



Scientific Aquatic Services

Applying science to the real world

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Attention: T. Naicker

RE: SPECIALIST EXTERNAL REVIEW OF THE BOTANICAL ECOLOGICAL ASSESSMENT COMPILED AS PART OF THE ENVIRONMENTAL AUTHORISATION PROCESS FOR THE NUCLEAR 1 PROJECT, WESTERN CAPE

Scientific Aquatic Services was requested to undertake a specialist external review of the botanical ecological assessment compiled as part of the environmental authorisation process for the Nuclear 1 project by Coastec Coastal and Environmental Consultants, undertaken by Mr Arthur Barrie Low and dated June 2014 (revised February 2011) and an addendum to the report (dated February 2015). The objective of the review was focused on the following aspects:

- Assess the document/ report in terms of its fulfilment of the Terms of Reference set;
- Consider whether the report is entirely objective;
- Consider whether the report is technically, scientifically and professionally credible;
- Consider whether the method and the study approach is defensible;
- Identify whether there are any information gaps, omissions or errors;
- Consider whether the recommendations presented are sensible and present the best options;
- Consider whether there are alternative viewpoints around issues presented in the report and if these are clearly stated;
- Consider whether the style of the report is written so as to make it accessible to non-specialists, technical jargon is explained and impacts are described using comparative analogies where necessary; and
- Report on whether normal standards of professional practice and competence have been met.

The following points highlight the findings of the review

Less attention was paid to formatting and grammatical issues as these have no bearing on the scientific validity and independency of the work done, however where these issues were identified during the review process it was noted and are indicated in the bullets below:

1. Overall the report and addendum is comprehensive and well written and provides detailed description of the alternatives assessed and the author displays intimate knowledge of the subject material;
2. The addendum seems to be a draft report, as such, there are minor typing and grammatical errors. However, this does not detract from the scientific validity of the document.

Assess the document/ report in terms of its fulfilment of the Terms of Reference set and that the report is entirely objective. Consider whether the report is technically, scientifically and professionally credible.

It is the opinion of the reviewer that all aspects as stipulated within the Terms of Reference were comprehensively addressed. Findings and recommendations are based on sound scientific reasoning and information acquired over several years of experience in combination with intimate specialist knowledge of the area. The document can therefore be considered comprehensive, objective and a true representation of the botanical ecological aspects pertaining to each site.

Consider whether the method and the study approach is defensible. Identify whether there are any information gaps, omissions or errors.

All methods employed are academically and scientifically sound and defensible. The approach to the study is deemed comprehensive and no significant gaps, omissions or errors were noted.

It is noted that the assessment and subsequent report writing started in 2007, however several of the IUCN statuses of the flora species identified may have changed, and a review of the status of the species of conservation concern identified during the assessments should be undertaken and the necessary amendments to the reports made.

Exhaustive national and regional desktop information is provided in the report. However, it is recommended that a review of the desktop databases such as those available on the SANBI BGIS webpage is undertaken to determine whether any additional regional or local desktop data is available and the necessary amendments to the reports made.

A comprehensive summary of national and regional legislation pertaining to the study is provided in the report. However, several new amendments and laws, such as the National Environmental Management: Biodiversity Act (Act 10 of 2004): Alien and Invasive Species Regulations, GN R598 of 2014, have been promulgated, and it is recommended that a review of the legislative requirements is undertaken and the necessary amendments to the reports made.

The addendum report (2015) contains no update of the original impact assessment. It is recommended that the report be amended to include an updated impact assessment.

By incorporating the above, it is the opinion of the reviewer that the report would not only be based on expert knowledge of the specialist, but will also incorporate methods considered best practise in the industry. Furthermore, present results can be used as baseline information against which future monitoring results can be compared, providing a long term repeatable overview of impacts which would be defensible.

Consider whether the recommendations presented are sensible and present the best options.

The recommendations set out in the report are comprehensive, finely detailed, sensible and have been fine-tuned by the results of several studies and consultation between the specialist and other stakeholders. Furthermore, the recommendations are pragmatic in nature and are balanced between conservation of botanical resources while still being scientifically sound and defensible.



Consider whether there are alternative viewpoints around issues presented in the report and if these are clearly stated.

The impact assessment allowed for in depth assessment of different layouts of infrastructure as stipulated by the Terms of Reference. The summary provided as part of the impact assessment for each site also gives a clear description of negative and positive impacts that can be expected.

Comparison of impact assessment ratings might be aided with the inclusion of a summary table, in the executive summary, where comparisons of the significance of similar impacts are presented next to each other to aid the summary of each potential impact in the relevant sections. However, this is a recommendation and does not detract from the scientific validity of the report.

Consider whether the style of the report is written so as to make it accessible to non-specialists, technical jargon is explained and impacts are described using comparative analogies where necessary.

Due to the sheer volume of data and the extreme detail of the study, reading the report is, at times, challenging. However, it is evident that effort went into packaging the report in such a way as to make it as accessible as possible to non-specialists (for example including full species lists and detailed supplementary information and datasheets) into appendices. The style of writing is easy to understand and the flow of the document is unforced and logical. The baseline information provides an in depth discussion on the findings and limitations associated with each site. Thus, the report is set out in a logical way, findings and results are easy to interpret and should be relatively easy to understand by the general public.

Report on whether normal standards of professional practice and competence have been met.

Based on the findings of this review, it is the opinion of the independent reviewer that the information presented in this report is comprehensive, extremely accurate and the results are reliable. The impact assessment is considered accurate and the mitigation measures, rehabilitation methods and general recommendations are considered relevant and necessary.

Professional Registration Details

The report was reviewed by Mr. E. van der Westhuizen and the review peer reviewed by Mr. S. van Staden, with credentials presented below.

Both reviewers are members of the Southern African Council for Natural Scientific Professions (SACNASP) (Mr. E. van der Westhuizen Reg. No. 100008/15; Mr. S. van Staden Reg. No. 400134/05) (registered for botany and ecological Sciences, respectively). Mr. E. van der Westhuizen holds a BSc. Honours in Plant Science and Ecology from the University of Pretoria and has more than 8 years' experience in floral ecological assessments for various projects throughout South Africa and also throughout Eastern, Central and West Africa.

Please don't hesitate to contact me should you require clarity about this review or have any other queries.

Yours Faithfully,

Digital Documentation Not Signed For Security Purposes

EB van der Westhuizen

