

3. SCOPE OF ENVIRONMENTAL INVESTIGATIONS

3.1. Approach to Undertaking the Study

An Environmental Scoping Study for the proposed establishment of a new concentrating solar power plant in the Northern Cape province, was undertaken in accordance with the Environmental Impact Assessment (EIA) Regulations published in Government Notice R1182 to R1184 of 5 September 1997 (as amended) in terms of Section 21 of the Environment Conservation Act (No 73 of 1989), as well as the National Environmental Management Act (No 107 of 1998).

In terms of Regulations R1182 to R1184 of the Environment Conservation Act (No 73 of 1989) (as amended), the following listed activities, which may have an impact on the environment, are applicable:

1. The construction, erection or upgrading of -
 - (a) facilities for commercial electricity generation with an output of at least 10 megawatts and infrastructure for bulk supply;
 - (c) The construction of transportation routes and structures, and manufacturing, storage, handling or processing facilities for any substance which is considered as dangerous or hazardous and is controlled by national legislation.
 - (d) roads, railways, airfields and associated structures;
 - (g) structures associated with communication networks, including masts, towers and reflector dishes, marine telecommunication lines and cables and access roads leading to those structures, but not including above ground and underground telecommunication lines and cables and those reflector dishes used exclusively for domestic purposes;
 - (n) sewage treatment plants and associated infrastructure;

2. The change of land use from:
 - (c) Agricultural or zoned undetermined use or an equivalent zoning, to any other land use;

The environmental studies are following a three-phased approach:

- Phase 1: Environmental Scoping Study (complete)
- Phase 2: Environmental Impact Assessment (this report)
- Phase 3: Environmental Management Plan

3.1.1. Environmental Scoping Process

An issues-based Environmental Scoping Study was undertaken for the proposed project. Existing information and input from specialists, the Authorities and I&APs were used to identify and evaluate potential environmental impacts (both social and biophysical) associated with the proposed project. The specialist studies also provided input into the site selection process through which a preferred site was nominated for further study in the EIA. No fatal flaws associated with the proposed project were identified through the Environmental Scoping Study, although a number of potentially significant environmental impacts were identified as requiring further in-depth study within the EIA.

The Scoping phase of the environmental studies provided I&APs with the opportunity to receive information regarding the proposed project, participate in the process and raise issues of concern. The draft Environmental Scoping Report was made available at public places for I&AP review and comment from 22 June 2006 to 21 July 2006. 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 Limpopo Department of Economic Development, Environment and Tourism (L DEDET) on 16 August 2006.

Acceptance of the Environmental Scoping Report has been received from DEAT on 24 October 2006 (refer to Appendix A). In terms of this acceptance, an Environmental Impact Assessment was required to be undertaken for the proposed project. The Plan of Study for EIA was submitted and accepted by DEAT on 24 October 2006 (refer to Appendix A). In terms of this acceptance DEAT requested that specific information be included in the EIA, this request has been met.

The Environmental Impact Assessment Process that was followed for the project is described below.

3.2. Authority Consultation

3.2.1. Consultation with Supervisory Authorities

The relevant authorities required to review the proposed project and provide a Record of Decision (RoD) were consulted from the outset of this study, and have been engaged throughout the project process. These supervisory (decision-making) authorities include the National Department of Environmental Affairs and Tourism (DEAT), who are the lead authority for this project, and the Northern Cape Department of Tourism, Environment and Conservation (NC DTEC).

Authority consultation included the following activities:

- Pre-application consultation.
- Submission of an application for authorisation in terms of Section 22 of the Environment Conservation Act (No 73 of 1989).
- Submission of a Plan of Study to undertake the Environmental Scoping Study to National DEAT and Northern Cape DTEC (provincial).
- Consultation with Authorities regarding project specifics, and the receipt of Authority approval of the Plan of Study for Scoping (Appendix A).
- Discussion with Authorities regarding the public participation process, the Interested and Affected Parties (I&APs) consulted, advertising, and issues arising through the Environmental Scoping process.
- Submission of the final Environmental Scoping Report and the acceptance thereof (refer to Appendix A).
- Submission of a Plan of Study for EIA.
- Site visit with the Authorities from 18 – 20 September 2006.
- Consultation with the Authorities regarding project specifics, and the receipt of Authority approval of the Plan of Study for EIA (see Appendix A).
- On-going authority consultation throughout the process.

3.2.2. Consultation with other Relevant Authorities

Consultations with other authorities were undertaken. The following departments were consulted:

- The Northern Cape Department of Water Affairs and Forestry (DWAFF)
- The Northern Cape Department of Health
- The Northern Cape Department of Agriculture
- The Northern Cape Department of Minerals and Energy
- South African Heritage Resources Agency (SAHRA)
- The Northern Cape Department of Land Affairs
- The Northern Cape Department of Transport, Roads and Public Works
- The Department of Science and Technology
- Northern Cape Tourism Authority
- South African Social Security Agency (SASSA)
- Northern Cape Local Government and Housing
- South African National Roads Agency Limited (SANRAL)

Background information regarding the proposed project was provided to these departments, together with a registration and comment form formally requesting their input into the EIA process.

In addition to the above, Northern Cape based authorities were invited to attend an authorities meeting in Kimberley on 19 April 2006. The meeting provided

authorities the opportunity to obtain clarity on specific issues as well as an opportunity to raise any issues or concerns. A second provincial authorities meeting will be held during the Environmental Impact Report review period.

3.3. Environmental Impact Assessment

As part of the overall project planning process, this Environmental Impact Assessment aims to achieve the following:

- to provide an overall assessment of the social and biophysical environments of the area affected by the proposed establishment of a Concentrating Solar Power Plant and associated infrastructure;
- to undertake a detailed assessment of the farm Olyvenhouts Drift in terms of environmental criteria;
- to identify and recommend appropriate mitigation measures for potentially significant environmental impacts; and
- to undertake a fully inclusive public participation process to ensure that I&AP issues and concerns are recorded.

3.3.1. Specialist Studies

In undertaking the Environmental Impact Assessment, Bohlweki Environmental were assisted by a number of specialists in order to comprehensively identify both potentially positive and negative environmental impacts (social and biophysical) associated with the project, evaluate the significance of the identified impacts, and propose appropriate mitigation measures, where required. The specialist team identified and evaluated the potential impacts for the nominated preferred site i.e. farm Olyvenhouts Drift. These specialists and their fields of expertise are outlined in Table 3.2.

Table 3.2: Specialists and their fields of expertise

Name and Organisation	Field of Study
Johan du Preez of MDA Consulting	Ecological assessment (flora & fauna)
Jon Smallie of the Endangered Wildlife Trust	Avifauna assessment
MetroGIS	Visual Impact Assessment and GIS mapping
Arthur Chapman and Jude Cobbing of the CSIR	Assessment of surface and groundwater impacts
Derek Cosijn of Jongens Keet and Associates	Noise Impact Assessment
Dr David de Waal of Afrosearch	Social Impact Assessment (SIA)

All of these specialist studies were undertaken within the EIA phase of the project, which concentrated on the preferred site (farm Olyvenhouts Drift), as identified during the Scoping phase.

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

- the *nature*, which shall include a description of what causes the effect, what will be affected and how it will be affected;
- the *extent*, wherein it will be 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;
- the *duration*, wherein it will be indicated 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*, which shall describe 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*, which shall be determined through a synthesis of the characteristics described above and can be assessed as low, medium or high.

As Eskom have the responsibility to avoid or minimise impacts and plan for the management of impacts (in terms of the EIA Regulations), the mitigation of significant impacts was discussed and conclusions and recommendations regarding the preferred sites were drawn.

3.3.2. Overview of the Public Participation Process

The primary aims of the Public Participation Process (PPP) in the Environmental Impact Assessment phase 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.
- To identify issues and concerns of key stakeholders and I&APs with regards to the proposed development (i.e. focus on important issues).
- To promote 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 associates 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.

On-going consultation with key stakeholders (e.g. local authorities, relevant government departments, local business etc.) and other identified I&APs ensured that I&APs were kept informed regarding the EIA findings and proposed mitigation measures. Networking with I&APs will effectively continue throughout the duration of the project until the closure of the EIA phase. Where required, key stakeholders and I&APs were engaged on an individual basis. During the environmental studies, consultations were held with individuals, businesses, institutions and organisations, including the following:

- National Department of Environmental Affairs and Tourism (DEAT).
- The National Department of Water Affairs (DWAF).
- The Northern Cape Department of Water Affairs and Forestry (DWAF)
- The Northern Cape Department of Health
- The Northern Cape Department of Agriculture
- The Northern Cape Department of Minerals and Energy
- South African Heritage Resources Agency (SAHRA)
- The Northern Cape Department of Land Affairs
- The Northern Cape Department of Transport, Roads and Public Works
- The Department of Science and Technology
- Northern Cape Tourism Authority
- South African Social Security Agency (SASSA)
- Northern Cape Local Government and Housing
- South African National Roads Agency Limited (SANRAL)
- Local authorities (including !Kheis Municipality and !!Khara Hais Local Municipality).
- South African National Roads Agency Limited (SANRAL).
- South African Heritage Resources Agency (SAHRA).
- Interested and Affected Parties within a 10 km radius of the alternative sites.
- Residents Associations or Community Organisations (e.g. Ward Councillors).
- Labour Unions (e.g. National Mineworkers Union).
- Environmental NGOs (e.g. Earthlife Africa, WESSA and EWT).

The I&AP database is included in Appendix C.

- *Consultation and Public Involvement*
Telephonic discussions, one-on-one consultation meetings and focus group meetings were held with key stakeholders and other relevant I&APs during the

scoping phase in order to identify key issues, needs and priorities for input into the proposed project. The interested and affected parties included:

- * !Kheis Municipality
- * !!Khara Hais Local Municipality
- * Groblershoop Community
- * Upington Community
- * Individual landowners and potentially affected parties in the Upington and Groblershoop areas

Special attention will be paid to consultation with potentially affected landowners within the study area (i.e. within a 10km radius of the preferred site). Networking with I&APs will continue through-out the duration of the of the project. Further meetings will be held with the above mentioned I&APs during the EIA report review period. Formal minutes of the meeting will be compiled. The minutes will be distributed to all attendees and included in the Final Environmental Impact Report.

- *Public Meeting:*

A public meeting will be held during the EIA report review period in order to inform I&APs and stakeholders of the outcome of the EIA report and associated specialist studies. This public meeting will be held in Upington on Thursday, 1 March 2007 at the Duineveld High School Lecture Room.

The public meeting will include a formal presentation regarding the proposed project.

The primary aim of this meeting will be to:

- * disseminate information regarding the proposed project to I&APs;
- * provide I&APs with an opportunity to interact with the public consultation team and the relevant Eskom officials;
- * discuss the studies to be undertaken within the Environmental Impact Assessment;
- * supply more information regarding the EIA process;
- * answer questions regarding the project and the EIA process;
- * receive input regarding the public participation process and the proposed development, and
- * provide I&APs not previously registered on the project database with an opportunity to be formally registered, and therefore be informed of progress for the remainder of the project.

In accordance with the requirements of the EIA Regulations, the public meetings was advertised 10 days prior to the event within local newspapers in

the predominant languages of the area (refer to Appendix B). This advertisement was combined with the advert announcing the EIA Report review period. Registered I&APs were also informed of the planned public meeting by fax or by e-mail.

The public meeting and open day presented a further opportunity for consultation with and participation by I&APs, and to record further issues and concerns raised by I&APs for inclusion in the environmental process. As such, the meeting will form part of the ongoing communication strategy between the project team and I&APs. Formal minutes of the meeting will be compiled. The minutes will be distributed to all attendees and included in the Final Environmental Impact Report.

- *Key Stakeholders Meeting*

A key stakeholders meeting will also be held during the EIA report review period in order to inform stakeholders of the outcomes of the EIA report and associated specialist studies. It is anticipated that the workshop will be held at the end of February 2007 in Johannesburg.

The key stakeholders' workshop allows stakeholders to interact with the environmental project team and Eskom representatives on a one-on-one basis to allow for more detailed discussion regarding a particular issue. The key stakeholders' workshop will include a formal presentation regarding the proposed project and the outcomes of the EIA studies.

The key stakeholders' workshop will present a further opportunity for consultation with and participation by stakeholders, and to record further issues and concerns raised by stakeholders for inclusion in the environmental process. As such, the meeting will form part of the ongoing communication strategy between the project team and stakeholders. Formal minutes of the meeting will be compiled. The minutes will be distributed to all attendees and included in the Final Environmental Impact Report.

- *Social Issues Trail:*

Issues, comments and concerns raised during the public participation process have been compiled into an Issues Trail (refer to Appendix C). This issues trail provides a summary of the issues raised, as well as responses which were provided to I&APs. This information was used as the basis of the evaluation of social impacts. The issues trail will be updated with all additional issues and comments raised by I&APs during the Report review period and will be included in the Final EIA report.

3.3.3. Public Review of the Draft Environmental Impact Report

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

- !!Kheis Public Library (No 97 Oranje Street, Groblershoop)
- !!Kheis Municipal Offices (No 97 Oranje Street, Groblershoop)
- Karstens Boerdery (Karstens Farms, Kanoneiland)
- Agrimark (Water Affairs Offices, Louisevale Road, Upington)
- Upington Magistrate Office (Weideman Street, Upington)
- !!Khara Hais Municipal Offices (Market Street, Civic Center)
- Forum Public Library (Keimoes Weg, Upington)
- Baballelo Public Library (King Street, Upington)
- !!Khara Hais Public Library (Market Street, Next to Civic Center)
- Koeberg Visitors Centre (R27 off West Coast Road, Dwynefontein, Melkbostrand)
- Offices of Bohlweki Environmental
- www.bohlweki.co.za

The availability of the draft Environmental Impact Report was advertised in the following newspapers (See Appendix B):

- DFA – 8 February 2007
- Die Volksblad – 8 February 2007
- Die Gemsbok – 8 February 2007

All registered I&APs were notified of the availability of the report in writing. Comments received during the review period will be recorded and included within the Final EIR.

3.3.4. Final Environmental Impact Report

The final stage in the Environmental Impact Assessment process will entail the capturing of responses and comments from I&APs on the draft Impact Report in order to refine the Environmental Impact Report, and ensure that all issues of significance were addressed. The final Environmental Impact Report will be submitted to National DEAT and Northern Cape DTEC for review and decision-making.