

## OFFICE OF THE CEO

**Ref: AS-23.08**

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### **MS NOMFUNDO TSHABALALA**

Director General

Department of Forestry, Fisheries and the Environment

Private Bag X447

**PRETORIA**

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**BY EMAIL**

18 September 2023

Dear Ms. Tshabalala,

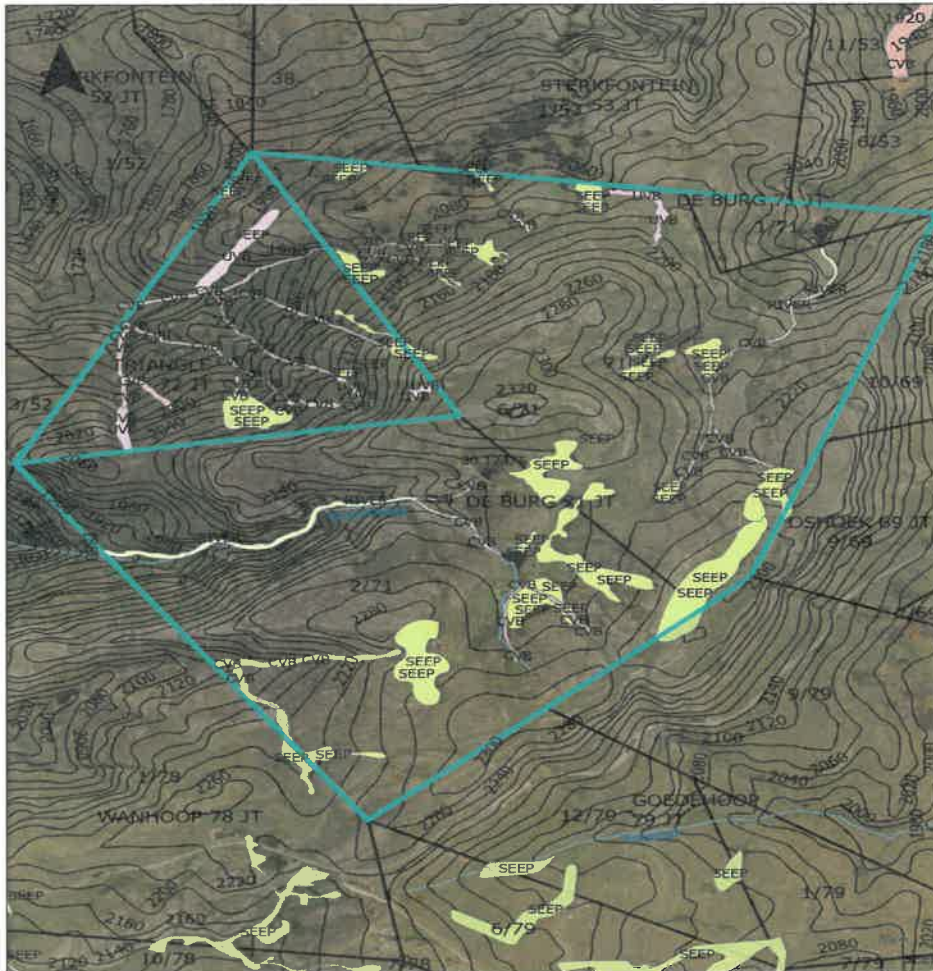
### **RE: INTENT TO DESIGNATE DE BERG NATURE RESERVE AS A WETLAND OF INTERNATIONAL IMPORTANCE IN TERMS OF THE RAMSAR CONVENTION ON WETLANDS.**

#### **1. Importance of the Site**

The De Berg Nature Reserve (DBNR) is located along the headwaters of the Dwars River in the Olifants River basin, approximately 20 kilometers north of the town of Dullstroom in Mpumalanga. It is situated in one of South Africa's highest rainfall areas known as the Mpumalanga Drakensberg Strategic Water Source Area (Le Maitre et al. 2018), at an elevation of just over 2300 meters above sea-level (masl). The DBNR represents numerous wetlands of various wetland types and mountain streams and represent some of the most pristine and habitat diverse watercourses in the South African grassland biome. The proposed RAMSAR site follows the boundary of the 1265.45 hectare De Berg NR (see figure 1).

The DBNR was listed in 1965 as the Davel private Nature Reserve, and formally proclaimed in 2023 as De Berg Nature Reserve, in terms of the Mpumalanga Nature Conservation Act (Act 10 of 1998). It consists of portion Re & 2 of the farm De Berg 71 JT, and the farm Triangle 72 JT. And the whole extent of the reserve is fenced.

The wetlands in DBNR play a very important hydrological function since sponges of the headwaters of the Groot Dwars River and its tributaries occur here. Due to the exceptionally high species richness, the DBNR is a biodiversity hotspot. It occurs in the Lydenburg and Sekhukhune Centre of plant endemism, and support two vulnerable vegetation types, the Steenkampsberg and Sekhukhune Montane Grassland Communities. The catchments occurring within the Reserve are classified as Critical Biodiversity Areas or Ecological Support Areas (MBSP 2014) (Lötter et al., 2014) and forms part of the National Freshwater Ecosystem Priority Area (NFEPAs).



**Figure.1. Showing the boundaries of the De Berg Nature Reserve. The boundaries of the Ramsar site will follow the same boundaries.**

## 2. Wetlands of international importance

To be designated a Ramsar site, a site needs to comply to one of the nine criteria described by Ramsar. The DBNR Reserve complies to four of the nine criteria.

### 2.1 Criterion 1: Representative, rare, or unique natural or near-natural wetland types

The DBNR occurs in one of South Africa's highest rainfall regions, known as the Mpumalanga Drakensberg Strategic Water Source Area (Le Maitre et al. 2018), and at an elevation of just over 2300 masl. The highest altitude wetlands in Mpumalanga. Wetlands play a very important hydrological function as sponges of important river systems. The headwaters of the Groot Dwars River occur within the DBNR. These upper catchment streams also play an important role in sustaining the lower river reaches, contributing to the flows of the Olifants River catchment, one of South Africa's most utilized River Systems which flows into Mozambique just after joining the Limpopo River. The exceptionally high quality of water, which is maintained by these wetlands, is of particular significance for the Olifants river catchment, much of which



has been modified by surrounding land uses. It not only plays an important dilution function, but also provides the necessary water quality for maintaining highly sensitive endemic aquatic species (De Castro & Brits, 2022b). The DBNR, Ramsar Site is a biodiversity hotspot due to its exceptionally high species richness. It falls within 4 vegetation types, 2 biomes and two centres of plant endemism. The catchments occurring within the Reserve are classified as Critical Biodiversity Areas or Ecological Support Areas (MBSP 2014) (Lötter et al., 2014) and also classified as a National Freshwater Ecosystem Priority Area (NFEPAs).

The DBNR Reserve represents numerous valley bottom wetlands, seep wetlands and mountain streams and represent some of the most pristine and habitat diverse watercourses in the South African grassland biome. The wetlands that occur here are include marginal sheetrock seep wetlands. Over 70 wetlands occur on the reserve and covers an area of approximately 162 ha (or 12.75% of the study area). Sheetrock seeps wetlands, which are rare in the Steenkampsberg Plateau, are inconspicuous and marginal wetland systems. The peat wetlands occur in the Central Highlands Peatland Ecoregion (Grundling et al., 2017), and form part of a group of peatlands associated with the Steenkampsberg Plateau. It is estimated that the mire at De Berg, which has a peat thickness of close to 1 m, has an inferred peat age of approximately 2 500 years (Grobler 2023).

## 2.2 Criterion 2: Rare species and threatened ecological communities.

The wetlands on DBNR support numerous threatened, critically endangered, and vulnerable species of fauna and flora. A total of 878 indigenous plant species and infraspecific taxa were recorded during a recent survey, this includes 42 plant species of conservation concern, 30 of the plant species of conservation concern are also threatened and near threatened. This comprise 15% of the 200 threatened and near threatened species known to occur within the Mpumalanga Province in an area less than 0.03% the size of the province. Five new species were also identified on the DBNR, and only one of these has so far been described (*Bulbine decastroi*), the other four (*Ledebouria* spp) are currently being described, *Ledebouria* sp. nov. '*altipaludosus*' ined. (De Castro & Brits, 2022a). Mires also contain the carnivorous *Drosera* sp. and *Urticularia* spp. As far as terrestrial vertebrate species are concerned, 641 species were identified. This includes 18 frog species, 71 reptile species, 432 bird species, and 120 mammal species, 82 of these are species of conservation concern.

## 2.3 Criterion 3: Biological diversity

The DBNR supports over 1519 plant and animal species, 3% (47) of these are endemic to the region. The wetlands play a major role in maintaining the genetic and ecological diversity of the Dullstroom Plateau Grasslands, especially since they support many Red Data, protected and/or endemic species. The reserve is mountainous with a significant difference in elevation over 2 km, ranging from approximately 1755 masl at the lowest point to 2332 masl at the highest point, which is also the highest point in the Mpumalanga Province. The large difference in elevation is one of the main reasons for the high diversity in plant communities (De Castro & Brits, 2022a). DBNR falls within the Lydenburg Centre of plant endemism as well as the Sekhukhune Centre of plant endemism. The larger portion of the reserve supports the Steenkampsberg Montane Grassland Community and a small portion to the west supports the Sekhukhune Montane Grassland. There are 42 plant species of conservation concern recorded within the study area, including the Endangered *Bulbine decastroi*, *Morella microbracteata*, *Ledebouria* sp. nov. '*altipaludosus*' ined. and the Near Threatened *Watsonia bella* (De Castro & Brits, 2022a). Mires also contain interesting obligate hydrophytes, such as a carnivorous *Drosera* sp. and *Urticularia* spp. that are adapted to grow and thrive in nutrient poor (oligotrophic) environments, which is common in undisturbed mires and

peatlands (Rydin and Jeglum, 2006).

The wetlands provide suitable breeding habitat for amphibians and macro invertebrates. 18 species of frogs occur on the reserve. Numerous mammal species, including several species of conservation concern such as Leopard, Black-footed cat, Southern Mountain reedbuck, Common molerat, and Hewitt's red rock rabbit occur at the site. Sixteen reptile species can be found, including four species of conservation concern, such as the Spotted dwarf gecko, Southern African rock python, Sekhukhune flat lizard and Common crag lizard. Thirty-three species of birds of conservation concern occur on the reserve, species observed since 2021 were African Finfoot, African Grass-owl, African Marsh Harrier, African White-backed Vulture, Black Harrier, Blue Crane, Denham's Bustard and Grey Crowned Crane.

Fifty-nine (59) diatom species were identified at five sampling sites assessed in the Reserve during February 2022. Four of the five sites were characterized by high biological water quality reflecting near pristine conditions. Endemic species with a preference for high biological water quality were observed. These species are scarce and have only been observed in the upper reaches of high-altitude streams or the upper reaches near the origins of streams where anthropogenic activity is limited (Kotze, 2022).

#### 4. Criterion 4: Support during critical life cycle stage or in adverse conditions

The DBNR high-altitude wetlands, which includes streams and waterfalls, are preferred breeding habitat for the vulnerable Southern Bald Ibis. Flocks of birds were observed grazing in the adjacent grassland and the birds were observed breeding, although a small population, smaller populations were recorded throughout South Africa (Colyn et al 2020). This gregarious species roosts and breeds communally on steep cliff-lines, preferably above water, or waterfalls. The breeding season within South Africa is August to December, with the timing of breeding commencement often correlated to the quantity of burnt grassland available. This breeding colony of Southern Bald Ibis are not yet recorded on the Birdlife South Africa data base, further monitoring of this breeding colony over the long term is required to determine the size of this breeding colony.

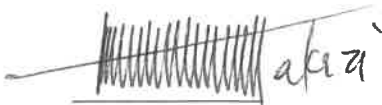
A total of 47 macroinvertebrate families were sampled in the valley- bottom wetlands and seeps and mountain streams within the DBNR between 2020 and 2022. This reflects a relatively high diversity of aquatic macroinvertebrate families and reflects highly diverse aquatic habitats as well as areas with very good water quality. The presence of these intolerant taxa at specific sites indicates excellent water quality in the DBNR.

Fifty-nine diatom species were identified at the five sampling sites assessed in DBNR. Four of the five sites were characterized by high biological water quality reflecting near pristine conditions, while the remaining site was rated as having moderate biological water quality. Endemic species with a preference for high biological water quality were observed. These species, based on the experience of the diatomologist, are scarce and have only been observed in the upper reaches of high-altitude streams or the upper reaches near the origins of streams where anthropogenic activity is limited.

The De Berg Nature Reserve is highly important in terms of biodiversity and water security. A most important factor is that De Berg is adjacent to the Verloren Valei Nature Reserve, Mpumalanga's first Ramsar Site designated in 2001.

If designated as a Ramsar site, it will provide more support and protection to De Berg Nature Reserve and the Verloren Valei Ramsar Site.

Kind regards,



**MR M.H. VILAKAZI**  
**CHIEF EXECUTIVE OFFICER**  
DATE: 18 / 09 / 2023

