



**TMG AQUIFER FEASIBILITY STUDY AND PILOT
PROJECT : EXPLORATORY PHASE**

REVIEW OF DRAFT SCOPING REPORT

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For : City of Cape Town, Water and Waste Department

A : Introduction

deVilliers Brownlie Associates were appointed by the City of Cape Town as review consultants to the Table Mountain Group Aquifer (TMGA) Feasibility Study and Pilot Project. This report reviews the Draft Scoping Report prepared by Ninham Shand Consulting Services in July 2004, for the Exploratory Phase of the Study.

We have reviewed the process followed and the scoping documentation produced in terms of the requirements of the EIA Regulations promulgated in terms of the Environment Conservation Act, 1989, bearing in mind the environmental principles given in the National Environmental Management Act, 1998, as well as 'best practice' in environmental assessment in general, and Integrated Environmental Management in particular. We have used the Draft Review Guidelines for Environmental Impact Assessment in the Cape Metropolitan Area¹ as the basis for this review.

Review of the Draft Scoping Report was carried out prior to its release to Interested and Affected Parties (I&APs) for their comment, and prior to public meetings.

The review was undertaken from the following two main perspectives:

- **Legal Requirements**, in terms of the EIA Regulations as contained in R1183 of 5 September 1997 in terms of the Environment Conservation Act, 1989 (Act 73 of 1989), the provisions of the National Environmental Management Act (NEMA), 1998 (Act 107 of 1998), and the National Heritage Resources Act 25 of 1999.

Draft Review Guidelines for Environmental Impact Assessment in the Cape Metropolitan Area, which draw on international standards of Best Practice in EIA, as well as on the requirements of South Africa's Integrated Environmental Management (IEM). These guidelines have been adopted by the provincial Department of Environmental Affairs and Development Planning for reviewing EIA documentation:

1. Adequacy of Terms of Reference, holistic interpretation of "environment", ethical conduct.
2. Adequacy of information provided for decision-making purposes.

¹. Prepared by deVilliers Brownlie Associates in association with Arcus Gibb (Pty) Ltd, the Environmental Evaluation Unit (University of Cape Town), and Sue Lane & Associates for the then Cape Metropolitan Council. November 2000.

3. Clarity of the Final Scoping Report, in terms of – amongst others – presence of a non-technical summary, clear accountability for information, appropriate emphasis, logical progression from section to section, and rational conclusions and recommendations.
4. Adequacy of identifying reasonable alternatives and evaluating them at a scale and level of detail that enables reliable comparison.
5. Adequacy of description of the project and the affected environment, including the need and motivation for the project.
6. Adequacy of ‘contextualising’ the proposal in terms of legal, policy and planning considerations.
7. Adequacy of provision for participation by interested and affected parties in scoping, and due consideration of issues and concerns raised.
8. Adequacy of assessing and evaluating the potential significance of issues and impacts, taking into account indirect or cumulative impacts as well as planned mitigation and management.
9. Adequacy of addressing measures to mitigate negative impacts and enhance benefits, as well as considering assurance for their implementation.

The following documents were read to provide a context for reviewing the Draft Scoping Report:

- Minutes of the first two Key Stakeholder Forum meetings.
- Fliers prepared by the TMGA Alliance for the general public or interested and affected parties.
- TMGA Alliance letter to I&APs notifying them of public meetings in April and May 2004.
- The Background Information Document for the TMGA feasibility study and pilot project.
- Correspondence with the Key Stakeholder Forum (KSF): letter (March and May 2004) to members updating them on the project, notifying them of the next KSF meetings and providing them with the findings of the Preliminary Phase on CD, draft minutes of, and materials used in KSF meetings: September 2003; 22 April 2004.

Please note: This review was prepared in parallel with Ninham Shand’s finalising the Draft Scoping Report, and after discussions as to its findings. It is thus conceivable that the Draft Scoping Report made available to the public could have been revised to address key points raised in the review.

B : Main Findings of Review

1. **Requirements in terms of the EIA Regulations, NEMA and the National Heritage Resources Act**

The Draft Scoping Report for the Exploratory Phase meets legal requirements for scoping, and is consistent with the Plan of Study for Scoping approved by Department of Environmental Affairs and Development Planning (DEA&DP).

The phased nature of this study and the associated agreement with the competent authority, DEA&DP, with regard to an appropriate authorisation process, introduce a challenge to the consultants and stakeholders with regard to the overall environmental assessment process. The challenge is to maintain perspective of the proposed larger scope of the study whilst simultaneously focusing on the potential impacts of a particular phase thereof. By acknowledging the broader issues raised by I&APs about future phases of the study, and indicating how they are to be addressed, the Draft Scoping Report achieves a reasonable balance in this regard.

2. **Requirements in terms of Draft Review Guidelines for Environmental Impact Assessment in the Cape Metropolitan Area:**

In general, the Draft Scoping Report is comprehensive and clear, and reflects a process which satisfies the requirements of Integrated Environmental Management and best practice EIA.

The TMGA study has emerged from a larger process which evaluates alternative water resource options for the City of Cape Town. The study considers and evaluates a number of alternatives sites for the exploratory phase, identifies and addresses the key issues raised by I&APs of direct relevance to this phase, indicates in broad terms how outstanding issues pertinent to future phases are to be addressed, and looks at ways in which potential impacts could be mitigated, primarily through specific siting of boreholes, planning of access roads, and the implementation of sound Environmental Management Plans (EMPs) at project and site-specific level.

The information contained in the Draft Scoping Report is considered to provide a sound and sufficient basis for decision-making purposes on the relatively insensitive sites where residual impacts would not be significant. Recommendations with regard to additional information and investigation needs prior to decision-making for sensitive and highly sensitive sites, to determine appropriate and site-specific mitigation in consultation with key stakeholders, and to evaluate the potential for significant residual impacts, are deemed appropriate.

The review identifies a few **potentially important shortcomings** in the Draft Scoping Report, which are highlighted in bold. These shortcomings should be addressed in revising the Draft. The review also makes a number of comments and suggestions *in italics* with regard to improving the Scoping Report.

2.1 **Terms of Reference, Holistic Interpretation of “Environment”, Ethical Conduct**

The Terms of Reference (TOR) for Ninham Shand, the independent reviewer and specialists are included in the Report. A broad, holistic interpretation of the “environment” is used in the Draft Scoping Report, and appropriate specialists have been used to carry out specific studies relevant to the investigation. There is no indication of unethical behaviour.

2.2 **Adequacy of information**

The information contained in this Draft Scoping Report is considered sufficient as the basis for decision-making on the relatively insensitive sites, albeit that there are a number of uncertainties and gaps in information. These uncertainties and gaps in information are noted in the Draft, and the implications thereof for the study have been adequately addressed where they could be significant. That is, an appropriate risk-averse and

cautious approach has been ‘built in’ to the proposed study to avoid or minimise such consequences or risks through precautionary mitigation measures, involvement of key stakeholders such as (eg Western Cape Nature Conservation Board) in decisions as to optimum siting of boreholes and access roads.

Adequate information on the ecological and geohydrological value and/or sensitivity of target areas is presented. *The social and heritage value of the protected areas, many of which fall within a World Heritage Site, as well as associated impacts (particularly cumulative) of drilling within these areas, are felt to be understated or omitted in places (Sections 2.5 and 2.8 of this review).*

2.3 Clarity of the Draft Scoping Report

As a whole, the Draft Scoping Report communicates effectively.

In places, and of particular relevance in the Executive Summary and Conclusions and Recommendations chapters, the terminology used to describe the sensitivity of the TSSs is confusing: reference is made to “highly sensitive”, “sensitive” and “apparently not sensitive” or “relatively insensitive” categories, as well as to areas mapped as having “high”, “very high” or “extremely high” sensitivity. Terminology should be clarified, since it detracts from an easy understanding of the recommendations arising from this scoping study.

2.4 Reasonable Alternatives

A number of broad site alternatives have been considered in selecting the TSSs. As indicated in the Draft Scoping Report, alternative locations within each TSS would be considered in mitigation of potential negative impacts.

2.5 Description of the Project and Affected Environment

The need for, and purpose of, the proposed project, are covered. A detailed description of the affected environment is given.

With regard to the socioeconomic environment, the fact that many of the TSSs fall within a recently proclaimed World Heritage Site, as well as within protected natural areas, underlines their importance not only with regard to biodiversity conservation, but in the related social spheres of land use, planning, heritage resources, visual aesthetics and sense of place. These linkages should be noted in that they inform the potential significance of impacts.

2.6 Legislative, Policy and Planning Context

The legal and planning context is adequately covered in the report.

The authorisation process agreed to with DEA&DP, the competent authority, presents a number of challenges to the authority, consultants, and interested and affected parties.

- ❑ *Firstly, issues raised by I&APs on the abstraction of water and other impacts associated with the larger TMGA study can’t be addressed in this exploratory phase Draft Scoping Report, and must be ‘carried over’ to the subsequent phase. This approach forces an artificial separation between phases of the project.*
- ❑ *Secondly, the implications with regard to subsequent phases of the project of a positive ROD on borehole locations in this phase of the study are not explicit, although it is stated that authorisation of the pilot phase application by DEA&DP would be contingent upon the findings of the exploratory phase. Exploratory drilling for the purposes of scientific research and monitoring (the subject of this Draft Scoping Report) is likely to be viewed differently from abstraction of water for bulk water supply*

in such TSSs; the agreed on authorisation process effectively de-links the exploratory and pilot abstraction phases.

It is repeatedly stated in the Draft Scoping Report that boreholes would either be capped or decommissioned at the end of the exploratory phase, and sites rehabilitated. Also, that the location of any future pilot well field would not necessarily be limited to those sites drilled during the exploratory phase. However, there is no clarity with regard to the legal process to be followed during subsequent phases should the proponent wish to locate pilot boreholes in new areas. Clarity is needed on this aspect.

- *Thirdly, DEA&DP's decision-making on sensitive sites appears to be based on the submission of Site-specific EMPs for these areas. The use of EMPs for decision-making purposes is believed to be questionable: an EMP is required to manage environmental impacts, and is believed to be appropriate when a scoping exercise and/or EIA has shown reliably that significant adverse impacts are improbable, taking into account planned mitigation. An EMP does not evaluate the potential significance of impacts; it addresses mitigation measures and responsibilities for their effective implementation. In this instance, where there are numerous 'sensitive' areas, the evaluation of impacts has been undertaken in broad terms only, and given the significance of many of the target areas from both a heritage and biodiversity conservation perspective, it is felt that a site-specific EMP would not suffice as a decision-making tool.*

The Draft Scoping Report recommends that an evaluation of the significance of residual impacts on such 'sensitive' areas, taking into account mitigation proposed in the site-specific EMPs, should be carried out as a critical informant to decision-making. Furthermore, where 'highly sensitive' sites are concerned, a more detailed investigation, assessment and evaluation of potential impacts should be conducted. Both of these recommendations are strongly supported, for reasons given above.

2.7 Interested and Affected Party Participation in Scoping

Reasonable and sufficient opportunity appears to have been made for I&APs to participate in the scoping investigation, through newspaper advertisements, radio coverage, letters to I&APs, access to draft reports, and open days / public meetings. For this reason, it is probable that most – if not all – of the key issues associated with this – and future – phases of the study would have been identified.

2.8 Evaluation of Impacts

Issues raised by I&APs with regard to this phase of the study focus on the potential for 'damage to pristine areas' (Chapter 6).

The potential impacts of the exploratory phase are described as "construction phase" impacts (Chapter 8) and therefore are limited in duration and extent, and mostly reversible. For this reason, the Draft Scoping Report states that the significance of residual, broad-scale impacts (ie after mitigation) is expected to be negligible to low in the "relatively insensitive" sites, increasing as ecological sensitivity increases. The potential for significant residual impacts in the sensitive or highly sensitive sites is thus relatively great, and there is a concomitant need for additional investigations to determine the likely significance of impacts. The limitations of the study to date with regard to predicting accurately the impacts of drilling further underline this need.

The Draft Scoping Report does not explicitly evaluate the likelihood of significant impacts in 'sensitive' or 'highly sensitive' sites. However, it recommends a hierarchy of additional information requirements, level of EMP and/or EIA for increasingly sensitive TSSs. These recommendations respond adequately and appropriately to the sensitivities of these sites.

*The possible cumulative impact of exploratory drilling is not addressed. It is noted in Chapter 8 that the actual area of disturbance would be limited to approximately 600m² per TSS, excluding any access tracks extended to the site. However, given that it is anticipated that there could be up to 3 drilling sites per TSS, the potential area of disturbance within each TSS could be substantially greater. **The cumulative impacts on 'sensitive' and 'highly sensitive' TSSs, as well as on particular protected areas, should be addressed when evaluating the residual impacts of proposed drilling, particularly in the light of the Draft Scoping Report's statement that disturbance of affected areas through drilling may result in a loss of integrity of the conservation areas, and that a number of protected areas contain more than one TSS.***

The World Heritage Site status, plus protected area status, of many of the TSSs should inform not only the ecological, but also the social and heritage sensitivity of affected areas. The Draft Scoping Report emphasises and bases the evaluation of impacts on the ecological sensitivity of the TSSs, but underplays the social and heritage values of these areas and impacts associated with the proposed change in land use linked to drilling. It is felt that the social and heritage linkages of these TSSs should be better explored, particularly in the subsequent phase of the study where impacts would be relatively long term, as opposed to short term as in this phase.

2.9 Mitigation

Mitigation of negative impacts is systematically covered in the Draft Scoping Report. Recommendations are made with regard to a Project EMP, Site-specific EMPs for sensitive sites, as well as submission of additional information to DEA&DP together with the Site-specific EMPs to ensure implementation of mitigation measures.