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reference SSD14/2/5/1/7/3/Dam_Weir_Riviersonderend
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EnviroAfrica
P.O. Box 5367
Helderberg
7135

Attention: Inge Erasmus

Dear Ms. Erasmus

Application for Sangasdrift Trust Dam Development on FA 394/3 and FA 394/5, and Existing Weir Rehabilitation on FA 234/Re, Riviersonderend (DEA&DP Ref No.: 16/3/3/2/E3/10/1005/17)

CapeNature would like to thank you for the opportunity to comment on the application. In addition to CapeNature's comments to the post-application scoping report and plan of study (October 2017), we would like to provide the following comments. Please note that our comments only pertain to the biodiversity-related impacts and not to the overall desirability of the application.

The application is for the rehabilitation of an existing weir, development of a dam, laying of a pipeline between the weir and dam, and development of a parking lot.

Ecological categorisations and protected area status:

According to the Western Cape Biodiversity Spatial Plan (WCBSP 2017), the watercourse and wetland seep at the dam site fall within the following categorisations: (i) Critical Biodiversity Area that is in good condition (CBA1); and (ii) Ecological Support Area that is restorable (ESA2). The pipeline traverses through ESA2. The weir site falls within the Riviersonderend Mountain Catchment Area and is therefore a formally protected area. Additionally, the watercourse where the weir occurs is a channelled valley-bottom wetland and is classified as a National Freshwater Ecosystem Priority Area (NFEPA).

Vegetation:

The vegetation present at the weir site is North Sonderend Sandstone Fynbos, which is least threatened. No species of conservation concern are known to be present near the weir site.

The vegetation present at the dam site is Greyton Shale Fynbos. The botanical specialist referred to Greyton Shale Fynbos as Least Threatened according to the National Environmental Management: Biodiversity Act (NEM:BA), which is incorrect. Greyton Shale Fynbos is endangered due to habitat loss and is nearing the threshold to become critically endangered; therefore, even degraded remnants are important to reach conservation targets.

The botanical specialists for both the weir and dam sites ascribe the degraded status of the sites to the presence of alien vegetation. However, the presence of alien vegetation does not necessarily negate the biodiversity value of the site. Note that in terms of the Conservation of Agricultural Resources Act (CARA 1983) and NEM:BA Alien and Invasive Species Regulations (2014), all landowners are required to implement an alien invasive management plan. From historical satellite imagery, it is evident that the clearing of black wattle *Acacia*

The Western Cape Nature Conservation Board trading as **CapeNature**

Board Members: Ms Merle McOmbring-Hodges (Chairperson), Dr Colin Johnson (Vice Chairperson), Mr Mervyn Burton, Prof Denver Hendricks, Dr Bruce McKenzie, Adv Mandla Mdludlu, Mr Danie Nel, Prof Aubrey Redlinghuis, Mr Paul Slack, Prof Kamilla Swart-Arries

mearnsii has taken place successfully along the watercourse and CapeNature commends the clearing efforts of the landowners in this regard. As the various species of alien trees on site are thinned out, the indigenous vegetation will recover.

Freshwater ecology and fish:

CapeNature generally does not support the development of in-stream dams. According to email correspondence from the engineers, an off-stream dam site was investigated as an alternative, but was declared unfeasible. The email references diagrams that were not made available. The final EIR should contain further evidence that the alternative dam site is unfeasible.

The development will have the greatest impact on the ecological reserve. The ecological reserve is critical to the freshwater ecology and floral and faunal assemblages on site and downstream of the site. Given the current drought situation in the Western Cape, it is important to ensure that the ecological reserve receives sufficient flow. While the application mentions winter-only abstraction, this is difficult to monitor; therefore, an engineered solution must be implemented to prevent complete shut-off of the valve. Since the tributary flows into the Sondered River, which is further constrained by the Theewaterskloof Dam, CapeNature suggests that the applicant provide more information on the anticipated water flow into the ecological reserve during both the dry summer months and the wet winter months according to standards from the Department of Water and Sanitation.

Two freshwater fishes of conservation concern are confirmed present: Cape kurper *Sandelia capensis* and Cape galaxias *Galaxias zebratus*. Both taxa are listed by the IUCN as Data Deficient due to taxonomic uncertainty. To clarify this uncertainty, both taxa are being split into several unique lineages, with the exact range and extent yet to be determined. The Eksteenskloof populations of both taxa are likely to be range-restricted to the Riviersonderend catchment of the greater Breede River system. Presently, no non-native predatory fish species pose a threat to these populations. Therefore, both taxa appear to be viable and are high conservation priorities.

The dam is proposed to coincide with watercourse 2, which is seasonal and the freshwater fish specialist recorded no freshwater fish. The existing weir in watercourse 1 will not affect movement of fish populations. If there is sufficient flow into the ecological reserve, the impacts on the fish populations are likely to be low.

The SASS findings were based on a single assessment. Ideally, several SASS assessments should be conducted both at the weir and downstream of the weir in order to draw general conclusions.

Nut orchards and vineyards:

According to satellite imagery, the proposed nut orchards and vineyards on FA 394/5 appear to have been previously transformed for cultivation and therefore would avoid triggering an additional NEMA listed activity i.e. Listing Notice 3, Activity 12 for removing endangered vegetation. If this is the case, the applicant is required to provide indisputable evidence that cultivation has taken place within the last ten years.

WCBSP categorisations:

To address the concerns of the botanical specialist who undertook the dam site assessment, it should be noted that the Marxan models that were used to create the WCBSP maps were built on robust data and rigorous testing methods outlined in the WCBSP Handbook. However, should applicants wish to query the WCBSP's categorisation of any site, indisputable evidence must be provided so that CapeNature can review the specific case. In the rare event that there was an error in categorisation, it is logged on a database for possible inclusion in the next WCBSP that is set to be published in 2021. Changes to current categorisations are not possible.

As laid out in the WCBSP Handbook and in CapeNature's previous comments, CBAs include areas that are required to meet biodiversity targets for species, ecosystems or ecological processes and infrastructure. ESAs play an important role in supporting the functioning of protected areas or CBAs, and are often vital for delivering ecosystem services. ESAs include

areas such as water source and recharge areas, and riparian habitat surrounding rivers or wetlands. The desired management objective of ESA2 is “restore and/or manage to minimise impact on ecological infrastructure functioning; especially soil and water-related services” (WCBSP 2017). Therefore, the ESA2 classification of the watercourse on site is valid regardless of its degraded state. Even if there is minimal natural habitat, the watercourse still provides ecological infrastructure that supports ecological services. The restoration of the watercourse would include the clearing of alien vegetation and rehabilitation of indigenous riparian vegetation, which is in line with CARA and NEM:BA as stated above.

Recommendations:

CapeNature is in support of the recommendations presented in the botanical, freshwater ecology and freshwater fish specialist reports for the weir and dam sites. In general, CapeNature supports the EMP and in addition, suggests that the following are also included:
Vegetation and freshwater:

- Water flow into the ecological reserve must be implemented and adhered to as it is critical to the ecology of the region. To ensure this, the valve must be designed to prevent a complete shut-off.
- No non-native fish species may be stocked in the dam, which could increase invasion risk into the watercourse.
- Efforts must be made to relocate fish out of the construction footprint to upstream areas to minimise mortality during the construction phase
- Construction material should be certified free of invasive alien plant seed to prevent infestation in the watercourse.

Pipeline:

- The pipeline trench should be dug by hand to avoid any unnecessary pollution and destruction of vegetation from heavy machinery.
- The working buffer on either side of the pipeline can be reduced from the proposed 5 m to 1 m, thereby reducing the footprint from approximately 3 500 m² to 750 m² along the 350 m length of pipeline.

Fire:

- No intentional fires shall be burned on site. Fynbos is a fire-driven ecosystem. Coupled with the alien tree infestation, the site may have a high fire risk. All vegetation that will be removed must be transported off-site for disposal.

Conclusion:

CapeNature does not object to the application under the condition that the recommendations given above and in previous comments (October 2017), are followed. However, the final EIR must provide further information on the ecological reserve, the alternative dam site, and the findings of further SASS assessments upstream and downstream of the weir.

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

Yours sincerely



Chanel Rampartab
For: Manager (Scientific Services)