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Department:

**Economic Development, Environment, Conservation and Tourism  
North West Provincial Government  
REPUBLIC OF SOUTH AFRICA**

# Bakubung EA and WML Amendment

2020/11/03

## 1 Brief project description

This report was generated by the North-West Department of Economic Development, Environment, Conservation and Tourism EMF tool for the Bojanala Platinum District Municipality Environmental Management Framework.

Bakubung Minerals (Pty) Ltd is the owner of Bakubung Platinum Mine (BPM), currently operating on the farm Frischgewaagd 96JQ (Portions 3, 4 and 11). The mine is located near Ledig, 2 km south of the Pilanesberg Game Reserve and Sun City in the North West Province. The specific changes to the project are which forms part of this EIA amendment is:- Capacity change from 3 MT/annum to 1 MT/annum and 2 MT/annum- Construction of an additional Tailings Storage Facility (TSF) on Frischgewaagd Farm- Change of liner for stock pad area

## 2 Proposed activity

Category: Waste and waste water management activities

Sub-category: Disposal of hazardous waste and large volumes of inert and general waste

The proposed project may include the following listed activities: Cat B, GNR 921:7

## 3 Generic environmental impacts or issues related to the proposed type of development

Generic environmental impacts or issues related to the proposed type of development are summarised in Table 1. Specialist input might be needed to determine the significance and extent of possible impacts related to each issue.

Table 1: Potential listed activities and environmental impacts associated with the proposed development.

Regulation nr	Activity	Air pollution issues	Nuisance issues (odours)	Noise related issues	Visual issues	Traffic impact issues	Geotechnical issues	Heritage (archaeological and palaeontological impacts)	Socio-economic impacts	Water related issues	Ground pollution issues
Cat B, GNR 921	7	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

## 4 Site specific environmental sensitivities

The following site specific environmental sensitivities area listed in Table 2. These must be considered when determining the specialist studies required for the EIA.

## 5 Environmental management zones

The environmental management zones that occur on the site of the proposed development are indicated on in Figure 5, while the environmental management zones that occur in the vicinity of the site of the proposed development are indicated on Figure 5. The percentage of cover for each zone are presented in Table 3.

## 6 Environmental management guidelines

### 6.1 Zone A: Development Zone I (Residential, business and other)

The following general management guidelines are applicable to Zone A:

- Development should be confined to urban areas (areas situated within the urban node/edge/fringe, or where no such node/edge/fringe has been defined or adopted, areas situated within the edge of built-up areas) to minimise the effects of urban sprawl in the area.

Table 2: Sensitivities identified inside the area of the proposed activities.

Type	Risk level	Area ( $km^2$ )
SurfaceHydro	None	2.757
SurfaceHydro	Very low	1.514
SurfaceHydro	Low	0.377
SurfaceHydro	Medium	0.290
GroundwaterHydrology	None	0.018
GroundwaterHydrology	Low	0.113
GroundwaterHydrology	Medium	4.806
Topography	None	4.835
Topography	Very low	0.103
Heritage	None	4.858
Heritage	Low	0.070
Heritage	Medium	0.009
Agriculture	Medium	2.746
Agriculture	High	2.192
Biodiversity	None	0.451
Biodiversity	Very low	0.003
Biodiversity	Low	0.002
Biodiversity	Medium	3.658
Biodiversity	High	0.824

Table 3: The environmental management zones found on the proposed site.

Zone	Description	Area ( $km^2$ )	Compatibility Guidelines
Zone A	Development Zone I (Res. and Bus.)	0.349	This zone is a refinement of areas identified for future urban development in local municipal SDFs. These development uses include, amongst others, residential land uses, commercial land uses and land uses related to government functions, but specifically excludes industrial land uses and mining related land uses.
Zone B	Development Zone II (Industrial)	0.047	This zone is a refinement of areas identified for future industrial development in local municipal SDFs.
Zone C	Development Zone III (Mining)	0.050	This zone is a refinement of areas identified in local municipal SDFs as areas with potential for mining development. If developed in a sustainable manner, these areas have the potential to stimulate economic growth in the area.
Zone D	Agriculture Zone I	0.009	This zone represents existing high potential agricultural land in the area (i.e. cultivated fields).
Zone E	Agriculture Zone II	1.767	This zone represents areas deemed suitable for further agricultural development for both grazing and cultivation purposes.
Zone F	Biodiversity Zone	2.636	This zone represents areas of high and significant biodiversity in the Bojanala District Municipality. Areas of high biodiversity was identified from the North West Province Biodiversity Sector Plan and includes, amongst others, critical biodiversity areas (CBAs) and Ecological Support areas (ESAs).
Zone G	Sensitive Topography Zone	0.080	This zone represents the sensitive topographical features, such as hills and ridges, which are deemed sensitive to development.

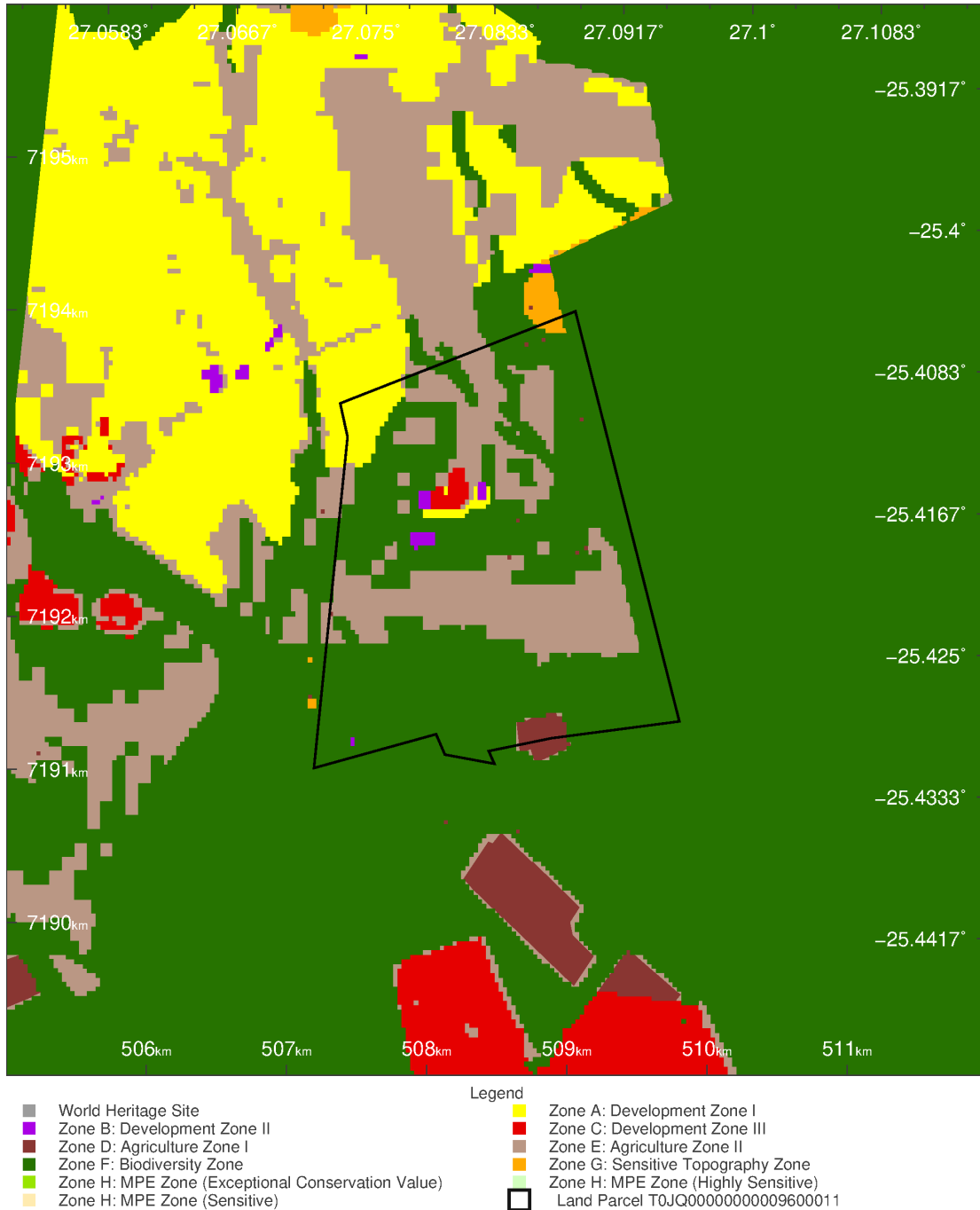


Figure 1: Management zones around the proposed site.

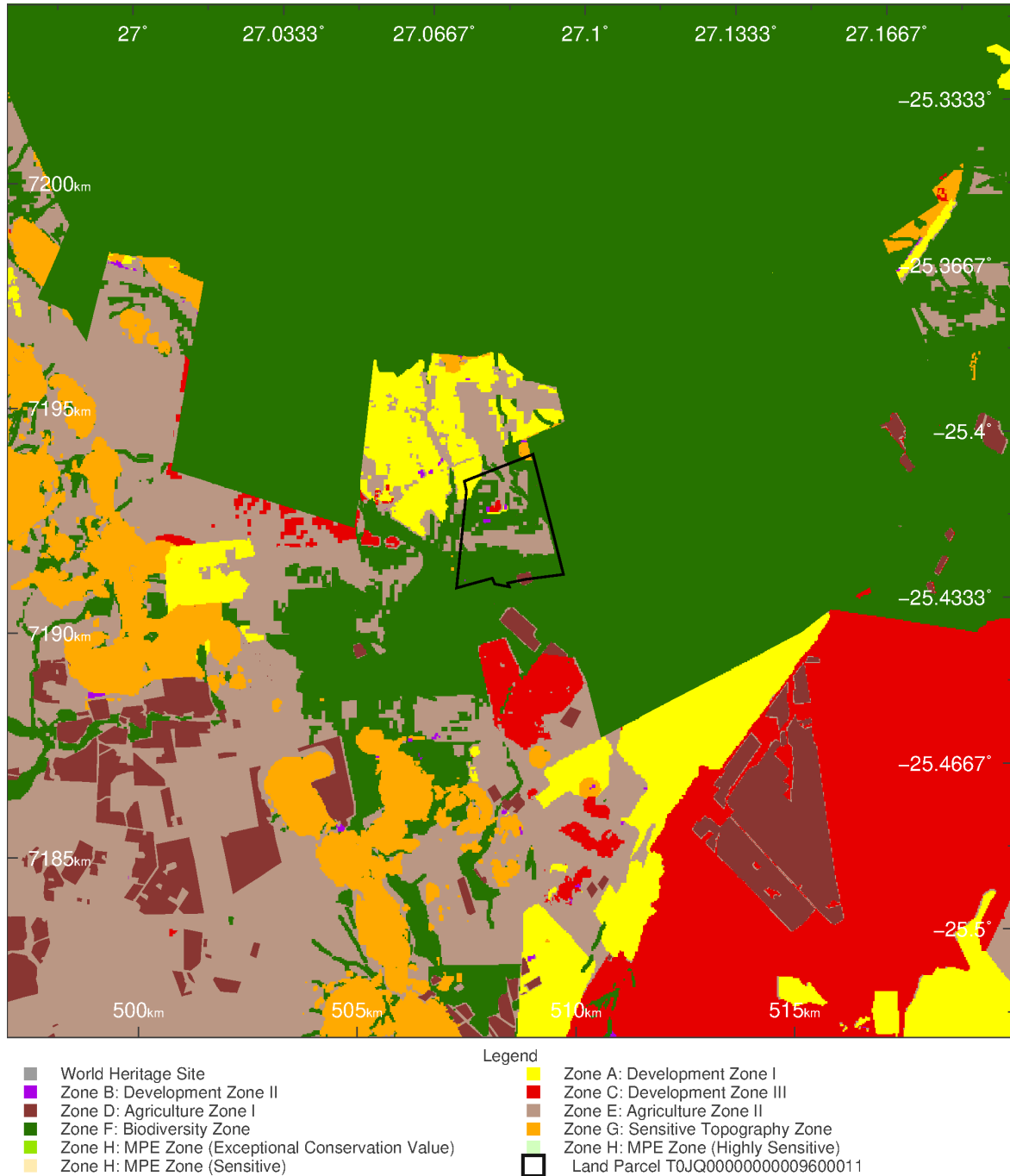


Figure 2: Management zones around the proposed site.

- The zone should be used for the expansion of urban areas and the integration of existing settlements.
- Green open spaces should be established and protected within the zone.
- The following should be encouraged in this zone:
  - Urban infill development;
  - Residential development;
  - Commercial developments;
  - Government functions;
  - Other appropriate land uses as reflected in the applicable SDF/s;
  - Upgrading of service infrastructure; and
  - Urban greening.
- If the zone falls within a Biosphere Buffer Zone, the following guidelines are also applicable:
  - The development guidelines in the relevant management plan should be consulted whenever an activity falls within the buffer area.
  - Developments that might put stress on the protected environments should be avoided within the buffer area.
  - The applicable biosphere development guidelines and principles should be considered.
  - Conservation and tourism orientated developments should be promoted within the buffer area.
  - High density developments, industrial developments, mining activities and other high-impact developments should be avoided in the buffer area.

## 6.2 Zone B: Development Zone II (Industrial)

The following general management guidelines are applicable to Zone B:

- Development should be confined to urban areas (areas situated within the urban node, or where no urban node has been defined or adopted, areas situated within the edge of built-up areas) to minimise the effects of urban sprawl in the area.
- Green open spaces should be established and protected.
- The following should be encouraged in this zone:
  - Industrial development; and
  - Upgrading of service infrastructure.
- If the zone falls within a Biosphere Buffer Zone, the following guidelines are also applicable:
  - The development guidelines in the relevant management plan should be consulted whenever an activity falls within the buffer area.
  - Developments that might put stress on the protected environments should be avoided within the buffer area.
  - The applicable biosphere development guidelines and principles should be considered.
  - Conservation and tourism orientated developments should be promoted within the buffer area.
  - High density developments, industrial developments, mining activities and other high-impact developments should be avoided in the buffer area

### 6.3 Zone C: Development Zone III (Mining)

The following general management guidelines are applicable to Zone C:

- Mining activities should, as far as possible, be confined to Zone C.
- Mining activities should be conducted in a sustainable manner.
- Wetlands, areas in proximity to aquatic features, areas of high or sensitive biodiversity, and areas of sensitive topography should be avoided at all costs.
- If the zone falls within a Biosphere Buffer Zone, the following guidelines are also applicable:
  - The development guidelines in the relevant management plan should be consulted whenever an activity falls within the buffer area.
  - Developments that might put stress on the protected environments should be avoided within the buffer area.
  - The applicable biosphere development guidelines and principles should be considered.
  - Conservation and tourism orientated developments should be promoted within the buffer area.
  - High density developments, industrial developments, mining activities and other high-impact developments should be avoided in the buffer area

### 6.4 Zone D: Agriculture Zone I

The following general management guidelines are applicable to Zone D:

- High potential agricultural land that is actively being cultivated should not be used for other types of development.
- Agriculture is the main priority within this zone and should be prioritised above all other types of activities and developments.
- Crop farming should be encouraged.
- Irrigation potential should be optimised.
- Intensive agriculture should be encouraged and developed.
- Sustainable farming practices should be encouraged.
- If the zone falls within a Biosphere Buffer Zone, the following guidelines are also applicable:
  - The development guidelines in the relevant management plan should be consulted whenever an activity falls within the buffer area.
  - Developments that might put stress on the protected environments should be avoided within the buffer area.
  - The applicable biosphere development guidelines and principles should be considered.
  - Conservation and tourism orientated developments should be promoted within the buffer area.
  - High density developments, industrial developments, mining activities and other high-impact developments should be avoided in the buffer area

## 6.5 Zone E: Agriculture Zone II

The following general management guidelines are applicable to Zone E:

- High potential agricultural land that is actively being cultivated should not be used for other types of development.
- Agriculture is the main priority within this zone and should be prioritised above all other types of activities and developments.
- Crop farming should be encouraged.
- Irrigation potential should be optimised.
- Intensive agriculture should be encouraged and developed.
- Sustainable farming practices should be encouraged.
- If the zone falls within a Biosphere Buffer Zone, the following guidelines are also applicable:
  - The development guidelines in the relevant management plan should be consulted whenever an activity falls within the buffer area.
  - Developments that might put stress on the protected environments should be avoided within the buffer area.
  - The applicable biosphere development guidelines and principles should be considered.
  - Conservation and tourism orientated developments should be promoted within the buffer area.
  - High density developments, industrial developments, mining activities and other high-impact developments should be avoided in the buffer area

## 6.6 Zone F: Biodiversity Zone

The following general management guidelines are applicable to Zone F:

- Biodiversity and sensitive topographical features should be protected within these areas at all costs.
- Before any non-conservation related activity is to be considered a detailed specialist study has to be conducted by an accredited scientist to determine the impacts of the envisaged activity on not only the site but also on the larger area (strategic context).
- Activities should be limited to conservation related and low-impact tourism related activities.
- The guidelines contained in North West Province Biodiversity Sector Plan are applicable and should be applied within this zone.
- If the zone falls within a Biosphere Buffer Zone, the following guidelines are also applicable:
  - The development guidelines in the relevant management plan should be consulted whenever an activity falls within the buffer area.
  - Developments that might put stress on the protected environments should be avoided within the buffer area.
  - The applicable biosphere development guidelines and principles should be considered.
  - Conservation and tourism orientated developments should be promoted within the buffer area.
  - High density developments, industrial developments, mining activities and other high-impact developments should be avoided in the buffer area



## 6.7 Zone G: Sensitive Topography Zone

The following general management guidelines are applicable to Zone G:

- Sensitive topographical features should be protected and any development that might negatively affect them should be discouraged.
- A detailed specialist study might have to be conducted by an accredited scientist to determine the impacts of an envisaged activity on the corridor function provided by a topographical feature.
- The visual impacts of proposed developments in this zone should be considered and developments/activities with high visual impact avoided.
- If the zone falls within a Biosphere Buffer Zone, the following guidelines are also applicable:
  - The development guidelines in the relevant management plan should be consulted whenever an activity falls within the buffer area.
  - Developments that might put stress on the protected environments should be avoided within the buffer area.
  - The applicable biosphere development guidelines and principles should be considered.
  - Conservation and tourism orientated developments should be promoted within the buffer area.
  - High density developments, industrial developments, mining activities and other high-impact developments should be avoided in the buffer area