CONSERVATION INTELLIGENCE

postal 16 17th Avenue, Voëlklip, Hermanus, 7200
physical 16 17th Avenue, Voëlklip, Hermanus, 7200
website www.capenature.co.za
enquiries Rhett Smart
telephone 087 087 8017
email rsmart@capenature.co.za
reference LS14/2/6/1/7/4/781-3_dam&cultivation_Bot River
date **24 November 2023**

PHS Consulting
P.O. Box 1752
Hermanus
7200

Attention: Jenna Theron
By email: jt@phsconsulting.co.za

Dear Ms. Theron

Pre-Application Basic Assessment Report for the Proposed Construction and Expansion of Dams and Cultivation on Portion 3 of Farm 781, Erin de Vigne Estate, Bot River
(DEA&DP ref: 16/3/3/6/7/1/E4/4/1346/23)

CapeNature would like to thank you for the opportunity to comment on the application and would like to make the following comments. Please note that our comments only pertain to the biodiversity related impacts and not to the overall desirability of the application.

Project Context

There was previously an investigation into alleged unlawful activities consisting of clearing of indigenous vegetation on the subject property and a weir and pipeline on a neighbouring property to supply water to the subject property. The outcome of the investigation of the clearing of the indigenous vegetation was that this was deemed to be lawful, although CapeNature was not involved in the final determination. The area which was cleared was delineated and was subsequently cleared again before the 10 year period expired where after it reverts back to indigenous vegetation. This area has now been cultivated based on the aerial imagery. The current application is for an expansion of the cultivation areas on the property and water storage for irrigation.

Desktop Information

The majority of the property is mapped as Critical Biodiversity Area 2 (CBA), with patches of CBA 1 and No Natural. The vegetation is mapped as Rûens Silcrete Renosterveld (endangered) in the western and central sections, Western Rûens Shale Renosterveld (critically endangered) in the eastern and north eastern sections and Elim Ferricrete Fynbos (endangered) in the north western corner. There are no natural aquatic features mapped on the site, with the Bot River and associated floodplain wetland located directly to the east of

the property. CapeNature agrees with the site sensitivity verification report in relation to the national web-based screening tool and the specialist studies undertaken.

Botanical Impact Assessment

The botanical impact assessment refers to the SA VegMap mapping as described above, but indicates that most of site would best be mapped as Elim Ferricrete Fynbos (the prevalence of Proteaceae, Restionaceae and Ericaceae species in the species list supports the presence of fynbos), however the soil disturbance across the site over time results in difficulty in determining and delineating the vegetation types that would have been present. Three botanical studies from the previous process can be referred to regarding the historical condition of the site (August 2005 October 2010 and October 2013) and they all indicate that there is/was also Hangklip Sand Fynbos (critically endangered) present on site.

Reference is made to the clearing of vegetation observed on site and historical aerial imagery and the associated lawfulness. We recommend that the Google Earth kmz files indicating the area determined by DEA&DP to have been lawfully cleared should be provided to the botanical specialist as was previously provided to CapeNature, to ensure accurate interpretation of the sequence of events.

The botanical sensitivity of the site is mapped and is based on the levels of disturbance experienced to date, with the low sensitivity areas having been subject to soil disturbance and occupying a large proportion of the site. A relatively large very high sensitivity area is located to the north east with a smaller patch in the south west. These areas are lightly to moderately invaded by alien invasive vegetation. Two small medium sensitivity patches are mapped in the southern and eastern sections which was disturbed many years back and have recovered relatively well. The sensitivity mapping for the very high sensitivity is similar to the 2010 and 2013 botanical reports, although there has been loss of areas deemed to be high sensitivity.

A total of ten species of conservation concern were recorded on site, including two critically endangered species and four endangered species, which adds to the conservation value of the highly threatened ecosystems present which have not been subject to soil disturbance. The previous botanical reports can be referred to in order to supplement the list, although some of these species may have been lost e.g. critically endangered *Erica rhodopis.*

Two alternatives are presented, with the preferred alternative consisting of three cultivation areas in the south and east and the other alternative consisting of a smaller total area in the east. The two dam alternatives both occupy transformed footprints and are therefore not discussed further. Although the preferred alternative occupies a larger area it is fully encompassed within the low sensitivity area, while the other alternative encroaches on both the medium and very high sensitivity areas.

The impact ratings for the preferred alternative for the construction phase is low before and after mitigation, while for the other alternative it is high before and after mitigation. The impact significance for both alternatives for the operational phase is medium before mitigation and low after mitigation. CapeNature agrees with the impact ratings. Therefore, if the preferred alternative is implemented the residual impact will be low for both the construction and operational phases, and according to the National Biodveristy Offset Guidelines, a biodiversity offset is not required. The other alternative would however require an offset. In accordance with the mitigation hierarchy, we therefore agree with the selection of the preferred alternative.

Should the mitigation for the operational phase not be implemented, the impact will be medium significance which requires than an offset is implemented (albeit without the full mitigation hierarchy being followed). It is therefore essential that all of the mitigation

measures outlined in Section 8 of the botanical impact assessment are implemented. This includes the recommendation that the very high sensitivity areas are formally managed as a conservation area in accordance with an environmental management plan (EMP). As discussed in the conclusions, the site can be secured as a conservation area within the CapeNature stewardship programme, which will address the operational conservation management as discussed in Section 8. We therefore recommend that the applicant should contact CapeNature before the next round of public participation to discuss the formal conservation options, including those outside of the CapeNature stewardship programme.

Aquatic and Freshwater Assessment

The aquatic and freshwater assessment confirms that there are no natural aquatic features present on site. The drainage line which was included in the botanical medium sensitivity to the east of the site was evaluated to be artificial as a result of the dam overflow, as the soils did not indicate a wetland. We wish to query if it could still not be considered as a natural ephemeral drainage line (but not necessarily a watercourse in terms of the National Water Act). We further wish to note that one of the endangered plant species referred to above only occurs at this location.

The dam alternatives are assessed for which the preferred alternative entails an expansion of the western dam and a small new dam adjacent to the eastern dam, while the other alternative consists of an expansion of the eastern dam. Both of the existing dams are off stream dams with existing water supply from the weir in the Huiskloof River. The Bot River to the east is identified as a feature of high ecological importance and it should further be noted that the Bot River Estuary is a short distance downstream and is a Ramsar Wetland of International Importance.

It is noted that the aquatic and freshwater assessment indicates that no NEMA listed activities are triggered and a risk assessment is compiled which rates all potential risks as low. The findings and recommendations of the aquatic and freshwater assessment should be used to inform the NEMA process regardless of the listed activities to ensure best practice. It is noted that the potential spill over from the eastern dam entering the Bot River is raised as a minor concern whereas the spill over from the western dam enters an alien infested area. Although not stipulated, it would appear that the western dam associated with the preferred alternative is preferred from an aquatic ecological perspective although impacts associated with both alternatives are within acceptable limits.

The dam engineering report confirms that the water volumes required to fill the dams are within the existing approved limits of water abstraction, however a water use license application (WULA) is required for the storage of water in the dams. It is noted that a WULA is underway, and it must be ensured that the WULA is considered concurrently with the NEMA application in accordance with the provincial operational agreement. We wish to query the dam overflow as reported, as the only time when overflow should be experienced should be during heavy rainfall and not as a result of the inflow from the weir.

Terrestrial Faunal and Avifaunal Species Impact Assessment

A terrestrial faunal and avifaunal impact assessment was undertaken due to the high sensitivity for this theme, which flagged four bird species as high sensitivity. The methodology consisted of a desktop assessment and a three day field survey which consisted of search meanders and acoustic surveys. Species were not only recorded through sightings of individuals but also by signs e.g tracks, faeces. Broad faunal habitats were identified, which are not the same as the

NBA ecosystems, with more focus on structure than floristics, and hence appropriate for fauna. Mammals, birds, reptiles, amphibians, butterflies and grasshoppers were recorded. Five faunal species of concern were recorded consisting of two amphibian species, two bird species and one grasshopper species (only one of which was flagged in the screening tool). A total of 11 mammal, 5 reptile, 5 amphibian, 55 avifaunal, 6 butterfly and 4 grasshopper species were recorded.

The two amphibians recorded were the Cape Flats Frog (*Microbatrachella capensis*), more commonly known as the Micro Frog, listed as critically endangered, and the Montane Marsh Frog (*Poyntonia paludicola*), listed as near threatened. The frogs were both recorded at the eastern dam. It is not confirmed whether the species were recorded using the sound recordings, however this method was targeted towards the amphibians.

We wish to refer to Table 4 which describes the probability of occurrence of species of conservation concern, which is referenced against the habitat preferences of the species. In this regard the artificial dam habitat in an agricultural context present on site does not match well with the preferred habitats of the two species. The Montane Marsh Frog occurs in mountain seep wetlands and the Micro Frog occurs in natural acidic lowland wetlands and is not found in anthropogenic habitats (such as farm dams) (du Preez & Carruthers 2009). Apart from the anthropogenic disturbance associated with the dam, it is located on a shale/ferricrete substrate which would generate a more alkaline run-off. It is however noted that the water which is used to fill the dam is sourced from a weir higher up in the catchment where the water would be more acidic.

Nonetheless, the species records seem unlikely and therefore we request further confirmation and evidence that these species are present, including verification from other specialists. If the presence of the Micro Frog can be confirmed this would be a significant record and increase the conservation value of the site, which will then also include the eastern dam. The report states that Micro Frog record was added to the iNaturalist database, however a search (on 24/11/2023) of all Micro Frog records on iNaturalist for the past two years did not reveal any records for this location or from the specialist. The locality is also a fair distance from the nearest recorded locality and only one individual was recorded calling.

The two bird species of conservation concern recorded are black harriers (*Circus maurus*), listed as endangered, and blue crane (*Anthropoides paradiseus*), listed as vulnerable. The two observations of the black harrier were within the medium-high shrubland, which correlates with the very high sensitivity area of the botanical assessment. Table 4 motivates that the species is unlikely to breed on site due to the lack of wetland habitat, however this species also breeds within shrubland (fynbos and renosterveld) habitat and therefore it is potentially possible that the species could breed within the medium-high shrubland (Curtis *et al* 2004). The blue cranes were observed at the western dam. Although this species occasionally breeds near wetlands or dams, it is not dependent on aquatic habitat. The vulnerable grasshopper species was found within the shrubland habitat.

Figure 24 indicates that suitable habitat for the five faunal species of conservation concern, which includes the two dams and the shrubland habitats. The site ecological importance (SEI) calculations indicate that the dams have a very high resilience as they are easily recreated, however due to the abundance and continued increase in farm dams in the vicinity of these species distributions it should be queried how and why the two amphibians species colonised this dam only. The combined SEI for all three groups of species of conservation concern rates the shrubland as very high, the eastern dam as medium and the remainder as low. The constraints map incudes these habitats in addition to buffers around the blue crane and grasshopper localities. We wish to query the buffer provided for the blue crane but not the black harrier taking into account the discussion regarding the breeding above. In general, we

wish to recommend that the shrubland and dams with buffers should be adequate for the faunal constraints.

The impact assessment rates the preferred alternative as very low significance for the construction phase and insignificant during the operational phase, while the other alternative is medium significance during the construction phase. However, we wish to note that the impact assessment does not include the significance prior to mitigation and after mitigation. Further to this, there is no section of required mitigation. The only mitigation recommended is the avoidance of the medium and very high SEI habitats. The proposed conservation area as discussed above should also be discussed in the faunal assessment.

Other Development on Site

We wish to note that in addition to the dams and cultivation which form part of this application, there are several other activities which have taken place on the property since the start of investigations around 15 years ago, with a number of buildings and associated infrastructure present. We wish to note in particular the buildings around the eastern dam. We wish to query the compliance of these other development components of the site with NEMA and other legislation e.g. municipal planning by-laws.

Conclusion

In conclusion, CapeNature in general does not object to the current preferred layout, however as stated in the botanical assessment, this is subject to the full implementation of all the recommended mitigation measures. We recommend that the applicant should consult with CapeNature regarding the options for formal conservation of the conservation-worthy sections of the site. The other queries and concerns as discussed above must also be addressed. This includes further verification of the threatened amphibians which were recorded on site and associated required mitigation measures.

CapeNature reserves the right to revise initial comments and request further information based on any additional information that may be received.

Yours sincerely

Rhett Smart
For: Manager (Landscape Conservation Intelligence)

cc. Johan Burger, CapeNature

References

Curtis, O., Simmons, R.E. & Jenkins, A.R. 2004. Black Harrier *Circus maurus* of the Fynbos biome, South Africa: a threatened specialist or an adaptable survivor? Bird Conservation International 14: 233-245.

du Preez, L. & Carruthers, V. 2009. A Complete Guide to the Frogs of Southern Africa. Struik Nature, Cape Town, South Africa.