

11 April 2019

Att: Tutayi Chifadza  
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Dear Tutayi

**RE: Terrestrial biodiversity associated with the proposed makeup and raw water supply pipelines at the Medupi Power Station, Lephallale, Limpopo.**

By appointment of WSP, the Biodiversity Company (TBC) is in the process of conducting the ecological component (fauna and flora) for the proposed makeup and raw water supply pipelines as part of the Medupi Flue Gas Desulphurisation (FGD) project. The current TBC ecological study was commissioned in support of the Basic Assessment (BA) and Water Use License Application (WULA) processes in line with the National Environmental Management Act 107 of 1998. This letter has been issued in response to a request made by WSP (email correspondence with Bronwyn Fisher, 01 April 2019) following a meeting with the Department of Environmental Affairs (DEA) in March 2019 for TBC to supply feedback on the various preceding specialist studies and whether they adequately encapsulate the current ecological status of the study area.

From an ecological perspective, the Medupi Power Station (MPS) premises has been extensively studied with results presented in several reports by BEC and Natural Scientific Services (NSS). Specifically, with regards to the FGD project, the latest and most relevant report is the NSS (2018) report entitled "*Biodiversity and Wetland Assessment for the FGD Project at Medupi Power Station, Lephallale, Limpopo*". Initially this study focused on the Ash Disposal Facility and surrounding Medupi properties but in 2017 the scope was broadened to include all intact areas within the FGD footprint area as well as within a 500 m radius surrounding this area. This study also incorporated data from previous (BEC) studies as well studies from the nearby Matimba Power Station (NSS, 2013) and, in total, spanned a four year period from 2014 to 2018.

In summary the NSS study provided both a broad overview of the legislative (ecological) and biophysical environment as well as a more site-specific assessment. This involved a detailed account of the site's flora as well as its mammal, bird, reptile, amphibian and selected terrestrial macro-invertebrate communities.

From a regional perspective the nearest National Freshwater Ecosystem Priority Areas (NFEPAs) listed system is the Sandloop (PES= C Moderately Modified) situated 3 km south-west of the proposed pipeline routes. No Threatened Ecosystems occur within the study area, the nearest being the Springbokflats Thornveld. According to the Limpopo C-Plan, the study area is situated within an Ecological Support Area (ESA) with parts of the FGD area (mainly associated with the Sandloop and southern properties) listed as a Critical Biodiversity Area (CBA).

From a floral perspective, four main non-disturbed vegetation communities were identified namely *Senegalia erubescens* - *Grewia* Thornveld, *Senegalia nigrescens* - *Grewia* Open Veld, *Senegalia nigrescens* - *Combretum apiculatum* woodland and *Senegalia* Dominated Wetland Flats. Overall, however, the vegetation on site is described as having a low diversity. Although a number of protected tree species

occur, in this case Maroela (*Sclerocarya birrea* subsp *africana*) and Shepard's Tree (*Boscia albitrunca*), no red data listed floral species were reported for the FGD study area (although one Near-Threatened herbaceous species may occur). Nevertheless, a limited amount of intact habitat still remains (albeit somewhat degraded). In these areas the most noteworthy communities are the *Senegalia nigrescens* – *Combretum apiculatum* dominated woodland and the vegetation associated with the pans and ephemeral washes (particularly those associated with the Sandloop FEPA) which were afforded a Very High and Moderate -High sensitivity respectively.

From a faunal perspective, the report reveals a list of 43 mammal, 158 birds, 20 reptile, 16 frog, 9 butterfly, 2 dragonfly and 1 scorpion species for the greater FGD study area. The report states that several noteworthy species (protected or red data listed) were recorded within the greater FGD study area. These included Serval (*Leptailurus serval*), Brown Hyaena (*Hyaena brunnea*), White-backed Vulture (*Gyps africanus*), Tawny Eagle (*Aquila rapax*), Red-billed Oxpecker (*Buphagus erythrorhynchus*) and African Bullfrog (*Pyxicephalus adspersus*). Additionally, anecdotal reports suggest the presence of Leopard (*Panthera pardus*), Cheetah (*Acinonyx jubatus*), African Wild Dog (*Lycaon pictus*), Spotted Hyaena (*Crocuta crocuta*), Pangolin (*Manis temminckii*), Southern African Python (*Python sebae*) and Nile Crocodile (*Crocodylus niloticus*) within surrounding properties. However, as mentioned in the report, only a very limited number of these species are expected to occur within the fenced FGD footprint area. Here no suitable breeding habitat exists for the regions red-listed raptor species (lack of suitably high trees and disturbance levels likely preclude breeding). Of the various noteworthy mammal species only Serval, Brown Hyaena may occur. Perhaps the most relevant and noteworthy species are African Bullfrog (Protected Species), which occur in notable abundance in the greater area and may potentially occur within some of the pans adjacent to the pipeline routes.

TBC conducted a screening of the area during which the presence of flora species of conservation concern were assessed. Camera traps were placed out to get a general idea of the fauna diversity currently found in the area (Figure 1 and Figure 2) and to substantiate the previous studies. Overall, TBC is of the opinion that the terrestrial work done to date within the FGD project area is up to date and of sufficient detail to adequately represent the terrestrial fauna and flora associated with the proposed FGD makeup and raw water supply pipelines. However, these pipeline routes were not within the scope of the NSS (2018) study and as such were not explicitly surveyed nor were the impacts specifically assessed. Nevertheless, given the alignment of the pipeline routes with existing infrastructure together with the fragmented nature of the site and nature of their installation (predominantly below ground) TBC is of the view that the project is likely to have a low impact significance on local fauna and flora.



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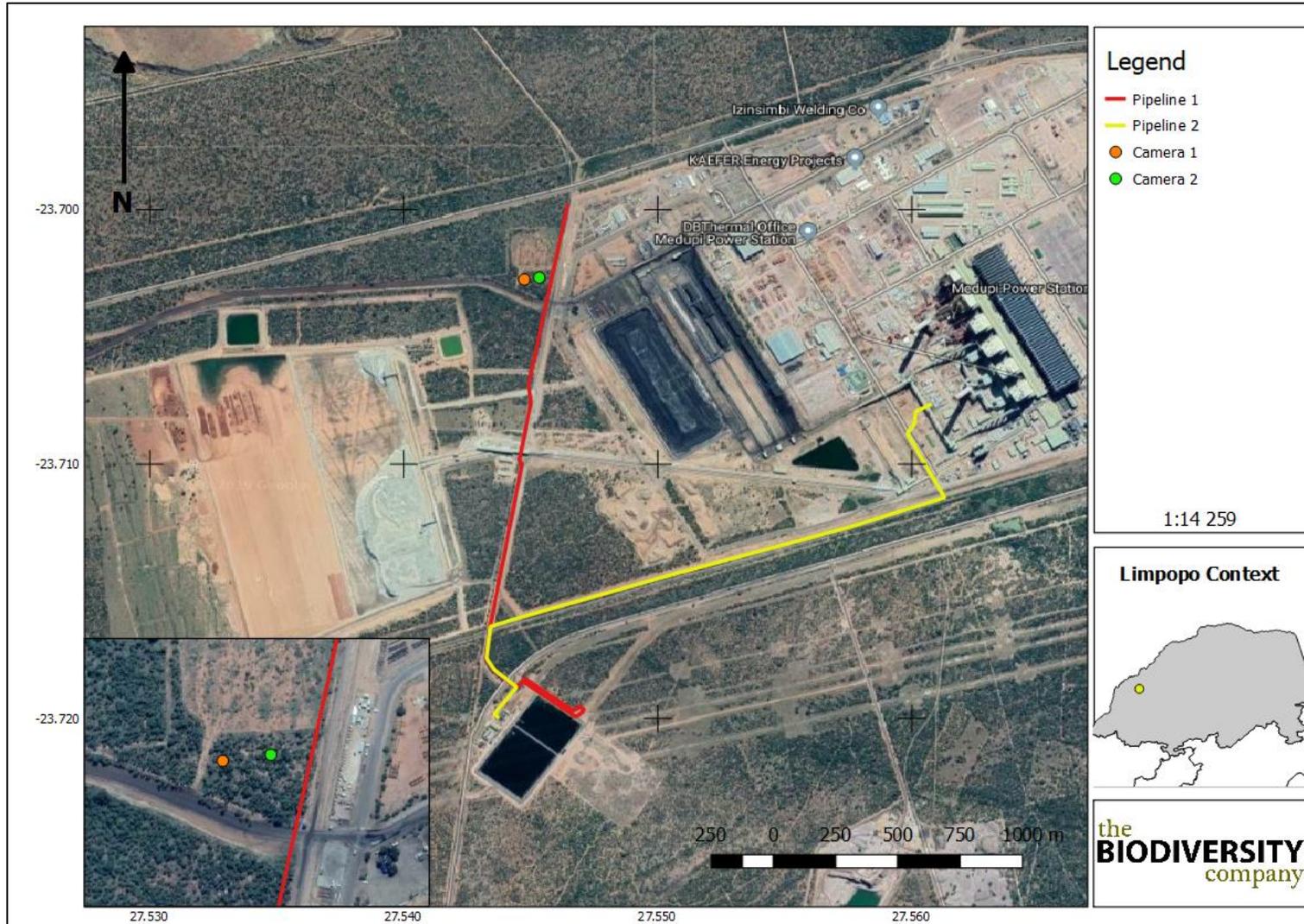


Figure 1: The project area and the position of the camera traps.





Figure 2: Some of the species observed in the project area during the screening of the area: A) Chacma Baboon (*Papio ursinus*), B) Steenbok (*Raphicerus campestris*), C) Domestic cat (it is recommended that a control plan be implemented) and D) Warthog (*Phacochoerus africanus*).

