

Appendix E4 – Comments from Cape Nature

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reference SSD14/2/6/1/9/4/29_cemetery_Koelenhof
date 25 March 2019

EnviroAfrica
P.O. Box 5367
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Attention: Vivienne Thomson
By email: admin@enviroafrica.co.za

Dear Vivienne

Revised Pre-Application Basic Assessment Report for the Proposed New Public Cemetery and Memorial Park on the Farm Calcutta 29, Koelenhof, Stellenbosch
(DEA&DP ref. no. 16/3/3/6/7/1/B4/45/1288/17)

CapeNature would like to thank you for the opportunity to comment on the proposed development 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 proposed development.

CapeNature provided formal comment on the background information document and the first draft of the Basic Assessment Report (BAR) for this application. Following on from this a freshwater assessment and a botanical statement have been compiled as recommended in our previous comments.

Freshwater Assessment

A freshwater assessment has been undertaken to follow up on the initial freshwater findings which had delineated the freshwater features on site and a recommended 15 m buffer. The present ecological state of the freshwater features is included in the assessment phase report, with the findings that the watercourse has a PES category D (largely modified) and the mosaic of depression wetlands a PES category E (seriously modified).

The buffer to the watercourse and wetlands was determined to be 15 m as referred to above, with the explanation that this was according to the application of best practice, but does not provide further detail. It is assumed that the WRC Buffer Zone Guidelines for Rivers, Wetlands and Estuaries¹ was used in this determination. According to the guidelines, the minimum recommended buffer zones according to land use (Annexure 16) provides for a minimum buffer of 15 m for cemeteries, which is consistent with the above. CapeNature however wishes to query whether the buffer zone tool contained within these guidelines was used to determine the buffer, or if only the minimum buffer according to the land use was applied.

¹ MacFarlane, D. & Bredin, I., 2017. *Buffer Zone Guidelines for Wetlands, Rivers & Estuaries*, Water Research Commission, Pretoria

The Western Cape Nature Conservation Board trading as CapeNature

Board Members: Prof Denver Hendricks (Chairperson), Prof Gavin Maneveldt (Vice Chairperson), Ms Marguerite Bond-Smith, Mr Mervyn Burton, Dr Collin Johnson, Prof Aubrey Redlinghuis, Mr Paul Slack

In general CapeNature agrees with the findings and recommendations of the freshwater impact assessment. One aspect we do wish to query is regarding the section where the watercourse enters the site which consists of an artificial channel, where it is evident that the upstream flow has been directed to this point. We therefore wish to query whether the best alternative would not be to return the natural flow entering the site and whether this would be a feasible option.

It should be noted that one of the constraints listed is that there is a dense infestation of alien invasive trees which hampered the site evaluation and also likely lowered the water table. The recommendation is that there should be a follow-up site evaluation after alien clearing has taken place across the site during winter/spring. We are satisfied that concerns related to groundwater have been addressed as indicated in previous comments.

Botanical Scan

CapeNature did provide comments on the biodiversity screening study which was not included in the previous version of the BAR, but has been included now. This has now been updated to a botanical scan as recommended. The findings of the additional site survey and study are that there is minimal naturally occurring indigenous vegetation remaining on the site, with the vegetation dominated by alien invasive trees (gums and Port Jackson) and alien grasses. Those species present are mainly common, disturbance tolerant species.

It should further be noted that there is a close correlation between the mapping of the land cover map and the WCBSP map for this site, as included in the botanical scan. It should however be noted that the woodlot covered the whole site based on the historical Google Earth imagery, however we do wish the applicant to confirm this.

It must however be noted that the site survey was undertaken in a non-optimal time of year, in particular for this vegetation type whereby many of the species present, including a high number of threatened species, are ephemeral and/or are only identifiable in late winter/spring. We have recommended in our previous comments that a site survey in August/September is required and this remains relevant. It should be noted that there are several records of highly threatened species within the direct vicinity of the site occurring on similarly highly degraded properties.

We therefore recommend that a spring survey is still required in order to ensure that there are no threatened species present. The concerns related to the dense alien infestation as stated above with regards to the freshwater assessment are also relevant for the terrestrial biodiversity whereby access across the entire site is restricted and it should further be noted that there may be species that only germinate once the alien cover is removed as the shading effect may be inhibiting growth. The botanical specialist should then make appropriate recommendations following the spring survey.

Development Proposal

The proposed site layout has been revised from the version included in the previous BAR. The previous layout indicated what appeared to be smallholdings to the west of the watercourse about which we had raised concerns. The comments and response report has been indicated that the smallholdings was as an error.

The description of the project in the BAR indicates that this area will form part of the public park component of the memorial park proposal. The revised layout plan however indicates that this area would be planted with vineyards and orchards which does not correlate with the project description in the BAR.

CapeNature prefers the option of a public park which can take the form of a combination of restoration of natural habitat and formally landscaped areas. The freshwater features and associated buffers should however strictly be restored to natural vegetation and no infrastructure should be placed in these areas apart from foot bridges and boardwalks.

It would appear that the layout of the cemetery component has been revised to mainly avoid the freshwater features and buffers, however the freshwater features need to be overlaid on the proposed layout as was done for the previous layout version, in order to verify this. One area of conflict is potentially Wetland A as indicated on Figure 18 of the freshwater assessment.

Stormwater management is another important consideration. The BAR provides minimal information in this regard, only indicating the flow will be towards the watercourse and will follow natural contours. A layout plan indicating stormwater and sewage has been provided but only provides a rough indication of the proposal.

The proposal appears to indicate that stormwater will be drained to a termination point at the watercourse and that sewage will be treated within the riparian zone. CapeNature does not support this proposal as this could have an impact on the freshwater systems. The services for the development proposal must be included in the impact assessment and must in particular be assessed in the freshwater assessment. More detail is required regarding the stormwater proposal, including stormwater detention ponds if necessary.

The access road from the R304 is another important component of the development proposal. A proposed access point has been indicated, but the access road has not been included in the development layout plan. The access road could also have impacts and therefore needs to be included in the impact assessment along with the other services, as described above.

Conclusion

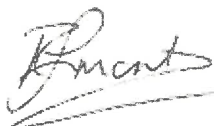
In conclusion, CapeNature recommends that the project proposal again requires further refinement and detail taking into consideration the biodiversity constraints, as was recommended in our previous comments. This must include all components of the development proposal, including services.

The site should be cleared of alien invasive trees, after which a site survey is required to in the optimal months to inform both the botanical assessment (August/September) and freshwater assessment (July/August). As the project is still in the pre-application phase this should be achievable within the project timeframes. Should this not be possible, further engagement is required with CapeNature.

Both the botanical specialist and freshwater specialist should provide responses to CapeNature's comments and an assessment of the final development proposal should be included in both of the revised specialist reports.

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 (Scientific Services)

cc. Dmitri Matthews, Department of Environmental Affairs and Development Planning

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date 19 December 2018

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CapeNature would like to thank you for the opportunity to comment on the proposed development 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 proposed development.

Background Information

CapeNature commented on the background information document for the proposed project in which we provided feedback on the desktop information and commented on the preliminary sensitivity and feasibility studies.

In general CapeNature agreed with the findings of the biodiversity sensitivity study, which identified a watercourse flowing southwards on the western section of the property and hence identified the western section to be excluded from the proposed cemetery development. This correlated broadly with the mapping of the Western Cape Biodiversity Spatial Plan (WCBSP) which mapped the western section of the property as Critical Biodiversity Area 2 and the remainder of the property as Ecological Support Area 2. CapeNature recommended that freshwater and groundwater specialist studies would be required in order to inform the suitability of the site as a cemetery.

Specialist Studies

An initial freshwater assessment has been undertaken, which has delineated the freshwater features on the property in accordance with the standard DWAF methodology (2005, 2008). The alignment of the watercourse on site was more accurately delineated and which follows a meandering course. The only major difference however is in the northern section, where it is evident that there is an artificial channel which has been dug which flows into the natural watercourse channel entering from the property to the north. The initial sensitivity study indicated the watercourse entering from the north west corner.

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Apart from the delineation of the watercourse, five wetlands have been delineated, four of which are associated with the watercourse and the other one adjacent to the R304. Buffers from the wetlands and watercourses have been provisionally provided. The wetland buffer calculations are proposed to be implemented and are estimated to be 20 m. We wish to however recommend that the buffers should be increased for cemeteries as compared to other development types which do not have the same potential to contaminate water sources. Also, the presence of the watercourse on the eastern boundary must be taken into consideration with an associated buffer.

A geohydrological assessment and geotechnical investigation have been undertaken. Although these do not relate directly to biodiversity these constraints would also need to be taken into consideration. Geohydrology can impact on biodiversity, however the findings of the geohydrological assessment indicate that the surface water features are not influenced by groundwater in the vicinity of the site due to the low permeability and water holding capacity of the soils present. It should be noted that the areas proposed as suitable for the development of the cemetery in the geotechnical investigation correlate broadly with the constraints identified in the biodiversity sensitivity study and the initial freshwater assessment.

It should be noted that in the initial biodiversity sensitivity screening study, one of the recommendations was that a botanical specialist scan is required before the site can be considered further. CapeNature agrees with this. A site survey must be undertaken by a botanical specialist in August or September, with a particular focus on locating any threatened plant species and appropriate recommendations should be provided.

Although the habitat on site is highly degraded, there is the possibility of Plant Species of Conservation Concern being present in areas of the site which have not been subject to soil disturbance taking into consideration the high number of threatened species associated with the vegetation type which would have occurred on site. The site history must be taken into consideration, in particular with regards to the planting and invasion of alien invasive species and fire.

Project Proposal

A site concept plan has been presented for the application. It is not apparent that the site concept plan has taken any of the identified constraints into consideration. The project description provided in the Pre-Application Basic Assessment Report does however provide further clarity on the proposal.

The description includes a public park between the watercourse and the R304, whereas the appearance on the site concept plan is that of smallholdings which would not necessarily be supported. A public park would not be objected to however more detail would be required and the biodiversity constraints would need to be taken into consideration.

The "forest zone" is not supported, unless further explained or motivated. CapeNature would not object to an avenue of the existing gum trees as a screen around the development should this be required, however this is a listed alien invasive species and all other individuals must be removed from the site. It should be noted that CapeNature has received the Stellenbosch Municipality's alien clearing annual report for 2016/2017. The subject property is included on the annual plan of operations (APO), however was not included for that year. The site should remain on the APO and the plan should respond to the future proposals for the site.

In general, CapeNature wishes to note that the need for cemetery space is exceptionally high, which has resulted in the need for the municipality wide investigation of options. In this regard, the proposal should attempt to maximise the number of burials per unit area in order to minimize the demand for land for this land use. Alternatives such as cremation should be strongly encouraged and in this regard the columbarium is supported. This should be taken into account in the layout.

The alternatives section refers to Appendices L and M which were the two initial municipal-wide feasibility studies to identify potential sites for cemeteries. These studies are of relevance in this regard, however the alternatives section should summarise the key factors and should as a minimum compare the proposed site with the others considered for the Northern Stellenbosch region. Alternative layouts should also be explored which take into account biodiversity constraints and which attempt to maximize the number of burials per unit area.

The project description has proposed the rehabilitation of the watercourse and riparian area and surrounding areas which will not be developed. This is supported by CapeNature, however these proposals require further detail. The hydrology of the site and surrounding area has been modified and will need to be taken into account, and an attempt should be made to establish a natural drainage system as far as possible.

Conclusion

In conclusion, CapeNature recommends that the project proposal requires further refinement and detail taking into consideration the biodiversity constraints. A botanical spring survey and an updated full freshwater impact assessment assessing the refined development proposal must be undertaken for the next phase of the application.

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

Yours sincerely



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cc. Dmitri Matthews, Department of Environmental Affairs and Development Planning