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Att: Louis-Mari van Zyl
Cape EAPrac Environmental Assessment Practitioners
PO Box 2070, George, 6530

Dear Louis-Mari

RE: REVIEW OF SPECIALIST REPORTS FOR ERF 3122 MOSSEL BAY (HARTENBOS GARDEN ESTATE)

This letter serves as a review of the Botanical, Faunal and Terrestrial Biodiversity assessments undertaken for Erf 3122, Mossel Bay (Hartenbos Garden Estate). The details of the reports are as follows:

1. Dr David J. McDonald, Bergwind Botanical Surveys & Tours CC. May 2023. Botanical Impact Assessment, Erf 3122 Mossel Bay (Hartenbos Garden Estate), Mossel Bay Municipality Western Cape Province.
2. Dr David J. McDonald, Bergwind Botanical Surveys & Tours CC. May 2023. Terrestrial Biodiversity Assessment, Erf 3122 Mossel Bay (Hartenbos Garden Estate), Mossel Bay Municipality Western Cape Province.
3. Jonathan Colville, Terrestrial Ecologist & Faunal Surveys, and Callan Cohen, Birding Africa. 12 May 2023. Terrestrial Faunal Impact Assessment –Hartenbos Hills Garden Estate, Erf 3122, Mossel Bay.

These reports are required to be prepared in compliance with the PROTOCOLS FOR THE SPECIALIST ASSESSMENT AND MINIMUM REPORT CONTENT REQUIREMENTS FOR ENVIRONMENTAL IMPACTS ON TERRESTRIAL BIODIVERSITY, TERRESTRIAL PLANT SPECIES AND TERRESTRIAL ANIMAL SPECIES, according to the requirements of The Environmental Impact Assessment Regulations, as promulgated in terms of Section 24 (5) of the National Environmental Management Act, 1998 (Act No. 107 of 1998), published in GN. No. 320 dated 20 March 2020 for Terrestrial Biodiversity, and in GN. No. 1150 dated 30 October 2020 for Terrestrial Plant Species and Terrestrial Animal Species. As per these Regulations, the approach for assessing sensitivity with respect to Terrestrial Plant Species and Terrestrial Animal Species is in accordance with guidelines described in the latest version of the "Species Environmental Assessment Guideline", available at <https://bgis.sanbi.org/>.

The assessment and minimum reporting requirements of these protocols are associated with a level of environmental sensitivity identified by the national web based environmental screening tool (screening tool).

This review is not an opinion on the sensitivity of the site in terms of these themes, but a review on whether the existing reports adequately address this requirement within the legal requirements for such assessments.

Prior to reviewing these reports, the reviewer (Dr David Hoare) undertook a visit to the site on 8 June 2023 to gain familiarity with ecological conditions on site.

According to the "Protocols", the following applies:

1. The assessment must be undertaken by a specialist registered with the South African Council for Natural Scientific Professions (SACNASP), within a field of practice relevant to the taxonomic groups ("taxa") for which the assessment is being undertaken.
2. The assessment must be undertaken within the study area.
3. The assessment must be undertaken in accordance with the Species Environmental Assessment Guideline.

Dr Dave McDonald, the author of the first two reports, is registered as a Professional Natural Scientist (Reg No. 400094/06) in the field of Ecological Science. He has a PhD in Botany and over 40 years' experience as a botanical consultant. The specialist meets the requirements for undertaking the Terrestrial Plant Species specialist assessment and for the Terrestrial Biodiversity specialist assessment.

Dr Jonathon Colville, the author of the third report, is registered as a Professional Natural Scientist (Reg No. 134759) in the field of Ecological Science. He has a PhD in Zoology and over 14 years' experience in his field. The specialist meets the requirements for undertaking the Terrestrial Animal Species specialist assessment.

For all three assessments, the assessments were undertaken within the study area. Data presented in the reports and in supplementary databases indicate that field data collection for the purposes of undertaking the assessments were collected on site (within the study area) and was collected recently. The specialist studies therefore comply with this requirement. In addition, previous reports on site provide additional data and material that can be used to assess site conditions.

Terrestrial Plant Species and Terrestrial Biodiversity assessment reports

Both reports are compiled by the same author and there is a lot of overlap in the data presented within each report. It is understood that the original study by this author on this site was compiled prior to the implementation of the Protocols and the report was recently split to comply with current reporting requirements.

The reports provide background information to the site, including climate, geology, topography, and soils. They also indicate that there is evidence that extensive parts of the site were previously cultivated, and the author suggests that this was probably in the 1970s or 1980s. Historical aerial photography, accessible on the website of the Surveyor-general, shows evidence of cultivation in 1957. Later aerial photograph dates are inconclusive. On-site evidence (species composition and vegetation structure within these areas) supports the conclusion that large parts of the site were previously cultivated. Details are provided in the report/s and the reviewer agrees with this ecological interpretation.

The author of the report has visited the site numerous times over the years, collected field data each time, and undertaken interpretation of aerial photographs in conjunction with field observations, to interpret patterns seen on site. The author discusses in some detail the methodology used for describing vegetation patterns (in response to comments from Cape Nature). The reviewer agrees that plot-based sampling methods are too time-consuming for impact assessments, and that meander-type plotless surveys are the standard in South Africa and recommended in the Species-Environmental Assessment Guidelines (page 56 and onwards). The field assessment approach is therefore considered to meet required standards.

A detailed review is provided in the report of all previous botanical surveys on the site, including maps of previous track logs and lists of species previously observed on site. The combination of all previous site surveys provides an in-depth analysis of the flora of the site that exceeds the detail that would normally be expected for an assessment of this nature. Based on the reviewers visit to the site, the species composition information provided for the site is realistic.

The author refers to Google Earth imagery dated March 2011 for determining the distribution of historically ploughed areas on site, as well as the history of previous fires on site. The demarcated areas match the patterns seen on site by this reviewer. The author provides a summary of invasive species on site and indicates that they "*are found throughout the study area but not in large numbers or concentrations*". It is agreed that *Acacia cyclops* is the most problematic species, and the reviewer noticed that there were relatively dense concentrations in many of the drainage lines. Overall, the description of the disturbance regime on site is realistic and, in my opinion, a good reflection of patterns seen on site. The conclusion that the areas dominated by renosterbos are secondary vegetation (historically ploughed) is supported.

The author provides a summary of the various regional vegetation descriptions for the site (and surrounding areas) and concludes that the site, at a regional level, is primarily renosterveld, but with a mosaic of other influences. Very detailed information is provided in the report of vegetation observed in different parts of the site, and a final vegetation habitat map is provided. The mapped communities match very well what this reviewer observed on site, and it is therefore considered to be a good description of the vegetation patterns seen on site. It is agreed that the upland parts of the site are secondary vegetation and that the slopes consist of a form of grassy fynbos. It is agreed that the secondary renosterveld has lower biodiversity value and that the fynbos areas have higher biodiversity value.

There is a lot of overlap between the Terrestrial Plant Species report and the Terrestrial Biodiversity report. More specifically, there is mention in both reports of information that is not relevant to the assessment of that theme. Specific information is required within each report for the assessment of that theme, and it is not necessary to repeat all the information in both reports. However, it is assumed that the report-writing history is a factor. The Terrestrial Animal Species report reviewed below is a good example of the current format that is followed for a taxon-specific assessment.

The Terrestrial Plant species assessment report concludes that "*No rare or threatened plant species were found during the survey. The probability of the occurrence of species of conservation concern (SCC) in the development footprint is low due to historical disturbance by ploughing.*" This conclusion is supported by the reviewer and is also consistent with another botanical assessment done for the site by Nick Helme in 2016. However, it must be noted that several rare and/or threatened plant species have been recorded in adjacent properties, and could therefore occur in areas outside of the proposed footprint (areas in a natural state / not previously ploughed), including the following recorded nearby, according to data on iNaturalist:

- *Ruschia leptocalyx* (Endangered).
- *Selago ramosissima* (Endangered).
- *Polygala pubiflora* (Vulnerable).
- *Hermannia lavandulifolia* (Vulnerable, but probably not threatened).
- *Lachenalia sessiliflora* (Vulnerable).
- *Trichodiadema burgeri* (Vulnerable).
- *Delosperma neethlingiae* (Data deficient).
- *Oxalis confertifolia* (Data deficient).
- *Cephalophyllum diversiphyllum* (Near threatened).
- *Gladiolus teretifolius* (Near Threatened).
- *Watsonia aletroides* (Near threatened).

The Terrestrial Plant species assessment section of the report/s does not specifically address the potential occurrence of these species, as suggested in the Species Environmental Assessment Guidelines, nor on habitat that occurs on site that is possibly suitable for these species. There may also be other species in the Screening Tool report that should be considered. Nevertheless, the conclusion that none of these species occur or are likely to occur within the development footprint is supported by all evidence.

The Terrestrial Biodiversity assessment section of the report/s concludes that "*The National Web-based Environmental Screening Tool the terrestrial biodiversity overestimates the sensitivity specifically of the development footprint which has been determined by on-site evaluation and the application of the Site*

Ecological Importance (SEI) equation to have Low Ecological Importance for the habitat and for the multi-taxon, the SEI is Medium." This needs to be unpacked further to understand the viewpoint of the author:

1. The site is mapped in the Screening Tool report as having Very High sensitivity, based on the presence of an Endangered Ecosystem, namely Mossel Bay Shale Renosterveld, as well as CBA1 areas.
2. The on-site assessment has determined that parts of the site consist of historically ploughed areas in which secondary renosterveld has since grown. This secondary vegetation has lower biodiversity value than the original vegetation that would have occurred there.
3. The secondary nature of the vegetation is not consistent with its designation as a CBA1 area, hence the suggestion by the author that it has low sensitivity and should possibly be mapped as an Ecological Support Area instead.

It is important to note that the definition of natural vegetation, according to the National Environmental Management Act, 1998 (Act No. 107 of 1998) is "*vegetation consisting of indigenous plant species occurring naturally in an area, regardless of the level of alien infestation and where the topsoil has not been lawfully disturbed during the preceding 10 years.*" According to this description, the vegetation on site is legally in a natural state, although the ecological value is compromised by the previous soil disturbance due to historical ploughing. However, the potential value of these areas as supporting habitat for population dynamics and/or as Ecological Support Areas is not specifically addressed, especially since any urban development results in edge effects that act some distance from the site of the original disturbance.

Terrestrial Animal Species assessment report

This report is a detailed review of all previous faunal studies undertaken on site, and a comprehensive assessment of flagged species, according to the Screening Tool report. It follows the recommended format in the Species Environmental Assessment Guidelines. The assessment included a detailed site visit in which specific taxon issues were addressed. The report identifies points of agreement related to all the previous faunal assessments done for the site. Of great value in this assessment is the comparison between different themes in terms of sensitivities identified for the site but expressed in terms of the animal species theme.

Key findings of the faunal report include the designation of high sensitivity to the lower lying grassy-fynbos areas, drainage lines and watercourses as important faunal corridors connecting Erf 3122 to surrounding areas of natural vegetation, and the establishment of the butterfly reserve. The upper renosterveld plateau area is given a sensitivity of medium due to the confirmed presence of Denham's Bustard, and a part of the site has high sensitivity due to the confirmed presence of Black Harrier.

A detailed impact assessment is provided that considers different layout alternatives, the preferred alternative from a faunal perspective being alternative 3, which includes local ecological corridors.

The Terrestrial Animal Species report is well structured and reasoned, includes comprehensive review and comparison of previous studies, and makes sensible recommendations.

The following is concluded:

- The specialists are qualified, competent and appropriately registered.
- The conclusions of the reports, based on good field and supporting data collection and interpretation, are supported.
- The assessments comply with the Protocols for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Terrestrial Biodiversity, Terrestrial Plant Species and Terrestrial Animal Species.
- A summary of the findings are as follows:
 - No rare or threatened plant species were found on site within the proposed footprint areas and none are expected to occur there. The footprint areas therefore have low sensitivity with respect to the plant species theme.
 - Although legally defined as natural vegetation, the footprint areas are within historically ploughed areas in which secondary vegetation has developed. The footprint areas therefore have low sensitivity with respect to the terrestrial biodiversity theme.
 - A threatened butterfly species was found on site. Habitat suitable for this species has high sensitivity with respect to the animal species theme. A butterfly reserve has been designed into the assessed preferred layout.

Yours faithfully,



Dr David Hoare
Director