

CONSERVATION INTELLIGENCE

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Guillaume Nel Environmental Consultants
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Attention: Christoff Dippenaar
By email: christoff@gnec.co.za

Dear Christoff

Pre-Application Basic Assessment Report for the Proposed Upgrade of the Trunk Road 28 Section 2 (TR28/2)/R43 between Stanford and Gansbaai, Overstrand (DEA&DP ref. no.: 16/3/3/6/7/1/E2/37/1016/20)

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.

Desktop Information

The project proposal is for the upgrading of the R43 between Stanford and Gansbaai which includes widening, surfacing, improving accesses and upgrading of culverts. The majority of the areas adjacent to the length of the road are classified as Ecological Support Area (ESA – mainly ESA 1 but also ESA 2), apart from the provincial and private nature reserves which are classified as Protected Area, with a Critical Biodiversity Area (CBA) corridor connecting the protected areas. There is also Other Natural Area (ONA) adjacent to De Kelders and Gansbaai.

The vegetation types traversed are Agulhas Limestone Fynbos in the northern third and Overberg Dune Strandveld in the southern two thirds. According to the National Environmental Management: Biodiversity Act (NEM:BA) National List of Threatened Ecosystems (2011), Agulhas Limestone Fynbos is listed as Vulnerable, while Overberg Dune Strandveld is listed as Least Threatened. In the draft ecosystem threat listings for the updated National Biodiversity Assessment (NBA), Agulhas Limestone Fynbos is listed as Critically Endangered and Overberg Dune Strandveld is listed as Endangered due to the updated methodology which is aligned to IUCN ecosystem threat listing.

Watercourses mapped which are traversed by the road are the Mill Stream in Stanford in the north and a watercourse in the south adjacent to Walker Bay Nature Reserve. Due to the

dune field in the central and southern sections, many watercourses dissipate when they reach the dunes. There is a channelled valley bottom wetland associated with the Mill Stream according to NFEPA, with no other NFEPA wetlands mapped along or adjacent to the road. The Mill Stream flows into the Klein River Estuary a short distance downstream of the R43 crossing.

Botanical Assessment and Rehabilitation Report

A botanical assessment was undertaken for the application, which has accurately reported on the desktop information as described above, apart from stating that Overberg Dune Strandveld is Critically Endangered in the draft 2018 ecosystem threat assessment (should be Endangered). The two national vegetation types have been broken down into seven finer scale habitat types and mapped. One of the habitats is “milkwoods”, although this entailed the mapping of individual White Milkwood (*Sideroxylon inerme*) trees rather than the mapping of milkwood thicket or forest (which is present in the area but not adjacent to the road). The purpose of the mapping is that this species is protected in terms of the National Forest Act and CapeNature Ordinance and removal should be avoided as far as possible and permits obtained where this cannot be avoided.

Several Plant Species of Conservation Concern were encountered, all within the Proteaceae, within the lower threat levels of Near Threatened and Vulnerable. Of note is the presence of *Leucadendron galpinii*, which is only found from De Hoop to Mossel Bay¹² and therefore this occurrence is outside of its recorded range. This could therefore be an extension of the recorded range or another likely explanation is that this species could have been sited in the rehabilitation of the road reserve following previous road upgrades or maintenance, particularly since this occurrence is within the town of Stanford. *Felicia echinata*, while listed as Least Concern, has a natural distribution range from Mossel Bay to Port Alfred³, and has been noted to be invasive in areas where planted west of its natural range⁴. Its presence is also likely to be due to planting rather than a natural occurrence.

The season in which the fieldwork was undertaken must be taken into consideration, as this is a sub-optimal time of year (February) for the Western Cape as many of the geophytes and annuals are only evident in late winter and spring, therefore it is likely that there are additional Plant Species of Conservation Concern that could be affected by the proposed road upgrade. It is therefore recommended that an additional botanical spring survey undertaken to identify any species present which are not evident or identifiable when the February fieldwork was undertaken.

The botanical assessment report indicates that in general the infestation of alien invasive trees along the road is low, particularly considering that alien invasive vegetation is one of the most significant threats the two vegetation types present and the primary reason for the elevated threat status according to the draft 2018 NBA, due to the threat to Species of Conservation Concern. The areas where there are higher number of alien invasive species are at the northern end near Stanford and the southern end adjacent to De Kelders and Gansbaai.

A rehabilitation report has been included as an appendix to guide the rehabilitation following construction. The botanical assessment strongly emphasised in the conclusion that no species, plant material and seed from areas outside the study area must be introduced to the study area and that for rehabilitation, each habitat must be revegetated using species sourced from

¹ Rebelo et al (2005)

² Rebelo (2001)

³ <https://www.theplantlibrary.co.za/plants/Felicia-echinata>

⁴ <http://kogelberg-botsoc.co.za/Blog/index.php/2015/10/06/felicia-echinata-is-taking-over/>

each site. This has been incorporated into the rehabilitation report and must be strictly adhered to. The areas adjacent to the road mostly consist of good condition natural vegetation which could supplement rehabilitation actions through seed dispersal, and introducing foreign material could result in the foreign species dispersing further afield.

In this regard, we wish to refer to the discussion above regarding the species within the road reserve which may have been introduced through previous rehabilitation activities or from the adjacent urban areas. We therefore recommend that the botanical specialist should screen all of the species encountered to only select those which can be confirmed to be of natural occurrence to be included in the rehabilitation programme.

The most important rehabilitation activity is the alien clearing programme which must not only include the construction phase and one year after, but extend into the operational phase of maintenance of the road reserve, and which must entail removal using recognised methods, including application of herbicide.

Freshwater Assessment

A freshwater assessment was undertaken, for which the primary focus was on the culverts for which there are 37 which require either retention of the existing culvert, replacement or a new culvert. The desktop mapping described above has been accurately reported on. The site verification has indicated that the only freshwater features present along the road alignment are those indicated on the NFEPA mapping, namely the Mill Stream and associated wetland which has been referred to as the Natural South Coast Limestone Fynbos Channelled Valley-Bottom Wetland System, which is consistent with the NFEPA classification.

The report provides an account for each of the culverts as referred to above, with photographs for each. Only culverts 1 – 9 are listed as associated with a watercourse, namely the Mill Stream system, with the remainder stated as not being associated with a freshwater feature and therefore their function is related to stormwater drainage from the road.

CapeNature wishes to query the on-site verification of the freshwater features, in particular the wetland delineation according to the DWS guideline. While the report does mention the indicators used to delineate wetlands and riparian zones, there is no evidence that this was used to delineate wetlands. As mentioned above, a valley bottom wetland is associated with the Mill Stream, however the extent of this wetland has not been determined and there is no mention of whether the presence of other wetlands was confirmed using standard methodology such as soil augering to establish the presence of hydromorphic soils. With regards to delineation of riparian zones, it should be noted that CapeNature's freshwater ecologist has queried the assertion that none of the other culverts apart from 1-9 have any drainage lines associated with them.

Further to this, the freshwater feature map on page 14 of the freshwater assessment indicates mapped drainage lines in the vicinity of the road (as referred to in our desktop information above) and confirmation should be provided whether there are freshwater features present, whether riparian or wetland. We further wish to refer to the botanical assessment, which included wetland habitat as one of the fine scale habitats, and apart from the wetlands associated with the Mill Stream system, there was a wetland identified at km 30.906, which needs to be evaluated in the freshwater assessment with regards to any potential impacts as a result of the road upgrade.

With regards to the culverts, the most important aspect which should be evaluated in the freshwater assessment is whether they are adequate in terms of allowing freshwater flow and to minimize impacts on the freshwater ecology. This has not been undertaken.

With regards to the Mill Stream system there have already been ecological assessments undertaken of this system, primarily as the Stanford Eye which is located a short distance downstream from culverts 4 – 9 is the primary source of water for the town of Stanford. The system is located over a substantial intergranular aquifer and as such there is a strong connection between groundwater and surface water features. The Mill Stream hydrological assessment (2017) was undertaken for the Stanford Mill Stream Improvement Project and provides detailed information regarding the hydrology and hydrological condition of the system. There are significant water quality impacts on the system, which impacts on both the water resource and the freshwater ecology, and which do ultimately impact on the Klein River Estuary a short distance downstream. Managing water flow at the location of culverts through appropriate design can address many water quality impacts.

The freshwater assessment has not provided any background to the biota associated with the freshwater features. The botanical assessment has included an evaluation of the plant species present in the wetland habitats, however there is no mention of any fauna in the specialist assessments. The lowland wetlands around Stanford harbour a population of the Western Leopard Toad (*Sclerophrys pantherinus*), IUCN listed as Endangered. There has been monitoring of this species in the Mill Stream system and adjacent areas. Road kills are one of the major threats to this species, as is described in the draft Biodiversity Management Plan (BMP-s) for this species, and has been an important impact to be addressed in other road projects where this species occurs e.g. Noordhoek.

A separate independent faunal impact assessment with particular focus on the Western Leopard Toad is therefore necessary before this application can be considered any further. The faunal impact assessment must also include assessment of the impact of the proposal on any other fauna. The proposed mitigation measures and recommendations of the faunal impact assessment must be implemented and incorporated into the design of the project. Apart from this, there are several deficiencies in the freshwater assessment that must be addressed, as described above.

Additional Land Requirements

An aspect of the project proposal which needs to be addressed relates to the increase in the width of the road reserve in places to accommodate the widening and the earthworks associated with improving the alignment to improve road safety and will require the expropriation of narrow sections of adjacent landowners. A list of the areas which require expropriation have been provided in the Basic Assessment Report in accordance with the distance markers. Detailed design layout plans have been provided to CapeNature upon request indicating the sections which require expropriation.

As mentioned above there are protected areas adjacent to the road, including a provincial nature reserve, namely Walker Bay and three private nature reserves, namely Grootbos, Fairhill and Waterkop. The detailed layout plans indicate that expropriation is required within Walker Bay, Fairhill and Grootbos Nature Reserves.

CapeNature does not support the loss of protected areas. Protected areas are established in order to protect areas of important biodiversity such that it will prevent the loss of biodiversity, as is inherent in the name. Therefore, deproclamation of a valid protected area would be contrary to the purpose of establishing the protected area.

In this regard, the principle applied for the loss of protected area which is validated as contributing to meeting targets for conserving valuable biodiversity, is that a biodiversity offset is required to remedy the impact. There are numerous precedents to refer to in this regard, including applications for new roads or road upgrades. This will need to be evaluated in the context of the size of the area being lost and associated impacts and will need to be aligned to the provincial biodiversity offset guidelines and national biodiversity offset policy. It should be noted that the private nature reserves throughout the Western Cape are currently in the process of being regularised in order to ensure that they are compliant with the National Environmental Management: Protected Areas Act (NEM:PAA). CapeNature should be engaged further with regards to the loss of protected areas and the requirement for a biodiversity offset.

Conclusion

In conclusion, the concerns raised above need to be addressed before this application can be considered further. A faunal impact assessment must be undertaken with a specific focus on the Western Leopard Toad and the freshwater impact assessment must be revised to address the concerns raised. An additional botanical spring survey must be undertaken and the final list for rehabilitation must be approved by the botanical specialist. Further consultation is required with CapeNature regarding the need for a biodiversity offset.

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 (Conservation Intelligence)

cc. Jeanne Gouws, CapeNature

References:

Rebelo, A.G. 2001. Proteas: A Field Guide to the Proteas of Southern Africa. Fernwood Press. Vlaeberg. Cape Town

Rebelo, A.G., Mtshali, H. & von Staden, L. 2005. *Leucadendron galpinii* E.Phillips & Hutch. National Assessment: Red List of South African Plants version 2020.1. Accessed on 2020/06/18 (<http://redlist.sanbi.org/species.php?species=794-53>)