

3. SCOPE OF ENVIRONMENTAL INVESTIGATIONS

3.1. Approach to Undertaking the Study

An Environmental Impact Assessment (EIA) for the proposed project has been undertaken in accordance with the EIA Regulations published in Government Notice R1182 to R1184 of 5 September 1997, in terms of the Environment Conservation Act (No 73 of 1989), as well as the National Environmental Management Act (No 107 of 1998). In terms of Government Notice R1182 (schedule 1), the following listed activities are applicable:

- the construction and/or upgrading of facilities for commercial electricity generation and supply; and
- the change in land use.

The environmental studies for this proposed project were undertaken in two phases, in accordance with the EIA Regulations (refer to Figure 3.1 overleaf):

3.2. Phase 1: Environmental Scoping Study

An Environmental Scoping Study (ESS) has been undertaken for the proposed project. A Detailed Environmental Scoping Study was undertaken for the Poseidon-Grassridge No 2 400 kV Transmission line (Bohlweki Environmental, May 2001) to identify issues associated with a new Transmission line within a broader study area. The proposed third 400 kV Transmission line falls within the same study area considered for this previous study. Therefore, this report formed the basis of the identification of issues associated with the replacement of the existing 220 kV Transmission line with a 400 kV Transmission line between the Poseidon and Grassridge Substations. Only the existing 220 kV Transmission line servitude was considered for the construction of this proposed 400 kV Transmission line, with site-specific alternatives in potentially sensitive areas (e.g. the citrus farms in the Addo area). This existing information was supplemented with specialist and interested and affected party (I&AP) input, where required.

Existing information was used to identify potential impacts (both social and biophysical) associated with the proposed extension to the Grassridge Substation, and to highlight areas which should be avoided in order to minimise these biophysical and social impacts. A public participation process was undertaken to identify issues and concerns of key stakeholders and I&APs.

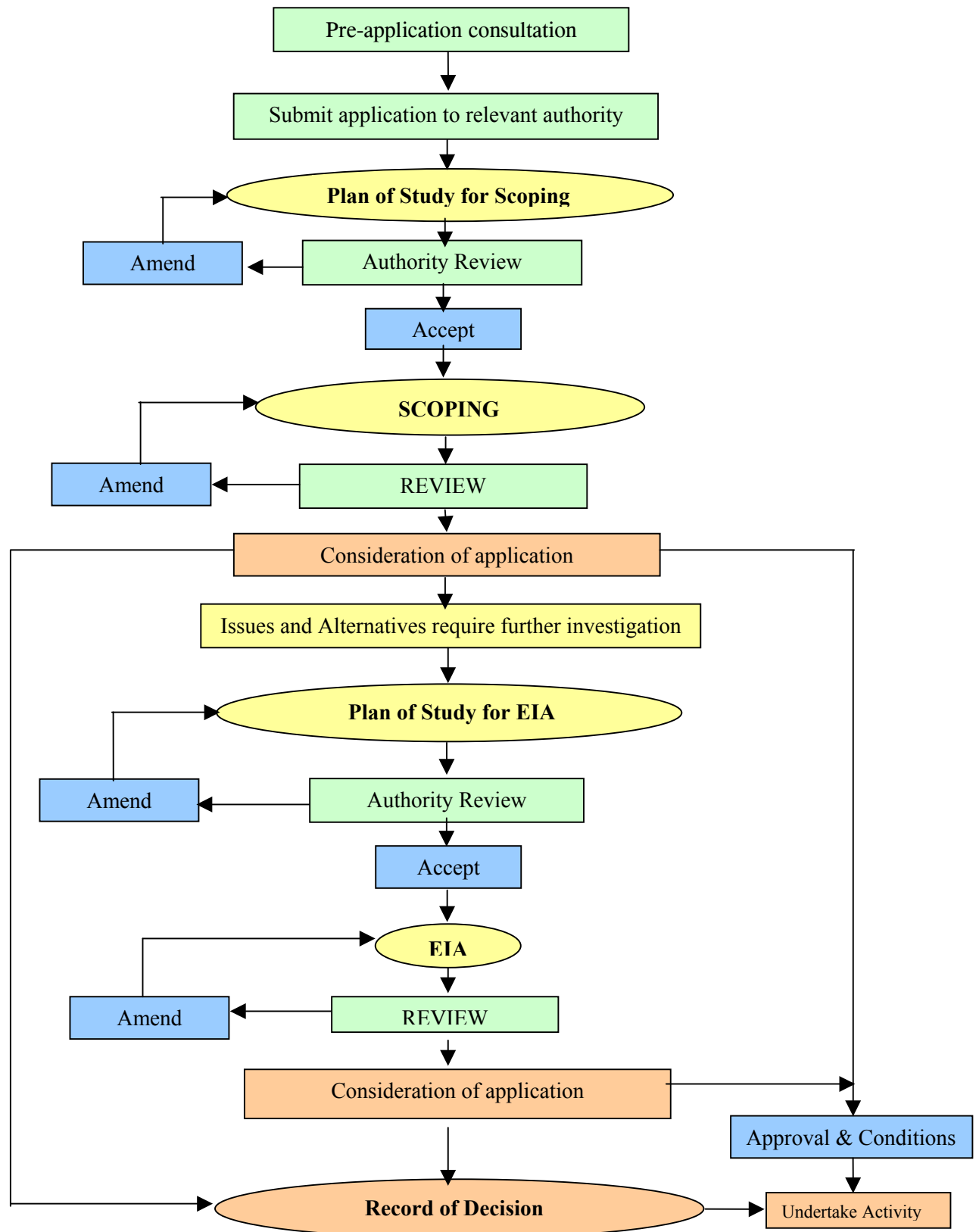


Figure 3.1: A schematic representation of the standard application procedure to be followed to obtain authorisation to commence with a listed activity (DEAT, 1998)

The draft Environmental Scoping Report compiled was made available at public places for I&AP review and comment. All the comments, concerns and suggestions received during the Scoping Phase and the draft report review period were included in the final Scoping Report, which was submitted to the National Department of Environmental Affairs and Tourism (DEAT) and the Eastern Cape Department of Economic Affairs, Environment and Tourism (EC DEAET) for review and acceptance.

3.3. Phase 2: Environmental Impact Assessment

The ESS concluded that there were no environmental fatal flaws associated with the proposed project, but that a number of potentially significant issues required further investigation within an EIA. The primary aims of the EIA study were:

- to undertake a fully inclusive public participation process;
- to assess the significance of negative environmental (biophysical and social) impacts identified during the ESS;
- to identify possible appropriate mitigation measures for potentially negative environmental impacts; and
- to make recommendations regarding the proposed Transmission line corridor and substation site.

3.3.1. Specialist Studies

Based on the findings of the Environmental Scoping Study, the following issues were identified as being of low significance, and therefore not requiring further investigation within the EIA:

- *Potential impacts as a result of climate and atmospheric conditions:* potential impacts of atmospheric conditions on Transmission line and substation infrastructure are not anticipated to be significant. Site-specific mitigation should be addressed during the design of the Transmission line and substation infrastructure, and addressed within an EMP for the maintenance phase.
- *Potential impacts on topography, geology and soils:* potential impacts are anticipated to be localised, restricted to tower positions and access roads, and are anticipated to be of low significance. This potential impact will be further ameliorated through the utilisation of existing access roads to the Transmission line servitude and substation site. Site-

specific mitigation should be addressed within an Environmental Management Plan (EMP) to be completed by Eskom and the necessary specialists.

- *Potential impacts on surface water:* potential impacts are anticipated during the construction phase, and are considered to be of low significance. Site-specific mitigation should be addressed within an EMP.

A number of potentially significant issues were identified within the ESS, which required further investigation within an EIA in order to ensure that potential environmental impacts associated with the proposed project are limited through mitigation. Specialist studies undertaken within the EIA included the assessment of potential impacts on:

- avifauna (bird life);
- vegetation;
- terrestrial fauna;
- agricultural potential;
- archaeological, cultural and historical sites;
- aesthetics and visual quality; and
- the social environment.

3.3.2. *Assessment of Impacts*

In order to evaluate the significance of the identified impacts, the following characteristics of each potential impact were identified:

- the *nature*, including a description of what causes the effect, what will be affected and how it will be affected;
- the *extent*, indicating whether the impact will be local (limited to the immediate area or site of development) or regional;
- the *duration*, indicating whether the lifetime of the impact will be of a short duration (0 - 5 years), medium-term (5 - 15 years), long term (> 15 years) or permanent;
- the *probability*, describing the likelihood of the impact actually occurring, indicated as improbable (low likelihood), probable (distinct possibility), highly probable (most likely), or definite (impact will occur regardless of any preventative measures);
- the *significance*, determined through a synthesis of the characteristics described above and can be assessed as low, medium or high; and
- the *status*, which will be described as either positive, negative or neutral.

3.3.3. Assumptions and Limitations of the Study

The assumptions and limitations on which this study approach has been based include:

Assumptions:

- All information provided by Eskom Transmission and I&APs to the Environmental Team was correct and valid at the time it was provided.
- The Eskom Planning Team will be in a position to consider site-specific alternatives identified through the environmental studies.
- It is not always possible to involve all interested and affected parties individually. Rather, every effort has been made to involve as many broad base representatives of the stakeholders in the area. An assumption has, therefore, been made that those representatives with whom there has been consultation, are acting on behalf of the parties which they represent.
- Eskom hold a registered servitude upon which the existing 220 kV Transmission line is constructed, and affected landowners understand the implications of this servitude on their property.
- The definition of a centre line is the final adjustment to the servitude, done by land surveyors setting it out on the ground using helicopters;
- Eskom will undergo a negotiation phase with landowners.
- The new Poseidon-Grassridge No 2 400 kV Transmission line will be constructed and commissioned prior to the decommissioning and dismantling of the existing 220 kV Transmission line, in order to ensure no interruption in the power supply to the Greater Port Elizabeth area.

Limitations and concerns:

- Digital and hard copy map data (1:50 000 maps) has not been updated with the most recent developments in the area.
- The visibility maps that have been developed are based on topography only. Therefore, what they represent is the worst case. In reality, the intervening objects, such as buildings, fences or vegetation, will at times block views of the site from external viewers.

- Decisions taken regarding the alignment of the Poseidon-Grassridge No 2 400 kV Transmission line may influence the final position of this third 400 kV line, and thus the final alignment may deviate from the registered servitude in some instances.

3.3.4. Overview of the Public Participation Process Undertaken within the EIA Phase

Public Participation plays an important role in the undertaking of environmental investigations, as I&AP input ensures all potential environmental issues (biophysical and social) associated with the proposed project are considered within the EIA. The aim of the public participation process was to establish efficient communication channels which would provide all I&APs with the opportunity to participate meaningfully in the process. The public participation process was on-going from the ESS phase, and aimed to:

- keep I&APs fully informed about the proposed recycling of the existing 220 kV Transmission line servitude and construction of the proposed extension to the existing Grassridge Substation, as well as the EIA process being followed;
- provide further opportunity to all I&APs to exchange information, and express their views and concerns;
- obtain the contributions of I&APs and to ensure that the issues and concerns raised are understood and fully documented; and
- focus the EIA on relevant issues.

In order to ensure an effective, appropriate, transparent and legitimate public participation process, the following principles were applied:

- Due consideration of site-specific alternatives (especially those raised through the public participation process).
- Meaningful and timeous participation of I&APs.
- Consideration of “due process”.
- Focus on issues relevant to the project, and considered important by I&APs.
- Inclusion of the needs, interests and values expressed by I&APs in the information provided to decision-making Authorities.

- *I&AP Consultation:*

The I&AP database compiled during the public participation process undertaken for the Detailed Environmental Scoping Study for the Poseidon-Grassridge No 2 400 kV

Transmission line (Bohlweki Environmental, 2001) was used as a basis for the identification of I&APs within the study area. In addition, a deeds search was conducted by Eskom in order to identify landowners along the existing 220 kV Transmission line. This I&AP database was updated throughout the duration of the EIA process, and is included within Appendix C.

In order to identify issues of concern, the public participation consultant travelled the route of the proposed Transmission line to meet with landowners. Where available, the landowners were personally spoken to and informed about the project and their issues and/or concerns noted. Meetings were also held with key stakeholders in the area, such as local councils, South African National Parks (SANParks), and farmer's associations. In addition, various telephonic discussions were held with I&APs to inform them of the proposed project and to note their comments and concerns.

Although the EIA process is independent of the process followed by Eskom, a small overlap does exist between the EIA process and the landowner negotiation process (further discussed in Appendix A). The EIA process identified and recorded landowners' details within the study area, as well as issues and concerns raised. Some inconsistencies between information received from the deeds office (in terms of farm portions, names and numbers) and that provided by I&APs were noted.

I&APs had access to a project website throughout the duration of the project (http://www.eskom.co.za/about/environment/eia_content.html). This website allowed for new I&APs to register onto the project database online.

Issues and concerns raised during EIA process formed the basis of the social impact assessment undertaken as part of this EIA (refer to Appendix D for the Social Issues Trail).

3.3.5. Public Review of Draft Environmental Impact Assessment Report

The draft Environmental Impact Assessment Report is available for public review at the following locations:

- Main Library (Central), Port Elizabeth
- Port Elizabeth Newton Park Library

- Fitzpatrick Library, Addo
- Sundays River Citrus Co-op (SRCC)
- East Cape Agriculture Co-op (Oos Kaap Lanbou Kooperasie), Golden Valley
- Middleton Hotel
- Langenhoven Library, Somerset East
- Oos Kaap Landbou Kooperasie, Somerset East
- Offices of Bohlweki Environmental, Midrand

This report will be available for review and comment until **Tuesday 3 December 2002**.

3.3.6. Final Environmental Impact Assessment Report

The final stage in the EIA process will entail the capturing of responses from I&APs on the draft EIA report in order to refine this report, and make final recommendations regarding the proposed project. It is the final report upon which the relevant Environmental Authorities provide comment, recommendations and authorisation.