

APPENDIX E20 – TERMS OF REFERENCE SPECIALIST STUDIES

a. Aquatic Study

Deliverables from this study will include:

- An assessment of the potential impacts on aquatic systems associated with the proposed project;
- Production of a sensitivity map indicating sensitive aquatic systems including wetlands;
- Permits to be acquired;

Recommendations regarding appropriate mitigation measures for each phase of the project.

b. Ecological Including Flora and Fauna Study

The study will include the following:

- Identification of sensitive habitats and plant communities on the site based on the conservation value of these at national and provincial level;
- A description of the vegetation communities of the study area using standard field-based vegetation survey techniques;
- A floristic (plant) survey conducted during the summer season;
- A list of potential Threatened Plant Species (Red Data Listed) that occur in the study area on the basis of MTPA records. For those species not found in the field, an assessment of the potential for threatened plant and animal species to occur in habitats within the study area will be provided. Recommendations for follow-up surveys will be made where the flowering period of the affected plant species does not co-incide with the floristic survey;
- A list of all plant taxa encountered during the survey, including threatened species (Red Data listed), medicinal species, protected species and endemic taxa;
- A list of naturalized plant species, indicating which are declared weeds or alien invasive species, according to the Conservation of Agricultural Resources Act (Act No. 43 of 1983) as amended in 2001.
- A list of all potential vertebrate species (mammals, birds, reptiles, amphibians) highlighting Threatened (Red Data) species;
- A list of all the vertebrate and invertebrate animal species recorded during the survey ;
- Maps indicating areas of sensitivity for animals, including the location of important species as well as roosting and hibernation sites e.g. caves of ecological importance, in relation to the proposed development;
- A list of threatened animal species that occur on the potential list, but not found during site visits or surveys. In respect of each such species, an opinion of the likelihood of that species occurring in the study area will be provided;
- A list of exotic / introduced vertebrate species occurring in the study area;
- Indication of whether the study area falls within an Important Birding Area (IBA), as indicated in literature on The Important Bird Areas of Southern Africa (Barnes 1998);
- Identification of potential impacts of the proposed development on terrestrial vegetation and habitats of threatened species and recommendation on

- management measures for remaining natural habitats and possible mitigation of impacts
- Permits to be acquired.

c. Heritage Study

To assess the impact on any building older than 60 years or graves impacted on by the proposed development.

The scope of work will consist conducting a Phase 1 heritage survey of the site in accordance with the requirements of Section 38(3) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999). This will include:

- Conducting a desk-top investigation of the area;
- A visit to the proposed development site.

The objectives of the study are to:

- Identify possible heritage, cultural and historic sites within the proposed development areas;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on archaeological, cultural and historical resources;
- Permits to be acquired;
- Recommend mitigation measures to ameliorate any negative impacts on areas of archaeological, cultural or historical importance.

d. Paleontological Study

To assess the impact on any paleontological feature impacted on by the proposed development. This will include:

- Conducting a desk-top investigation of the area;
- A visit to the proposed development site.

The objectives of the study are to:

- Identify possible paleontological features sites within the proposed development areas;
- Evaluate the potential impacts of construction, operation and maintenance of the proposed development on resources;
- Permits to be acquired;
- Recommend mitigation measures to ameliorate any negative impacts on areas of paleontological importance.