



the federation for a sustainable environment

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COMMENTS ON THE APPLICATION FOR THE AMENDMENT OF WESIZWE'S  
BAKUBUNG MINERALS' 2009 ENVIRONMENTAL AUTHORISATION AND ITS  
APPROVED 2010 WATER USE LICENCE

The following comments are submitted on behalf of the Federation for Sustainable Environment (FSE). The FSE is a federation of community based civil society organisations committed to the realisation of the constitutional right to an environment that is not harmful to health or well-being, and to having the environment sustainably managed and protected for future generations. Their mission is specifically focussed on addressing the adverse impacts of mining and industrial activities on the lives and livelihoods of vulnerable and disadvantaged communities who live and work near South Africa's mines and industries.

The FSE is/was a member of *inter alia*:

- The Study Steering Committee on the Department of Water and Sanitation's (DWS) Development of the National Eutrophication Strategy (2020)
- The Study Steering Committee (SSC): Development of the Limpopo Water Management (WMA) Area North Reconciliation Strategy (2017)
- The Water and Sanitation Sector Leadership Group Sustainable Development Goal 6 Task Team. (2018 -)
- The Project Steering Committee: Environmental Management Framework for the Bojanala District Municipality (North West Province, South Africa). (2017)
- DWS' study steering committee on the Feasibility Study for a Long Term Solution to Address the Acid Mine Drainage Associated with the East, Central and West Rand Underground Mining Basins (2012, 2013)
- DWS' Steering Committee on the Classification of Significant Water Resources in the Mokolo and Matlabas Catchments: Limpopo Water Management Area and Crocodile (West) and Marico WMA: WP 10506

- Strategy Steering Committee (SSC) for the DWS' Crocodile West water Supply System Reconciliation Strategy (Directorate: National Water Resource Planning)
- The South African Human Rights Commission's (SAHRC) Section 5 Advisory Committee on Mining and Acid Mine Drainage
- The SAHRC's Advisory Committee (section 11) to monitor and assess the implementation of the recommendations and directives arising out of the Commission's National Hearing on the Underlying Socio-economic Challenges of Mining-affected Communities in South Africa report.

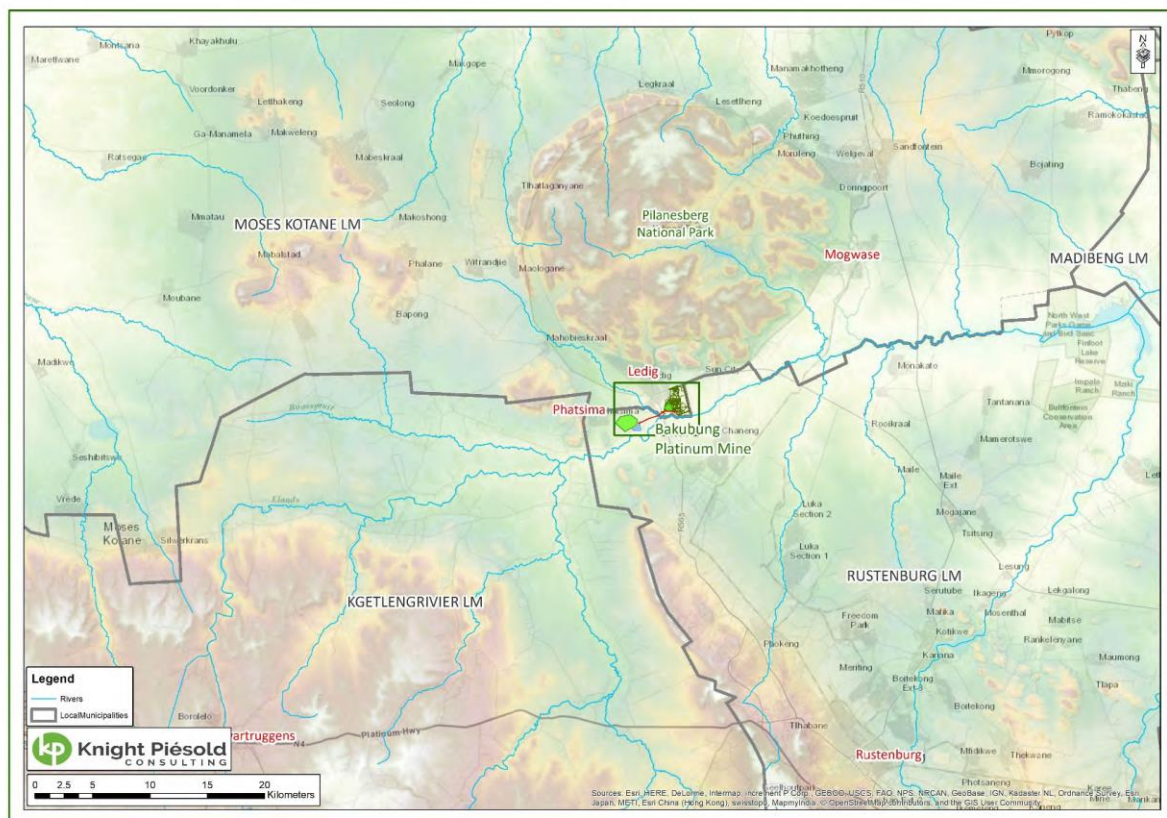
## BACKGROUND

According to the Draft Amendment of Wesizwe's Bakubung Minerals' 2009 Environmental Authorisation and its Approved 2010 Water Use Licence ("the Report") the amendment pertains to:

- Changes to the mining capacity of platinum and the PGMs from 3MT per annum to 1MT per annum (immediate) and 2MT per annum (by 2024);
- **Construction of an additional Tailings Storage Facility (TSF) with evaporation dam on Frischgewaagd Farm;**
- Change of the liner for the stock pad area.

Bakubung Minerals ("the mine") is located near Ledig, **2 km south of the Pilanesberg Game Reserve** and Sun City in the North West Province.

The close proximity of the mine to the Pilanesberg Game Reserve can be seen from the subjoined map, which was supplied by the Environmental Assessment Practitioner (EAP).



The Report informs us that the proposed area of the TSF and evaporation dam is 27ha. The height of the TSF is envisioned to be approximately 47 m and it will have a storage capacity of 7.6 million tons waste.

Although the TSF and evaporation dam will be lined, there remains the risk of a minor or major liner leakage due to ponding of groundwater underneath the liner in the long term.

The waste is considered a Type 3 waste with Copper and Nickel values above the Total Concentration Threshold (TCT) as prescribed in the National Norms and Standards for the Assessment of Waste for Landfill Disposal and the leachable concentration threshold (LCT) values of Barium, Manganese, Nickel, Lead and Total Dissolved Solids (TDS) also above the LCT 0 in terms of the aforesaid National Norms and Standards.

The Groundwater Impact Assessment confirms that samples from the waste material, which is to be deposited on the planned TSF exceeded the TCT0 or LCT2 values. Cobalt, copper, manganese, nickel and vanadium exceeded the LCT2 limits.

Our comments will focus on the impacts of the construction of an additional TSF and an evaporation dam on the Frischgewaagd farm, which we consider to be of appreciable magnitude and not on the changes to the mining capacity and the change of the liner for the stock pad area, which we consider to be insignificant.

#### BOJANALA PLATINUM DISTRICT MUNICIPALITY ENVIRONMENTAL MANAGEMENT FRAMEWORK (BPDM EMF)

Section 24 O of NEMA dictates that the criteria to be taken into account by competent authorities when considering environmental applications in terms of s 24 are *inter alia*:

*“(1) If the Minister, the Minister of Minerals and Energy, an MEC or identified competent authority considers an application for an environmental authorisation, the Minister of Minerals and Energy, MEC or competent authority must take into account all relevant factors, which may include any information and maps compiled in terms of section 24(3), including any **prescribed environmental management frameworks**, to the extent that such information, maps and frameworks are relevant to the application”.*

(Emphasis added.)

According to the BPDM EMF the number and nature of development applications in the BPDM area for environmental authorisation, indicates that there is “severe development pressure in the district area and that there are complexities around competing land uses in the area.” Tourism and mining are two of the competing land uses in the area.

The BPDM EMF identified the need for sunrise or new economic sectors that can diversify rural economies. According to the BPDM EMF **“Tourism promises to provide new vistas for rural economic transformation.”**

The desired state of the Bojanala Platinum District Municipality Environment is *inter alia* that *“the tourism potential of the area is optimally developed and utilised.”*

**The need and desirability of the proposed Project therefore has to be demonstrated in comparison with the need and desirability for alternative land uses, such as the preservation and development of tourism for the area. This calls for an evaluation of the Best Practicable Environmental Option (BPEO) for this area.**

This appraisal ought to be conducted with the guidance of *inter alia* the Mining Biodiversity Guideline and the taking into consideration of the opportunity costs. According to the Mining and Biodiversity Guideline the importance of the biodiversity features in these areas and the associated ecosystem services is sufficiently high to prohibit mining in these areas. Given the very high biodiversity importance, the Guideline states that an EIA conducted in respect of such an area should include the strategic assessment of optimum, sustainable land-use for a particular area which should determine the significance of the impact on biodiversity. The EIA must take into account the environmental sensitivity of the area, the overall environmental and socio-economic costs and benefits of mining as well as the potential strategic importance of the minerals to the country.

The Guideline states that the EIA “*needs to identify whether mining is the optimal land use, whether it is in the national interest for that deposit to be mined in that area and whether the significance of unavoidable impacts on biodiversity are justified. It is important that a risk averse and cautious approach is adopted. This implies strongly avoiding these biodiversity priority areas, given the importance of the receiving environment and the probability that the proposed activity would have significant negative impacts*”.

When considering mining these biodiversity priority areas, the Guideline prescribes a set of filters that should be sequentially applied and "mining should only be considered if:

- a. It can be clearly shown that the biodiversity priority area coincides with mineral or petroleum reserves that are strategically in the national interest to exploit.
- b. There are no alternative deposits or reserves that could be exploited in areas that are not biodiversity priority areas or less environmentally sensitive areas.
- c. It can be demonstrated that there are spatial options in the landscape that could provide substitute areas of the same habitat conservation, to ensure that biodiversity targets would be met.
- d. A full economic evaluation of mining compared with other reasonable/feasible alternative land uses, undertaken as a necessary component of the EIA, shows that mining would be the optimum sustainable land use in the proposed area.
- e. A detailed assessment and evaluation of the potential direct, indirect and cumulative impacts of mining on biodiversity and ecosystem services shows that there would be no irreplaceable loss or irreversible deterioration, and that minimising, rehabilitating, and offsetting or fully compensating for probable residual impacts would be feasible and assured, taking into account associated risks and time lags.
- f. A risk averse and cautious approach, taking into account the limits of current knowledge about the consequences of decisions and actions, can be demonstrated both in the assessment and evaluation of environmental impacts, and in the design of proposed mitigation and management measures.

The Guideline states further that:

*“The above filters should form the basis for deciding on whether or not, and how and where, to permit mining. This means that based on the significance of the impact, some authorisations may well not be granted. If granted, authorisation may set limits on allowed activities and impacts, and may specify biodiversity offsets that would be written into licence agreements and/or authorisations”.*

The Bakubung Mine's Application for EA ought to have been compiled so as to give effect to the Guideline and the decision maker must consider the Guideline in deciding whether or not to grant environmental authorisation

This includes an assessment of the opportunity costs, e.g.

- o Understanding the value of the foregone opportunity;
- o The achievement of the desired aim/goal for the specific area;
- o Optimising of positive impacts;
- o Minimising of negative impacts;
- o Equitable distribution of impacts; and
- o The maintenance of ecological integrity and environmental quality.

Applying the “*opportunity cost*” principle would change the question being asked, namely, by placing a positive duty upon the decision maker to consider if the proposed development will constitute the best use of the resources (i.e. the best practicable environmental option).

Existing tourism has a direct influence on the economic growth and development in the area. According to the BPDM EMR “*most of the tourism activities in the BPDM is focussed on the ‘bushveld experience’, including game viewing and hunting, but natural and cultural history itself also represents a significant drawcard.*”

And, “*by far the best known attractions in the BPDM area are the nature reserves located in the district. Pilanesberg Game Reserve is one of the most accessible South African game reserves. It is the fourth largest game reserve in South Africa and is set high in the Pilanesberg range, traversing the floor of an ancient, long-extinct volcano. Pilanesberg conserves all the major mammal species including lion, leopard, elephant, rhino and buffalo.*”

The Report (page 59) informs us that the significance of the visual impact of the proposed TSF is rated as high before and after mitigation. Recreational sightseers and tourists who visit the Pilanesberg National Park are highly sensitive to any change in visual quality and to sense of place. It follows hence that the impact of the proposed TSF on the ‘sense of place’ of the Pilanesberg National Park and its visitors will be negative and ought to be assessed. ‘Sense of place’ does not only have a therapeutic or spiritual value, it also has an economic value.

The accumulative impacts on ‘sense of place’ ought furthermore to be assessed since the project site is situated directly adjacent to the western side of the Royal Bafokeng Platinum Styldrift project and immediately north of Maseve's Project 1.

(Interpolation: The Report informs us that the TSF area is proposed on a site that was previously assessed for the placement of a solar plant in the 2016 EIA. The visual impact of a solar plant is far less destructive to “sense of place” than the establishment of a 47 m high TSF containing 7.6 million tons of waste.)

**It is part of our law that the potential impact of a development on the sense of place of an area must be considered.** In the case of *Director: Mineral Development Gauteng Region and another v. Save the Vaal Environment and others* 1999 (2) SA 709 (SCA) at 715C, the Supreme Court of Appeals with regard to a proposed mine on a wetland next to the Vaal river, identified as an environmental concern the “*...predicted constant noise, light, dust and water pollution resulting from the proposed strip mine will totally destroy the ‘sense of place’ of the wetland*

*and the associated Cloudy Creek. Thus the spiritual, aesthetic and therapeutic qualities associated with this area will also be eliminated.”*

The Amendment of Environmental Authorisation and Waste Management Licence Report (page 59) acknowledges that *“the construction, operation, and closure of a new TSF will have a **definite and permanent impact** on the natural topography of the area, which in turn will create a visual impact.”*

(Emphasis added.)

#### SANBI’S MINING AND BIODIVERSITY GUIDELINES AND PROPOSED ZONES ACCORDING TO THE BOJANALA PLATINUM DISTRICT MUNICIPALITY’S (BPDM) ENVIRONMENTAL MANAGEMENT FRAMEWORK (EMF0)

According to the BPDM’s EMF, *“in the BPDM area, there are five conservation areas that are legally protected and where mining is prohibited (Category A). Areas of highest biodiversity importance with highest risk for mining (Category B) occurs spread throughout the BPDM area, primarily related to river systems. Areas of high biodiversity importance with a high risk for mining (Category C) occur as buffers around the formally protected conservation areas, but also in nearly 50% of the BPDM.”*

According to the North West Biodiversity Sector Plan (READ, 2015), and as shown in Figure 18 of the Applicant’s Report, the mine as well as the **new TSF site is primarily located on a Critical Biodiversity Area 2 (CBA2)**; 54 percent of the site is of high biodiversity conservation value and of the 23 species, which may potentially occur within the study area, 21 are Red Data species and five are protected under the National Environmental Management Biodiversity Act (NEMBA).

According to SANBI’s Mining and Biodiversity Guidelines, Critical Biodiversity Areas are categorised as of the highest biodiversity importance and because of the high risk for mining, *“environmental screening, environmental impact assessment (EIA) and their associated specialist studies should focus on confirming the presence and significance of these biodiversity features, and to provide site-specific basis on which to apply the mitigation hierarchy to inform regulatory decision-making for mining, water use licences, and environmental authorisations.”*

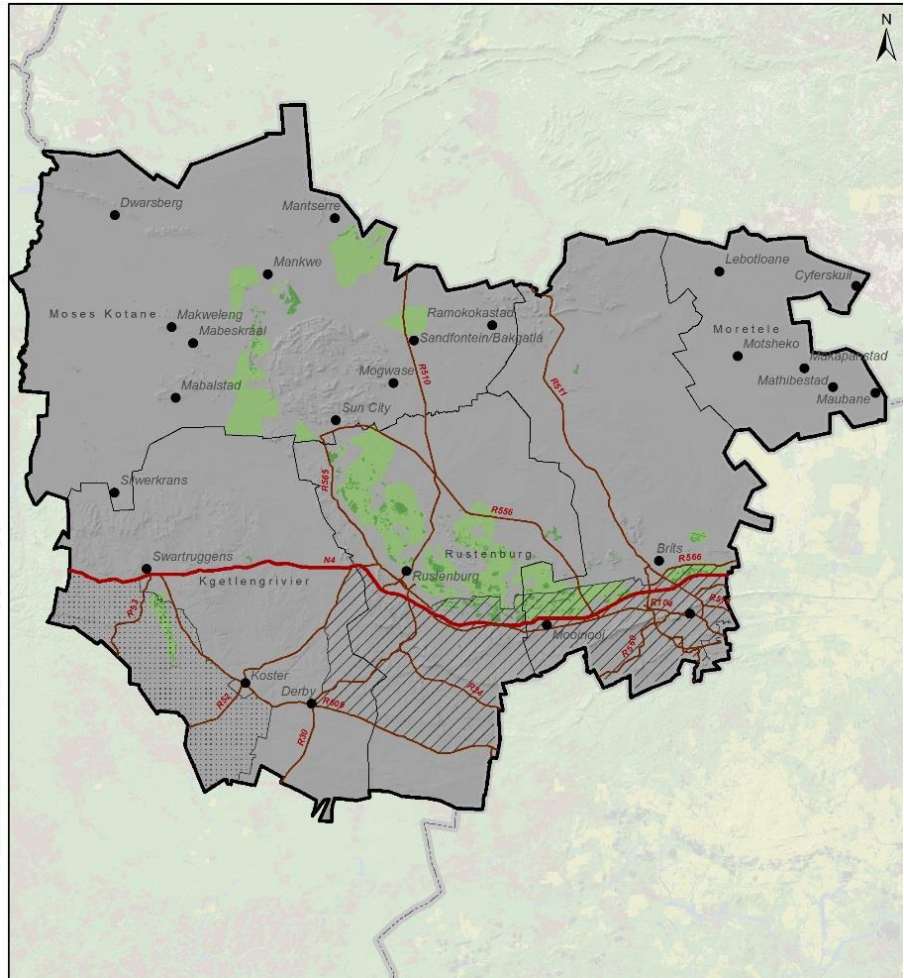
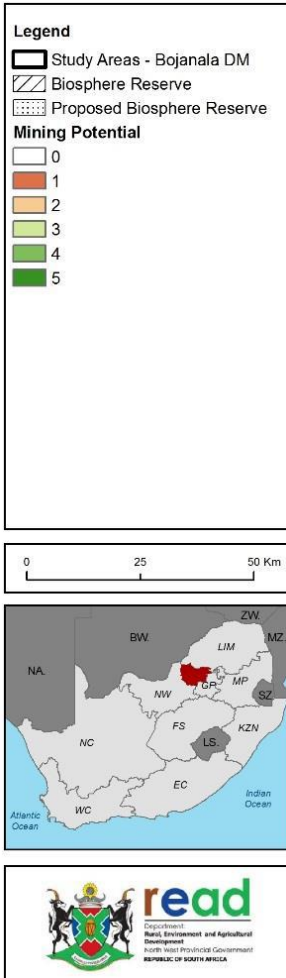
While the Report confirms the presence and significance of the Area where the proposed TSF will be located, the EIA according to SANBI’s Mining and Biodiversity Guideline ought to have included *“the strategic assessment of optimum, sustainable land use for a particular area...this assessment should fully take into account the environmental sensitivity of the area, the overall environmental and socio-economic costs and benefits of mining, as well as the potential strategic importance of the minerals to the country.”*

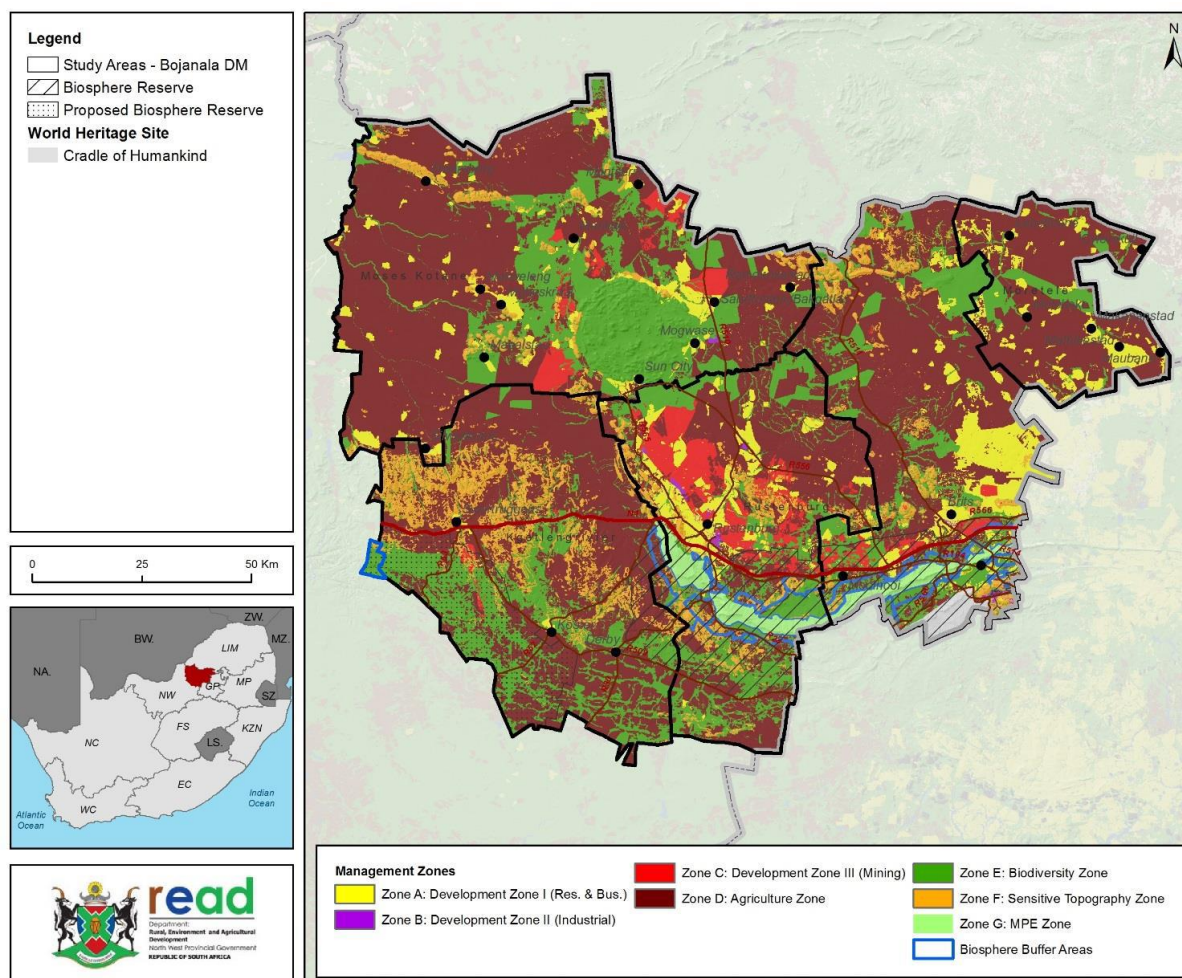
The Guideline furthermore states *“authorisations may well not be granted. If granted the authorisation may set limits on allowed activities and impacts, and **may specify biodiversity offsets** that would be written into licence agreements and/or authorisations.”*

(Emphasis added.)

The subjoined maps are included in the BPDM EMF to indicate zones where mining is allowed and areas and zones earmarked as a biodiversity zone.







**Kindly confirm if the Application for the project is aligned with the BPDME proposed zones for tourism and biodiversity and SANBI's guidelines.**

## BASELINE AQUATIC ECOLOGY ASSESSMENT

We are informed by the Report that the Application falls within the Elands River Catchment Management Area (CMA) and on a larger scale within the Crocodile West Limpopo CMA. According to the Report the proposed Ecological Category for the relevant section of the Elands River is a D.

The Water Quality Monitoring Report confirms that the *“The Elands River in turn flows into the Limpopo River.”* The Report also informs us that *“groundwater is the sole source of water for many of the surrounding households on farms. It is for this reason that an accurate monitoring program is essential so that a potential groundwater quality impact can be identified and managed or mitigated in time.”*

Prefatory to our comments on the findings of the aquatic ecology assessment and the Water Quality Monitoring and Groundwater Report, we think it relevant to refer to the reply of the acting Director General of the Department of Water and Sanitation in August 2019, in response to the FSE's request for the status of the actions which were proposed in the 2016 Draft Reconciliation Strategy for the Limpopo and **which was to be implemented as a matter of urgency**, namely:



1. Verification of water entitlements, that is, whether the Validation and Verification Study was finalised and a compliance monitoring and enforcement plan was developed, and unlawful water use was eliminated through prosecution.
2. The re-evaluation of the water resources of areas where unlawful water uses were removed and the water balances adjusted accordingly.
3. Monitoring of the water use to confirm water requirement projections before implementing options.
4. Implementation of water conservation and water demand management.
5. Monitoring of observed flows and storage levels at strategic points.
6. Water quality monitoring.
7. Groundwater monitoring.
8. The setting of clear targets for the construction of bulk water distribution systems.
9. The continuous integration between water balances and water supply planning to water services schemes, etc.

The Acting Director General (DG), at the time, replied that:

1. The verification is not finalized and thus the monitoring and enforcement plan is not yet developed;
2. The re-evaluation of the water resources of the areas could not be finalised due to the verification process yet to be finalised;
3. There are challenges that the Department is currently addressing regarding the surface water quantity monitoring and data processing;
4. The monitoring of transition elements needs to be addressed;
5. An update for the 2017 reconciliation strategy should be done.

#### (ANNEXURE “A”)

The response by the Acting DG highlights the serious gaps and challenges in the management of scarce water resources within the Catchment. The Catchment Agency (CMA) for the Limpopo Water Management Area has also not been established. **It is for this reason that the FSE urges the Applicant to adopt the precautionary approach when determining the management measures of surface run-off, and the treatment of extraneous or polluted water.**

The information in the Bakubung Mine’s Baseline Aquatic Ecology Assessment is advised by a desktop study and literature review, and a once off field visit on the 26<sup>th</sup> and 27<sup>th</sup> of February 2020. High rainfall was experienced prior to the field visit, which may have resulted in a dilution of pollution hence a compromised assessment.

The Baseline Aquatic Ecology Assessment furthermore informs us that:

- the aquifer system in the study area is important for local supplies and in supplying base flow for rivers;
- the vulnerability for contamination of this system is classified as medium, and
- there are wetlands within the study area, consisting of ephemeral channels, channelled and un-channelled valley bottoms with a low to moderate ecological sensitivity and importance.

**The literature, which are referenced in the above-mentioned Assessment, does not include the DWS’ Determination of Resources Quality Objectives and Numerical Limits Report in the Mokolo, Matlabas, Crocodile West and Marico Catchment in the Limpopo North West Water Management Area.**

We now refer to the Department of Water Affairs' (DWS) Resource Quality Objectives (RQOs) and Numerical Limits Report in the Mokolo, Matlabas, Crocodile West and Marico Catchment in the Limpopo North West Water Management Area (WMA 01).

According to the DWS' Report on the RQOs the Upper reaches (to the Swartruggens Dam) of the Elands River fall within Resource Unit (RU) 5.1 while the Elands River downstream (from the Swartruggens Dam to Lindleyspoort) falls within RU 5.2.

RU 5.1 is categorised as Class II and according to the DWS' Report the presence of the vulnerable *B. motebensis* within the upper reaches contribute to a high Ecological Importance and Sensitivity (EIS) for the upper reaches. The wetlands within this RU are classified as important and the rivers are classified as Freshwater Ecosystem Priority Areas (FEPAs).

RU 5.2: The IUA is a Class II and the Present Ecological Status is a C ecological category. The Ecological Water Requirements (EWR) rapid site 10 is present in this RU.

It is understood that the Application falls within RU 5.2, which according to the DWS' RQOs and Numerical Limits Report calls for:

1. The maintenance of low flows and drought flows must be attained to support the aquatic ecosystem and downstream users;
2. The instream concentration of nutrients specified must be attained to sustain aquatic ecosystem health and ensure the prescribed ecological category is met. The Nitrate and Nitrite as Nitrogen limit is  $\leq 0.05$  mg/l.

**(It is common cause that most commercial explosives used for blasting contain from 70% to 94% (by weight) ammonium nitrate and that when some of the explosives end up in shot rock and ore through either spillage or incomplete detonation, ammonia and nitrates can leach into ground water.)**

3. The concentrations of toxicants should not pose a risk to aquatic organisms and human health. The Numerical Limits of:
  - a. Al should not exceed 0.1 mg/l
  - b. Mn should not exceed 0.15 mg/l
  - c. Fe should not exceed 0.3mg/l
  - d. Pb (hard) should not exceed 0.0095 mg/l
  - e. Cu (hard) should not exceed 0.0073 mg/l
  - f. Ni should not exceed 0.07 mg/l
  - g. Co should not exceed 0.05 mg/l
  - h. Zn should not exceed 0.002 mg/l
4. Habitat diversity should be maintained for a C ecological category or improved upon.
5. The riparian vegetation cover should be maintained at a C ecological category or better condition.
6. The suitability of this stretch of river to serve as a habitat for aquatic bird and mammal populations must be maintained through proper habitat management.
7. Macro invertebrate assemblage must be maintained in a C category ecological condition or improved upon.
8. Diatom assemblage must be maintained in a C/D ecological category or improved upon.

**The Groundwater Report shows that 2 sampling points have poor water quality, 1 site has unacceptable water quality and 4 sites have marginal (not ideal) water quality. The Nitrate at sampling point FBH04D was 12.5 and the Mn at MBH03D and MBH05 was 0.583 and 0.545 respectively, which if our interpretation is correct, is in non-compliance with the RQOs.**

**This matter is not of trivial importance since this is a water scarce area with competing water users, and “groundwater is the sole source of water for many of the surrounding households on farms.”**

**The Report on Surface Water shows 3 sites having unacceptable water quality, 1 site having poor water quality with nitrate levels at 2.71 and 2.51 at SW2 and SW3 respectively, which if our interpretation is correct, are in non-compliance with the RQOs.**

**We hereby call upon the Applicant or its EAP to report on its current compliance with the above RQOs, the impact of its proposed TSF on the RQOs and its mitigation and management measures to comply with the abovementioned RQOs.**

The FSE furthermore requests that the Applicant presents its Application for the Amendment of its Water Use Licence to the Elands/Hex’s Catchment Management Forum (CMF) to allow for participation by stakeholders within the CMF.

#### **AIR QUALITY**

It is inferred that the Bakubung Mine falls within the Waterberg Bojanala Priority Area (WBPA). The WBPA was declared in 2012 as the third National Priority Area in terms of section 18 of the National Air Quality Management Act, 2004 (Act No. 39 of 2004) (AQA). Following the declaration, an Air Quality Management Plan (AQMP) was developed in terms of section 19 of AQA and was gazetted on the 9 December 2015. One of the WBPA AQMP’s goals is the reduction of emissions in compliance with the NAAQS in the WBPA.

According to the EAP the current operations of the Bakubung mine did not result in exceedences of more than two times per year and according to the Air Quality Specialist Report for the Bakubung Platinum Mine TSF Project the impacts for the proposed Application are considered to be low.

Notwithstanding the above findings, of relevance are the following findings which ought to motivate the Applicant to adopt a precautionary approach:

1. At the recent Bojanala Air Quality Implementation Task Team (ITT) Meeting on 1 September 2020, Mr Victor Loate of the Department: Economic Development, Environment, Conservation and Tourism, North West Provincial Government (DEDECT-NW) presented a report on the State of Air from the DEDECT-NW Network. He indicated that levels of SO<sub>2</sub> were high. According to Dr Cheledi Tshehla (South Africa Weather Services) the PM<sub>10</sub> and PM<sub>2.5</sub> exceeded the daily average limit resulting in non-compliance with the NAAQS.
2. Following the South African Human Rights Commission’s National Hearing on the Underlying Socio Economic Challenges of Mining Affected Communities in South Africa on 13-14 September; 26 and 28 September; and 3 November 2016, the Commission issued the following directives:

The DEA (in cooperation with COGTA and SALGA) is directed to conduct an audit of all provincial governments and municipalities to confirm:

- Whether all municipalities have developed and incorporated an air quality management plan into their IDPs; and
- Whether all provincial MECs and municipalities have appointed an air quality officer in line with NEMAQA.
- **Noting the reported lack of certainty around the applicability of NEMAQA to mining activities, the DEA (together with the DMR) are directed to issue a formal notice clarifying the requirements.** A copy of this public notice must be submitted to the SAHRC within three months from the release of this Report and must be accompanied by a report outlining measures taken to ensure that all industry role players are adequately made aware of the requirements.
- **The DEA (together with the DMR) must jointly report on the measures taken to streamline the control of the cumulative air pollution impacts of mining operations.** This report must outline the mechanisms that have been put in place for collation, verification and dissemination of information between stakeholders in relation to impacts reported and / or interventions undertaken in relation to air quality.

In the light of the abovementioned, we support the recommendation by Airshed Planning Professionals that an **air quality management plan** and not merely an air quality monitoring plan be adopted.

#### CORPORATE STRUCTURE AND RESPONSIBILITY

We are informed in the Air Quality Specialist Report for the Bakubung Platinum Mine that *“Wesizwe Platinum Limited (Wesizwe) is the owner of Bakubung Platinum Mine (BPM)”* and that *“Bakubung Minerals (Pty) Ltd holds the mining right for BPM.”*

Are we correct in our inference from this statement that both Wesizwe Platinum Ltd as owner of the Bakubung Mine and Bakubung Minerals (Pty) Ltd as holder of the mining right will be responsible in terms of s 28 and s 34 of the NEMA for the duty of care and remediation of environmental damage?<sup>1</sup> Please advise.

#### MITIGATION MEASURES AND ENFORCEMENT

Pages ii & iii of the Executive Summary Report inform us of the potential impacts of the proposed amendment to the EA and the WUL, namely:

- soil loss,
- loss of habitat for fauna,
- loss of faunal biodiversity,
- loss of faunal of conservation concern,
- loss of vegetation types,
- loss of plant communities,
- loss of plant species of conservation concern, and
- loss of water course habitat

The abovementioned impacts are categorised as high in the unmitigated scenario.

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<sup>1</sup> Section 34 of NEMA makes provision for both ‘firms’ (including companies and partnerships) and their ‘directors’ (including board members, executive committees or other managing bodies or companies or members of close corporations or of partnerships) to be held liable, in their personal capacities, for environmental crimes. This personal liability also applies to managers, agents or employees who have done or omitted to do an allocated task, while acting on behalf of their employer.

The impact on climate change is assessed as medium.

We are further informed that these impacts “*require a measure of mitigation which, if **successfully implemented** will reduce the significance of the impacts and the related residual risk*”.

The EAP concluded: “*It follows **that provided the EMP is effectively implemented** there is no environmental, social, or economic reason why the project should not proceed.*”

(Emphasis added.)

In the light of the findings of:

1. The South African Human Rights Commission (SAHRC) pursuant to its National Hearing on the Underlying Socio Economic Challenges of Mining Affected Communities in South Africa, on 13-14 September; 26 and 28 September; 3 November 2016, namely that: “*Overall the mining sector is riddled with challenges related to land, housing, water, the environment and the absence of sufficient participation mechanisms and access to information...Non-compliance, the failure to monitor compliance, poor enforcement, and a severe lack of coordination amongst especially government stakeholders exacerbate the socio-economic challenges faced by mining-affected communities*”, and

(ANNEXURE “B”)

2. The findings of Judge Spilg in the Environmental v BP Southern Africa (Pty) Ltd matter, namely of “*an opaque administration or an under-capacitated and potentially inhibited law enforcement agency which cannot claim the number of successful convictions one would have expected despite clear evidence of historic degradation to our environment*”,

**we express concern that the failure to implement the proposed mitigation measures may most likely not be monitored and enforced due to the DMRE’s and the DWS’ capacity constraints. For this reason we strongly recommend that a Forum be established which will allow interested and affected parties to raise their concerns and grievances with the Applicant with the objective to address and resolve environmental concerns.**

Submitted by:

Mariette Liefferink

CEO: Federation for a Sustainable Environment.

29 October 2020.



23 November 2020

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Our ref: Francois Joubert/Onalerona Phiri/307717.00006

**COMMENTS IN RESPECT OF BAKABUNG PLATINUM MINE AMENDMENT OF ENVIRONMENTAL AUTHORISATION AND WASTE MANAGEMENT LICENCE: NORTH WEST REGION, BOJANALA PLATINUM DISTRICT MUNICIPALITY, MOSES KOTANE LOCAL MUNICIPALITY**

Dear Sir/Madam,

**1. Introduction**

- 1.1 We have been instructed by Bakubung Ba Ratheo Traditional Community (“**the Community**”/“**our client**”) to review and comment on the Draft Report in relation to the amendment of the Bakubung Platinum Mine (“**BPM**”) Environmental Authorisation and Waste Management Licence (“**the Draft Report**”).
- 1.2 Bakubung Minerals (Pty) Ltd is the owner of Bakubung Platinum Mine (“**BPM**”), currently operating on the farm Frischgewaagd 96JQ (Portions 3, 4 and 11). Bakubung Minerals (Pty) Ltd holds the mining right for BPM.
- 1.3 Knight Piésold (“**the EAP**”) has been appointed by Bakubung Minerals (Pty) Ltd to amend the existing approved Environmental Authorisation (EA) and Waste Management Licence granted in 2017 – (NW/30/5/1/2/3/2/1/(339) EM) of the BPM. The mine is located near Ledig, 2km south of the Pilanesberg Game Reserve and Sun City in the North West Province.
- 1.4 Mining activities at BPM are in respect of Platinum Group Elements, i.e. platinum, palladium, rhodium, and gold, with copper and nickel as by-products. The mine falls within the Rustenburg and Moses Kotane Local Municipalities of the Bojanala District Municipality.
- 1.5 This letter serves as our client’s comments in respect of the Draft Report. Please take note that we do not regard this reply as our final opportunity to engage as an interested and affected party and reserve the right to comment at a later stage.

## 2. **Proposed Changes in the Amendment Application**

- 2.1 The Amendment Application is based on BPM's intention to re-optimize the mining process in order to make its operations financially viable. The mine capacity was authorised for 3 MT/annum, but BPM wishes to approach this capacity in a phased approach – 1 Mt/annum (immediate) and 2 MT/annum, by 2024.
- 2.2 The specific changes to the project which form part of the proposed amendment are as follows:
  - 2.2.1 capacity change from 3 MT/annum to 1 MT/annum and 2 MT/annum;
  - 2.2.2 construction of an additional Tailings Storage Facility (“TSF”) on Frischgewaagd Farm; and
  - 2.2.3 change of liner for the stock pad area.

## 3. **Social Impact of the Proposed Amendment**

### ***Community Interest and Public Participation***

- 3.1 In terms of the Draft Report, the project is located in Ward 28 of the Moses Kotane Local Municipality that falls under the Bojanala Platinum District Municipality in the North West Province. The area is under the traditional authority of our client. It is worth noting that the area is predominantly rural with predominantly traditional land ownership.
- 3.2 In addition, the Draft Report provides that Setswana is the home language of most residents in the study area and that there are differences in the language profiles of the different wards, with some wards having a relatively large proportion of people with isiZulu as a home language.
- 3.3 It is submitted that, in keeping with the principle of public participation, it is important that affected communities be consulted and engaged in an accessible and understandable way, in order to allow them to make meaningful contributions to the Public Participation Process. Although the Draft Report indicates that notices were posted and stakeholder engagement forums were held in relation to the proposed amendment application, the Draft Report does not specify whether the affected communities were engaged in languages understandable to them. It is crucial for a meaningful Public Participation Process that I&APs are informed of any and all information which may affect their interests in a manner understandable to them.

### ***Socio-Economic Impact***

- 3.4 The Draft Report provides that the construction, operation and closure of the new TSF will have a definite and permanent impact on the natural topography of the area, which in turn will create a visual impact. The anticipated visual impact will have an adverse effect on one of the main economic sectors in the area, i.e. tourism, which will detrimentally affect a community that is already economically weak and poverty stricken. Any detraction from efforts to strengthen and support the socio-economic sustenance of the community without substituting such efforts with a better alternative economic source will be detrimental to the community.

- 3.5 The Draft Report goes on to state that the proposed TSF is within the boundaries of an existing mine on an area previously earmarked for a solar power station. However, it is submitted that the visual impact of a solar power station tends to be worse than the visual impact of a mine or TSF. The argument that this in turn reduces the magnitude of the impact to moderate is inadequate and not sustainable.

#### ***Degradation of Community Cohesion***

- 3.6 The Draft Report has highlighted that there has been a long-standing issue of local tensions in the community relating to the spending of royalties. There is a risk that such tensions may be exacerbated in the proposed amendment application. This could lead communities to resort to violent protests if they are of the view that they are not heard, which could place lives in danger and lead to damaged property. Apart from suggesting that emergency procedures be put in place by the mine, the Draft Report does not propose ways in which such tensions can be resolved or avoided indefinitely in the future. It is submitted that this is an issue which the Applicant should prioritise, reflect on and address more comprehensively in the Final Report.

### **4. Environmental Impact of the Proposed Amendment**

#### ***Impact on Natural Resources***

- 4.1 The Draft Report provides that the main economic sectors in the Moses Kotane municipal area are tourism, manufacturing, agriculture, and mining and that besides Pilanesberg, there are a number of smaller nature reserves in the area.
- 4.2 It is important to note that section 48(1)(a) of the National Environmental Management: Protected Areas Act 57 of 2003 (“**NEMPAA**”), provides that “[d]espite other legislation, no person may conduct commercial prospecting or mining activities in a special nature reserve or nature reserve; or (b) in a protected environment without the written permission of the Minister”.
- 4.3 Unless the EAP or Applicant is able to present clear evidence that the relevant Ministerial permission from the Minister of Environment, Forestry and Fisheries has been obtained, it is submitted that the Application should be withdrawn by the EAP or Applicant to the extent that the project will affect such nature reserves.

#### ***Terrestrial Biodiversity***

- 4.4 It is submitted that the proposed changes set out in the Draft Report are detrimental to terrestrial biodiversity. According to the North West Biodiversity Sector Plan, 2015, the mine as well as the new TSF site are primarily located on Critical Biodiversity Area 2 (“**CBA 2**”). In terms of the Sector Plan, Critical Biodiversity Areas are areas of the landscape that need to be maintained in a natural or near-natural state in order to ensure the continued existence and functioning of species and ecosystems and the delivery of ecosystem services. In other words, if these areas are not maintained in a natural or near natural state then biodiversity targets cannot be met.
- 4.5 According to the Draft Report, the TSF area is proposed on a site that was previously assessed for the placement of a solar plant in the 2016 EIA. This site

was found to comprise comprises 35.8% Mixed Woodland & Thicket, 8.4% Acacia mellifera Bushland & Thicket and 55.8% secondary vegetation. Therefore, approximately 54% of the site is of high biodiversity conservation value. It is submitted that such biodiversity is threatened by the proposed amendment application.

### ***Loss of Vegetation Types***

- 4.6 The Draft Report provides that there will be a clearing of approximately 30 ha of Marikana Thornveld, which is a vulnerable vegetation type, within an area mapped as a CBA 2, and this is rated as an impact of high severity for both the unmitigated and mitigated scenarios.

### ***Surface Water Pollution and Loss of Watercourse Habitats***

- 4.7 The Draft Report provides that the construction of surface infrastructure on the mining area could impact on the watercourse habitat. There is also a risk of increase of surface water runoff from stockpiles, hardened surfaces and areas cleared of vegetation could lead to the deposition of sediment and increase erosion within the watercourses. This could cause the ecological and hydrological integrity of the watercourses to be altered.

### ***Soils and Land Capability***

- 4.8 The Draft Report provides that stripping and stockpiling of soil for the construction and operation of the TSF will take place, which will result in the following impact to the soil:
- 4.8.1 loss of the original spatial distribution of natural soil forms and horizon sequences which cannot be reconstructed similarly during the rehabilitation process;
  - 4.8.2 loss of original topography and drainage pattern;
  - 4.8.3 loss of original soil depth and soil volume;
  - 4.8.4 loss of original fertility and organic carbon content; and
  - 4.8.5 compaction during rehabilitation which will adversely affect root development and effective soil depth.
- 4.9 The Draft Report states further that the impact of soil loss during the all phases is rated as high significance before mitigation and moderate significance after mitigation. It is submitted that, despite the mitigation of the impact of soil loss to moderate, the security of land and land use entitlements of the community will be adversely affected as they will no longer be able to cultivate the land and use it for agricultural purposes. The removal of the topsoil will cause the existing arable and grazing land capability to cease completely.
- 4.10 We note that the Draft Report provides that the new TSF is not currently being utilized for agricultural activities, and was earmarked for mining infrastructure. However, if this is considered in the context that in the Moses Kotane Local Municipality, the large portion of households are under the food poverty line or in very close proximity of the poverty line, and that the intensity of poverty has increased more than in the surrounding areas, it is submitted that the proposed

amendment does not serve the socio-economic interests of the community or their entitlement to use the land to its fullest potential for their sustenance.

- 4.11 It is submitted that the risk of soil contamination by hydrocarbon spillages during construction or operational activities on the mine, or because of a liner or infrastructure leakage, erases any prospects of the use of land to eradicate the challenge of poverty which currently confronts the community.

## **5. Conclusion**

- 5.1 In conclusion, we submit that the Draft Report fails to stipulate how the abovementioned risks will be adequately addressed and mitigated. Based on the afore going, our client objects to the proposed amendment application.

- 5.2 Our client's rights are reserved.

Yours faithfully

*[Sent electronically without signature]*

**Fasken**





the federation for a sustainable environment

(Reg. No. 2007/003002/08)

NPO NUMBER 062986-NPO

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COMMENTS ON BAKUBUNG MINERALS (PTY) LTD APPLICATION TO AMEND  
THE EXISTING APPROVED ENVIRONMENTAL AUTHORISATION (EA) AND  
WASTE MANAGEMENT LICENCE (WML) GRANTED IN 2017 –  
(NW/30/5/1/2/3/2/1/(339) EM) OF THE BAKUBUNG PLATINUM MINE (BPM)

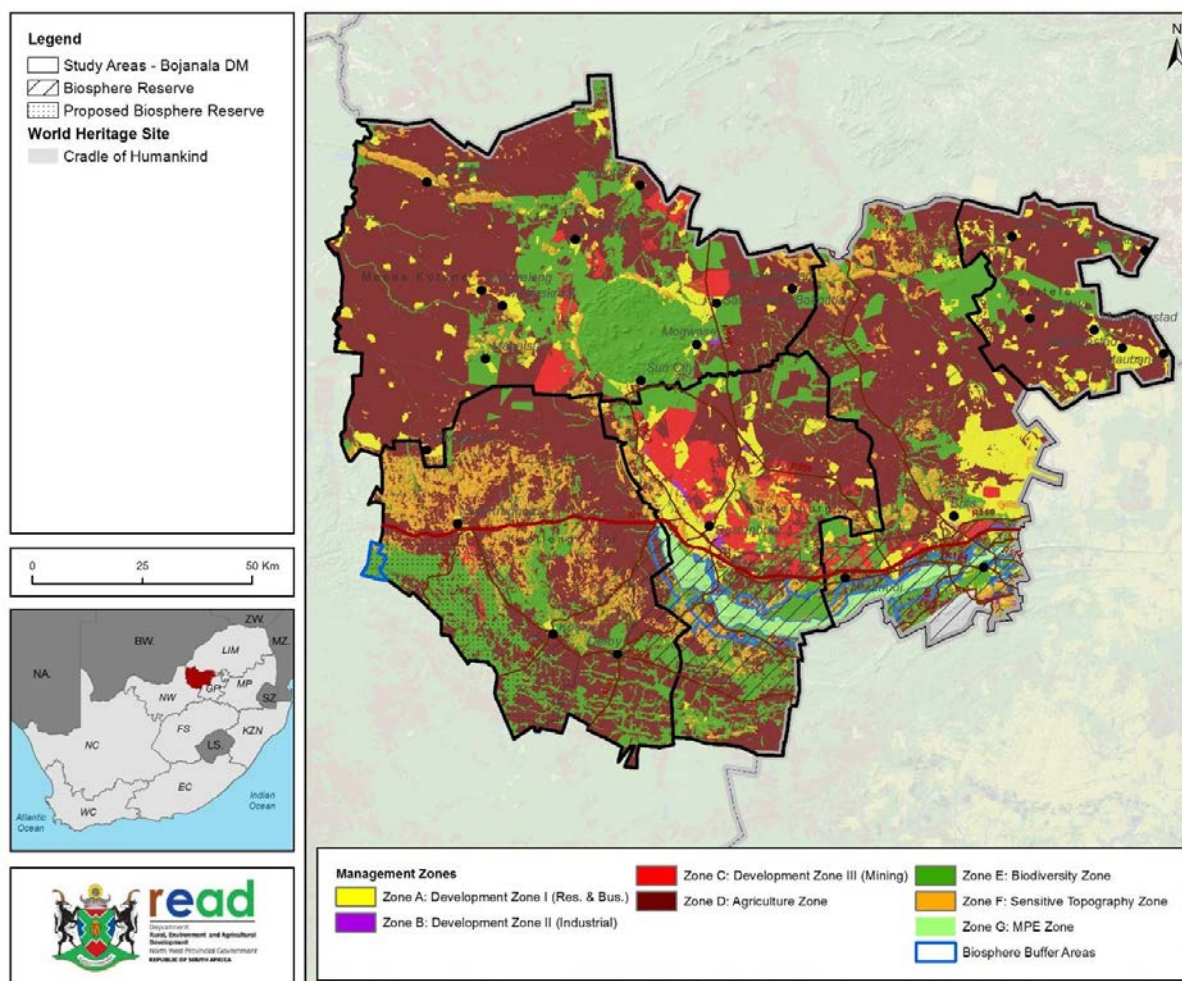
The following comments are submitted on behalf of the Federation for Sustainable Environment (FSE). The FSE is a federation of community based civil society organisations committed to the realisation of the constitutional right to an environment that is not harmful to health or well-being, and to having the environment sustainably managed and protected for future generations. Their mission is specifically focussed on addressing the adverse impacts of mining and industrial activities on the lives and livelihoods of vulnerable and disadvantaged communities who live and work near South Africa's mines and industries.

To meaningfully comment on the significant number of applications for the prospecting and mining of platinum and the Platinum Group of Metals (PGMs) within the Bojanala District Municipality is problematic, we think, not only for civil society and mining affected communities but also for the Department of Mineral Resources and Energy (DMRE) and the Department of Human Settlement, Water and Sanitation (DHSWS).

BOJANALA PLATINUM DISTRICT ENVIRONMENTAL MANAGEMENT  
FRAMEWORK (BPD EMF)

We refer to the Applicant's response to the FSE's question in the Comments and Response Report, namely "*Kindly confirm if the Application for the project is aligned with the Bojanala Platinum District Municipality (BPDM) Environmental Management Framework (EMF) proposed zones for tourism and biodiversity and SANBI's guidelines.*"

The FSE referred to the BPDM EMF, which identified the respective zones for industrial developments, agriculture, tourism, mining, etc. Please see the subjoined map.



The Applicant/EAP<sup>1</sup> responded:

*“Please refer to Appendix A for the web-generated report as per <http://nwreademf.co.za/> which superimposes the property (Frischgewaagd 96 JQ, portion 11) on the BPDME MF...From this report it can be seen that Frischgewaagd 96 JQ, portion 11 does not include any areas of Zone H which are the most sensitive.”*

Zone H refers to the Magaliesburg Protected Environment. Zone H is not relevant to the application. What is relevant, however, is the following: Does the proposed development fall within Zone C, namely the Development Zone III (Mining) or Zone E<sup>2</sup> (on page 122 in the BDM EMF referred to as Zone F), namely the Biodiversity Zone or Zone F<sup>3</sup> (on page 123 in the BDM EMF referred to as Zone G), namely the Sensitive Topography Zone?

Please confirm whether the subjoined provincial legislation and environmental management instruments were considered by the Applicant/EAP in this Application?

<sup>1</sup> The Applicant is Bakubung Platinum Mine and the EAP or Consultant is Knight Piésold (Pty) Ltd.

<sup>2</sup> The ‘Biodiversity Zone’ represents areas of high and significant biodiversity in the Bojanala District Municipality. Areas of high biodiversity were identified from the North West Province Biodiversity Sector Plan and includes, amongst others, critical biodiversity areas (CBAs) and Ecological Support areas (ESAs).

<sup>3</sup> The ‘Sensitive Topography Zone’ represents the sensitive topographical features, such as hills and ridges, which are deemed sensitive to development.

1. The North West Provincial Development Plan 2030
2. The North West Provincial Rebranding, Reposition and Renewal Strategy
3. The North West Province Environmental Outlook
4. The North West Province Biodiversity Sector Plan
5. The North West Province Air Quality Management Plan
6. The North West Province Integrated Waste Management Plan
7. The North West Provincial Spatial Development Framework
8. The North West/Bojanala District Municipality Climate Change Vulnerability Assessment

## WASTE, CUMULATIVE IMPACTS AND SUSTAINABLE FUTURE LAND USE

As early as 1987, the US Environmental Protection Agency recognised that “.....*problems related to mining waste may be rated as second only to global warming and stratospheric ozone depletion in terms of ecological risk. The release to the environment of mining waste can result in profound, generally irreversible destruction of ecosystems.*”<sup>4</sup>

The FSE expresses concern regarding the significant number of existing mining operations and mining and prospecting applications within the Bojanala District Municipality and the risk to future sustainable land use and livelihood opportunities within the area.

It should be noted that platinum is a non-renewable resource and although, South Africa’s Bushveld Complex hosts approximately 80% of PGM-bearing ore the mining of platinum or the PGMs is finite. In terms of Section 24 of the Bill of Rights of the Constitution of the Republic of South Africa, “*everyone has the right to have the environment protected for the benefit of present **and future generations** through reasonable legislative and other measures that secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.*” (Emphasis added.)

It follows hence that the present over-exploitation of BGMs will adversely impact future generations, that is, both their right to an environment that is not harmful to health and well-being and their right to the extraction and use of mineral resources.

Section 24 of the Constitution calls for inter and intra generational equity. One of the stated fundamental principles of the MPRDA is to give effect to s 24 of the Constitution. The Minister of Mineral Resources and Energy is specifically tasked to ensure the sustainable development of South Africa’s mineral resources.

The MPRDA states that this should be achieved ‘*by ensuring that the nation’s mineral and petroleum resources are developed in an orderly and ecologically sustainable manner while promoting justifiable social and economic development*’.

Sustainable Development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.

## CLOSURE

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<sup>4</sup> European Environmental Bureau (EEB). 2000. The environmental performance of the mining industry and the action necessary to strengthen European legislation in the wake of the Tisza-Danube pollution. EEB Document no 2000/016. 32 p

We infer from Appendix D (“Mine Overall EMP”) that the TSF will be closed with approved closure design; the landscape will be profiled to ensure the area is rehabilitated as close to its natural state as possible; closure planning will incorporate measures to achieve future land use; stockpiles, tailings, rock dumps will be rehabilitated after mining ceases; the land will be returned to a grazing land use after decommissioning and the wilderness feel to the area will be promoted.

In accordance with applicable legislative requirements for mine closure, the holder of a mining right must ensure that the closure of a mining operation incorporates a process which must start at the commencement of the operation and continue throughout the life of the operation. MPRD regulation 56 prescribes:

- Risks pertaining to environmental impacts must be quantified and managed proactively, which includes the gathering of relevant information throughout the life of a mining operation in accordance with the provisions of the National Environmental Management Act (NEMA), 1998, the Financial Provision Regulations, 2015 and the Environmental Impact Assessment (EIA) Regulations, 2014.
- Residual and possible latent environmental impacts are identified and quantified in accordance with the provisions of the NEMA, the Financial Provision Regulations and the EIA Regulations.
- The land is rehabilitated, as far as is practicable, to its natural state, or to a predetermined and agreed standard or land use which conforms with the concept of sustainable development; in accordance with the provisions of the NEMA, the Financial Provision Regulations and the EIA Regulations.

The EMP must include, in terms of the MPRD Regulation 61 *inter alia* a description of the closure objectives and how these relate to the mine operation and its environmental and social setting and must identify the key objectives for mine closure to guide the project design, development and management of environmental impacts in accordance with the NEMA and the EIA Regulations, 2014; provide proposed closure costs in accordance with the NEMA and the Financial Provision Regulations, 2015.

Regulation 62 prescribes that a closure plan must include a summary of the regulatory requirements and conditions for closure negotiated and documented in the (EMPr or the EMP) environmental authorisation, as the case may be; a summary of the results of the environmental risk report and details of the identified residual and latent impacts, in accordance with the NEMA and the EIA Regulations, 2014; a summary of the results of progressive rehabilitation, in accordance with the NEA and the EIA Regulations, 2014; a summary of the results of progressive rehabilitation, in accordance with the NEMA and the EIA Regulations; details of a proposed closure cost and financial provision for monitoring, maintenance and post closure management in accordance with the NEMA and the Financial Provision Regulations.

**We are of the opinion that the Mine Overall EMP (Appendix D) does not give adequate effect to the above-mentioned Regulations. Furthermore, we find no evidence that Interested and Affected Parties were involved in the agreements regarding future land use of the affected areas and thus in the decisions regarding the establishment of objectives for such future land use. We are merely informed in the Mine Overall EMP that the future land use will be grazing.**

**It also begs the question whether the rehabilitated land will be able to sustain grazing. Such sustainability involves soil fertility and having enough standing grass. It will require soil testing and correcting soil nutrient deficiencies, selecting species adapted to the specific area, implementing the correct seeding method and rate, implementing a weed control program, and using proper management to maintain a productive stand.**

#### **BAKUBUNG TAILINGS STORAGE FACILITY DESIGN REPORT**

I, on behalf of the FSE, am not adequately qualified to comment on the TSF Design Report except to submit that a containment barrier system comprising of both filter protected drains and low permeability liners are only visible in the short term until covered. The drains and liners pertaining to the proposed new TSF will be required to perform effectively after initial use and will be inaccessible for the operating period and subsequent service life of decades.

Furthermore, a sound design alone does not provide assurance of pollution prevention due to the potential detrimental influences during construction and operation.

**Kindly advise whether the TSF Design and infrastructure performance was reviewed by the DWS<sup>5</sup> Chief Directorate Engineering Services and whether a record of the Engineering review from the Regional Office, who has its own Chief Engineer, is available.**

**The DWS' Chief Directorate: Mine Water Management is responsible for the chemistry of the waste risk assessment in the water quality management aspect. Please advise whether the DWS' Chief Directorate: Mine Water Management was involved in the process since the Comments and Response Report and Appendix C1 ("Proof of PP") do not record any comments from the DWS.**

#### **ECOLOGICAL INFRASTRUCTURE**

We infer from the Final Draft Report that the Application is for a new TSF and associated infrastructure and that the water uses to be applied for are: 21 (g): Evaporation Pond associated with the TSF, 21 (g): New TSF, 21 (c) & (i) for activities (TSF, evaporation pond) within 500m of a wetland. Exemption in terms of GN 704 is not required.

It follows hence that the proposed activities (construction of a new TSF and associated infrastructure) will involve the disposal of "*waste in a manner which may detrimentally impact on a water resource*"; "*impede or divert the flow of water in a watercourse*"; and "*alter the bed, banks, course or characteristics of a watercourse*". This will result in a loss of watercourse habitat, deposition and erosion of water courses and surface water pollution, and possible groundwater pollution for liner leakages.

We respectfully request the decision makers to take into consideration the following:

In terms of the National water and Sanitation Master Plan "*South Africa has lost over 50% of its wetlands, and of the remaining 3.2 million hectares, that is one third are already in a poor ecological condition.*" The proposed actions for the protection and restoration of ecological infrastructure by 2020 and 2021 are "*declare strategic water source areas and critical groundwater recharge areas and aquatic ecosystems recognised as threatened or sensitive as protected areas*"; "*review and promulgate aggressive restrictions within the legislation to restore and protect ecological infrastructure*".

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<sup>5</sup> The acronym "DWS" in these comments refer to the Department of Water and Sanitation and the Department of Human Settlement, Water and Sanitation.



According to the North West Biodiversity Sector Plan (NW DEDECT, 2015), much of the surrounding landscape (excluding transformed areas mostly associated with Ledig community and other mines), are designated Critical Biodiversity Area Category 2 (CBA 2).

Critical Biodiversity Areas are portions of land that need to be maintained in a natural or semi-natural state in order to ensure the continued existence and functioning of species and ecosystems, and the delivery of ecosystem services (NW DEDECT, 2015). In summary, areas designated as CBA 2 usually comprise land with a combination of the following traits:

- Ecosystems and species fully or largely intact and undisturbed
- Areas of intermediate irreplaceability (i.e., some flexibility with regard to meeting biodiversity targets)
- Biodiversity features that are approaching but have not surpassed their limits of acceptable change.

The criteria resulting in the CBA 2 designation for the study area by the Consultant is that the land is regarded as 'Natural Corridor Linkage' and 'Natural Protected Area Buffer' (within 2,6 km of the Pilanesberg Game Reserve).

In terms of the Mining and Biodiversity Guideline Critical Biodiversity Areas for equivalent areas from provincial spatial biodiversity plans mining is considered as the highest risk and the implications for mining are detailed as follows:

*"Environmental screening, environmental impact assessment and their associated specialist studies should focus on confirming the presence and significance of these biodiversity features, and to provide site-specific basis on which to apply the mitigation hierarchy to inform regulatory decision-making for mining, water use licences, and environmental authorisations.*

*"If they are confirmed, the likelihood of a fatal flaw for new mining projects is very high because of the significance of the biodiversity features in these areas and the associated ecosystem services. These areas are viewed as necessary to ensure protection of biodiversity, environmental sustainability, and human well-being.*

*"An EIA should include the strategic assessment of optimum sustainable land use for a particular area and will determine the significance of the impact on biodiversity. This assessment should fully take into account the environmental sensitivity of the area, the overall environmental and socio-economic costs and benefits of mining, as well as the potential strategic importance of the minerals to the country.*

*"Authorisations may well not be granted. If granted the authorisation may set limits on allowed activities and impacts, and may specify biodiversity offsets that would be written into licence agreements and/or authorisations."*

## VISUAL/SENSE OF PLACE

We are informed that *"The TSF will increase in height. Security lights will be installed."* Alteration to the visual quality of the study area due to the physical presence, scale and size of the new TSF. The project becomes more visible for people travelling along the R565 and the R556 as well as residents from Ledig. Mitigation measures are possible but will not be able to hide/screen the proposed activities completely since the upper levels of the TSF will break the tree horizon, which makes it more visible.'

We are furthermore informed that the proposed new TSF and associated infrastructure are approximately 27 ha and it is 2.6 km from the Pilanesberg National Park, a protected area, a recognised Important Bird Area, a popular and important eco-tourism destination, with numerous recreational camps, lodges, and hotel facilities. We are also informed that *“due to active conservation efforts, the Pilanesberg Game Reserve is likely to have retained a full mammal assemblage, which includes a number of large megafauna and species of conservation concern”*.

According to the Draft Final Report, as a formal protected area, characterised by diverse habitats and an intact fauna assemblage, Pilanesberg Game Reserve is vitally important in biodiversity conservation in the North West Province. Areas of undeveloped natural and semi-natural habitat that surround the reserve play a vital role supporting and buffering the ecological processes within the reserve. Amongst other traits, habitat patches in the surrounding landscape are likely to act as movement and dispersal corridors or ‘steppingstones’ for certain fauna and flora.

The proposed TSF will contain 7.6 million tons of tailings and its height will be  $\pm 48$  meters.

The Draft Final Report acknowledges that the development will result in habitat loss and modification. The impact is assessed as being high with and without mitigation measures. Anthropogenic disturbances, such as mining, have caused large-scale transformation and disturbance of habitats in the broader landscape, and this has negatively affected the abundance and diversity of mammals. **These habitat and faunal losses and modifications also affect the visual appeal of the area. These impacts were not included in Greentree Environmental Consulting’s Report.**

We are informed by Greentree Environmental Consulting that: *“The extent of the study area is determined by the zone of potential influence, which in this study relates to a radius of 5,0km around the Project site. At 5,0km and beyond the Project would recede into background views and or be screened by existing buildings, vegetation or infrastructure.”* We understand this to be an assumption.

According to this assumption Sun City and the lodges and camping sites within the Pilanesberg Game Reserve fall outside the zone of potential influence. We hereby respectfully request that Greentree Environmental Consulting substantiates this assumption since we are informed by the consultant that while people visiting the tourist attractions, such as Sun City and the lodges within the Pilanesberg will not have a view of the proposed project while staying at the facilities, *“the proposed project will become visible when they travel on the local roads such as the R556 and the R565 or if the viewers/ receptors are on elevated areas such as hiking trails that are facing the project site.”*

We therefore dissent from the statement that *“the proposed project will however have a low effect on sensitive viewers such as people visiting Sun City and other tourist facilities within the Pilanesberg since the proposed project will not be visible from these areas”*.

Greentree Environmental Consulting referred to the National Environmental Management Act (Act 107 of 1998), EIA Regulations; the National Heritage Resources Act (25 of 1999); the Western Cape Department of Environmental Affairs & Development Planning: Guideline for Involving Visual and Aesthetic Specialists in EIA Processes Edition 1 (CSIR, 2005) in the evaluation of the visual quality and management, the scenic quality of the area and the reaction of observers to the visual resource.

The FSE is of the considered opinion that the guideline for involving visual and aesthetic specialists in EIA processes for the Western Cape does not provide a satisfactory visual analysis process. A guideline document that provides a valuable step-by-step evaluation process is Manual H-8410-1 – Visual Resource Inventory, a system developed by the U.S. Department of the Interior – Bureau of Land Management in the US of America. The process provides five framework steps, namely Scenic Quality Analysis (landform, vegetation, water, colour, adjacent scenery, scarcity and cultural modifications); Sensitivity Level Analysis; the impact of distance on visual values; deciding on the management of the visual value of the area and rehabilitation.

The Consultant argues that since the area is already compromised by mining related activities and existing mines such as the Bafokeng Maseve Mine, the existing Bakubung Platinum Mine and the Bafokeng Rasimone Platinum Mine, an additional mining related visual intrusion will have little impact (...“*the landscape integrity becomes highly compatible due to the existing land uses and sense of place created by these activities*”). The FSE respectfully dissents. The accumulated impact of the existing mines and the proposed new TSF with security lights and associated infrastructure will exacerbate the degradation of the visual resources and values of the area.

This is acknowledged, however, by the Consultant in its Report (page 35), namely “*The separate effects of such individual components or developments may not be significant, but together they may create an unacceptable degree of adverse effect on visual receptors within their combined visual envelopes.*”

## **DUST**

The proposed new TSF and associated infrastructure falls within the Waterberg/Bojanala Air Priority Area. An air quality management plan (AQMP) was prepared for the area. The FSE is a member of the Bojanala Platinum Implementation Task Team.

According to the DEFF’s proposed Regulations for the Implementing and Enforcing Priority Air Quality Management Plans, the air quality in the area does not meet the National Air Quality Standards (NAAQS) due to the ineffective implementation of the AQMP. According to the DEFF’s Chief Directorate: Air Quality Management: “*Major polluters don’t consider AQMP as a legal document that can be enforced.*”

It is evident from the statistics in the Final Draft Report that the Application is for a new TSF and associated infrastructure, that the Bakubung Platinum Mine contributes to the non-compliance with the AQMP. We are informed that the South National Dust Control Regulations limit for residential areas of 600 mg/m<sup>2</sup>/d was exceeded by the Mine at the following residential sites:

- Bakgofa Primary School – October 2008
- Bakgofa Primary School – July 2009
- Lekwadi Section – November 2012
- Lekwadi Section – December 2014
- Lekwadi Section – October 2015
- Kayaletu High School – September 2018

The SA NDCR limit for non-residential areas of 1 200 mg/m<sup>2</sup>/d was exceeded by the Mine at the following non-residential sites:

- Explosives magazine – January 2012
- Tailings North – January 2012
- Tailings Dam – July 2012
- Tailings North – November 2012

Since the construction of a new TSF will logically increase the risks and impacts of dust fallout, we express little confidence in the Mine's ability to mitigate the risks and impacts, if it currently exceeds the SA NDC limits for both residential and non-residential areas and is failing in its current reduction interventions.

We also express concern that the Bakubung Platinum Mine as a member of the Bojanala Platinum IIT failed to contribute to the Bojanala Annual Implementation Plan. In substantiation, please see attached hereunder.



Bojanala Annual  
implementation plan

#### MITIGATION MEASURES: CONCERNS REGARDING INEFFECTIVE IMPLEMENTATION AND ENFORCEMENT

We are informed that “*The assessment of the proposed project presents the **potential for significant negative impacts to occur** (in the unmitigated scenario in particular) on the bio-physical, cultural, and socio-economic environments both on the project sites and in the surrounding area. With mitigation, these potential impacts can be prevented or reduced to acceptable levels.*

*It follows that, **provided the EMP is effectively implemented**, there is no environmental, social, or economic reason why the project should not proceed.” (Emphasis added.)*

The approval of the Application therefore calls for the implementation of the proposed mitigation and management measures and the diligent enforcement by the DMRE and the DWS of the non-compliances by Bakubung Platinum Mine of its EMP and the WUL in terms of the NEMA and the NWA.

It is relevant to here refer to the South African Human Rights Commission's (SAHRC) findings and directives pursuant to its National Hearing on the Underlying Socio-Economic Impacts of Mining Affected Communities in South Africa. **The Commission found that the existing sanctions for non-compliance with environmental laws and regulations are inadequate and do not address, nor disincentivise, systemic non-compliance in the sector.**

The SAHRC directed the DMR to *inter alia*:

- “Address internal capacity constraints so that it can effectively ensure that the mining application process complies with all relevant laws and policies across all spheres and department of government;
- The DMR must consider introducing a policy or legislative amendment to impose sanctions in instances of non-compliance by mining companies.
- Sanctions could include the suspension or cancellation of mining licences, possible imposition of community service and/or fines for persons responsible for ensuring

*compliance; public exposure of non-compliant companies and possible criminal sanctions for serious breaches.”*

With reference to the DWS, the SAHRC found that *“there is an immediate need for WULs to incorporate more stringent measures to better protect communities’ water rights and the environment. In this respect, internal (self-regulating) and external auditing (by the DWS) in consultation with communities, civil society, mining companies and other stakeholders is required...”*

In the absence of the DMRE’s and the DWS’ implementation of the SAHRC’s directives, the FSE expresses little confidence in the enforcement of the Bakubung Platinum Mine’s failure to effectively implement the mitigation and management measures in terms of its EMP and WUL’s terms and conditions.<sup>6</sup>

The capacity constraints within the DMRE and the DWS have resulted in the externalisation of their duties to mining affected communities and civil society. We refer in this regard to the judgement of Judge Spilg in the *Uzani Environmental v BP Southern Africa (Pty) Ltd* matter, namely:

*“NEMA not only requires a transparent administration but recognised the contribution that can be made to the protection of the environment by a vigilant and committed public which has most to lose...Securing protection is therefore no longer the exclusive preserve of those engaged in these activities, nor of an opaque administration or an under-capacitated and potentially inhibited law enforcement agency which cannot claim the number of successful convictions one would have expected despite clear evidence of historic degradation to our environment.”*

## CONCLUSION

We apologise for typographical errors.

We hereby reserve the right to augment our comments.

We furthermore respectfully request that our submission be included – unabridged – in the Comments and Response Report and that the Applicant and its EAP - Knight Piésold (Pty) Ltd - supply us with their responses to our comments.

SUBMITTED BY:

Mariette Liefferink.

CEO: FEDERATION FOR A SUSTAINABLE ENVIRONMENT.

12 April 2021.

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<sup>6</sup> The FSE was a member of the SAHRC’s Section 11 Advisory Committee pertaining to the Underlying Socio-Economic Impacts of Mining Affected Communities in South Africa hence the FSE’s particular interest in the DMRE’s response to the SAHRC’s directives.



26 April 2021

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**Knight Piésold (Pty) Ltd**  
**Attention:** Tania Oosthuizen

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Our ref: Francois Joubert/Onalerona Phiri/307717.00006

**COMMENTS IN RESPECT OF BAKABUNG PLATINUM MINE AMENDMENT OF ENVIRONMENTAL AUTHORISATION AND WASTE MANAGEMENT LICENCE: NORTH WEST REGION, BOJANALA PLATINUM DISTRICT MUNICIPALITY, MOSES KOTANE LOCAL MUNICIPALITY**

Dear Sir/Madam,

**1. INTRODUCTION**

1.1 We refer to:

- 1.1.1 our letter dated 23 November 2020 to Knight Piésold (Pty) Ltd (the “**EAP**”);
- 1.1.2 your letter dated 24 February 2021 in response to our comments of 23 November 2020 on the draft report relating to the application for amendment of Bakubung Platinum Mine’s (“**BPM**” or the “**Applicant**”) Environmental Authorisation and Waste Management Licence (NW/30/5/1/2/3/2/1/(339) EM) (the “**Draft Amendment Report**”); and
- 1.1.3 your email dated 19 March 2021 notifying interested and affected parties (“**I&APs**”) about the public review of the final draft amendment report issued on 23 March 2021 (the “**Final Draft Amendment Report**”).
- 1.2 We act on behalf of Bakubung Ba Ratheo Traditional Community (“**our client**”).
- 1.3 On 23 November 2020, we filed comments on behalf of our client in respect of the Draft Amendment Report with the EAP, to which the EAP responded with its letter dated 24 February 2021 (the “**EAP’s Response**”).
- 1.4 On 19 March 2021, we received notification by email from the EAP advising that the Final Draft Amendment Report will be available for public review from 23 March to 24 April 2021 on its website.
- 1.5 Although the EAP’s Response has addressed certain issues raised in our letter dated 23 November 2020, it is submitted that the EAP’s Response and the Final Draft Amendment Report have not fully and satisfactorily provided clarity on some issues pertaining to the amendment application.

- 1.6 Below, we set out our comments in relation to the EAP's Response and the Final Draft Amendment Report. Please take note that we do not intend replying in detail to each and every response set out in the EAP's Response, nor do we regard this reply as our final opportunity to engage as an I&AP.
2. **REPLY TO THE EAP'S RESPONSE AND COMMENTS ON THE FINAL DRAFT AMENDMENT REPORT**

**Ad paragraph 3.3 (*Community Interest and Public Participation*)**

- 2.1 We understand from the EAP's Response and Appendix C1 (*Proof of Public Participation*) of the Final Draft Amendment Report ("**Appendix C1**") that site notices containing information of the nature of the activity, the application process and the details of the EAP were placed at various strategic sites in both English and Setswana. Although photographs of the site notices are contained in Appendix C1, it is difficult to determine whether the required information was indeed contained in the site notices and whether such information was provided in both English and Setswana because the content of each notice is illegible on the photograph.
- 2.2 Furthermore, although the newspaper advertisements placed in the Rustenburg Herald and Platinum Weekly rightly state the nature and location of the activity to which the application relates; where further information on the application can be obtained; and the manner in which and the person to whom representations in respect of the application may be made, we note that the advertisements have omitted to specify whether basic assessment or scoping and environmental impact reporting procedures are being applied to the application as required by regulation 41 (3)(b)(i) of the Environmental Impact Assessment Regulations, 2014, under the National Environmental Management Act 107 of 1998.

**Ad paragraph 3.4 (*Socio-Economic Impact*)**

- 2.3 We understand from the EAP's Response and Appendix D1 (*Final Visual Impact Assessment Report*) of the Final Draft Amendment Report ("**Appendix D1**") that the proposed project will not be visible to people visiting the tourist attractions, such as Sun City and the lodges within the Pilanesberg while staying at the facilities. However, the proposed project will become visible to people travelling on the local roads such as the R556 and the R565 or to viewers on elevated areas such as hiking trails that are facing the project site.
- 2.4 We also understand that the proposed project will be marginally visible to viewers located at the Kingdom Resort mainly due to the distance between the proposed project and the resort, but also due to dense vegetation and the possibility of buildings blocking or screening views within the Kingdom Resort. The proposed project will be highly visible for residents residing in Ledig, but will be marginally visible from Chaneng and Phatsima which are located just on the border of the Zone of Potential Visual Influence.
- 2.5 Appendix D1 proposes mitigation measures for the visual impact of the proposed project. However, we note from Appendix D1 that the mitigation measures will be viable during the first phases of construction and become less effective as the Tailings Storage Facility expands. This is mainly due to the scale

and height of the project components. Has the EAP or the Applicant considered any measures to address or manage the effects of the impact as the mitigation measures become less effective during the operational phase?

**Ad paragraph 4.1 (*Degradation of Community Cohesion/Social Impact*)**

- 2.6 We note that Appendix D8 (*Social Impact Assessment*) of the Final Draft Amendment Report (“**Appendix D8**”) identifies social impacts specific to the amendment of the Environmental Authorisation (“**EA**”) and Waste Management Licence (“**WML**”) of BPM, as well as the proposed mitigation measures relating to these impacts. In particular, we note that there is a grievance mechanism which is already in place to assist in documenting evidence of community and mine interactions. The grievance mechanism is also meant to assist the mine to track grievance issues and to help the community see what action the mine has taken.
- 2.7 How will the Applicant ensure that the grievance mechanism is community-friendly, taking into account that the community members communicate in different languages (English, Afrikaans, Setswana and isiZulu) and that the high levels of illiteracy among certain groups in the community will mean that written communication will often not be the most appropriate means of communication? Has the EAP or the Applicant considered alternative means other than written complaints by community members and written reports by the mine, e.g. stakeholder engagement meetings, which are culturally appropriate but also account for the prevailing risk of the COVID-19 pandemic?
- 2.8 Appendix D8 has also identified economic impact and skills development as a positive impact that the proposed project will have on the community. To ensure that the economic impact and skills development is sustainable, Appendix D8 proposes that skills development plans must be focused on skills that the mine needs and that are also transferable. It also recommends that support must be given to people after the training to ensure that their newly acquired skills can be implemented.
- 2.9 In order to demonstrate the feasibility of this proposed measure, is the EAP or the Applicant in a position to provide us with evidence of people being successfully trained and earning a living from the skills acquired during the training, e.g. previous Social and Labour Plan Training Reports?
- 2.10 We also note from Appendix D8 that in order to promote the economic impact of the proposed project, BPM should ensure that a fair number of secondary economic opportunities are given to local contractors and that services and goods must be procured locally as far as reasonably possible. This measure is to be undertaken during the construction, operation, decommission, closure and rehabilitation phases. Has the Applicant successfully concluded any service provider agreements with local contractors for the construction and operation phases preceding the EA and WML amendment application in order to demonstrate that this arrangement is feasible and will be impactful to the local community?
- 2.11 Further to the social impacts associated with the proposed project, Appendix D8 sets out the existing impacts which may also apply to the development of the new Tailings Storage Facility. We understand from Appendix D8 that there is limited access to social infrastructure such as, *inter alia*, schools in the study

area. Has the EAP or the Applicant considered the effects of and possible mitigation measures for the limited access to schooling infrastructure for the local community, especially since the mine requires a National Senior Certificate as a minimum qualification for certain positions? How has the Applicant sought to address high levels of illiteracy in the community, over-supply of unskilled labour and scarcity of skilled labourers in BPM's Social and Labour Plan? Are there any reports which show skills development achieved by the Applicant thus far in order to demonstrate that skills development and positive economic impact is plausible during the proposed project?

- 2.12 We understand from the Final Draft Amendment Report that the majority of residents within the North West province obtain water from the municipal networks (73.6 %), while 15 % obtain water from boreholes and 4.5 % from water tankers and the remainder from other sources. We note from Appendix D8 that an existing environmental impact of the mine with social dimensions is the slight decline in borehole levels and water quality. Given the influx in population which may partially be attributed to new employment opportunities from the proposed project, it is anticipated that the existing water quality and availability may worsen. What mitigation measures has the Applicant considered for the decline in borehole levels and water quality noted in Appendix D8?

**Ad paragraph 4.7 (*Surface Water Pollution and Loss of Watercourse Habitats*)**

- 2.13 We note the specific mitigation measures from the EAP's Response to manage surface water impacts including, amongst others, the development of a watercourse rehabilitation plan for impacts not successfully mitigated, the development and implementation of a stormwater management system to attenuate flood peak events and the storage of hazardous materials in a hazardous material zone with a bunded area.
- 2.14 We understand from Appendix D5 (*Baseline Aquatic Ecology Assessment*) of the Final Draft Amendment Report ("**Appendix D5**") that four impacts have been deemed to be applicable during construction, operation and closure phase, namely:
- 2.14.1 loss of watercourse habitat;
  - 2.14.2 sediment mobilisation: deposition and erosion in watercourses;
  - 2.14.3 surface water pollution; and
  - 2.14.4 encroachment of alien species into watercourse.
- 2.15 The control measures proposed in Appendix D5 in respect of the above impacts include, amongst others, management of sediment and surface water run-off to ensure that no sediment build up occurs within the aquatic ecosystems; implementation of stormwater management plan and measure; monitoring during high rainfall events and quarterly inspection of the Tailings Storage Facility.
- 2.16 We understand from Appendix D5 that, in the specialist's opinion, the abovementioned impacts can be reduced to acceptable levels if the appropriate mitigation measures are implemented. We note from Appendix D5 that the construction of the new Tailings Storage Facility that falls within 500m of

delineated wetlands will trigger section 21 (c): *impeding or diverting the flow of water in a watercourse* and 21 (i): *altering bed, banks, course or characteristics of a watercourse* water uses under the National Water Act 36 of 1998, which, in the specialist's opinion, may receive a General Authorisation by the Department of Human Settlement, Water and Sanitation.

- 2.17 Regarding the Surface Water Quality data for December 2020, we note from the Final Draft Amendment Report that the Wesizwe Bakubung Water Use Licence guidelines, 2010, as well as the General Authorization Limits were complied with in terms of the majority of variables measured, with the exception of pH. The water quality of the pollution control dam (Mine Water Pond – SW4) could be classified as marginal for domestic use according to the Water Research Commission Quality of Domestic Water Supplies, 1998, classification system. Nutrients were low and were within the acceptable limits. The River Quality Objectives (“**RQO**”) limits were exceeded in terms of pH and Sodium at the pollution control dam (Mine Water Pond – SW4). Also, the Elands River upstream of mine (SW1), the Elands River midstream along mine (SW2) and Elands River down stream from mine (SW3) were recorded as dry on the day of sampling.
- 2.18 Regarding the recorded Groundwater Quality data for December 2020, we note from the Final Draft Amendment Report that the physical water quality for most of the groundwater localities could be described as neutral, saline and very hard. All the groundwater localities exceeded the SANS 241-1:2015 drinking water standards in terms of at least one variable, the most being turbidity. Analyzed nutrients were low and were within acceptable limits. All sampled localities were dominated by the bicarbonate anion while most were dominated by the magnesium cation, and the total coliforms counts were detected at Borehole on Frischgewaagd, down gradient (FBH01D and FBH02D).

#### **Ad paragraph 4.9 (Soil and Land Capability)**

- 2.19 We reiterate that despite the mitigation of the impact of soil loss to moderate, the security of land and land use entitlements of the community will be adversely affected as they will no longer be able to cultivate the land and use it for agricultural purposes. The removal of the topsoil will cause the existing arable and grazing land capability to deteriorate. Despite the rehabilitation that will be conducted upon closure of the Frischgewaagd Tailings Storage Facility to minimise and mitigate the impacts caused by mining activities, the land capability will not be restored to its previous condition for future use by the community.

#### **Ad paragraph 4.11 (Soil and Land Capability)**

- 2.20 We understand from Appendix B (*Tailings Storage Facility Design Report*) of the Final Draft Amendment Report (“**Appendix B**”) that there are three possible phases where groundwater contamination can occur at the new Tailings Storage Facility, namely construction, operation and decommissioning phase.
- 2.21 We note the mitigation measures set out in Appendix B in respect of the possible impacts, which include the following:

- 2.21.1 Care should be taken to minimise contamination during the construction of the Tailings Storage Facility and its associated services. Fuel and storage and service areas should be bunded to minimise groundwater contamination.
- 2.21.2 The Tailings Storage Facility and its pollution control dams should be lined with a Class C or GLB-liner.
- 2.21.3 Potential leakage from infrastructure such as transfer pipe systems and pump station should be minimised. Pipes should be routed above ground in order to detect and limit leaks.
- 2.21.4 Groundwater monitoring points should be installed in order to monitor the groundwater quality at the Tailings Storage Facility as well as the pollution control dams.
- 2.21.5 If contamination is detected, contamination interception measures should be put in place. This should consist of, but not be limited to, interception trenches (if the groundwater level is shallow enough) or interception boreholes. The water intercepted by these measures should be treated to the RQO of the Elands River before being released into the environment.

### 3. CONCLUSION

- 3.1 In conclusion, we submit that although the EAP's Response and the Final Draft Amendment Report have attempted to address some of issues raised in our letter of 23 November 2020, we respectfully submit that there are certain issues pertinent to the Applicant's amendment application which remain unresolved and unclear, as discussed above.
- 3.2 On this basis, we respectfully submit that the EAP and/or Applicant provides feedback in respect of the foregoing issues as requested above.
- 3.3 Our client's rights are reserved.

Yours faithfully

*[Sent electronically without signature]*

**Fasken**  
**#4235509v1**

30 April 2021

TANIA OOSTHUIZEN

KNIGHT PIESOLD ( Pty)Ltd

Tania Oosthuizen: [toosthuizen2@knightpiesold.com](mailto:toosthuizen2@knightpiesold.com)

**OBJECTION AGAINST THE AMENDMENT OF THE ENVIRONMENTAL AUTHORISATION AND WATER USE LICENCE ISSUED TO BAKUBANG PLATINUM MINE AND THE CONSTRUCTION OF THE TAILINGS STORAGE FACILITY SITUATED IN THE MAGISTERIAL DISTRICT OF RUSTENBURG AND MOSES KOTANE DISTRICT, NORTH WEST PROVINCE: RI 301- 00509/11.**

We are instructed by the Kingdom Development Company (Pty) Limited, known as the Kingdom Resort (The Kingdom Resort) to lodge objections to the amendment of the Environmental Authorisation and Water Use Licence issued to Bakubang Platinum Mine and the construction of the tailings storage facility situated in the magisterial district of Rustenburg, and Moses Kotane district, North West Province: RI 301- 00509/11.

The Kingdom Resort was established in 2008 and became fully operational in 2013. The annual number of guests is approximately 140 000 persons based on 2019 figures. Our client is a significant tourist facility 8km north-east of the study area. The objections arise out of a detailed consideration of the Final Basic Assessment Report and the accompanying specialist reports.

**1. First objection: The construction of the tailings storage facility will negatively impact the visual character of the study area and will alter the “sense of place” for sensitive viewers.**

- 1.1 The Bakubang Platinum mine is situated in a rural area where the dominant economic sector is tourism. There are a number of tourist attractions in the surrounding area including the Kingdom Resort, Sun City, and various lodges situated within the Pilanesberg.



- 1.2 The common landscape has a positive character with natural features such as mountains, woodlands, rivers, and vegetation typical of a Savanna Biome, and is sensitive to change which could be harmful if dealt with inappropriately.
- 1.3 Visual receptors towards the north, east, and south-west of the study area experience a pastoral sense of place created by the natural landscape of the area. Tourist attractions such as Sun City, the Kingdom Resort, and lodges and caping areas within the Pilanesberg mountains and game reserve are located north and north-east of the study area.
- 1.4 Tourists visiting the tourist attractions have been identified as having a high potential for sensitivity to the visual receptors or high susceptibility to changes in the study area and surrounding area.
- 1.5 Mitigation measures will be implemented during each phase of the mine, however, due to the scale and height of the tailings storage facility, they will become less effective over the years as the height of the facility increases.
- 1.6 When considering the visual impact of the project, each factor cannot be considered individually. Factors of visibility, scenic quality, and sense of place must be viewed as indivisible elements which contribute to the high negative impact of the project overall. It must also be considered that the project will enter various phases of life and that the implementation of each phase, particularly the operational phase, will contribute to the cumulative negative impact on the aesthetics of the landscape and its sense of place.

**2. Second objection: Bakubang Platinum Mine's amendment to the Environmental Authorisation and Water Use Licence is contrary to the *National Environmental Management Act 107 of 1998 (NEMA)* and will have significant, irreversible consequences for the terrestrial biodiversity of the study area and surrounding landscapes.**

- 2.1 Section 2 of NEMA states that development must be environmentally sustainable and must consider the following:

*"That the disturbance of ecosystems and loss of biodiversity are avoided, or where they cannot be altogether avoided, must be minimised and remedied".*

- 2.2 The Pilanesberg Game Reserve is formally protected conservation area located 2,6km north of the study area. The reserve encompasses a billion-year-old eroded volcano and is recognised as an Important Bird Area. The reserve is home to numerous globally and regionally threatened birds and is an important conservation area and eco-tourism destination.
- 2.3 The study area has been determined to be similar to the Marikana Thornveld in both the dominant species and general structure and has been categorised as a vulnerable ecosystem.
- 2.4 The North West Biodiversity Sector Plan has designated the study area as a Critical Biodiversity Area Category 2 (CBA 2). To ensure the continued existence and functioning of ecosystems and species in Critical Biodiversity Areas, the land needs to be maintained in a natural or semi-natural state.
- 2.5 A significant percentage of the existing vegetation will need to be cleared for the construction of the Tailings Storage Facility. Prior to the implementation of mitigation measures, the habitat loss or modification of biodiversity of the Marikana Thornveld is of high significant importance. The nature of the proposed project will make it difficult to significantly and effectively mitigate the impacts of the loss and modification.
- 2.6 Mitigation measures implemented by way of rehabilitation during the decommissioning and closure of the Tailings Storage Facility will only ensure some reversibility of the impacts. Despite mitigation, the negative impact of the habitat loss and alteration of biodiversity of the Marikana Thornveld will still be rated of high significant importance.
- 2.7 Ecosystems and other ecological processes operate on a broad scale and alterations in one sector can affect the overall functions. Developments on one site may negatively impact the broader landscape, and the remaining natural and semi-natural landscapes are depended upon to buffer and support the ecosystem.

- 2.8 The cumulative impact of the alteration and loss of biodiversity and the disturbance of ecosystems may strain the remaining landscape's ability to act as a buffer and support, which could compromise the integrity of the ecological dynamics within the reserve.

**3. Third objection: The Social Impact Assessment has underestimated the cumulative existing and future negative impacts and failed to accurately weigh them against benefits of the proposed project.**

- 3.1 Bakubang Platinum Mine has stated that the positive impacts of the project will include:
- 3.1.1 At least 30% local employment.
  - 3.1.2 Job security for those who are already employed, the economic benefits of which will be experienced on a wider level.
  - 3.1.3 Increased spending power.
  - 3.1.4 The use of local suppliers and service providers.
  - 3.1.5 The introduction of skills development programmes to develop transferable skills for people within the community which can be used outside of mining.
- 3.2 The assessment has concluded that there are no fatal flaws to prevent the project from proceeding.
- 3.3 There is a history of tension and mistrust and there is a strong possibility of violent local conflict. This may impact tourist attractions in the surrounding areas as tourists and employees may be concerned about their safety travelling through the area.
- 3.4 The community has put forth realistic expectations, but it has been determined that the extent to which these expectations can be met is limited.
- 3.5 The community has high rates of illiteracy which has resulted in an oversupply of unskilled labour. The project would inevitably require the recruitment of employees from outside the community, putting further strain on community relations and cementing mistrust.

- 3.6 The assessment has stated the recruitment of a workforce outside the community “will not cause significant impact...other than natural in- and out-migration”.
- 3.7 Natural in-migration is known to trigger an increase in the so-called “four m’s: “men, money, mixing, and movement”:
- 3.7.1 The mixing of groups of people with more money and differing value systems and community members may cause socio-economic disparities and civil unrest.
  - 3.7.2 The influx of people i.e. “men” may introduce elements which are harmful to poor communities. With the movement of labourers and suppliers in and out of the community there are increased possibilities for the prostitution of young, vulnerable girls and teenage pregnancies.
  - 3.7.3 The mixing of low and high disease prevalent groups provides ideal circumstances for the spread of HIV and other sexually transmitted diseases. Other contributing factors for the spread of disease include substance abuse, sexual and gender-based violence, migratory labour, poverty, and income disparities.
- 3.8 The project is expected to be of benefit to the local economy for the life of the mine. However, the vulnerable groups which make up this community will bear the burden of these detrimental social impacts for years to come and well past the life of the mine.
- 3.9 In considering these social impacts, the need and desirability and potential benefits of the project cannot be seen as outweighing the harm that will be done to the community.

#### **4. Conclusion**

The above demonstrates that there is harmful and irreversible damage to the sense of place and landscape integrity, local and surrounding biodiversity and the local communities that will arise from the ongoing operation of the mine and the proposed amendment of the Environmental Authorisation and Water Use Licence and the construction of the proposed tailings storage facility.

The negative cumulative visual and environmental impacts arising from the proposed amendment and subsequent construction of the proposed tailings storage facility cannot be mitigated in any significant way. Any mitigation measures implemented by Bakubang Platinum Mine to reduce the negative visual

impact of the tailings storage facility will become less effective over the time as the height of the facility increases. Harmful changes made to the environment are long-lasting and have the potential to be irreversible, and rehabilitation can only ensure *some* reversibility of these changes. Additionally, ecosystems exist and work on a scale that extends beyond the site/study area. Changes in ecological processes and biodiversity in one area can have a knock-on effect and cause ecological processes and biodiversity in the broader landscape to take strain. Mitigation measures that are limited to the site/study area will have no significant impact on the overall negative environmental impact.

The positive impacts of the project, which are primarily economic, have been overestimated and do not outweigh the long-lasting impacts on the community and surrounding environment.

Yours faithfully



Aldine Armstrong

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