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**TYPE OF DOCUMENT: DRAFT SCOPING REPORT FOR
THE EXTENSION OF PAULPUTS SUBSTATION IN
SCHUITKLIP 92 PORTION 4 FARMS.**

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List of Abbreviations

BID	Background information document
CBOs	Community Based Organizations
DEA&T (DEAT)	Department of Environmental Affairs and Tourism
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMP	Environmental Management Plan
EMS	Environmental Management System
I&APs	Interested and Affected Parties
IEM	Integrated Environmental Management
EAP	Environmental assessment Practitioner
PPP	Public Participation Process

Contact Details

Table 1: Contact details of EAP

Name of an EAP	Mr. Calvin Mawelela
Qualification of an EAP	B-Tech Environmental Science (CV attached in appendix C8)
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Table 2: Contact details of applicant.

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Postal Address:	P O Box 1091 Johannesburg 2001
Telephone number:	(011) 800 4427
Fax Number:	(011) 800 3917

Table 3: Particulars of proposed development site.

Full name of property to be developed:	Schuitklip 92, Portion 4 farm.
Magisterial district:	Namakwa District Municipality
Current use of surrounding areas:	Private farms.
Land Owner:	Mr. Gerald Visser
Contacts of the Land owner:	084 645 8971 / 054 933 0475
Name of closest town:	Pofadder

1. Introduction and background

1.1 Introduction.

Enkanyini Projects was appointed by Eskom Holdings Limited as an Independent Environmental Consultant to undertake the environmental investigation for the extension of Paulputs Substation situated in the Northern Cape Province. Appendix C9 is the expertise of an Environmental Assessment Practitioner responsible for the EIA in the proposed upgrading of Paulputs Substation.

Enkanyini Projects is a holly owned black company providing Consultancy in Environmental, Social and Projects Management services. The company has various expertise in the environmental field, with number of successful environmental friendly project completed. Enkanyini Projects was formally formed in 2005 in an effort to make a meaningful and sustainable contribution to the development and improvement of the quality of environment for the people of South Africa. Enkanyini Projects has worked and continues to work in partnership with other establishment Environmental Consultants in an endeavor to build its expertise while ensuring the best service to its Clients.

Our staff has been carefully selected to meet the specific requirements of our various business activities. Since inception we have always realised that our staff are and will always be our most valuable assets. Our highly experienced diverse team covers the full spectrum of environmental and social consulting service, environmental project management. Through their commitment, dedication and in depth understanding of our client's needs the company is now ready to become one of South Africa's, support and solution providers.

1.2 Terms of reference.

Eskom Holdings Limited have requested Enkanyini Projects as an Independent Environmental Consultant, to carry out the necessary environmental investigations for the upgrading the Paulputs substation on the farm Schuitklip 92 portion 4. The environmental investigation together with the public participation process of the project is to be carried out in accordance with the Environmental Impact Assessment Regulations, 2006 in terms of Chapter 5 of the National Environmental Management Act, 1998.

In order to carry out the necessary environmental investigations for the extension of the Paulputs substation in Schuitklip 92 portion 4, the public participation process of the project is to be carried out in accordance with the EIA Regulations (Notice No R 385.2006) Regulations in terms of Chapter 5 of the National Environmental Management Act, 1998.

There are various influencing factors that play a role in the environmental investigation requirements for the proposed Paulputs extension which are as follows;

- Increase in noise levels may result hence there is need for control measures.
- Land use and capability.
- Sensitive landscapes.
- Visual aspects.
- Waste disposal.
- Soil contamination may occur if development is not properly monitored.
- Ecological disturbances are anticipated; therefore the possibility of establishment of a nursery for rare species could be of great importance.
- Storm water management.
- Increase in traffic flow during construction.

2 Study approach.

The EIA regulations require that a Scoping study should be undertaken as one of the required step in applying for the authorization to proceed with the proposed activity. The objectives of the Scoping study are to:

- Identify Interested and Affected Parties (I&APs) and inform them of the proposed project.
- Identify issues and concerns associated with the proposed project.
- Identify alternatives to the proposed project.
- Identify areas of likely impact and relevant environmental issues that may need further attention and investigation in an EIA.

3 Purpose of the Scoping report.

The purpose of the Scoping report is threefold, namely:

- To present the results of the Scoping phase of the EIA process to the Interested and Affected Parties(I&APs). The Scoping report outlines the main issues associated with the proposed development, which will require attention and the potential management and mitigation measures that can be applied to the project actions.
- To allow I&APs the opportunity to confirm that their concerns and suggestions have been adequately documented for consideration in the impact assessment phase of the EIA.
- To invite comments on the proposed project for the impact assessment phase of the study, which are based on the results of the Scoping exercise.

4 Legislative Framework

Eskom Holdings Limited has a legal responsibility to ensure that the proposed activity and the EIA process conform to the principles of NEMA, requirements of the Environmental Impact Assessment Regulation, 2006 to take actions to prevent the degradation of the environment.

- The Constitution of the Republic of South Africa (Act No 108 of 1996).
- The National Environmental Management (Act No 107 of 1998).
- Listing Notice No.R.387 of 21 April 2006
- Environmental Impact Assessment Regulations, 2006
- National Environmental Management Air Quality Act(39 of 2004)
- National Heritage Resource Act(25 of 1999)
- Occupational Health and Safety Act(Act 85 of 1993)
- Hazardous Substance Act 15 of 1973

4.1 Constitution of the Republic of South Africa (Act 108 of 1996)

The Constitution of the Republic of South Africa (Act No 108 of 1996) has a major influence on Environmental Management in South Africa in so much that the protection of the environment and of individual property rights has become a public common right, the free access to information, just administrative action and the broadening *locus standi* of the litigants are of major assistance in the implementation and enforcement of the environmental management principles of the 1989 Act and the 1998 Act.

Diagram 1 : The Constitution of South Africa, Act 108 of 1996 (Chapter 2 – Bill of Rights) states:

Constitution

- a. 24. (1) Everyone has the right to an environment that is not harmful to their health or well-being; and
- b. to have the environment protected, for the benefit of present and future generations, through reasonable legislative and other measures that
 - prevent pollution and ecological degradation;
 - promote conservation; and
 - secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development.

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(2) The state must take reasonable legislative and other measures, within its available resources, to achieve the progressive realization of this right. “

4.2 National Environmental Management Act, 1998 (Act No. 107 of 1998).

- ✦ The National Environmental Management Act (NEMA) (Act No 107 of 1998) makes provision for co-operative environmental governance by establishing the principals for decision making on the matters affecting the environment. Institutions that will promote the co-operative governance and procedures for coordinating the environmental functions exercised by the organs of state and to provide for matters connected therewith.

The competent authorities require that all activities that may significantly affect the environment and require authorization by law must be assessed prior to approval. Section 8. (b) States that the competent authority will take into account all relevant factors, including-

- (i) any pollution, environmental impacts or environmental degradation likely to be caused if the application is approved or refused;
- (ii) the impact on the environment of the activity which is subject of the application, whether alone or together with existing operations or activities;
- (iii) measures that could be taken –
 - (aa) to protect the environment from harm as a result of the activity which is the subject of the application; and
 - (bb) to prevent, control, abate or mitigate any pollution, environmental impacts or environmental degradation.

4.2.1 Environmental Impact Assessment regulations, 2006, promulgated in terms of section 24 (5) of the NEMA Act, 1998

National Environmental Management Act (NEMA) is an important environmental legislation. NEMA provides a framework for an environmental law reform and covers three areas, namely:

- Land, planning and development.
- Natural and cultural resources, use and conservation.
- Pollution control and waste management.

The law is based on the concept of sustainable development. The object of NEMA is to provide for co-operative environmental governance through a series of principles relating to:

- the procedures for state decision-making on the environment; and
- the institutions of state which make those decisions.

The NEMA principles serve as:

- a general framework for environmental planning;
- guidelines according to which the state must exercise its environmental functions; and
- a guide to the interpretation of NEMA itself and of any other law relating to the environment.

The Listing Notice No.R.387 of 2006 makes provision for the assessment of activities that are potentially detrimental to the environment. Activities identified in terms of section 24(5) No. (2) of the act, may not commence without environmental authorization from the competent authority and in respect of which the investigation, assessment and communication of potential impact of activities must follow the

procedure as described in regulations 27 to 36 of the environmental impact assessment regulations, 2006, promulgated in terms of section 24(5) of the Act.

Identified activities require authorization from the relevant authorities based on the findings of an assessment of the impact of the proposed activity on the environment. Therefore, the following activity has been identified in the Listed Notice No. R. 386 and R 387 of 2006

Listing No. R 387

Activity No 1(l) The construction of facilities or infrastructure, including associated structure or infrastructure, for the transmission and distribution of above ground electricity with a capacity of 120 kilovolts or more.

Listing No. R 386

Activity **No. 12** The transformation and removal of indigenous vegetation of 3 hectares or more 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 Environment Management Biodiversity Act, 2004(Act No. 10 of 2004).

Activity **No. 16(a)** The transformation of underdeveloped, vacant or derelict land to residential, mixed, retail, commercial, industrial or institutional use where such development does not constitute an infill and where the total area to be transformed is bigger than 1000 cubic metres at any one location or site.

Activity **No. 7** The above ground storage of dangerous goods including petrol, diesel, liquid petroleum gas or paraffin, in containers with a combined capacity of more than 30 cubic metres but less than 100 cubic metres at any location or site

Activity No. 1(p) The construction of facility or infrastructure, including associated structures or infrastructures for the temporary storage of hazardous waste.

The EIA Regulations stipulate the procedures and obligations required by the proponent (applicant) and the authorities regarding the assessment of the proposed activity. The procedures required in terms of the EIA Regulations include the appointment of an EAP to undertake the assessment, application prescriptions, procedures, and requirements as well as contents for reports. The findings of the assessment are used to inform the decision regarding the authorisation of the proposed activity.

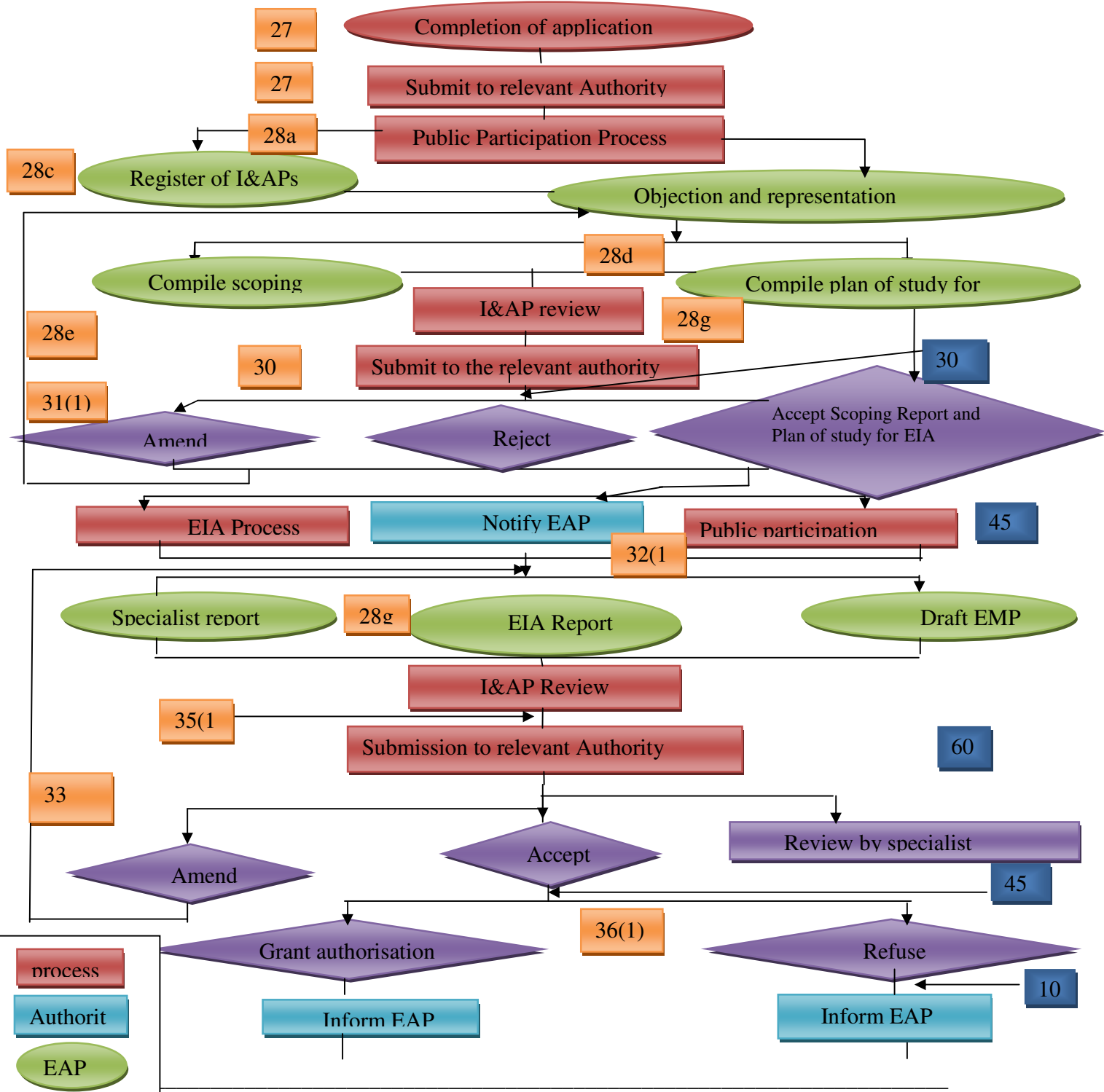
Initially a Scoping Phase is completed to determine whether there are any significant environmental issues associated with the proposed activity. In order to enable Interested and Affected Parties to identify issues and concerns for consideration in the Scoping Report, a public consultation process had to be undertaken. The environmental issues associated with the proposed activity are then assessed. Should the Scoping Report indicate that there are no significant issues associated with the activity or the impacts can be effectively mitigated and the authorities are of the opinion that sufficient information has been provided, therefore, the competent authority will accept the scoping report and advise the EAP in terms of regulation 31(1) (a) to proceed with the tasks contemplated in the plan of study for Environmental Impact Assessment.

However, should the Scoping Report indicate that there are significant environmental impacts associated with the proposed activity and the authorities require more information, the competent authorities will request an EAP to amend the scoping report or make recommendation to the EAP regarding issues that needs attention should be addressed in the EIR to be submitted.

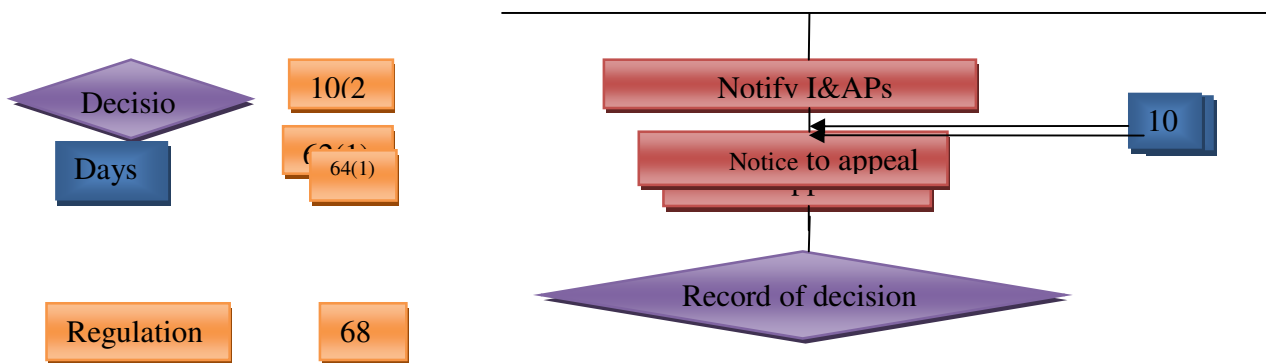
Scoping is the process for determining issues and concerns related to the proposed project, and involves consultation with the public and relevant authorities. In addition, the Scoping Phase includes the identification of required specialist studies and potential environmental aspects for further investigation. The Scoping Phase outlines a plan for the EIA Phase and facilitates the input from stakeholders and authorities to inform the EIA Process. The flow chart 1 provided below is an overview of EIA application procedure

for an Environmental Authorisation application that is implemented in Paulputs Substation upgrade application.

FLOW CHART 1: EIA PROCESS IN THE PAULPUTS SUBSTATION UPGRADE



ectors: AC . Mawelela Btech (Environ), ME Nhubunga Dip (Civil Eng).
Reg: 2005/018299/23



4.3 Transition from Atmospheric Pollution Prevention Act (Act 45 of 1965) to the National Environmental Management Air Quality Act (Act 39 of 2004)

The Air Pollution Prevention Act (APPA), Act 45 of 1965 is scheduled to be replaced in its entirety by the National Environmental Management Air Quality Act (AQA), Act 39 of 2004. The Air Quality Act was approved by the President and gazette on 24th February 2005. On 11th September 2005 the Air Quality Act came into force, with the exclusion of sections 21, 22, 36 to 49, 51(1)(f), 51(3),60 and 61, most of which deal with the licensing of “listed activities”. Given that the legislative context is currently in transition, it is necessary to consider the implications of both the APPA and the AQA as they pertain to the proposed plant’s operations. Under the APPA air pollution control was administered at a national level by the DEAT. This Act regulates the control of noxious and offensive gases emitted by industrial processes, the control of smoke and wind borne dust pollution, and emissions from diesel vehicles. The implementation of the act is charged to the Chief Air Pollution Control Officer (CAPCO).

4.4 National Heritage Resources Act (Act 25 of 1999)

In terms of Section 38 of the National Heritage Resources Act (Act 25 of 1999) the following developments require a Heritage Impact Assessment prior to proceeding with construction:

- Any development or other activity which will change the character of a site
 - Exceeding 5 000 square meter in extent; or

- Involving three or more existing erven or subdivisions thereof; or
- Involving three or more erven or divisions thereof which have been consolidated within the past five years; or
- The costs of which will exceed a sum set in terms of regulations by South African Heritage Resources Agency (SAHRA) or a provincial heritage resources authority;

The re-zoning of a site exceeding 10 000 m² in extent; or

- Any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority, must at the very earliest stages of initiating such a development, notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development. The construction of the electricity generation plant and associated structures will be larger than 5000m² but it will not change the character of the site and therefore **will not** require a Heritage Impact Assessment in terms of this Act.

4.5 Occupational Health and Safety Act (Act 85 of 1993)

This Act makes provisions that address the health and safety of persons working at the proposed plant. The Act addresses amongst others the:

- safety requirements for the operation of plant machinery;
- protection of persons other than persons at work against hazards to health and safety, arising out of or in connection with the activities of persons at work;
- establishment of an advisory council for occupational health and safety; and
- provision for matters connected therewith.

The law states that any person undertaking upgrades or developments for use at work or on any premises shall ensure as far as is reasonably practicable that nothing about the manner in which it is erected or installed makes it unsafe or creates a risk to health when properly used.

4.6 Hazardous Substance Act 15 of 1973

The purpose of the is 'To provide for the control of substance which may cause injury or ill health to or death of human beings by reason of their toxic, corrosive, irritant, strongly sensitizing or flammable nature or the generation of pressure thereby in certain circumstances, and for the control of certain electronic products to provide for the division of such substances or products into groups in relation to the degree of danger; to provide for the prohibition and control of the importation, manufacture, sale, use, operation, application, modification, disposal and dumping of such substances and products; and to provide for matters connected therewith'.

5 Proposed activity

The following activities will be undertaken during the expansion of the Paulputs substation on the farm SchuitKlip 92 portion 4;

- A second 250 MVA transformer will be installed
- Installation of double busbars for 220 and 132kV yards will need to be reconfigured to conform to a double busbars philosophy. The 220 kV busbar system will have two normal running busbars(No. 1 and No. 2)
- A new bus couple bay will be installed creating a total of two zones of busbar.
- Extension of the 220 kV yard by 73m from the existing Eskom boundary to the south of the substation and
- Extension of the eastern part of the substation by 41.5m but this falls within the Eskom boundary fence.

5.1 The need and justification for the proposed project

The proposed extension of Paulputs substation by the Eskom Holdings Limited is implemented to create a firm transformer capacity at Paulputs substation, which is part of the Namaqualand Customer Load Network (CLN). Presently the substation has only one 220/132kV transformer and as part of this project, a second transformer will be installed.

5.2 The benefits from the extension of Paulputs substation are:

- There will be continuity of supply during breaker maintenance as a result of the expansion.
- A firm transformer capacity will be created in the substation.

5.3. Project alternatives

5.3.1 Preferred Option.

The proposed extension of Paulputs substation positioning can be seen in Figure 2 and 3 below which show the current existing substation and the proposed extension, which is shaded with a yellow colour.

- Extension of the 220 kV yard by 73m from the existing Eskom boundary to the south of the substation and
- Extension of the eastern part of the substation by 41.5m but this falls within the Eskom boundary fence.

This portion of land is to some extent disturbed and contains very little, if any fauna.

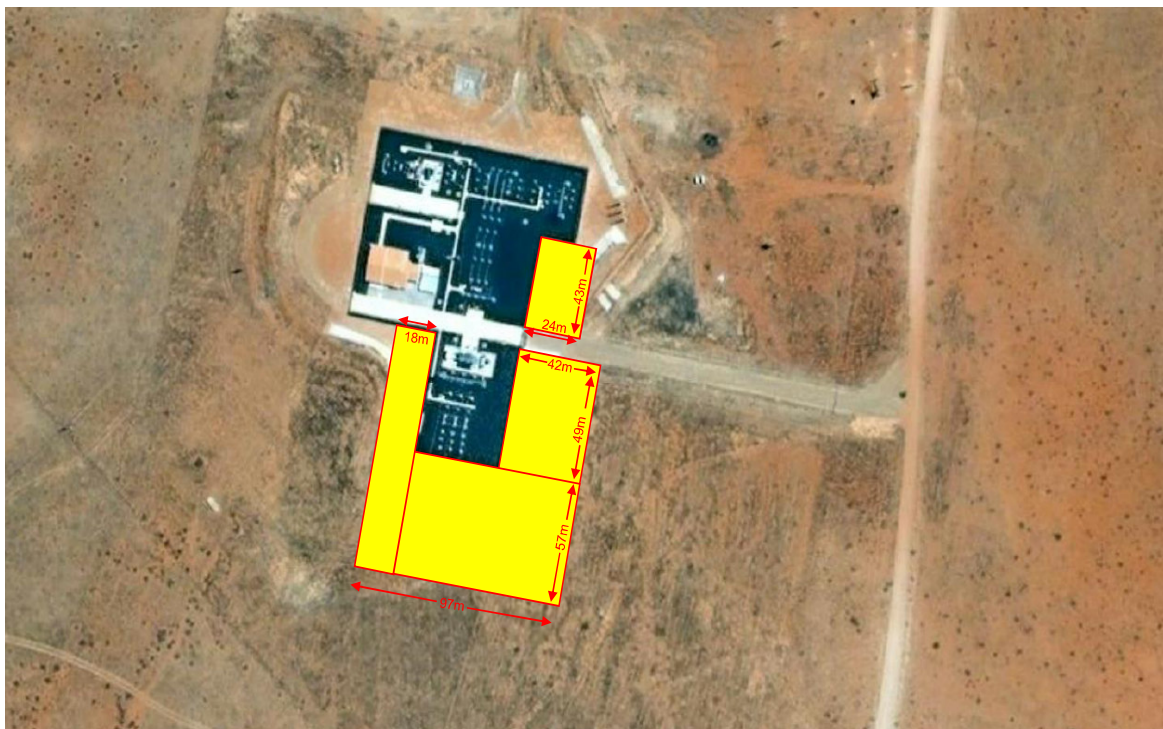
This choice of land offers limited construction and option to conserve our environment.

Vehicles and construction machinery will be able to easily access the site and it will be easier to carry out any work that needs to be carried out during and following the construction phase of the project as access exist.

Figure1: The current existing Paulputs substation.



Figure 2: The preferred positioning of an extension in Paulputs substation.



5.3.2 Alternative option.

The positioning of the extension would be moved to the north side of the current existing substation. As indicated in the below figure 3, the marked portion is the alternative position of the proposed extension.

Figure 3: The alternative positioning of the proposed extension in Paulputs substation.



5.3.3 Third Option: The “No Go” Option.

If the proposed project is not given a go ahead by Department of Environmental, Affairs and Tourism, no extension will take place and the current existing problems experienced in the substation will continue, thus during maintenance there will be a complete black out to the receiving end. The following will be the consequence during maintenance of a substation:

- Businesses will continue to be negatively impacted by the electricity cut offs.

- Service delivery to the communities will be affected.
- Government offices in the receiving end will continue loose working man hours.
- Traffic congestion will continue to be a problem during maintenance period.

5.4. Preferred option and the alternative option

It is in our opinion that the preferred positioning is the best option which is influenced by the following factors.

- The current existing substation is positioned in a storm water path in the area therefore the best positioning of the extension is in the side which would cause minimum disturbance of storm water runoff path, avoiding a creation of water trap zone. If a further environmental degradation occurs on site a series of negative environmental issues would result.
- The alternative will require an access road to be created around the substation yard thus clearing unnecessary vegetation in an area that is not actually targeted for extension. The preferred positioning has a direct access to the gravel road.
- The alternative option is disadvantageous hence its position is a more upstream while the preferred is more in a flat surface.

It is with this in mind that the extension of the Paulputs substation preferred position has been considered as the best option to prevent, minimise, and reduce possible further environmental degradation.

6. Receiving environment

The receiving environment has already been disturbed partially, hence it is the current existing Paulputs substation. Through the option discussed above based on impressions gained during site visits and generalised desktop studies of environmental parameters, such as the geology, visually, storm water management and vegetation of the site area.

6.1 Location

The Paulputs substation is situated in the farm SchuitKlip 92 portion 4 along the Onseepkans road \pm 40 kilometers north east of Pofadder town in the Northern Cape Province.

Table 1: GPS Coordinates

X	Y
-055122	3196005
-055082	3196016
-055238	3195967

Figure 4: A view of the proposed site in the Paulputs substation.



6.2 Land Use

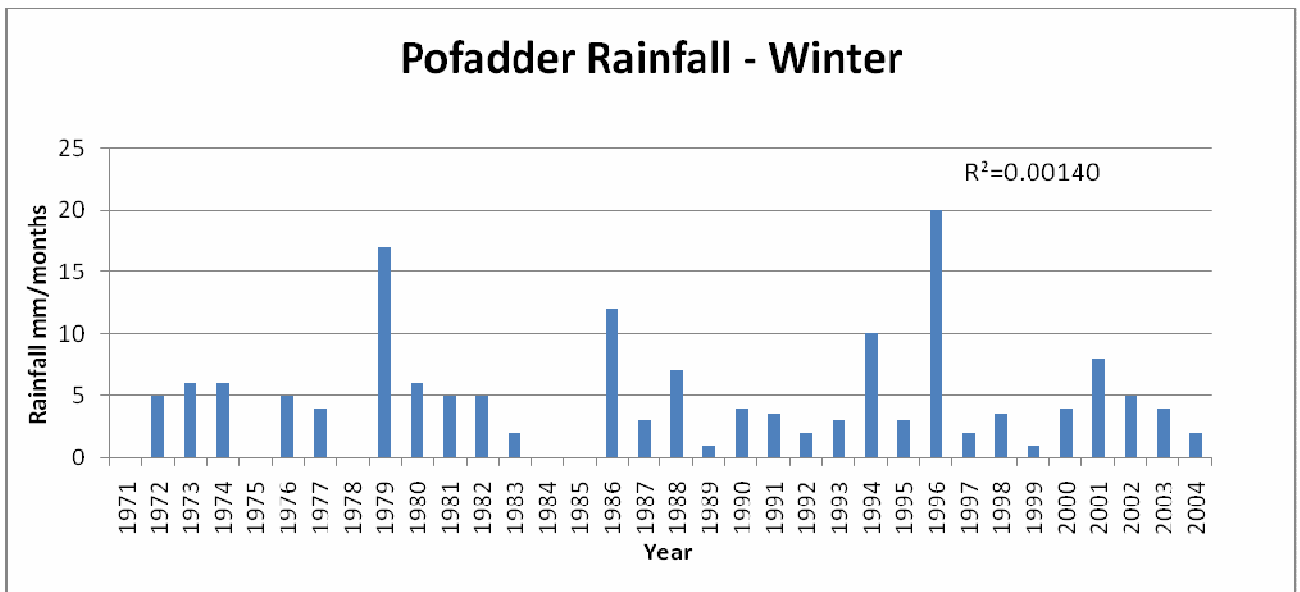
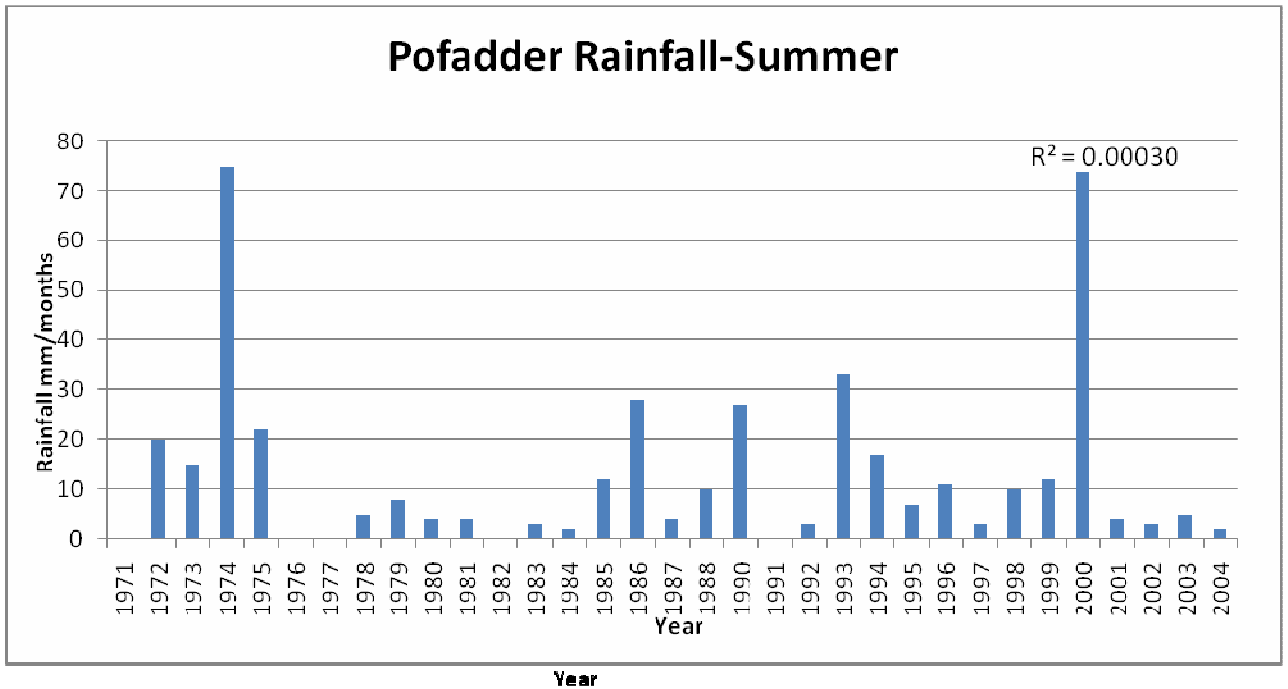
The site is currently used as a substation, but the area surrounding it is currently open space used for sheep farming.



Figure 5: The surrounding in the Paulputs substation.

6.3 Climate

The mean annual rainfall can be seen in the graphs 1 and 2 below.



Y
e
a
r

The Northern Cape semi-arid region climate has little rainfall (varying from 150 to 350

mm per year which occurs in late autumn). The weather conditions are extreme cold and frosty in winter, and extremely high temperatures in summer. In summer the average minimum is 17.8°C and average maximum is 34.6°C. In winter the average minimum is 3.5°C and an average maximum is 20.6°C (South African Weather Bureau)

6.4 Ecology (vegetation and animal).

The study site falls within a region classified as Bushman Arid Grassland (Mucina and Rutherford, 2005), Orange River Nama Karoo (Low and Rebelo, 1996) or Namaqualand Broken Veld (Acocks, 1988). In places, the region is very rocky and possesses a ‘‘broken’’ topography with Quiver Tree *Aloe dichotoma*, Bushman Poison Tree *Euphorbia avasmontana* and Aggenys Milkbush *E. gregaria* normally associated with the steep slopes of the mountains and hills of the area. On the pediments, Spike-flowered Black Thorn *Acacia melifera*, Threethorn *Rhizum trichotomum*, Shepard’s Tree *Boscia albitrunca* and Stink Shepard’s Tree *B. foetida* are common trees and shrubs, while Silky Bushman Grass *Stipagrostis uniplumis* often dominates the plains, especially after good summer rains. There are abundant thickets along the banks of the Orange River itself, with Wild Tamarisk *Tamarix usneoides*, Buffalo Thorn *Ziziphus mucronata* and Camel Thorn *Acacia erioloba* common along the dry river beds of the tributaries as well (Low and Rebelo, 1996).

The complex geology and broken, rocky terrain result in a large number of distinct vegetation communities within this regional vegetation type. This type tends to occur on the granite-derived soils rather than the shale-derived, clayey soils of the other Nama karoo types. Nothing is known of the role wild animals, especially nomadic species, played in the ecological functioning of this vegetation type.

The Augrabies Falls National Park is the largest conservation area within this regional vegetation type. Although only a small portion of the area is official conserved, careful farming should preserve most of the plant species (Low and Rebelo, 1996).



Figure 6: The general view of the existing site.

6.5 Relative Humidity.

Although the annual average is 82%, extremes of saturation in summer coupled with temperature approaching 40° C, can result in sharp but short uncomfortable spells. (miller 2002)

6.6 Wind direction and Speed

Wind in the region is relatively light with gusts occurring during the occurrences of thunderstorms the wind direction is predominantly south westerly with the strongest winds starting in August and building up to their peak in October then dropping off and declining again in April- May(South African Weather Bureau)

6.7 Geology and Soil

According to Hartmann's (1988) classification of soil of the Northern Cape the area soils are classified as weakly development soils with much rocky land. The soils of this group are widely distributed being located predominately in the mountainous area

6.8 Topography

Change in current existing topography will lead into erosion and changes in drainage and runoff patterns. The area proposed for extension is a semi disturbed land with an existing storm water management channelling in place.

6.9 Socio-economic environment

The site is a privately owned land, used for animal farming and has an existing Eskom substation. Pofadder is affected by high unemployment rate estimated to be $\pm 75\%$ (Khaimi Local Municipality Information)

7. Identification of environmental issues and concerns

7.1 Method used to identify and rate impacts.

Assessment Approach in Identifying Environmental Issues

The assessment and description of identified environmental issues were conducted according to the structure and approach detailed below. The following is a brief description of how these impacts were identified and rated. The approach may be tailored and altered where required to deal adequately with the description and assessment of a specific impact. The definition or of terms used in this section are in the page

- ❖ A description of the nature of the potential issues as to its :
 - General background and context within this application
 - Causes and effect

- Who or what will be affected
- How it will be affected
- ❖ Assessment of the impact as to
 - Probability
 - Extent
 - Duration
 - Magnitude
 - Reversibility

The table below shows how each impact will be assessed and is an elaboration of the approach used in identifying and rate these impacts.

Potential issue	Criteria	Description of elements that are central to each issue
Description	Nature	What causes the effect?
		Who will be affected?
		What will be affected?
		How will it be affected?
	Probability	Certain / may not occur with mitigation.
	Status	Positive, negative or neutral.
Assessment	Extent	Is the impact site specific.
		Does the impact extend locally, i.e. to the site and its nearby surroundings?
		Does the impact extend regionally, i.e. have an impact on the region.
		Does the impact extend nationally, i.e. have an impact on a national scale.
	Duration	Short term, i.e. 0-5 years.
		Medium term i.e. 5-11 years.
		Long term, i.e. impact ceases after the construction or operational life cycle.
		Permanent, i.e. mitigation either by natural process or by human intervention will not occur in such a way or in such a time span that the impact can be considered transient.
	Magnitude	Low, i.e. natural and social functions and processes are not affected or minimally affected.
		Medium, i.e. affected environment is notably altered. Natural and social functions and processes continue albeit in a modified way.
		High, i.e. natural or social functions or processes could be substantially affected or altered to the extent that they could temporarily or permanently cease.
	Reversibility	Impact is reversible or irreversible.
	Cumulative or non-cumulative	Potential of two or more impacts to combine to form cumulative or synergistic impacts.

7.2 Method used to identify mitigation and management measure for the identified Impacts.

Proposed mitigation and management methodology

The table below is an illustration of the criteria that will be utilised to identify proposed mitigation and the management of the mitigation. The table below is a further illustration of the period of mitigation and the responsible party.

No	Mitigation	Impact and proposed mitigation and management actions	Responsibility	Timeframe
	Potential to mitigate negative impact	Description of mitigation measures. Extent to which mitigation measures could influence the significance and status of impact.	The responsible person to ensure that the mitigation measures are taken.	Implementation period for the mitigation
	Potential to enhance positive impacts	Where ever possible a description of the optimization measures. Extent to which they could influence the significance of impact		
	Significant rating of impact after mitigation	Low, i.e. natural and social functions and processes are not affected or minimally affected.		
		Medium, i.e. affected environment is notably altered. Natural and social functions and processes continue albeit in a modified way.		
		High, i.e. natural or social functions or processes could be substantially affected or altered to the extent that they could temporarily or permanently cease.		
Comment on the overall assessment and conclusion.	Overall Assessment and concluding comments as to the predicted impacts after mitigation and their : <ul style="list-style-type: none"> ○ Severity and permanence ○ Size and relative significance ○ Ecological and socio – economic context ○ Balance between positive and negative aspect ○ Cost and benefits ○ Acceptability / Unacceptability 			

7.3. Impacts that may arise in the extension of Paulputs substation.

7.3.1 Storm water management.

The current substation is situated in the path of storm water and even though there is storm water management system, there is a water trap zone in the area. The proposed extension could increase the current existing impact if not properly addressed. Therefore storm water will need to be addressed in order to reduce this impact.

7.3.2 Waste generation and disposal.

Solid waste will be generated in the process of extension of Paulputs substation and if no proper disposal measure area in place the surrounding environment would be negatively impacted.

7.3.3 Visual impacts.

The proposed extension of Paulputs will have pose less / no visual impact to the surrounding. However the site camp and storage yard for equipment should be properly positioned on site, and proper management would have to be in place to ensure that no random placement of materials and equipments in non designated areas.

7.3.4 Dust

To some extent dust could result in the process of extension due to movement of construction vehicles and from stockpiled soil on site. If dust suppression measure are not in place the health of the employee could be at risk.

7.3.5 Hazardous liquids.

In the process of installation of transformers a large amount of hazardous liquid will be used and if not well managed spillages could arises which would negatively affect the ground soil(in some cases ground water could be contaminated by these liquids).

7.3.6 Soil erosion

Erosion may take place when vegetation is removed and the top soil is exposed, which is then more susceptible to erosion during rainfall events and from strong winds. Similarly, trampling of vegetation by the continual movement of vehicles and people may also lead to the removal of vegetation and exposure of the top soil.

7.3.7 Noise

It is expected that the construction activities will create noise pollution in the area during working hours. An increase in

7.3.8 Endemic flora and fauna

Endemic flora and fauna in and around the construction site should be protected as far as possible hence a further impact in the little life remaining on site would be negative to the existing environment.

7.3.9 Fire Prevention and Control

The activities that require fire in the contractors' camp may pose fire threat to the surrounding environment (creation of veldt fires).

7.3.10 Labour force

Environmentally unfriendly actions of the labour force can create various problems such environmental pollution.

7.3.11 Control of construction workers

Construction workers should be managed accordingly to avoid unnecessary impact on the surrounding environment.

7.3.12 Survey Points

The surrounding environment must be taken into consideration when survey operations are to be performed.

7.3.13 Construction Camps

The choice of site for the contractors' camp requires the Engineers permission and must take into account location of ecological sensitive areas.

7.3.14 Lighting

Lighting on site is to be set out to provide maximum security and to enable easier policing of the site, without creating a visual nuisance to local residents or business.

7.3.15 Maintenance of access roads

If access roads are not maintained with an acceptable surface free of erosion and water ponding this could impact the environment negatively.

7.3.16 Traffic

In the process of extension of Paulputs traffic in the main roads will be affected as a result of transportation of heavy vehicle and material to the site.

8. Public Consultation

8.1 Introduction.

In April 2006 the Minister of Environmental Affairs and Tourism passed regulations in terms of chapter 5 of the National Environmental Management ACT, 1998 (Act No. 107 of 1998 ("NEMA")). The regulations replace the environmental impact assessment (EIA) regulations that were promulgated in terms of the Environmental Conservation Act, 1989 (Act No. 73 OF 1989) in 1997 and introduce new provisions regarding Environmental Management Frameworks (EMF).

To assist the relevant role-players in understanding what is required of them and what their role may be, the Department of Environmental Affairs and Tourism has produced a set of guidelines. These guidelines are intended to be guides only and should be read in conjunction with NEMA and the regulations. They are not intended to be a substitute for the provisions of NEMA or the regulations in any way.

The guidelines form part of the department's Integrated Environmental Management Guidelines Series and consist of four parts, namely:

- ❖ Guideline 3: General guide to the EIA Regulations
- ❖ Guideline 4: Public participation
- ❖ Guideline 5: Assessment of alternatives and impacts and alternatives
- ❖ Guideline 6: Environmental management frameworks

Guideline 4, provides information and guidelines for applicants, authorities and interested and affected parties (I&APs) on the public participation requirements of the regulations as described in Chapter 7 of the EIA regulations.

8.2 Approach and methodology

The broader framework in which the environmental investigations are conducted is Integrated Environmental Management IEM. A definition provided by the South African Department of Environmental Affairs and Tourism, (DEAT) for IEM reads as follows:

“IEM is a combination of proactive and preventative processes and procedures that maintain the environment in good condition for a variety of short and long range sustainable uses.”

In order to ensure that the IEM is incorporated into a development process, it is necessary to identify issues and understand associated impacts. Thus, it is important

that the Scoping phase, a process designed to identify issues, is conducted in the public domain, allowing I&APs the opportunity of participating in this process.

8.2.1 Principles of the Public consultation process.

As the public participation programme is an integral part of the Integrated Environmental Management (IEM), the same IEM Principles should be applied. IEM principles, as listed by the DEAT (1998) and which are most relevant to the Public Participation Programme include:

- Meaningful and timorous participation of I&APs
- Focus on important issues
- Due consideration of alternatives
- Accountability for information used for decision making
- Encouragement of co-regulation, shared responsibility and sense of ownership
- Dispute resolution
- Application of due process particularly with regard to public participation in environmental governance as provided for the Constitution
- Inclusively: the needs, interests and values of I&APs must be considered in the decision-making process

The external communication function performed by Public Participation is both proactive and reactive in nature, and can best be described in terms of three categories:

- Meetings
- Services
- Products

8.2.2 Meetings

The main type of stakeholder meetings that were conducted, were as follows:

- Public open day
- Interactions with individuals and I&APs representatives

8.3 Public Participation Open Day.

The Public Participation Open Day was conducted on the 18th of September 2008 at 17h00 as required by the NEMA Regulations. The purpose of the public open day was to provide a platform to I&APs to raise issues and as well to inform I&APs more thoroughly of the development through the use of diagrams & maps with a one on one interaction with the members of the study team. A full attendance register was taken at the Public Participation day of attendants who enquired about the project & can be seen in the attached Appendix C5. There were no negative issues raised at the public participation day.



Figure 7: Public Open Day.

8.3.1 Interactions with individuals and I&AP representatives

In addition to the Public Participation Day, members of the study team interacted personally and communicated by telephone with individuals and representatives of I&APs about the project.

8.3.2 Services

Enkanyini Projects provided the following services:

- Registration of I & AP s though attendance registers at the Public Open Day and invitations to register extended in the Background Information Document (Appendix B), individual letters and faxes and media advertisements. I&APs were also identified from existing data bases. A copy of the attendance register taken at the Public Participation Day is available in Appendixes.
- A complete list of all registered I&APs is available in attached Appendix.
- Feedback to I&APs, individually and collectively.
- Enkanyini Projects committed itself that the Draft Scoping Report will be distributed to key stakeholders and placed in Khaima Local Municipality in the Pofadder for public review.
- Assistance, where requested will be provided to I&APs in order to facilitate the understanding of the Scoping Report so that I&APs have the opportunity to provide meaningful comment.

8.3.3 Public Information Documents

A Background Information Document (BID) was produced and distributed during the Public Participation Day. The BID provided a brief and concise description of the project as well as a map of the proposed study area. Copies of the BID were:

- Disseminated to identified I&APs
- Provided at the Public Participation Day
- Placed at public venues in the respective study areas

A set of posters was produced to form part of the Public Participation Day display, these posters provided information on the EIA process, further information on the project and a large scale map of the proposed project, making the routing of the project more visible to I & AP s.

8.3.4 Notifications

- As per the EIA Regulations (No 56) of 2006, press advertisements were placed in the newspapers that are distributed in areas where the project is to take place, informing the public of the location, the time and the whereabouts of the Public Participation Day. The Newspapers in which we used for publication is Daily Sun and the local news paper by the name Gembsbok which was believed to be the most read news paper in the local community the copy of the news paper is in the appendix section.
- Posters informing the public of the project were placed along the route of the proposed project and at strategic public places.

8.3.5 Findings of public participation to date

The Public Participation component of this project has been advertised in the press, posters have been placed at strategic in public places. A data base of potential I&APs was collected from information and addresses obtained from I&AP representatives, however few of them showed-up to the invitation to come to the Public Participation day that was held, and it was assumed that they were sufficiently informed about the proposed project.

In summary, the following overall comments regarding the Interested and Affected Parties sentiment towards the proposed project can be made:

- Interested and Affected Parties are aware that there are formal and advertised channels through which their issues and concerns can be raised. They are also aware that if they require any further information they can obtain it from the consultants.
- Some Interested and Affected Parties expressed interest in staying informed about the project as it evolved.
- These I&APs were informed that although the environment should be considered in a holistic sense, their concerns should be addressed to the environmental consultants concerned.

- While it is perhaps quite unrealistic to think that all interested and affected parties will be satisfied with the project and the processes followed, it is important to the project team that all I&APs feel that they have had the opportunity to express their views and believe the process to have been as transparent as possible.

8.3.6 Proposed future actions.

Public Participation is an ongoing programme that will be continued throughout the involvement of Enkanyini Projects with the project. Issues and concerns will be continually added to those already taken and any new I&APs that wish to be registered I&APs will be kept informed of any developments in the project as they happen, culminating with the issue of Environmental Authorisation by DEAT.

8.3.7 Public Participation conclusion.

It is the belief of the environmental team, that the due process has been followed. With the release of the Background Information Document (draft scoping report at a later stage) it is felt that I&APs will have had the opportunity to learn about the project and provide meaningful comment to the process.

9. Identification of environmental issues and concerns

9.1 Categorization of I&APs

In terms of this project the I&APs can be categorised into the following groups, these groups are representative of the main core of the existing social makeup of the site area and can be divided into the following categories:

- Residents (individual)
- Landowners
- Provincial government
- Local government
- Unclassified

9.2 Issues raised by interested and affected parties

Issues that were and will continually be raised by the I&APs at the Public Participation Consultation Process and in correspondence relating to the project via email, fax, letters and telephonic conversations have been and will be dealt with in the following way.

- Issues relevant to the environmental investigation have been summarised in the attached issues report and will be addressed in specialist studies if required by the department.
- These issues may be grouped into the following categories:
 - + The natural environment, wetlands, waterways, flora and fauna
 - + Health and well being
 - + Consideration of alternatives.

9.3 Key issues raised by Interested and Affected Parties.

A summary is provided below of the relevant issues that have been raised by the I&APs about the project, these will be split into their various groupings and discussed

9.3.1 The natural environment.

There was less or no comments regarding the proposed upgrade although there seemed to be little concern to the development.

9.3.2 Health and well being

I&APs understand the necessity of the project and that it will have a huge impact on the quality of life of the recipients of the service.

9.3.3 Alternative Position

Although this is a very valid line of questioning, it is also apparent that the selected position seemed to cause no concern to the attendants and the land owner.

10. Conclusions and recommendations

10.1 Guidelines for the Impact Assessment Phase

General aspects that require attention in the Impact Assessment phase of the project as well as in the preparation of a detailed Environmental Management Plan (EMP) are addressed below. It should be noted that these aspects are not necessarily the only ones that need to be addressed in the EIA and the EMP; other aspects relating to practical and technical consideration will also have to be covered to ensure best environmental practice.

10.2 Issues and concerns raised by I&APs

Environmental issues and concerns that are raised by the I &AP s should be addressed in the EMP.

10.3 Mitigation and enhancement

Mitigation measures suggested by the I&APs should be taken into consideration to avoid or reduce the potential negative impacts. Ways to enhance positive impacts should also be addressed in the EMP.

General mitigation measures must also be followed as stated below;

- A re-vegetation exercise of all excavated or disturbed areas should be implemented with grasses, forbs and trees that are indigenous and mimic the current vegetation;
- Checks must be carried out at regular intervals to identify areas where erosion is occurring. Appropriate remedial action, including rehabilitation must be implemented;
- All exotic plant species must be removed during construction. Should these species not be removed during construction, it is recommended

that a programme be implemented to remove all alien species and replace them with indigenous species over a period of 2 years;

- Measures must be put in place to ensure the velocity of storm water is reduced before it reaches drainage areas;
- Vehicles transporting materials must be covered with tarpaulins to reduce dust generation;
- Access to the ridge should be limited during construction to prevent undue disturbance by the workforce;
- All waste is to be disposed of correctly before, during and after construction; and
- Construction workers must refrain from hunting, snaring, making fires and littering.

11. References

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- National Environmental Management Act, 1998(Act 107 of 1998)
- The Constitution of the Republic of South Africa (Act No 108 of 1996).
- Listing Notice No.R.387 of 21 April 2006
- Environmental Impact Assessment Regulations, 2006
- National Environmental Management Air Quality Act(39 of 2004)
- National Heritage Resource Act(25 of 1999)
- Occupational Health and Safety Act(Act 85 of 1993)
- Hazardous Substance Act 15 of 1973

Appendix A – Map
Appendix B – Background Information Document
Appendix C – Public Participation Consultation.

- Appendix C1 - Proof of site notice
- Appendix C2 - Proof of News paper advertisement
- Appendix C3 - Communication to and from person
- Appendix C4 - Minutes of the public meetings
- Appendix C5 - Copy of the register of I&AP
- Appendix C6 - Comments and response report
- Appendix C7 - Consent letter
- Appendix C8 - EAP expertise

Appendix A – Map.

Appendix B – Background Information Document.

Appendix C – Public participation consultation.