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TERMS OF REFERENCE FOR AQUATIC SPECIALIST ASSESSMENT

THE PROPOSED EXPANSION OF THE EXISTING "GOUE AKKER" CEMETERY IN BEAUFORT WEST

1. INTRODUCTION

Sharples Environmental Services cc (SES) has been appointed as the independent Environmental Assessment Practitioner (EAP) to conduct the Environmental Impact Assessment process for the proposed cemetery expansion and requires specialist aquatic scientist input.

1.1 Location and background

The proposed site is situated southbound in the town of Beaufort West, that lies in the Central Karoo District Municipal area. The graveyard site can be accessed from the national road N12 via the Blyth street turnoff (Figure 1). GPS coordinates: S 32°22'47.08", E 22°35'24.60".

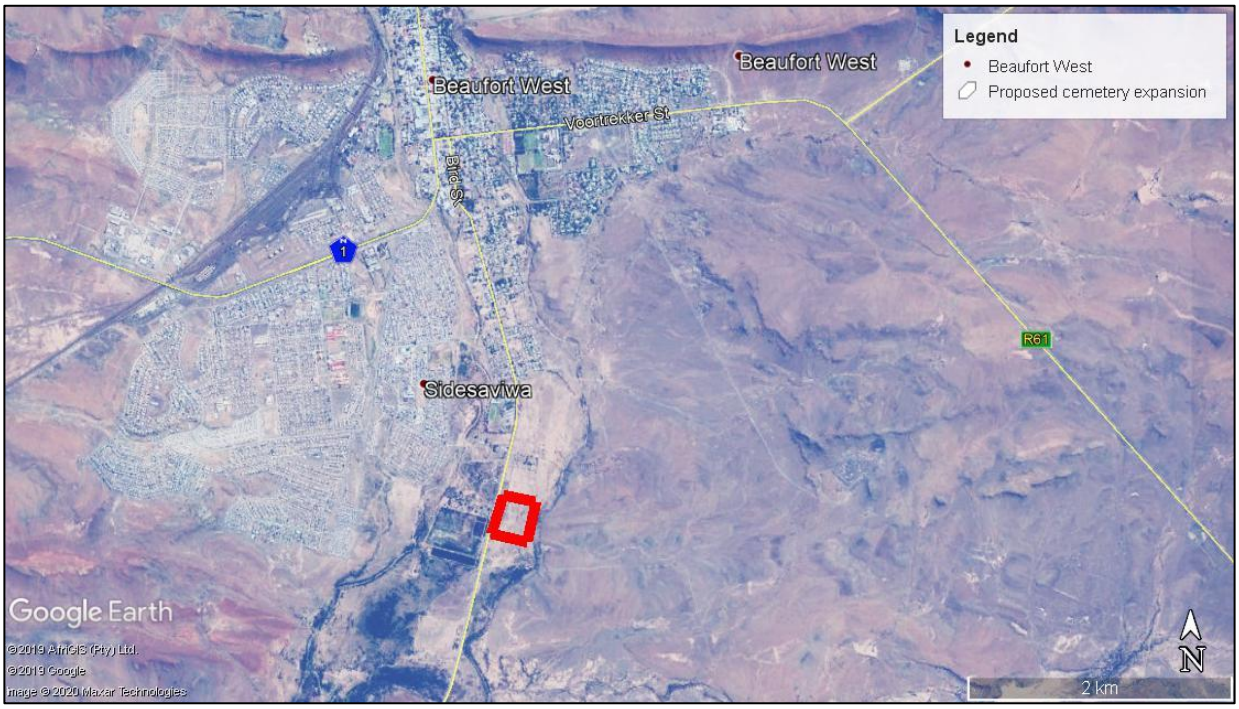

Figure 1: Locality map for the site and surrounding area

There are currently five (5) existing cemetery sites in Town namely Beaufort West Eastern Cemetery, Beaufort West Central Cemetery, Botha Street Cemetery, "Goue Akker" North Cemetery and the "Goue Akker" Cemetery. The Municipality has identified an imminent shortage in future available burial space and that the existing cemeteries are near reaching their full capacity. It is estimated that the grave site at the "Goue Akker" cemetery currently has 691 burial space. The average monthly funerals are 41, leaving the "Goue Akker" cemetery with a capacity of approximately 16 months thus giving purpose to the urgent expansion of the cemetery. The Municipality have identified vacant land next to the existing "Goue Akker" cemetery for expansion purposes.

The existing informal roads on the proposed cemetery land are not sufficient to accommodate regular traffic. New gravel roads need to be constructed in line with the proposed site's layout. Currently there are no existing facilities on the proposed site. The site will need to have caretaker facilities (for equipment storage) as well as ablution for people attending funerals. The exact location and level of service of these proposed facilities will be determined during the site planning and layout study.

Currently the forecasted is that 16 months of available cemetery space is available in the town of Beaufort West before the existing cemetery reaches its full capacity. The proposed expansion of the existing cemetery will provide additional capacity of approximately 7 410 no. additional burial spaces and with a growth rate of 3% per annum will provide sufficient space for the next thirteen (13) years after the existing site has reached its capacity. The community of Beaufort West desperately needs additional capacity to bury their relatives.

2. SPECIALIST INVOLVEMENT

The purpose of this study is to conduct an aquatic status quo and impact assessment of the site to ascertain any aquatic constraints to development and the potential impact thereof. The report should not be limited to this brief. Where the specialist sees the necessity for providing other vital information or investigations, this should be included.
The specialist conducting this study must:

- Be independent and have expertise in conducting similar assessments;
- Have a suitable academic qualification in the aquatic sciences field;
- Be familiar with the assessment criteria commonly used in the EIA Process to assess and evaluate impacts;
- Have good knowledge relating to assessment techniques and to relevant legislation, policies and guidelines.
- Perform the work in an objective manner, even if this results in views and findings that are not favourable to the applicant.
- Consider the DEA&DP's Guideline on Involving biodiversity specialists in the EIA process.

2.1 Terms of Reference

The assessment of the proposal will necessitate specialist input which will need to be undertaken with the Terms of Reference listed below and relevant specialist guidelines. In addition to meeting the requirements of the relevant legislation, the reports should also meet those of the Guideline for Involving Biodiversity Specialists in EIA Processes. The Fynbos Forum Ecosystem Guidelines for Environmental Assessment in the Western Cape, as well as national, provincial and municipal biodiversity and development planning documents must be consulted where available. The specialist must have no financial or other vested interest in the proposed development and must be professionally registered with the South African Council for Natural Scientific Professionals, SACNASP.

Phase 1 (Contextualisation of study area)

- ✓ Contextualization of the study area in terms of important biophysical characteristics and the latest available aquatic conservation planning information (including but not limited to vegetation, CBAs, Threatened ecosystems, any Red data book information, NFEPA data, broader catchment drainage and protected areas).
- ✓ Desktop delineation and illustration of all watercourses within and surrounding the study area utilising available site-specific data such as aerial photography, contour data and water resource data.
- ✓ A risk/screening assessment of the identified aquatic ecosystems to determine which ones will be impacted upon by the proposed development and therefore require groundtruthing and detailed assessment.

Phase 2 (Delineation and classification)

- ✓ Ground truthing, infield identification, delineation and mapping of any potentially affected aquatic ecosystems in terms of the Department of Water and Sanitation (DWAF 2008) *Updated Manual for the Identification and Delineation of Wetlands and Riparian Areas*.

- ✓ Field delineation must follow the accepted national protocol and should result in a map that includes the identified boundary and the field data collection points (which should include at least one point outside the wetland or riparian area), and a report that explains how and when the boundary was determined.
- ✓ Classification of the identified aquatic ecosystems in accordance with the, '*National Wetland Classification System for Wetlands and other Aquatic Ecosystems in South Africa'* (Ollis *et al*. 2013) and *WET-Ecoservices* (Kotze *et al*. 2009).
- ✓ Description of the identified watercourses with photographic evidence

Phase 3 (Aquatic Assessment)

- ✓ Conduct a Present Ecological State (PES), functional importance assessment and Ecological Importance and Sensitivity (EIS) assessment of the delineated wetland habitats, utilising the latest tools, such as:
  - → Level 2 WET-Health tool (Macfarlane *et al*., 2009/2018) – PES
  - → WET-Ecoservices (Kotze *et al*., 2009/2018) and/or the Wetland EIS assessment tool of Roundtree and Kotze (2013). - Functional assessment
- ✓ Conduct a Present Ecological State (PES) and Present Ecological Importance and Sensitivity (EIS) assessment of the delineated river/riparian habitats, utilising:
  - → Qualitative Index of Habitat Integrity (IHI) tool adapted from (Kleynhans, 1996) – PES
  - → DWAF (DWS) River EIS tool (Kleynhans, 1999) - EIS
- ✓ Indicate the Recommended Ecological Category (REC) of the potentially impacted aquatic ecosystems.

Phase 4 (Impact Assessment)

- ✓ Identification, prediction and description of potential impacts on aquatic habitat during the construction and operational phases of the project. Impacts are described in terms of their extent, intensity, and duration. The other aspects that must be included in the evaluation are probability, reversibility, irreplaceability, mitigation potential, and confidence in the evaluation.
- ✓ All direct, indirect, and cumulative impacts for each alternative must be rated with and without mitigation to determine the significance of the impacts.

Phase 5 (Mitigation and monitoring)

- ✓ Recommend actions that should be taken to avoid impacts on aquatic habitat, in alignment with the mitigation hierarchy, and any measures necessary to restore disturbed areas or ecological processes.
- ✓ Determination and mapping of any necessary buffer zones with consideration to the *Buffer zone guidelines for rivers, wetlands and estuaries* (Macfarlane & Bredin, 2016).
- ✓ Rehabilitation guidelines for disturbed areas associated with the proposed project and monitoring.

General

- ✓ Identify legislation and permit requirements that are relevant to the development proposal from an aquatic perspective
- ✓ Complete the Department of Water and Sanitation Risk Matrix.
- ✓ Reference all sources of information and/or data used.
- ✓ Indicate limitations and assumptions, particularly in relation to seasonality.
- ✓ Provide a reasoned opinion as to whether the proposed activity should be authorised
- ✓ Be professionally registered with the South African Council for Natural Scientific Professionals (SACNASP).
- ✓ The specialist and the report must also comply with the following guidelines and legislation:
  - → Fynbos forum. 2016. *Ecosystem guidelines for environmental assessment in the Western Cape*. Cape town.
  - → Appendix 6 of the Amended EIA Regulations, GN No. R. 326 (April 2017).

→ Brownlie, S. 2005. *Guideline for involving biodiversity specialists in EIA processes: Edition 1.* CSIR Report No ENV-S-C 2005 053 C. Republic of South Africa, Provincial Government of the Western Cape, Department of Environmental Affairs & Development Planning, Cape Town.

→ Any national, provincial and municipal biodiversity and development planning documents must be consulted where available (such as Western Cape Biodiversity Spatial Plan 2017).

2.2 Quotation Details

- Kindly provide a written quote for the freshwater impact assessment.
- Please detail a break-down of costs and indicate your availability to commence with the study.
- Kindly make provision in your quote for one round of amendments and printing costs to provide 15 hard colour copies of the final report.

3. EXPECTED DELIVERABLES

An initial draft report covering the above requirements must be submitted to *SES* four weeks after the notice to proceed with above scope of work. The report must be prepared in a suitable font (such as Arial 12) and the format and content must comply with Appendix 6 of the amended EIA Regulations, 2017. The final report (which shall include any reasonable amendments in response to the EAP's comments on the initial draft, if necessary) shall be delivered two weeks after the draft report, assuming the EAP shall have provided comments within a week after receiving the initial draft report. One electronic copy and 15 hard colour copies of the final report must be submitted to the Client/EAP.

We look forward to your quotation.

Kind regards
Debbie Fordham

Sharples Environmental Services cc