

5. SCOPE OF ENVIRONMENTAL INVESTIGATIONS

5.1 Approach to Undertaking the Study

An Environmental Scoping Study (ESS) for the proposed extension of the Hydra Substation and the proposed Hydra-Gamma 765 kV Transmission line has been undertaken in accordance with the EIA Regulations published in Government Notice No. R. 385 to No. R 387 of 2006, in terms of Section 24 (5) of the National Environmental Management Act (Act No 107 of 1998).

The potential listed activities (Basic Assessment (Government Notice R386 activities) and Scoping & EIA (Government Notice R387 activities)) associated with the proposed development are indicated in Tables 5.1 and 5.2 respectively.

Table 5.1: Potential listed activities in Government Notice No. R. 386 applicable to proposed project

Government Notice R386 Activity No(s):	Relevant Basic Assessment Activity
12	The transformation or removal of indigenous vegetation of 3 hectares or more or of any size where the transformation or removal would occur within a critically endangered or an endangered ecosystem listed in terms of section 52 of the National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004).
14	The construction of masts of any material or type and of any height, including those used for telecommunication broadcasting and radio transmission, but excluding – (a) masts of 15 metres and lower exclusively used i) by radio amateurs; or ii) for lighting purposes (b) flag poles; and (c) lightning conductor poles.
15.	The construction of a road that is wider than 4 metres or that has a reserve wider than 6 metres, excluding roads that fall within the ambit of another listed activity or which are access roads of less than 30 metres long.

Table 5.2: Potential listed activities in Government Notice No. R. 387 applicable to proposed project

Government Notice R387 Activity No(s):	Relevant Scoping and EIA Activity
1. c	The construction of facilities or infrastructure, including associated structures or infrastructure, for the above ground storage of a dangerous good, including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of 1000 cubic metres or more at any one location or site including the storage of one or more dangerous goods, in a tank farm.
1. l	The construction of facilities or infrastructure, including associated structures or infrastructure, for the transmission and distribution of above ground electricity with a capacity of 120 kilovolts or more.

The ESS process followed for the project is described below.

5.2 Authority Consultation

5.2.1 Consultation with Decision-making Authorities

The relevant authorities required to provide input into the proposed project were consulted from the outset of the study, and have been engaged throughout the project process. Consultation was undertaken with the National Department of Environmental Affairs and Tourism (DEAT) and the Northern Cape Department of Tourism, Environment and Conservation (NC DTEC) prior to the submission of the application for authorisation for the proposed project. The pre-application consultation confirmed that DEAT would act as the lead authority for the proposed project.

The primary aim of the pre-application consultation process was to determine specific authority requirements with regards to the proposed project, and ensure inclusion of these issues in the environmental studies. Authority consultation also included the following activities:

- Submission of an application for authorisation in terms of Section 24 and 24D of the Environmental Management Act (No 107 of 1998).

5.2.2 Consultation with Other Relevant Authorities

Consultation with non-DEAT authorities was undertaken through telephone calls, written correspondence and meetings in order to actively engage these authorities and provide background information to the proposed project during the Environmental Scoping Phase. The representatives from these Departments were requested to formally provide input into the EIA process. The other Authorities to be consulted include *inter alia*:

- Local Councils (i.e. Ubuntu Municipality and Emthanjeni Municipality)
- South African Heritage Resource Agency (SAHRA)
- Department of Transport
- Department of Land Affairs
- Department of Agriculture
- Department of Water Affairs and Forestry (DWAF)
- Department of Minerals and Energy (DME)
- Department of Health

5.3 Application for Authorisation

An application for authorisation in terms of Section 24 and 24D of the Environmental Management Act (No 107 of 1998) in respect of the activities identified in terms of Section 24 and 24D of the said Act was submitted to DEAT and NC DTEC on the 18 October 2006. This application included information regarding the proponent, as well as the proposed project and was submitted together with a declaration of independence from the environmental consultants. See Appendix D for the acceptance of application letter from DEAT and the allocation of a reference number.

5.4 Legal Requirements

A limited scoping of relevant legislation was undertaken in order to identify any legal issues related to the proposed project. Applicable environmental legislation which must be considered by Eskom during the implementation of the proposed project is summarised in Table 5.3 below.

Table 5.3: Summary of applicable environmental legislation

Legislation	Sections	Relates to
The Constitution Act (No 108 of 1996)	Chapter 2	Bill of Rights.
	Section 24	Environmental rights.
	Section 25	Rights in property.

Legislation	Sections	Relates to
National Environmental Management Act (No 107 of 1998)	Section 2	Defines the strategic environmental management goals and objectives of the government. Applies throughout the Republic to the actions of all organs of state that may significantly affect the environment.
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
	Section 28	The developer has a general duty to care for the environment and to institute such measures as may be needed to demonstrate such care.
Environment Conservation Act (No 73 of 1989)	Section 2	General policy.
	Sections 19 and 19A	Prevention of littering by employees and subcontractors during construction and the maintenance phases of the proposed project.
	Sections 21, 22, 25, 26 and 28	EIA Regulations, including listed activities.
	Section 28A	Exemptions.
The Conservation of Agricultural Resources Act (No 43 of 1983)	Section 6	Implementation of control measures for alien and invasive plant species.
National Heritage Resources Act (No 25 of 1999)		Provides general principles for governing heritage resources management throughout South Africa including national and provincial heritage sites, burial grounds and graves; archaeological and palaeontological sites, and public monuments and memorials
Atmospheric Pollution Prevention Act (No 45 of 1964)	Sections 27 – 35	Dust control.
	Section 36 - 40	Air pollution by fumes emitted by vehicles.
Occupational Health and Safety Act (No 85 of 1993)	Section 8	General duties of employers to their employees.
	Section 9	General duties of employers and self employed persons to persons other than their employees.
Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (No 36 of 1947)	Sections 3 to 10	Control of the use of registered pesticides, herbicides (weed killers) and fertilisers. Special precautions must be taken to prevent workers from being exposed to chemical substances in this regard.

Legislation	Sections	Relates to
Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act (No 36 of 1947)	Sections 3 to 10	Control of the use of registered pesticides, herbicides (weed killers) and fertilisers. Special precautions must be taken to prevent workers from being exposed to chemical substances in this regard.
Cape Nature and Environmental Conservation Ordinance (No 19 of 1974)		Prohibits the picking of all indigenous plants on public land and nature reserves without a permit Identification of rare, endangered or protected plants
National Water Act	Section 21 c) and i)	Water use licenses
All relevant Provincial regulations, Municipal bylaws and ordinances		

5.5 Environmental Scoping Study

The ESS aims to provide a description of how the environment may be affected by the development of the proposed project. Desktop studies taking into consideration field studies carried out during the Hydra Gamma 1 EIA, and the use of readily available existing information, has been used to highlight and assist in the identification of potential impacts (both social and biophysical) associated with the proposed project.

Additional issues for consideration have been extracted from feedback from the public participation process, which commenced at the beginning of the Scoping phase, and will continue throughout the duration of the project. All issues identified during this phase of the study have been documented within this detailed Environmental Scoping Report. Thus, this Environmental Scoping Report provides a record of all issues identified, and an evaluation of the significance of the issues in order to make recommendations regarding the project and further studies required, if any, for the proposed project.

The ESS aimed to address the following:

- identification of potential positive and negative environmental (biophysical and social) impacts, and an evaluation of their significance in terms of the project;
- identification of "hotspots" which should be avoided where possible due to potentially significant impacts;
- description of study area for the proposed construction of the Transmission power line and extension of the Hydra Substation;
- evaluation of the nature and extent of potential environmental impacts and nomination of issues for further investigation, if any, within the EIA; and
- optimisation of positive impacts to the benefit of the local environment and

community.

Impacts on, *inter alia*, topography, geology, soils and agriculture potential, land-use, fauna, flora, heritage sites, aesthetics and the social environment were identified by means of a site inspection, consultation with I&APs, consultation with key stakeholders, and reviewing existing information and relevant literature.

In order to evaluate issues and assign an order of priority, it was necessary to identify the characteristics of each potential issue/impact:

- the *nature*, which includes a description of what causes the effect, what will be affected and how it will be affected; and
- the *extent*, wherein it is indicated whether the impact will be limited to the immediate areas or site of the development activity (local), limited to the immediate surroundings, sub-regional, regional, and/or national.

A synthesis of the description of the above characteristics of each identified issue assisted in the determination of the potential significance of the issues. The issues rated to be of medium or high significance are highlighted as issues requiring further investigation and assessment within an EIA.

5.5.1 Specialist Studies

In undertaking the ESS, potential positive and negative environmental impacts (social and biophysical) associated with the project were identified utilising the specialist studies undertaken for the Hydra Gamma 1 EIA. The specialist team involved in this study had previously identified and evaluated the potential impacts for the previous EIA, and these results were utilised in order to obtain an understanding and provide a platform with regards to the potential impacts associated with the proposed construction of the additional 765 kV Transmission power line between the Hydra and Gamma Substations, as well as the proposed extension of the Hydra Substation.

For the purpose of this project, certain specialist studies conducted for the previous EIA were required to be updated. These studies include the following:

SPECIALIST STUDY	SPECIALIST UNDERTAKING THE STUDY
Agricultural Potential	Garry Paterson of ARC-Institute for Soil, Climate and Water
Vegetation and Flora Impacts	Joggie van Staaden of Bohlweki Environmental
Avifauna Impacts	Jon Smallie of Endangered Wildlife Trust
Socio-economic Impacts	Anita Bron of Master Q Research
Visual Impacts	Lourens du Plessis of MetroGIS

Heritage Impacts	David Morris of McGregor Museum
Tourism Impacts	Marga van der Merwe of Grant Thornton

These updated specialist studies have been combined with the previous studies to assist in the identification and assessment of specific impacts as well as cumulative impacts associated with 4 power lines adjacent to each other. The studies are included within Chapters 7 and 8 of this detailed Environmental Scoping Report.

5.6 Overview of the Public Participation undertaken within the Scoping Process

The primary aims of the public participation process are:

- To inform interested and affected parties (I&APs) and key stakeholders of the proposed development.
- To initiate meaningful and timeous participation of I&APs.
- The identification of issues and concerns of key stakeholders and I&APs with regards to the proposed development (i.e. focus on important issues).
- The promotion of transparency and an understanding of the proposed project and its potential environmental (social and biophysical) impacts.
- To provide information used for decision-making.
- To provide a structure for liaison and communication with I&APs and key stakeholders.
- To assist in identifying potential environmental (social and biophysical) impacts associated with the proposed development.
- To ensure inclusivity (the needs, interests and values of I&APs must be considered in the decision-making process).
- To focus on issues relevant to the project, and issues considered important by I&APs and key stakeholders.
- To provide responses to I&AP queries.
- To encourage co-regulation, shared responsibility and a sense of ownership.

5.6.1 Advertising

In terms of the EIA Regulations, the commencement of the EIA process for the proposed project was advertised in the *Citizen*, *De Aar Echo* and *Victoria West Messenger* on 10 November 2006 and in the *Rapport* on 12 November 2006 (refer to Appendix E). Interested and affected parties were requested to register their interest in the project, and become involved in the EIA process. The primary aim of these advertisements was to ensure that the widest group of I&APs possible was informed of the project.

In addition to advertisements in the newspapers, site notices were also placed at the following public places advertising the EIA process for the proposed project:

- De Aar Court House
- De Aar Public Library
- Emthanjeni Municipality
- Ubuntu Municipality
- Victoria West Public Library

Proof of these Site Notices is provided within Appendix F of this Environmental Scoping Report.

Other advertisements that were placed during the course of the ESS phase advertised the dates of the availability of reports for public review (refer to section 5.7.1 and Appendix E).

5.6.2 Identification of Key Stakeholders and Interested and Affected Parties

The first step in the public participation process was to identify key stakeholders and I&APs. These included:

- District and Local Authorities
- Residents / Rate Payers' Associations
- Business Groupings (Chamber of Commerce)
- Agricultural Associations (De Aar and Victoria West)
- Community Based Organisations
- Affected and neighbouring landowners
- Environmental / Conservation Bodies

The I&AP database from the previous EIA was utilised as a base reference. The identification of additional I&APs was undertaken through existing contacts, responses to newspaper advertisements, Briefing Papers, networking and a proactive process to identify key I&APs within the nominated study area.

All I&AP information (including contact details), together with dates and details of consultations and a record of all issues raised is recorded within a comprehensive database of I&APs. This database has been updated on an on-going basis throughout the project process (refer to Appendix G).

5.6.3 Briefing Paper

A briefing paper for the project was compiled in English and in Afrikaans (refer to Appendix H). The aim of this document was to provide a brief outline of the

proposed project, provide preliminary details regarding the EIA, and explain how I&APs could become involved in the project. The briefing paper was distributed to all identified stakeholders and I&APs together with a map and a comment sheet inviting I&APs to register for the proposed project and submit details of any issues and concerns. Comments received from I&APs during the scoping process are attached as Appendix I.

5.6.4 Consultation and Public Involvement

Telephonic consultations, Key Stakeholder Workshops and Focus Group Meetings with I&APs were undertaken in order to identify additional key issues, needs and priorities for input into the EIA process for the proposed project. Minutes of meetings with stakeholders and I&APs were prepared and forwarded to the attendees for verification of issues raised. Networking with I&APs will continue throughout the duration of the project until the completion of the EIA process.

- *Key Stakeholder Workshop:*

A key stakeholder workshop was held on 14 November 2006 at the Kalahari Lodge in Kimberley with I&APs, who were identified as key stakeholders with regards to the project. The purpose of this meeting was to allow key stakeholders with specific issues to air their views and to facilitate interaction between the key stakeholder and the project team. The meeting also allowed for smaller groups of I&APs and/or representatives of larger interest groups or organisations to play an active role in the process and provided an opportunity for dialogue and consultation with these parties.

Minutes of the key stakeholder workshop are included in Appendix J

- *Focus Group Meetings:*

Two focus group meetings were held on 14 and 15 November 2006 at the Emthanjeni and Ubuntu Municipalities respectively. Minutes of these focus group meetings are included in Appendix J.

One-on-one consultation sessions were undertaken with the landowners in the study area and issues raised during these consultations have been captured and confirmed (refer to Appendix K). The issues raised during the one-on-one consultations are further detailed within the Social Impact Assessment in Chapters 7 and 8 of this detailed Environmental Scoping Report.

All issues raised are also captured within the Comments and Response report included within Appendix L

5.6.5 Comments and Response Sheet

All issues and comments raised during the public participation process were compiled into a comments and response sheet (refer to Appendix L). This information was incorporated at the core of the scoping of social issues as part of this ESS.

5.7 Review of the Draft Environmental Scoping Report

5.7.1 Public Review of Draft Scoping Report

The draft Environmental Scoping Report was made available for public review at the following strategic public locations within the study area, which were readily accessible to I&APs:

- De Aar Public Library
- Emthanjeni Municipality
- Ubuntu Municipality
- Victoria Public Library
- Offices of Bohlweki Environmental, Kyalami
- <http://www.eskom.co.za.htm>

A 30-day period was allowed for this review process (i.e. 4 December 2006 to 15 January 2007). The availability of this draft report was advertised in the *Citizen*, *Rapport*, *De Aar Echo* and *Victoria West Messenger* (refer to Appendix E). I&APs registered on the project database were notified of the availability of this report by letter (refer to Appendix M).

Due to the above public review period falling over the December holidays, Bohlweki Environmental and Eskom were advised by DEAT to make the draft Environmental Scoping Report available for review over a more suitable period. The availability of the DESR was therefore re-advertised on the 10 January 2007 in the same newspapers mentioned above (Refer to Appendix E) and made available for an additional 30 day public review period at the same venues as above. The additional public review period was from **10 January 2007 until 9 February 2007**. All I&APs registered on the database were also informed in writing of this additional review period, in which their comments could be forwarded. A copy of this letter is included within Appendix M.

All issues and comments received during the initial review period and the additional review period have been recorded in the comments and response report and included into this Final Environmental Scoping Report that is being submitted to DEAT and NC DTEC for review and decision making.

5.7.2 Authority Review of Draft Environmental Scoping Report

The draft Environmental Scoping Report was made available to DEAT, NC DTEC and the public, simultaneously for review and comment.

5.7.3 Final Environmental Scoping Study Report

The final stage in the Environmental Scoping Study process entailed the capturing of responses from I&APs on the draft Environmental Scoping Report in order to refine the ESR, culminating into this final ESR. It is this report upon which the relevant environmental authorities are requested to provide comment, recommendations and any decisions taken at this stage in the EIA process.