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9 November 2021

Sillito Environmental Consulting
Suite 105, Block B2, Tokai Village Centre
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Attention: Mr. A. Mader

Dear Anthony

AQUATIC CONFIRMATION STATEMENT: RECOMMENDED ECOLOGICAL BUFFERS FOR THE PROPOSED OAKHURST LIFESTYLE ESTATE ON ERF 8343 AND ERF R/2224, HOUT BAY IN CAPE TOWN

Your request for a confirmation statement on the required ecological buffers or development setback areas adjacent to the watercourses and wetlands for the proposed residential estate development on Erf 8343 and Erf Rem/2224, Hout Bay has reference.

The Bokkemanskloof River, a tributary of the Disa River, bisects the site from south to north and has eroded a deep channel in various parts of the site. The upper to middle reaches of the Bokkemanskloof River crosses the property within a deeply eroded stream channel. Several small tributaries drain the hillside and flow into this stream.

The Present Ecological Status of the upper to middle reaches of the Bokkemanskloof River was deemed to be in a good condition (B/C Category) instream but moderately impacted (C Category) in the riparian zones. The ecological importance and sensitivity of the river is considered to be moderate to high.

Based on the initial freshwater assessments done for the site in 2008 and 2010, the following rationale was provided for the proposed development setbacks along the Upper Bokkemanskloof River on Erf 2224, Hout Bay. There are many reasons for the need for a specified development setback:

1. Dr Gale's report (2008) stipulates that there should be no residences below the 1 in 100-year flood lines and recommends a suitable buffer or development setback be implemented but does not quantify the width.

2. Interested and Affected Parties (Mr. Tim Szöke of Bokkemanskloof Estate), as well as CapeNature, have requested that suitable offsets be outlined.
3. Concerns have been raised relating to the potential erosion problems and stormwater runoff that may result in the channelisation of the river.
4. The Western Leopard Toad assessment recommends the maintenance of a green corridor but has also not quantified the width of such a corridor.

Due to the moderate to high level of sensitivity and ecological importance of the Bokkemanskloof River, as well as its settling within a steep slope with a high erosion potential, this stream must be afforded a reasonable level of protection measures. This can best be achieved by providing a sufficiently wide buffer zone along the river.

A buffer refers to a riparian area adjacent to the water body that comprises natural or near-natural vegetation, designed to protect aquatic and riparian areas from the impacts associated with various human activities. Buffers serve to reduce the levels of sediment and pollutants directly entering the rivers and wetlands. A buffer zone should therefore be adopted to protect aquatic habitat from the impacts associated with any proposed development.

As stated in my freshwater review report of 2010, the current policy of the City (Floodplain and River Corridor Management, May 2009) relating to development setbacks is as follows: The determination of ecological buffer widths should be based on an assessment of the ecological condition and importance of the system, where watercourses and wetlands with high ecological condition and importance require a wider buffer than those which have been exposed to considerable modification. **The buffer is measured from the watercourse “top of bank” or outer edge of the wetland and varies in width between 10 m and 40 m for watercourses, and up to 75 m for wetlands.**

The Department of Water and Sanitation also requires that any development **below the 1 in 100-year flood line or within 500m of a wetland first obtain their authorization.** These legal requirements have been set based on the recommendations of several specialists involved in the management and protection of aquatic ecosystems.

Based on the above, the recommended buffer for the site was **at least 20 m as measured from the top of bank be established along the Bokkemanskloof River. A buffer of 30 m should be established around the off-channel wetland area, as measured from the wetland edge. A buffer of 10m wide along the smaller tributaries was also recommended.**

The Department of Water and Sanitation’s wetland buffer tool has been utilised to determine the recommended buffers based on the aquatic ecological characteristic, ecological condition and ecological importance and sensitivity of the aquatic ecosystems occurring within the property. The default wetland buffer for the wetland characteristic and desired ecological condition is 30 m. Given the type of development proposed for the site and the recommended mitigation measures, this buffer can be reduced to 15 m, measured from the delineated edge of the wetland edge. Figure 1 provides a Google Earth image with the delineated wetland area within the properties concerned and shows the 15m wetland buffer setback area. Figure 2 shows the recommended buffers overlaid on the proposed development layout for the site.



Figure 1: Google Earth image of the site with the mapped aquatic habitats and the recommended buffer

Appendix A: Qualifications of Specialist Consultant

Name: Antonia Belcher
Contact details: 53 Dummer St, Somerset West, 7130; Phone: 082 883 8055;
Email: toni@bluescience.co.za
Profession: Aquatic Scientist (P. Sci. Nat. 400040/10)
Fields of Expertise: Specialist in freshwater assessments, monitoring and reporting
Years in Profession: 30+ years

Toni Belcher worked for the Department of Water Affairs and Forestry for more than 17 years. During this period she worked for the Directorate Water Quality Management, the Institute for Water Quality Studies and the Western Cape Regional Office and has built up a wide skills base on water resource management and water resource quality for rivers, estuaries and the coastal marine environment. Since leaving the Department in 2007, she has been working in her private capacity and was co-owner of BlueScience (Pty) Ltd, working in the field of water resource management and has been involved in more than 500 aquatic ecosystem assessments for environmental impact assessment and water use authorisation purposes. In 2006 she was awarded a Woman in Water award for Environmental Education and was a runner up for the Woman in Water prize for Water Research.

Professional Qualifications:

- 1984 Matriculation Lawson Brown High School
- 1987 B.Sc. – Mathematics, Applied Mathematics University of Port Elizabeth
- 1989 B.Sc. (Hons) – Oceanography University of Port Elizabeth
- 1998 M.Sc. – Environmental Management (cum laude) Potchefstroom University

Key Skills: Areas of specialisation: Aquatic ecosystem assessments, Monitoring and evaluation of water resources, Water resource legislation and authorisations, River classification and Resource Quality Objectives, River Reserve determination and implementation, Water Quality Assessments, Biomonitoring, River and Wetland Rehabilitation Plans, Catchment management, River maintenance management, Water education.

Summary of Experience:

1987 – 1988	Part-time field researcher, Department of Oceanography, University of Port Elizabeth
1989 – 1990	Mathematics tutor and administrator, Master Maths, Randburg and Braamfontein Colleges, Johannesburg
1991 – 1995	Water Pollution Control Officer, Water Quality Management, Department of Water Affairs, Pretoria
1995 – 1999	Hydrologist and Assistant Director, Institute for Water Quality Studies, Department of Water Affairs and Forestry, Pretoria
1999 – 2007	Assistant and Deputy Director, Water Resource Protection, Western Cape Regional Office, Department of Water Affairs, Cape Town
2007 – 2012	Self-employed – Aquatic Specialist
2013 – 2020	Senior Aquatic Specialist and part-owner, BlueScience
2020 – present	Self-employed– Aquatic Specialist

Appendix B: Declaration of Independence

I, **Antonia Belcher**, as the appointed specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that I:

- in terms of the general requirement to be independent:
 - other than fair remuneration for work performed/to be performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
 - ~~○ am not independent, but another specialist that meets the general requirements set out in Regulation 13 of GN No. 326 have been appointed to review my work (Note: a declaration by the review specialist must be submitted);~~
- in terms of the remainder of the general requirements for a specialist, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- have disclosed/will disclose, to the Applicant, the Department and registered interested and affected parties, all material information that have or may have the potential to influence the decision of the Department or the objectivity of any report, plan or document prepared or to be prepared as part of the application;
- have ensured/will ensure that information containing all relevant facts in respect of the application was/will be distributed or was/will be made available to interested and affected parties and the public and that participation was/will be facilitated in such a manner that all interested and affected parties were/will be provided with a reasonable opportunity to participate and to provide comments;
- have ensured/will ensure that the comments of all interested and affected parties were/will be considered, recorded and submitted to the Department in respect of the application; and
- am aware that a false declaration is an offence in terms of Regulation 48 of the NEMA EIA Regulations, 2014 (as amended).

Date: 9 November 2021

Signature of the specialists: 