the farm Wortel 42 does not trigger any listed activities in terms of GNR 325 Listing Notice 2 and therefore a full EIA process is not required. Listed activities in terms of GNR 324 Listing Notice 3 requires a basic assessment process to be followed.</p> <p>21. The botanical study was conducted and the findings were incorporated into the DBAR.</p> <p>22. The botanist did not identify the need for an offset area as the development footprint was contained to the previously disturbed areas and no undisturbed natural area will be lost as a result of the proposed activity. However, should the DENC identify a need for an offset area this will be considered by the Applicant.</p> <p>23. The botanical study was conducted and the findings were incorporated into the DBAR. The findings of the report advised the assessment of the potential impacts.</p>

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Mr Edmund Agenbag	Oonab Boerdery CC Koenabib 43, Portion 1	edmund.agenbach@gmail.com	16 August 2019	No Comments Received
Municipal Manager: Mr Obegang	Pofadder Municipality	munman@khaima.gov.za	16 August 2019	No Comments Received
Me Glenda Goosen	Klein Pela Gastehuis	Kpgastehuis@karsten.co.za	16 August 2019	No Comments Received
Upload onto SAHRIS on 16 August 2019				

#### SUMMARY OF PARTICIPATION PROCESS

Comments received on the DBAR of mining permit application 10771 MP was incorporated into the DBAR of mining permit application 10799 MP that will again be distributed for comments before the final BAR is compiled and submitted to DMR for decision making.

See attached as Appendix I proof of the correspondence with the I&AP's and stakeholders during the public participation process.