environmental affairs
Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

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File Reference Number:	
Application Number:	
Date Received:	

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.
13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section? YES | NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

The Eskom Penge Substation Decommissioning Project involves the decommissioning and demolishing of the existing Penge substation.

The study area is situated west of the village of Penge along its western boundary, approximately 30km north of Burgersfort in the Sekhukhune District Municipality, Limpopo Province.

b) Provide a detailed description of the listed activities associated with the project as applied for

Listing Notice 1	
GN 983, Dec 2014, Number 31 The decommissioning of existing facilities, structures or infrastructure for- (i) any development and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014; (ii) any expansion and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014; (iii) any development and related operation activity or activities and expansion and related operation activity or activities listed in this Notice, Listing Notice 2 of 2014 or Listing Notice 3 of 2014; (iv) any phased activity or activities for development and related operation activity or expansion or related operation activities listed in this Notice or Listing Notice 3 of 2014; or (v) any activity regardless the time the activity was commenced with, where such activity: (a) is similarly listed to an activity in (i), (ii), (iii), or (iv) above; and (b) is still in operation or development is still in progress; excluding where- (aa) activity 22 of this notice applies; or (bb) the decommissioning is covered by part 8 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies.	The existing Penge Substation will be decommissioned.

Listing Notice 3	
GN 985, Dec 2014, Number 12 The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. e. Limpopo i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004; ii. Within critical biodiversity areas identified in bioregional plans; or iii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning.	More than 300m^2 of indigenous vegetation will be cleared in areas that has been identified as • Critical Biodiversity Area 1 (The SANBI map is attached under Appendix A). The clearance of indigenous vegetation will take place during the decommissioning (construction) phase which will be required for laydown areas.

2. FEASIBLE AND REASONABLE ALTERNATIVES

"alternatives", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

(a) the property on which or location where it is proposed to undertake the activity;
(b) the type of activity to be undertaken;
(c) the design or layout of the activity;
(d) the technology to be used in the activity;
(e) the operational aspects of the activity; and
(f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h), Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.
The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Alternative 1 (Preferred Alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Existing Penge Substation	24^0 23' 16.96" S	30^0 16' 49.60" E
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

In the case of linear activities:

Alternative 1		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative 2		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		
Alternative 3		
• Starting point of the activity		
• Middle/Additional point of the activity		
• End point of the activity		

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.
In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

SITE DESCRIPTION

The town of Penge is a small settlement situated in the mountains of Sekhukhuneland. The settlement has a population of approximately 1100 inhabitants.

Penge was the location of the largest amosite asbestos mine in the world between 1920 and 1992. Around 1960, Eskom established the Penge Substation in order to supply electricity to the asbestos mine and associated village. The asbestos mine has since closed because asbestos products have been banned worldwide. Penge is regarded as one of the most hazardous areas due to the asbestos remains exposed either by rain and life stock. Even though electricity supply has been scaled down considerably, Penge substation at present continues to serve nearby communities.

Asbestos contamination of the entire Penge Substation yard is evident. During the years of its operation, vehicle and pedestrian traffic have crushed the tailings, opening the way for rainwater to wash the fibrous mass down the embankment where it accumulated in huge puddles. The asbestos is exposed to the elements and microscopic fibres may be dispersed into the breathing air of employees, contractors and citizens of the community. Asbestos also migrated from the substation to contaminate an ever-increasing area around it.

The substation site itself is situated within the Ohrigstad Mountain Bushveld vegetation type which is characterised by a woody layer that varies from open to dense with shrubs and trees dominating. Various grass species grow in the open areas where the woody vegetation is not dense.

The topography surrounding the substation yard varies from moderately steep to steep slopes along mountains and valleys. In some areas the topography is flat while the soil is mostly shallow and leached. It occurs mostly on quartzite and shale.

The Penge Substation

SELECTING AN ALTERNATIVE

Alternative 1: Decommissioning and demolishing of the substation

The substation will be decommissioned and the affected land will be rehabilitated. This is the best option to follow because of the following reasons:

- Residents and industries within the Penge area moved away after the closure of the asbestos mine with a subsequent huge decrease in electricity demand.
- A substation must be situated as near as possible to the middle of the load centre (where the power will be actually consumed). Due to the decrease in electricity demand the current position of the Penge substation is not close to the middle of its load centre. The most practical and optimal utilisation of the electricity network is therefore not possible whilst the substation is at its current location.
- The substation was constructed in the 1960's and is in serious need of refurbishment in order to provide a reliable supply of electricity.
- Even though health and safety regulations are being followed by Eskom personnel when visiting the substation, they are always at risk due to the high level of asbestos pollution within the wider Penge area. For health and safety reasons it is therefore preferred to not have a substation within the Penge area where regular maintenance is required.

It was therefore decided that the Penge substation should be decommissioned and that the contaminated land will be rehabilitated. The current users of the Penge substation will receive their electricity from Pitso (Malatjie) Substation (the DEA approval thereof formed part of another Basic Assessment process with DEA Reference 14/12/16/3/3/1/753.). Construction on this substation will commence in the 2017 / 2018 financial year.

Alternative 2: Temporarily closing down of the substation and Rehabilitation of the substation yard

An *Asbestos Health Risk Assessment* was undertaken by Ergosaf and completed in August 2007 (the report is attached under Appendix J).

The report concluded that the substation presents a serious health risk to employees and contractors who are required to work there, as well as to citizens of the community. The recommendations made were the following

- Emergency steps must be taken immediately to close Penge Substation temporarily and to supply present clients with electricity from an alternative centre;
- The asbestos pollution inside and outside of the substation must be rehabilitated. For this purpose a proposed rehabilitation plan was compiled.
- Operations at the substation should not be resumed until rehabilitation work has been completed to a satisfactory standard.

Eskom however decided to *not* follow this recommendation due to the following reasons:

- The Centre for Sustainability in Mining and Industry (CSMI) undertook a study in 2008 for the Asbestos Relief Trust and a report named "**The future of Penge**" (attached under Appendix J) was compiled. The report concluded as follows:
    - Investigation into conditions of health and safety in the area provided evidence of heavy asbestos contamination. There are virtually no economic activities in Penge itself and there appear to be high levels of unemployment among inhabitants. The village infrastructure has fallen into disrepair with derelict buildings, roads and bridges.
    - Asbestos fibres were visible all over the paths, side-walks and dirt roads within the village and surrounds. Schools have closed down and the hospital has been downgraded to a clinic. There appear to be few prospects for the development of a local economy that might bring employment. The idea of making the village into a tourist attraction was mooted by the Province, but this should not be encouraged, as the area remains a source of danger to health.
    - It is strongly recommended that the Provincial Government of Limpopo, in collaboration with the Greater Sekhukhune District Municipality and the local Penge community, as a matter of urgency begin making plans for the closing down of the village and removal of the people elsewhere. It is strongly recommended that the whole of the Penge site, including the former mining village and the mine dumps, be closed to human habitation.

Due to the high levels of asbestos pollution within the Penge area, many people and industries moved away, with a subsequent huge decrease in electricity demand. It would therefore not make economic sense to spend millions of rands on the temporarily closing down of the substation when demand is decreasing every year.

SELECTING AN ALTERNATIVE: PUBLIC PARTICIPATION

No objections to the decommissioning of the substation were received during the public participation process to date.

CONCLUSION ON SELECTING AN ALTERNATIVE

The **decommissioning and demolishing of the substation** is preferred above the temporarily closing down and rehabilitation of the land mainly because of the drastic decrease of electricity demand and the fact that the substation is not close to the middle of the load centre anymore. The substation is also approximately 50 years old and current equipment needs to be replaced to ensure a stable energy supply. For health and safety reasons it is preferred to not have a substation within the highly polluted Penge area where regular maintenance is required.

Once mitigation measures have been applied, the decommissioning of the substation and rehabilitation of polluted land would have a positive effect on the environment. This alternative is therefore the alternative that is recommended for environmental authorisation

b) Lay-out alternatives

Alternative 1 (preferred alternative)		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 2		
Description	Lat (DDMMSS)	Long (DDMMSS)
Alternative 3		
Description	Lat (DDMMSS)	Long (DDMMSS)

c) Technology alternatives

Alternative 1 (preferred alternative)
Alternative 2
Alternative 3

d) Other alternatives (e.g. scheduling, demand, input, scale and design alternatives)

Alternative 1 (preferred alternative)		
Alternative 2		
Alternative 3		

e) No-go alternative

The Penge Substation a significant source of environmental asbestos pollution, dispersed by wind and water, which threatens the health and safety of those who visit the site as well as residents of and visitors to the area. The risk is aggravated by the fact that Penge is already heavily polluted as a result of years of dust pollution during the operational phase of the mine.

The electricity demand within the Penge area also decrease significantly over the past years and the substation is therefore not close to its load centre (where the electricity will actually be consumed) anymore. The most practical and optimal utilisation of the electricity network is therefore not possible whilst the substation is at its current location.

The maintaining of the status quo, in other words the application of the no-go option, is definitely not to the benefit of the people of Penge, the environment or Eskom. The no-go option is not recommended for this project.

Paragraphs 3 – 13 below should be completed for each alternative.

3. PHYSICAL SIZE OF THE ACTIVITY

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

Alternative:	Size of the activity:
Alternative A1[1] (decommissioning of the substation)	±7 200m²
Alternative A2 (temporarily closing down and rehabilitation)	±7 200m²
Alternative A3 (if any)	m²

or, for linear activities:

Alternative:	Length of the activity
Alternative 1	Km
Alternative 2	Km
Alternative 3	Km

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:	Size of the site/servitude:
Alternative 1	m
Alternative 2	M
Alternative 3	

4. SITE ACCESS

Does ready access to the site exist?	YES	NO
If NO, what is the distance over which a new access road will be built		m

Describe the type of access road planned:

The existing Penge substation is directly adjacent to the tar road that enters the town of Penge and no new access roads are required.

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of

[1] "Alternative A.." refer to activity, process, technology or other alternatives.

more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s;)
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection).

6. LAYOUT/ROUTE PLAN

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

8. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

10. ACTIVITY MOTIVATION

Motivate and explain the need and desirability of the activity (including demand for the activity):

1. Is the activity permitted in terms of the property's existing land use rights?	YES	NO	Please explain
The property belongs to Eskom and the existing substation will be decommissioned.			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
The **Limpopo Province Spatial Development Plan 2015 - 2019** The Medium-Term Strategic Framework (MTSF) for 2015 - 2019 reflects the action plan for the National Development Plan and the New Growth Path for this first five - year implementation period. Development objectives are classified into two broad development themes and fourteen priority outcomes as indicated below, each with its own targets and indicators. The two broad development themes are Economic Transformation (including infrastructure and workplace conflict reduction), and Improving Service Delivery (access to and quality of services and local government capacity). The MTSF is underpinned by Outcomes. Outcome Nr 2 is applicable to this project: "A long and healthy life for all South Africans". A healthy environment is one of the nine goals of this Outcome. The decommissioning of the Penge substation and the rehabilitation of the asbestos pollution will assist in a more healthy environment for the residents and workers of Penge.			
(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
Not applicable			

(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES	NO	Please explain
According to the **Greater Tubatse Municipality's IDP 2011-2016**, the following applies: Asbestos was mined at Penge and Taung, but because asbestos products have been banned worldwide, the mines were closed down and these areas are currently being rehabilitated. Old mining areas such as Penge, Taung, and Krommelenboog etc are regarded as the most hazardous areas due to the asbestos remains exposed either by rain and life stock. The decommissioning of the Penge Substation is in support of these rehabilitation efforts.			
(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
A Structure Plan for the Greater Tubatse Municipality is not available / does not exist.			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO	Please explain
According to the **Sekhukhune District Municipality's IDP 2005 - 2008,** the municipality derives its mandate from the Constitution of the Republic of South. One of the constitutional mandates is "*to promote a safe and healthy environment*". One of the key challenges is ensuring a safe and functional work environment. The decommissioning of the Penge Substation is in support of these mandates and challenges. The proper rehabilitation of the substation site will lead to a safer environment for the residence of Penge.			
(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
Unknown			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES	NO	Please explain

The decommissioning of the substation with its asbestos components and proper rehabilitation of effected areas will ensure a safer environment for visitors to and residence of the Penge area. The 2005 – 2008 IDP identified safer environments as a priority area that needs attention.			
4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES	NO	Please explain
The decommissioning of the substation with its asbestos components and proper rehabilitation of effected areas will ensure a safer environment for visitors to and residence of the Penge area.			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	NO	Please explain
The project is for the decommissioning of an existing substation and no additional capacity is required for this project.			
6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	NO	Please explain
A healthy and safe environment is one of the goals of the Tubatse Municipality and this project will assist in achieving that goal for the Penge area.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO	Please explain
This project does ultimately contribute on national level. A safe and healthy environment is the constitutional right of every South African and the decommissioning of the substation and proper rehabilitation of effected areas will contribute to a safer and healthier environment.			
8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES	NO	Please explain
The decommissioning of the substation and rehabilitation of affected areas will contribute to a more healthy and safe environment within the Penge area.			

9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
The decommissioning and rehabilitation of the substation will contribute to a more healthy and safe environment within the Penge area. Furthermore, Eskom infrastructure will be removed from an asbestos polluted area to a clean environment.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
The continues use of the substation will cause Eskom employees to be exposed to asbestos pollution which involves various health risks. Due to high dust levels the maintenance of the Penge substation is very costly – the use of the new substation will reduce the maintenance cost considerably.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO	Please explain
This decommissioning and rehabilitation will contribute to a healthier environment and forms part of the municipal plans for the area.			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO	Please explain
No person's rights would be negatively affected by the proposed activity. A thorough public participation programme was conducted and issues raised by interested & affected parties are satisfactorily addressed.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO	Please explain
The activity is irrelevant to the urban edge, because it is an existing substation site.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO	Please explain
15. What will the benefits be to society in general and to the local communities?			Please explain
The continues use of the substation will cause Eskom employees to be exposed to asbestos pollution which involves various health risks. Due to high dust levels the maintenance of the Penge substation is very costly – the use of the new substation will reduce the maintenance cost considerably.			
16. Any other need and desirability considerations related to the proposed activity?			Please explain
The management of Penge Asbestos Mine, Egnep (a subsidiary of Cape Plc) encouraged the use of tailings, a heavily contaminated asbestos waste, to gravel roads, construct sports fields, and to make bricks and other construction materials. In the case of Eskom's Penge Substation, asbestos tailings were used as the aggregate filler between transformers and high voltage equipment. Tailings were also used to mix concrete for the construction of terraces, storm water channels and bund walls in and around the substation.			

Asbestos contamination of the entire Penge Substation yard is evident. During the years of its operation, vehicle and pedestrian traffic have crushed the tailings, opening the way for rainwater to wash the fibrous mass down the embankment where it accumulated in huge puddles. The asbestos is exposed to the elements and microscopic fibres may be dispersed into the breathing air of employees, contractors and citizens of the community.

The health risks presented by asbestos fibres are well known. Repeated and prolonged exposure to airborne asbestos fibres, even at relatively low concentrations, can pose a serious health hazard by causing diseases such as asbestosis, lung cancer and mesothelioma.

Clinical studies have established incontrovertibly that asbestos causes asbestosis, a progressive fibrotic disease of the lungs, cancer of the lung, malignant mesothelioma of the pleura and peritoneum, cancer of the larynx, as well as certain gastrointestinal cancers. The risk of contracting these diseases increases with increased exposure.

An important feature of most asbestos-related diseases is the latency period. It may take 20 to 40 years for the first symptoms to manifest. There is no cure.

For very obvious health and safety reasons, it is highly desirable that the Penge substation be decommissioned so that it is not required for any Eskom personnel to visit the site. The environment will also benefit from the rehabilitation of asbestos contaminated land.

17. How does the project fit into the National Development Plan for 2030?	Please explain

The **National Development Plan** aims to eliminate poverty and reduce inequality by 2030. South Africa can realise these goals by drawing on the energies of its people, growing an inclusive economy, building capabilities, enhancing the capacity of the state, and promoting leadership and partnerships throughout society.

The Commission's **Diagnostic Report, June 2011** set out South Africa's achievements and shortcomings since 1994. It identified a failure to implement policies and an absence of broad partnerships as the main reasons for slow progress, and set out nine *primary challenges of which the following is relevant to this project*: "Infrastructure is poorly located, inadequate and under-maintained". Given the complexity of national development, the plan sets out six *interlinked priorities. Relevant to this project is bringing about faster economic growth*.

The **National Development Plan** makes a firm commitment to achieving a minimum standard of living. *Elements of a decent standard of living include the following relevant to this project* :

- A more efficient and competitive infrastructure.
- Infrastructure to facilitate economic activity that is conducive to growth and job creation.

An approach will be developed to *strengthen key services* such as commercial transport, energy, telecommunications and water, while ensuring their long-term affordability and sustainability.

Economic infrastructure: The proportion of people with access to the electricity grid should rise to at least 90 percent by 2030, with non-grid options available for the rest.

18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.

Current procedures and/or organisational structures are not necessarily achieving integrated decision-making and/or co-operative governance and, as a result, there is a failure to properly achieve the objectives of IEM as set out in Section 23 of NEMA. EIA's however often focus on the immediate harm a project will cause rather than any benefits it might create in the long term to sustainable development.

The stated objectives of Section 23 are to ensure integrated decision-making and co-operative governance so that NEMA's principles and the general objectives for integrated environmental management of activities can be achieved. The goals are to

a) promote the integration of the principles of environmental management set out in section 2 into the making of all decisions which may have a significant effect on the environment;
b) identify, predict and evaluate the actual and potential impact on the environment, socio-economic conditions and cultural heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impacts, maximising benefits, and promoting compliance with the principles of environmental management set out in section 2;
c) ensure that the effects of activities on the environment receive adequate consideration before actions are taken in connection with them;
d) ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;
e) ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and
f) identify and employ the modes of environmental management best suited to ensuring that a particular activity is pursued in accordance with the principles of environmental management set out in section 2.

For this project the following actions were taken to reach the general objectives of Integrated Environmental Management as set out in Section 23 of NEMA:

a) Applicable environmental, economic and social aspects have been assessed, thereby ensuring an integrated approach in order to balance the needs of all whom would be affected by this development.
b) Impacts have been described and assessed elsewhere in this report. Mitigation measures have been supplied in order to ensure that all identified impacts are mitigated to acceptable levels. Alternatives have been thoroughly assessed and the best possible solution represents this development proposal.
c) The development proposal has to be evaluated and approved by DEA and no construction may commence prior to the issuing of the Environmental Authorisation.
d) The procedures which were followed during the public participation programme were based on the NEMA EIA Regulations which came into effect on 14 December 2015.
e) DEA will take all information as represented in this report into consideration and may request further information should they feel that further studies/information is required before an informed decision can be made.
f) The mitigation measures as supplied in this report together with the measures as per the Environmental Management Programme are deemed to be the best way to manage anticipated impacts.

By providing electricity whilst not severely impacting negatively on the environment, the project would contribute to a sustainable environment.

19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.

Chapter 2 of NEMA provides a number of principles that decision-makers have to consider when making decisions that may affect the environment, therefore, when a Competent Authority considers granting or refusing environmental authorisation based on an Environmental Impact Assessment, these principles must be taken into account.

The NEMA principles with which this application conforms are described as follows —

1. Environmental management must place people and their needs at the forefront of its concern, and serve their physical, psychological, developmental, cultural and social interests equitably.
2. Development must be socially, environmentally and economically sustainable.
3. Sustainable development requires the consideration of all relevant factors.

The social, economic and environmental impacts of activities, including disadvantages and benefits, were considered, assessed and evaluated, and informed decision-making by the authority is hereby made possible.

11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management Act (Act 107 of 1998), as amended	Environmental Authorisation is required	Department of Environmental Affairs	
National Heritage Resources Act (25 of 1999)	Comment is not required	SAHRA	
National Water Act (Act 36 of 1998)	Comment is required	Department of Water Affairs	
Section 7(1) and 15(1) of the National Forests Act of 1998 (Act 84 of 1998)	Authorisation may be required if protected trees are being cut or removed	Department of Agriculture	
Environment Conservation Act (Act 73 of 1989)	Authorisation is not required	Department of Environmental Affairs	
National Environmental Management: Biodiversity Act (Act 10 of 2004)	Authorisation is not required	Department of Environmental Affairs	
National Environmental Management: Biodiversity Act (Act 10 of 2004): Threatened & Protected Species Regulations	Authorisation may be required if protected trees are being cut or removed	Department of Environmental Affairs Department of Agriculture, Forestry & Fisheries for permit applications	

National Spatial Biodiversity Assessment (2004)	Authorisation is not required	Department of Environmental Affairs	
National Biodiversity Strategy Action Plan	Authorisation is not required	Department of Environmental Affairs	
Conservation of Agricultural Resources Act (43 of 1983)	Authorisation is not required	Department of Agriculture	
Endangered and Rare Species of Fauna and Flora (AN 1643 February 1984)	Authorisation is not required	Lists endangered species in terms of the Nature Conservation Ordinance, 1983 (Ordinance 12 of 1983)	

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?	YES	NO
If YES, what estimated quantity will be produced per month?		Undetermined

How will the construction solid waste be disposed of (describe)?

General construction waste

- Unusable waste will be disposed of at registered waste disposal sites according to the applicable waste classification.
- Steel (ferrous and non-ferrous) and aluminium will be recovered and sold as scrap for recycling.
- Refuse bags will be supplied to construction personnel for dumping of household waste. Bins with lids will be provided at construction camps for household waste.

Hazardous waste (asbestos)

- All asbestos contaminated waste (inclusive of soils) must be hauled to a licensed H:H registered waste disposal facility.
- The transporter of such waste must be licenced to do so:
    - The *National Environmental Management: Waste Act, 2008 (No. 59 of 2008)*, Section 25 deals specifically with the duties of persons transporting waste and must be adhered to at all times. The person transporting hazardous waste must, before offloading the waste from the vehicle, ensure that the facility or place to which the waste is transported, is authorised to accept such waste and must obtain written confirmation that the waste has been accepted. Any person engaged in the transportation of waste must take all reasonable steps to prevent any spillage of waste or littering from a vehicle used to transport the waste.

For all waste that is disposed of, Eskom shall obtain waste manifests and disposal certificates, which shall be recorded and reported to the Environmental Control Officer (ECO) on a monthly basis.

Where will the construction solid waste be disposed of (describe)?

- It will be transported off site by the contractor and returned to Eskom stores where scrap will be handed over to buyers. Any waste that cannot be recycled will be transported to appropriate registered waste disposal sites.
- General household waste generated by the construction team will be removed by the relevant contractor to a registered waste disposal site / municipal waste transfer station. Burgersfort Landfill site could be used for disposing of general waste (Permit no: 16/2/7/B400/D66/Z1/P292).

For all waste that is disposed of, Eskom shall obtain waste manifests and disposal certificates, which shall be recorded and reported to the ECO on a monthly basis.

Will the activity produce solid waste during its operational phase?	YES	NO
If YES, what estimated quantity will be produced per month?		m^3

How will the solid waste be disposed of (describe)?

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?	YES	NO

Definitions as per the National Environmental Management: Waste Act 2008 are applicable to the asbestos that will be removed during the construction (decommissioning) phase of the project and are as follows:

- "**hazardous waste**" means any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment;

- "**high-risk activity**" means an undertaking, including processes involving substances that present a likelihood of harm to health or the environment;

It is however NOT required to apply for a Waste License under this Act because the hazardous waste (asbestos) will be removed from site and dumped at a licensed hazardous waste facility and not recycled, refined, utilised, co-processed, treated or stored.

If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility?	YES	NO

If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?	YES	NO
If YES, what estimated quantity will be produced per month?		m^3
Will the activity produce any effluent that will be treated and/or disposed of on site?	YES	NO

If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?	YES	NO

If YES, provide the particulars of the facility:

Facility name:			
Contact person:			
Postal address:			
Postal code:			
Telephone:		**Cell:**	
E-mail:		**Fax:**	

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other that exhaust emissions and dust associated with construction phase activities?	YES	NO
If YES, is it controlled by any legislation of any sphere of government?	YES	NO

If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe the emissions in terms of type and concentration:

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?	YES	NO

If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?	YES	NO
If YES, is it controlled by any legislation of any sphere of government?	YES	NO

Describe the noise in terms of type and level:

The demolishing activities might be associated with noise even though the levels will be low – the impact would therefore be minimal.

13. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

Municipal **(Construction)**	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water **(Operation)**

If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:	litres	
Does the activity require a water use authorisation (general authorisation or water use license) from the Department of Water Affairs?	YES	NO

If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

14. ENERGY EFFICIENCY

Describe the design measures, if any, which have been taken to ensure that the activity is energy efficient:

Not applicable

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

The activity is designed for the decommissioning of an existing substation, and no further development will take place at this site.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

1. For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.
   Section B Copy No. (e.g. A): [ ]
2. Paragraphs 1 - 6 below must be completed for each alternative.
3. Has a specialist been consulted to assist with the completion of this section? YES | NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	Limpopo
District Municipality	Sekhukhune District Municipality
Local Municipality	Tubatse District Municipality
Ward Number(s)	16
Farm name and number	Farm Penge 108-KT
Portion number	Portion 0
SG Code	TOK0000000000010800000

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Existing substation

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required? YES | **NO**

1. GRADIENT OF THE SITE1

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

2.1 Ridgeline		2.4 Closed valley		2.7 Undulating plain / low hills	
2.2 Plateau		2.5 Open valley		2.8 Dune	
2.3 Side slope of hill/mountain	X	2.6 Plain		2.9 Seafront	
2.10 At sea					

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following?

	Alternative S1:		Alternative S2 (if any):		Alternative S3 (if any):	
Shallow water table (less than 1.5m deep)	YES	NO	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO	YES	NO	YES	NO
An area sensitive to erosion	YES	NO	YES	NO	YES	NO

Erosion control measures are supplied in the Environmental Management Plan

-If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

4. GROUNDCOVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition[E]	Natural veld with scattered aliens[E]	Natural veld with heavy alien infestation[E]	Veld dominated by alien species[E]	Gardens
Sport field	Cultivated land	Paved surface	**Building or other structure**	Bare soil

If any of the boxes marked with an "[E] "is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn't have the necessary expertise.

Not applicable

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES	**NO**	UNSURE
Non-Perennial River	YES	**NO**	UNSURE
Permanent Wetland	YES	**NO**	UNSURE
Seasonal Wetland	YES	**NO**	UNSURE
Artificial Wetland	YES	**NO**	UNSURE
Estuarine / Lagoonal wetland	YES	**NO**	UNSURE

If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station [H]
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential[A]	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant[A]	Nature conservation area
Medium industrial [AN]	Train station or shunting yard [N]	**Mountain, koppie or ridge**
Heavy industrial [AN]	Railway line [N]	Museum
Power station	Major road (4 lanes or more) [N]	Historical building
Office/consulting room	Airport [N]	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam[A]	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

If any of the boxes marked with an "N "are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Not applicable

If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Not applicable

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

Not applicable

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	**YES**	NO
Core area of a protected area?	YES	**NO**
Buffer area of a protected area?	YES	**NO**
Planned expansion area of an existing protected area?	YES	**NO**
Existing offset area associated with a previous Environmental Authorisation?	YES	**NO**
Buffer area of the SKA?	YES	**NO**

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

The following Biodiversity Maps as obtained from the SANBI website (http://bgis.sanbi.org) are included under Appendix A:

- Limpopo Conservation Plan (CBAs & ESAs): The site falls within an area identified as Critical Biodiversity Area 1
- National Parks and Protected Areas
- Rivers and Wetlands
- Threatened Terrestrial Ecosystems

7. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:	YES	**NO**
	Uncertain	

Comment from the provincial heritage resources agency is required when Section 38 of the National Heritage Resources Act is applicable. It is stated therein that the developer should notify the responsible heritage resources authority and furnish it with details regarding the location, nature and extent of the proposed development if any person who intends to undertake a development categorised as the following:

(a) the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
(b) the construction of a bridge or similar structure exceeding 50m in length;
(c) any development or other activity which will change the character of a site-
  (i) exceeding 5 000 m^2 in extent; or
  (ii) involving three or more existing erven or subdivisions thereof; or
  (iii) involving three or more erven or divisions thereof which have been consolidated within the past five years; or
  (iv) the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
(d) the re-zoning of a site exceeding 10 000 m^2 in extent; or
(e) any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

As per the Act's definition of 'development' the decommissioning of the substation may trigger activity 2(i).

The substation however do not contribute to the heritage value of the area and since the land on which the substation is build is already highly disturbed, the changes of finding any archaeological remains are exceptionally slim.

The following is however stated in the EMP
It should be noted that the subterranean presence of archaeological and/or historical sites, graves, features or artifacts is always a distinct possibility. Care should therefore be taken when development commences that if any of these are discovered, a qualified archaeologist be called in to investigate the occurrence.

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

Will any building or structure older than 60 years be affected in any way?	YES	**NO**
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?	YES	**NO**

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

The following information was obtained from the **Greater Tubatse Municipality's Integrated Development Plan, 2011 - 2016.**

Level of unemployment:

The Greater Tubatse Municipality has a high level of unemployment and poverty. The municipality has significant mining and manufacturing (ferrochrome smelters) sectors, but unemployment is still significantly above the provincial average. Information from different sources suggests that the new mining developments that have already been around could reduce unemployment from 73% (expanded unemployment rate definition) in 2001 to 44% in 2010.

Economic profile of local municipality:

The Greater Tubatse Municipality has adopted an LED strategy in 2007 which makes emphasis that the area has a high level of poverty and unemployment of which indication of the following areas are made to improve the status of the economy:

- Mining cluster development
- Horticulture development
- Meat cluster development
- Tourism cluster development
- Nodal development
- Informal sector development

The northern area of the GTM is economically the most marginal region of the Limpopo province, and had no economic base. The area is solely dependent on government handouts and migrant labour income for survival. With the development of mines in GTM, the area is currently benefitting economically from the mines in many ways, however the economic melt-down experienced during 2008 and 2009 has left most of the mining industries with no option but to seize operations and some mines had to retrench their employees.

This has left the municipality and its communities in drastic economic difficulties due to the fact that some of the residents are un-able to pay for the services rendered by either the municipality or the private sector. The Limpopo Employment Growth and Development Plan for 2009 suggests programmes that will improve the economic status of the Province like: integrated poverty reduction programme, Building Material manufacturing Programme, SMME's and Co-operatives and the integration of the National Youth Agency Programmes into the provincial programmes.

The four major sectors contributing to the economy in the GTM are:
- Agriculture
- Mining
- Manufacturing
- Trade
- Tourism

General Challenges facing economic development
- Brain drain
- High level of illiteracy
- Lack of infrastructure for agriculture and tourism development
- Migration and immigration
- High level of HIV/AIDS

Level of education:

The quality of education for the African population has long been poor and insufficient in terms of standard requirements. The Limpopo province's education achievements lag behind those of other provinces. For example, the literacy rate of the Limpopo province was 73.6% in 1991, while average literacy in South Africa was 82.2%. Population Development Program (PDP) indicators suggest that, in 1991 nearly one in every ten children of a school going age did not attend school.

According to the Education Atlas of the Education Foundation, which gives detailed data for 1991, the overall pupil/ classroom ratio for African pupils was 56:1 in the southern region of GTM. In addition to the inadequate education facilities, costs are generally also high, as families spend on average R710 per child per year on tuition, uniforms and books, which is extremely high given the overall subsistence existence that it lead in this region.

There are 247 schools (primary and secondary) situated in GTM. Steelpoort, Ohrigstad and Burgersfort have one primary school each with Burgersfort having additional private primary schools. The Department of education Limpopo has developed two state of the art schools namely Nthame Primary School at Riba – Cross and Batubatse Primary School at Praktiseer. Generally in rural or semi-rural areas such as this, the predominance of primary schools is not unusual as many pupils leave school at the earliest possible time to find employment to assist and support the family. The privileged scholars, who can afford to further their education, either attend the secondary schools in the area or secondary schools located in larger towns outside the area.

The expansion of the mining activities in the GTM area presents an opportunity to address unemployment in the area. However, the low skills levels pose a threat in this regard. Education should be geared towards meeting the skills needs of the growing economy as a result of the mining activities. The FET (Further Education and Training) facility at Dr CN Phatudi College is assisting majority of the Young people in acquiring different skills in the area. There are no tertiary education facilities like Technikons and Universities in the areas of GTM. Plans are underway to develop a Technical school by the Mining houses in consultation with the Municipality and the Limpopo Provincial Department of education.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	R0	
What is the expected yearly income that will be generated by or as a result of the activity?	R0	
Will the activity contribute to service infrastructure?	YES	**NO**
Is the activity a public amenity?	YES	**NO**
How many new employment opportunities will be created in the development and construction phase of the activity/ies?	*Minimal during construction	
What is the expected value of the employment opportunities during the development and construction phase?	Unknown	
What percentage of this will accrue to previously disadvantaged individuals?	Unknown	
How many permanent new employment opportunities will be created during the operational phase of the activity?	None	
What is the expected current value of the employment opportunities during the first 10 years?	None	
What percentage of this will accrue to previously disadvantaged individuals?	Unknown	

* The proposed project involves the experience and expertise of highly skilled labour. All of Eskom's policies encourage the use of local labour where possible. Minimal additional employment opportunity will be available during the construction phase.

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult http://bgis.sanbi.org or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/ EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

a) Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)

Systematic Biodiversity Planning Category				**If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan**
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	The Limpopo Conservation Plan, indicating the CBAs and ESAs within the study area is attached under Appendix A. Critical Biodiversity Areas are regarded as essential areas for the achievement of regional conservation targets, and are designed to ensure minimum land take for maximum result, and Ecological Support Areas (ESAs) are less critical areas that still provide valuable habitat and support the CBAs. The macro study area is an identified CBA (which includes the town of Penge and all its surrounds). The macro area supports numerous plant species, and provides ecological connectivity.

b) Indicate and describe the habitat condition on site

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	0%	The study site consists of the substation on an area of approximately 7 200m^2.
Near Natural (includes areas with low to moderate level of alien invasive plants)	0%	
Degraded (includes areas heavily invaded by alien plants)	0%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	100%	

c) Complete the table to indicate:

(i) the type of vegetation, including its ecosystem status, present on the site; and
(ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems						
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and Wetland (including rivers, depressions, channelled and unchanneled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Endangered							
	Vulnerable							
	Least Threatened	YES	**NO**	UNSURE	YES	**NO**	YES	**NO**

The Threatened Ecosystem Status map is attached under Appendix A and the substation site falls well outside of any demarcated areas. The vegetation was however identified as being *Least Threatened*.

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The study site falls within the **Ohrigstad Mountain Bushveld** (SVcb26) vegetation type which is characterised by a woody layer that varies from open to dense with shrubs and trees dominating. Various grass species grow in the open areas where the woody vegetation is not dense. The topography varies from moderately steep to steep slopes along mountains and valleys. In some areas the topography is flat while the soil is mostly shallow and leached. It occurs mostly on quartzite and shale.

The vegetation is characterised by the woody species *Sclerocarya birrea, Vachellia exuvialis, Combretum apiculatum, Combretum molle, Vachellia tortilis, Kirkia wilmsii, Englerophytum magalismontanum,* the grasses *Loudetia simplex, Brachiaria nigropedata, Eragrostis rigidior, Panicum maximum, Andropogon chinensis* and the succulents *Aloe fosteri, Aloe castanea, Euphorbia cooperi* and *Euphorbia tirucalli.*

This vegetation type is considered as being least threatened with approximately 8% statutorily conserved and another estimated 4% being used for game farming purposes. In some areas alien invasive species are present.

The vegetation of the study site is mostly degraded with the woody layer destroyed comprising small seedlings and shrubs less than 1m tall dominated by the tree *Vachellia tortilis*. The herbaceous layer consists of various pioneer weedy species such as the grasses *Cynodon dactylon, Aristida congesta* subsp. *barbicollis, Urochloa panicoides, Panicum maximum,* and the forbs *Bidens pilosa, Chenopodium album, Zinnia peruviana, Sesamum triphyllum, Achyranthes* spp., and the succulent tree *Aloe marlothii.*

Large bare soil patches are present with red gravelly soil, while litter are found in various places. Footpaths also traverse the area that further causes degradation of the vegetation ecosystem.

The study area borders onto a mountain slope which comprises natural vegetation. The vegetation of the study site is mostly degraded and does not resemble the natural vegetation of the area. Various human-induced influences (development; litter, footpaths, clearing of vegetation) has taken place in the past resulting in the area becoming degraded. From a plan ecological point of view the area is regarded as degraded with a low conservation value.

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Steelburger / Lydenburg	
Date published	24 February 2017	
Site notice position	**Latitude**	**Longitude**
On the fence of the Penge Substation, next to the provincial road that enters the town of Penge	24^0 23' 15.88" S	30^0 16' 51.50" E
At the entrance gate to the Penge Substation	24^0 23' 16.56" S	30^0 16' 47.97" E
Date placed	16 February 2017	

Include proof of the placement of the relevant advertisements and notices in **Appendix E1**.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 733.

ACTIONS UNDERTAKEN DURING THE PUBLIC PARTICIPATION PROCESS

1st Phase Notification (Background Information Documents)

- ***Notification to the directly affected landowners***
  A list of directly affected landowners was compiled and BIDs were emailed during April 2017. A 14-day commenting period applied.

- ***Notification to Government Departments, Municipalities and other IAPs***
  A General I&AP List was compiled and includes municipalities, government departments and other applicable organisations. BIDs were emailed to everyone on this list during April 2017 and onwards. A 14-day commenting period applied.

- ***Onsite notification***
  Two English and Sesotho onsite notices were placed at the substation on 16 February 2017. The notifications were A2 in size and laminated.

- ***Newspaper Advertisement***
  A newspaper advertisement was placed in the Steelburger / Lydenburg, a local newspaper, dated 24 February 2017.

Distribution of Draft Basic Assessment Report

The Draft BAR is being distributed as follows (a 30-day commenting period applies):

- Hard copies were delivered to the
  - National Department of Environmental Affairs: Environmental Authorisation
  - National Department of Environmental Affairs: Biodiversity Section
  - Limpopo Provincial Government: Economic Development Environment & Tourism, Environmental Impact Management
  - Department of Water & Sanitation, Limpopo Province
  - Department of Environmental Affairs (Directorate Local Government Support) based at Sekhukhune District Municipality
  - Sekhukhune District Municipality: Waste Management Officer
  - Limpopo Heritage Resources Agency (LIHRA)
  - The Greater Tubatse Municipality
- All registered Interested and Affected Parties received an electronic copy of the Draft BAR via email or notification of its availability via post.
- The Draft BAR was linked to the SAHRIS website of the South African Heritage Resources Agency (SAHRA) for their perusal and comment.

Public participation to continue

- Based on comment received on the Draft BAR, it will be determined if any further public participation measures (i.e. a public meeting) are deemed necessary;
- Comment received will be responded to in the Final BAR;
- The Final BAR will be submitted to DEA for approval / refusal of the project.
- IAPs will be informed of the DEA's decision and their right to appeal.

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 733

Please refer to Appendix E for the contact details of below mentioned IAPs

POTENTIALLY DIRECTLY AFFECTED LANDOWNERS

The Landowner of Portion 0 of the Farm Penge 108-KT: Department of Public Works, Limpopo, Sekhukhune District, District Director, For attention: Ms M D Manyelo
Eskom Land Development Department, For attention: Angelina Shalang & Adeline Manake & Lydia Zeko

Include proof that the key stakeholder received written notification of the proposed activities as **Appendix E2**. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

3.1 Comment received during the Initial Advertising Period: April 2017

Summary of main issues raised by I&APs and Response from EAP
Greater Tubatse Municipality: Municipal Manager: Mr J N T Mohlala Ms Patience Busane Director Community Services should be added to the IAP register *Response from Landscape Dynamics* • *Ms Busane was added to the IAP register*
Transnet Freight Rail, Johannesburg: Livhuwani Ndou They wanted to know if there is any Transnet Property that can be affected by this project or that is in the vicinity of the project site. *Response from Landscape Dynamics* • *To the best of our knowledge we are not aware of any Transnet Properties that could be affected by this project or that is in the vicinity of the project site. The Google Earth file was forwarded with a request to compare the position of the existing substation with their database.*
Department of Environmental Affairs (Directorate Local Government Support) based at Sekhukhune District Municipality: Control Environmental Officer, Sello Ledwaba The requested to be added to the IAP list because they are directly responsible to deal with EIAs in Sekhukhune District *Response from Landscape Dynamics* • *They were added to the IAP register and a hard copy of the Draft BAR was sent via courier to their offices.*

Eskom Distribution Mpumalanga Operating Unit: Ilona Jerling It was requested that Mr Anton Kotze and Ms Jerling be deleted from the IAP register and the following people should be added to the register: Eskom Land Development Department, For attention: Angelina Shalang & Adeline Manake & Lydia Zeko *Response from Landscape Dynamics* • *These names were deleted and added to the IAP register as requested*
Sekhukhune District Municipality: Waste Management Officer: For attention Mr Philemon Mphahlele He requested to be added to the register of IAPs; his interest being, among others the handling, storage, transportation, disposal of the waste. *Response from Landscape Dynamics* • *His name was added to the register and a hard copy of the Draft BAR was sent to his office.*

3.1 Comment received on the Draft BAR (*to be included in the Final BAR*)

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as **Appendix E3**.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Please refer to Appendix E for the contact details of below mentioned IAPs

GOVERNMENT DEPARTMENTS

Traditional Houses Office, Senior Manager, For attention: Mr K S Ndou (Ms N F Khethani – PA)
Traditional Houses Office, Manager, For attention: Mr H S Mashele (Ms N F Khethani – PA)

Land Claims Commissioner, Limpopo Province, For attention: Mr Tele Maphoto
Department of Rural Development and Land Reform: Limpopo Province, Land Claims Commissioner: Regional Offices, The Deputy Director: For attention: Mrs Loraine Mosebedi
Land Claims, Director: All Districts (Restitution), For attention: Mr Miyelani Nkatingi
Limpopo Department of Economic Development, Environment and Tourism, Biodiversity Monitoring, for attention: Mr Stanley Rodgers
Department of Water Affairs & Sanitation, Olifants Water Management Area: Mpumalanga Provincial Operations, for attention: Mr Johann van Aswegen as well as Mr Lindelani Mbulaheni
Department of Water and Sanitation, Water Regulation and Use, for Attention: Ms Cecilia Mashaba
Department of Water and Sanitation, The Deputy Director: Water Resources Management, For attention: Mr David Nethengwe
Limpopo Heritage Resources Agency, Heritage Officer, for attention: Mr Donald Lithole
Department of Agriculture, Forestry and Fisheries: Land Use and Soil Management, National Land Care Secretariat
Group Capital Department – Eskom Properties, Regional Land Portfolio Managers: For attention: Ms Bronwyn Stolp and/or Ms Tinkie Holl
Eskom SOC Limited Wayleave Applications: Limpopo Province: For attention: Mr Xander Neethling
Transnet Freight Rail: The Senior Manager: - Environmental Management: For attention: Mr Ezekiel Monyamane and Livhuwani Ndou
Department of Water & Sanitation, Mr Piet Ackerman, Chief Landscape Architect, Sub-Directorate: Instream Water Use Department of Water and Sanitation (DWS), Sub Directorate Instream Water Use

MUNICIPALITIES

Sekhukhune District Municipality: The Municipal Manager: For attention Ms Mapule Mokoko as well as the Secretary of the Municipal Manager: Ms Gladys Mahlangu
Sekhukhune District Municipality: Waste Management Officer: For attention Mr Philemon Mphahlele
Greater Tubatse Local Municipality, Municipal Manager, For attention: Mr J N T Mohlala
Greater Tubatse Local Municipality: Director Community Services: For attention Ms Patience Busane
Greater Tubatse Local Municipality, Director for Economic and Land Development, for attention: Mrs MA Monyepao
Greater Tubatse Municipality, Ward Councillor for Ward 16, For attention: Mrs Khoza

Include proof that the Authorities and Organs of State received written notification of the proposed activities as Appendix E4.
In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of registered I&APs must be included as **Appendix E5**.
Copies of any correspondence and minutes of any meetings held must be included in **Appendix E6**.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report.

Please note that a comprehensive Impact Assessment (with detailed mitigation measures) is supplied in Appendix F where the impacts are assessed in terms of the following criteria:

- Nature of the impact (what is being affected and how, is it positive or negative);
- Extent (site specific / local / regional / national / global);
- Duration (short / medium / long / permanent);
- Magnitude or intensity of the impact (would the impact be destructive or benign and rated as low / moderate / severe);
- Probability of impact occurring (unlikely / possible / probable / definite)

The mitigation measures as supplied in this Impact Assessment are also included in the Environmental Management Plan.

The **Significance Rating** of an impact is assessed before and after mitigation measures has been applied and refers to the following:

Significance of impact	Explanation of Significance
None	There is no impact at all
Low	Impact is negligible or is of a low order and is likely to have little real effect
Medium	Impact is real but not substantial
High	Impact is substantial
Very high	Impact is very high and can therefore influence the viability of the project

Please note that detail impact descriptions and mitigation measures are supplied in the Impact Assessment (Appendix F). All mitigation measures are also included in the Environmental Management Plan (Appendix G).

ALTERNATIVE 1 (THE PREFERRED ALTERNATIVE) Decommissioning and demolishing of the existing Penge Substation		
Short impact description	**Significance before mitigation**	**Significance after mitigation**
Health & Safety of construction workers Asbestos in soil is a risk to health if fibres can become airborne so they may be inhaled. The risk may be increased depending on the type and amount of asbestos material in the soil, and if there is potential for it to become disturbed or airborne. Due to the high level of pollution within the substation yard and its surrounds, the health and safety of construction workers can be seriously affected by construction / decommissioning activities, when the soil and asbestos therein will be disturbed..	Very high	Medium / Low
Increased asbestos pollution levels in the environment Insensitive construction methods could cause the dispersal of the asbestos within the substation yard to the surrounding areas. This will have a huge negative impact on the environment and its people within an already polluted area.	Very high	Medium / Low
Ineffective rehabilitation of asbestos contaminated land The contaminated land will be rehabilitated. Ineffective methods could cause the asbestos to spread further than the site and the asbestos parts could also stay in the soil and will impact negatively on the soil itself and plants within that area.	Very high	Medium / Low
Soils / Erosion An increase in surface water runoff which could lead to soil erosion may happen in areas where current hard surfaces, such as cement slabs and other large equipment are being removed. The pollution may be severe if the runoff contains asbestos.	High	Low
Groundwater Potential for groundwater pollution always exists as a result of oil spills, etc. during the construction period. Due to high levels of asbestos within the substation site as well as the surrounds, this impact could be severe if not properly mitigated.	High	Low
Botanical Impact (Fauna & Flora) Disturbance to and/or destruction of habitat due to insensitive construction methods and illegal placement of snares could impact on the *Fauna & Flora* within the macro study area.	Medium	Low
Aquatic Ecosystems There are no surface water aquatic systems within close proximity to the site.	Low / None	Low / None
Cultural / Heritage Impacts No sites of heritage resources have been identified or are likely to be found within the site of the existing substation.	Low	Low to very low

Community An influx of workers could result in an increased risk for crime and general safety.	Medium / Low	Low
Air quality Dust created by construction vehicles could impact on air quality during the construction period.	Low	Very Low
Noise Labourers and machinery could result in noise pollution during the construction period.	Low	Very Low

POSITIVE IMPACT

The substation will be decommissioned and the land rehabilitated to its natural state. This will have a positive impact on the vegetation in and surrounding the site as well as to the wider area because a source of asbestos is being removed.	Positive impact	Positive impact

ALTERNATIVE 2 **Temporarily closing down of the substation and Rehabilitation of the substation yard**		
Short impact description	**Significance before mitigation**	**Significance after mitigation**
Impacts as described above for Preferred Route Alternative also apply to Route Alternative 1, with additional impacts as described below		
Financial implications The temporarily shutting down of the Penge Substation whilst rehabilitation work is undertaken will have unacceptable high financial implications because other substations would have to be upgraded and powerlines rerouted to continue supplying existing users with electricity. **Health & Safety of Eskom workers** Even though the substation site itself will be rehabilitated and make safe for workers to enter the site, the surrounding area is still contaminated with asbestos and maintenance staff would still be exposed to possible asbestos contamination. Recommended mitigation is to use the Preferred Alternative	Very high	Low

Alternative 3		
Short impact description	Significance before mitigation	Significance after mitigation

Conclusion of Impact Significant Rating
The long term end result that this project may have on the environment is mainly of a positive nature. All identified negative impacts on the environment can be reasonably mitigated to acceptable levels. There are no impacts that could influence the feasibility and viability of this project.

A complete impact assessment in terms of Regulation 19(3) of GN 733 must be included as Appendix F.

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Please note that a comprehensive Impact Assessment (with detailed mitigation measures) is supplied in Appendix F. The Impact Statement below is a summary of the conclusion of this Impact Assessment. *All mitigation measures are also included in the Environmental Management Plan & Rehabilitation Recommendations (Appendix G).*

Alternative 1 (preferred alternative)

Alternative 1: Decommissioning and demolishing of the substation
The substation will be decommissioned and the affected land will be rehabilitated. This is the best option to follow because of the following reasons:

- Residents and industries within the Penge area moved away after the closure of the asbestos mine with a subsequent huge decrease in electricity demand.
- A substation must be situated as near as possible to the middle of the load centre (where the power will be actually consumed). Due to the decrease in electricity demand the current position of the Penge substation is not close to the middle of its load centre. The most practical and optimal utilisation of the electricity network is therefore not possible whilst the substation is at its current location.
- The substation was constructed in the 1960's and is in serious need of refurbishment in order to provide a reliable supply of electricity.
- Even though health and safety regulations are being followed by Eskom personnel when visiting the substation, they are always at risk due to the high level of asbestos pollution within the wider Penge area. For health and safety reasons it is therefore preferred to not have a substation within the Penge area where regular maintenance is required.

It was therefore decided that the Penge substation should be decommissioned and that the contaminated land will be rehabilitated. The current users of the Penge substation will receive their electricity from elsewhere (the new substation and associated power lines do not form part of this study).

Public participation
No objections to the decommissioning of the substation were received during the public participation process to date.

Conclusion on selecting an alternative
The *decommissioning of the substation* is preferred above the temporarily closing down and rehabilitation of the land mainly because of the drastic decrease of electricity demand and the fact that the substation is not close to the middle of the load centre anymore. The substation is also approximately 50 years old and current equipment needs to be replaced to ensure a stable energy supply. For health and safety reasons it is preferred to not have a substation where regular maintenance is required within the highly polluted Penge area.

Once mitigation measures have been applied, the decommissioning of the substation and rehabilitation of polluted land would have a positive effect on the environment. This alternative is therefore the alternative that is recommended for environmental authorisation

Alternative 2

Alternative 2: Temporarily closing down of the substation and Rehabilitation of the substation yard

An *Asbestos Health Risk Assessment* was undertaken by Ergosaf and completed in August 2007 (the report is attached under Appendix J).

The report concluded that the substation presents a serious health risk to employees and contractors who are required to work there, as well as to citizens of the community. The recommendations made were the following

- Emergency steps must be taken immediately to close Penge Substation temporarily and to supply present clients with electricity from an alternative centre;
- The asbestos pollution inside and outside of the substation must be rehabilitated. For this purpose a proposed rehabilitation plan was compiled.
- Operations at the substation should not be resumed until rehabilitation work has been completed to a satisfactory standard.

Eskom however decided to *not* follow this recommendation due to the following reasons:

- To obtain electricity temporarily from a different source than the Penge substation will be extremely difficult, if not impossible. For example, other substations would have to be upgraded to accommodate increased demand and power lines would have to be rerouted.
- The Centre for Sustainability in Mining and Industry (CSMI) undertook a study in 2008 for the Asbestos Relief Trust and a report named "**The future of Penge**" (attached under Appendix J) was compiled. The report concluded as follows:

- Investigation into conditions of health and safety in the area provided evidence of heavy asbestos contamination. There are virtually no economic activities in Penge itself and there appear to be high levels of unemployment among inhabitants. The village infrastructure has fallen into disrepair with derelict buildings, roads and bridges.
- Asbestos fibres were visible all over the paths, side-walks and dirt roads within the village and surrounds. Schools have closed down and the hospital has been downgraded to a clinic. There appear to be few prospects for the development of a local economy that might bring employment. The idea of making the village into a tourist attraction was mooted by the Province, but this should not be encouraged, as the area remains a source of danger to health.
- It is strongly recommended that the Provincial Government of Limpopo, in collaboration with the Greater Sekhukhune District Municipality and the local Penge community, as a matter of urgency begin making plans for the closing down of the village and removal of the people elsewhere. It is strongly recommended that the whole of the Penge site, including the former mining village and the mine dumps, be closed to human habitation.

Due to the high levels of asbestos pollution within the Penge area, many people and industries moved away, with a subsequent huge decrease in electricity demand. It would therefore not make economic sense to spend millions of rands on the temporarily closing down of the substation when demand is decreasing every year.

Mitigation is the selection of the Preferred Alternative.

Alternative 3

No-go alternative (compulsory)

The Penge Substation a significant source of environmental asbestos pollution, dispersed by wind and water, which threatens the health and safety of those who visit the site as well as residents of and visitors to the area. The risk is aggravated by the fact that Penge is already heavily polluted as a result of years of dust pollution during the operational phase of the mine.

The electricity demand within the Penge area also decrease significantly over the past years and the substation is therefore not close to its load centre (where the electricity will actually be consumed) anymore. The most practical and optimal utilisation of the electricity network is therefore not possible whilst the substation is at its current location.

The maintaining of the status quo, in other words the application of the no-go option, is definitely not to the benefit of the people of Penge, the environment or Eskom. The no-go option is not recommended for this project.

SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?	YES	NO

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

Environmental Management Plan & Rehabilitation Recommendations

The Penge substation has high levels of asbestos contamination and some rehabilitation recommendations are included in the EMP. It is however important to note that the services of an *Approved Asbestos Inspection Authority* must be obtained in order to draft a detailed Plan of Work for the rehabilitation of the substation yard and its surrounds, as required in terms of Regulation 21 of the Asbestos Regulations, OHSAct (85 of 1993).

Plan of Work

It is also to be noted that, according to the Asbestos Regulations, OHSAct (85 of 1993), a Plan of Work must be submitted for approval to an *Approved Asbestos Inspection Authority* before any demolition activities may commence.

The above should form part of the conditions of approval of the Environmental Authorisation.

Is an EMPr attached?	YES	NO

The EMPr must be attached as Appendix G.

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as Appendix H.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in Appendix I.

Any other information relevant to this application and not previously included must be attached in Appendix J.

Susanna Nel

_____

NAME OF EAP

_____ ____ 15 June 2017_____

SIGNATURE OF EAP DATE

SECTION F: APPENDIXES

Appendix A: Maps

- Locality Map
- SANBI
  - Limpopo Conservation Plan (CBAs & ESAs)
  - National Parks and Protected Areas
  - Rivers and Wetlands

Appendix B: Photographs

- Photo Report

Appendix C: Facility illustration(s)

- Not applicable

Appendix D: Specialist reports (including terms of reference)

- None

Appendix E: Public Participation

- E1a – Proof of Placement of Advertisements: Newspaper
- E1b – Proof of Placement of Advertisements: Onsite Notices
- E2a – Background Information Document
- E2b – Proof of distribution of Background Information Document
- E2c – Proof of Notification of availability of the Draft BAR to all IAPs *(to be included in the Final BAR)*
- E3 – Comments & Reponses Report
- E4 – Complete register of Interested & Affected Parties
- E5 – Copies of Correspondence, notes and minutes of meetings
  - E5.1 Written comment received during the first phase notification period
  - E5.2 Written comment received on the Draft BAR *(to be included in the Final BAR)*

Appendix F: Impact Assessment

- Impact Assessment

Appendix G: Environmental Management Programme (EMPr)

- Environmental Management & Rehabilitation Programme

Appendix H: Details of EAP and expertise

- Landscape Dynamics Company Profile and Condensed CVs of EAPs

Appendix I: Specialist's declaration of interest

- Not applicable

Appendix J: Additional Information

- Occupational Hygiene Report on an Asbestos Health Risk Assessment at Eskom's Penge Substation, Penge, Limpopo Province - *Environmental and Occupational Health Services CC, August 2007*
- The Future of Penge: Prospects for People and the Environment – *Centre for Sustainability for Mining and Industry, July 2008*