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, 2010, 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, 2010 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 1 September 2012. 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 on the electronic copy of the report submitted to the competent authority.

1. SCOPE OF PROJECT

Eskom Holdings SOC Ltd (the Applicant) commissioned Landscape Dynamics Environmental Consultants (the Environmental Assessment Practitioner) to undertake an Environmental Impact Assessment for the following project:

Eskom Limpopo Operating Unit, Land Development (Eskom) plans to construct the Marken Customer Network Centre (CNC) in a fenced area of 2,5 hectares. The CNC is proposed to include a new office building including electrification, plumbing and interior; technical service centre; customer service centre; parking; stand-by accommodation for staff; enclosed equipment and general store; 2.4m high steel palisade fence; parking for bin trucks; wash bay; facilities for storage of fuel with a capacity of 103,68m^3; small sewage treatment facility; new transformer storage plinth, drainage sump and oil bund; 21 meter lighting tower; waste/refuse area; ladder racks; a pole yard that includes a scrap compartment and a guardhouse.

2. LEGAL REQUIREMENTS

An application for environmental authorisation is submitted to the National Department of Environmental Affairs (DEA) in terms of the National Environmental Management Act 107 of 1998 (NEMA), and the Environmental Impact Assessment Regulations published in GNR 543/2010- GNR 546/2010 of 18 June in terms of section 24(5) of the Act.

This document constitutes the Basic Assessment Report prepared in support of an environmental authorisation application. In addition to the statutory provisions in the NEMA more fully referred to herein below, other legislation and guidelines that have been considered in the preparation of the Report, includes relevant legislation on all levels including the constitutional, national, provincial and local level.

The overarching principle of the NEMA is sustainable development. It defines sustainability as meaning the integration of social, economic and environmental factors into planning, implementation and decision making so as to ensure the development serves present and future generations.

Section 2 of NEMA provides for National Environmental Management Principles. These principles include inter alia:

- Environmental management must place people and their needs at the forefront of its concern.
- Development must be socially, environmentally and economically sustainable.
- Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated.
- Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued.
- The participation of all Interested and Affected Parties (I&APs) in environmental governance must be promoted.
- Decisions must take into account the interests, needs and values of all I&APs.
- The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.
- The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people's common heritage.

The Environmental Impact Assessment (EIA) process to be undertaken in respect of the authorisation process of the proposed project is in compliance with the NEMA read with the Environmental Impact Assessment Regulations of 2010 (Government Notice No's R543, 544, 545 and 546 of 2010).

3. STUDY APPROACH

The approach followed by the consultants was based on the specifications for the undertaking of a Basic Assessment as provided in the document "Companion to the EIA Regulations, Integrated Environmental Management Guideline Series 5, Department of Environmental Affairs, 2010".

The study approach followed by the Consultants, in short, entailed the following steps:

- Preliminary site investigations to determine the scope of works of the project and to familiarise with the sites were done by the EAP, specialists and Eskom in March 2014.
- Specialist ecological input was obtained to investigate the flora, fauna and the general biophysical environment in an attempt to identify the potential impacts of the project.

- The proposed development is covered by the National Heritage Resources Act which incorporates heritage impact assessments in the Environmental Impact Assessment process. A Phase 1 Heritage Impact Assessment was therefore done by a specialist to identify the potential impact on heritage resources.
- The National Heritage Resources Act 25 of 1999 in addition requires that all heritage resources, that is, all places or objects of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance be protected. Fossil heritage of national and international significance is found within all provinces of the RSA. Therefore a Palaeontological Assessment was also commissioned.
- Input from an avifauna specialist was obtained to determine the impact of the proposed project on birds.
- The Public Participation Programme (PPP) started in March 2014 and included the identification of key stakeholders, the distribution of information letters with a request for comment, as well as advertising of the project in the local press and on site.
- Contact was established with landowner(s) to notify them of the proposed project.
- The Public Participation Programme allows for informed and responsible decision-making by all interested and affected parties.
- A draft Basic Assessment Report was compiled with the main aim to identify issues, potential impacts and potential alternatives associated with this project. It included a description of the status quo of all relevant environmental components as well as the proceedings of the PPP and communication with registered Interested & Affected Parties (IAPs).
- The Draft Basic Assessment Report (BAR) is now distributed to all IAPs on the Register of IAPs (refer to Appendix E for a detailed Register of IAPs) for a 40 day commenting period.
- Comment received during above-mentioned period will be addressed in the Final BAR. The Final BAR will be submitted to I&APs for a 21 day commenting period, should it differs substantially from the Draft BAR,
- The Final BAR will be submitted to DEA for a decision regarding authorisation of the project.

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 appointment of a specialist for each specialist thus appointed.		

Any specialist reports must be contained in Appendix D.

1. PROJECT DESCRIPTION

Describe the project associated with the listed activities applied for.

1.1 Background

Eskom Limpopo Operating Unit, Land Development (Eskom) plans to construct the Marken Customer Network Centre (CNC) in the vicinity of Marken in the Limpopo Province.

The proposed Marken Customer Network Centre will facilitate the rendering of services and maintenance by Eskom officials to existing customers and structures as, i.e. emergency personnel will be based at the CNC and will be close at hand in case of any electricity problems.

A Basic Assessment (BA) process for this proposed project is currently being undertaken by Landscape Dynamics Environmental Consultants.

The NEMA listed activities for the proposed project are the following:

Listed Activity	Activity/Project Description
GN 544, June 2010, Number 13 The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500m^3	A 103 680 litre (103,68 cubic metres) diesel tank will be erected on the site of the Customer Network Centre (CNC). (One cubic meter equals 1000 liters)

GN 544, June 2010, Number 23 The transformation of undeveloped, vacant or derelict land to (i) residential, retail, commercial, recreational, industrial or institutional use, inside an urban area, and where the total area to be transformed is 5 hectares or more, but less than 20 hectares, or (ii) residential, retail, commercial, recreational, industrial or institutional use, outside an urban area and where the total area to be transformed is bigger than 1 hectare but less than 20 hectares; except where such transformation takes place for linear activities.	The proposed Customer Network Centre will be constructed on land of approximately 2.5 hectares near Marken.

1.2 Locality and Regional Context

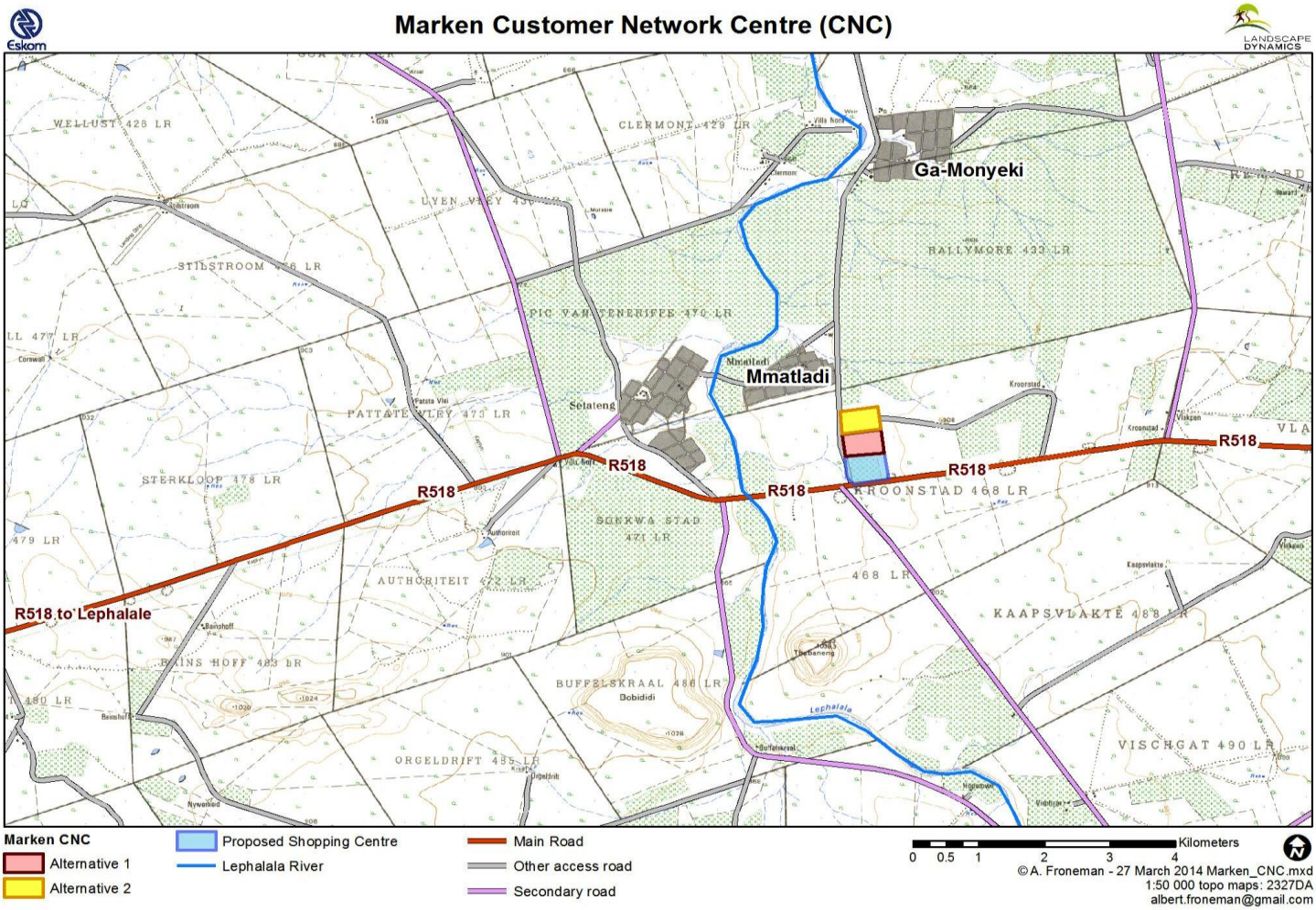
The study area is located near Marken, which is in the vicinity of Villa Nora and Ga-Shongwane, in the Limpopo Province. The area is situated immediately north of the R518, about 41km east of Lephalale (Ellisras) and approximately twenty five kilometres to the west of Marken.

Two alternatives for the proposed site of the Customer Network Centre (CNC) were identified and investigated. The alternative sites are along the eastside of the road towards Mmatladi and Ga-Monyeki. Alternative 2 is to the immediate north of Alternative 1 (refer to the locality map on the next page).

The Eskom Project Area is part of a level land mass which is characterised by flat-top sandstone hills to the north-east of Lephalale in the Limpopo Province and is marked by major water courses such as the Limpopo River to the north and the Mogol River to the west. The area is part of a consistent level sandy plain which is covered with open savannah bush. A few scattered pans occur further to the west, near Lephalale whilst some agricultural fields do occur across the larger region.

Locality Map

Map indicating Site Alternative 1, Site Alternative 2



The dominant land uses in the general region are urbanisation, cultivation, grazing and open bushveld. The proposed sites for the Marken CNC are situated in the middle of a region with numerous rural villages to larger townships. The two alternative sites for the CNC are totally open bushveld. However, the veld is degraded and over-utilised in terms of resources (wood) and grazing. The carrying capacity of the veld is low due to it being on sandy soils which leach quickly and are low in nutrients. Immediately to the south of the study site is an area of degraded bushveld that has been earmarked for development. It is understood that a shopping centre is to be built on this site.

The cultivated areas are predominantly dryland maize production. The levels of cultivation are not as intense as commercial, irrigated and high-yield farms would be. The area can however, be best described as a low-level urbanised area, interspersed with cultivation and bushveld utilised for free-roaming cattle grazing.

1.3 Property descriptions

The proposed location for the site for the Marken CNC is on the Remaining Extent of Portion 1 of the Farm Kroonstad 468-LR in the Mogalakwena Local Municipality, Limpopo Province.

1.4 Need for the project

The Eskom Conversion Act, 2001 (Act No. 13 of 2001) establishes Eskom as a State Owned Company (SOC) with the Government of South Africa as the only shareholder, represented by the Minister of Public Enterprises. The main objective of Eskom is to "provide energy and related services including the generation, transmission, distribution and supply of electricity, and to hold interests in other entities".

The proposed Marken Customer Network Centre will facilitate the rendering of services and maintenance by Eskom officials to existing customers and structures as, i.e. emergency personnel will be based at the CNC and will be close at hand in case of any electricity problems.

Eskom therefore proposes to construct the Marken Customer Network Centre (CNC) to improve the rendering of services and maintenance to the area.

1.5 Project components

The full scope of work includes the construction of:

- new office building including electrification, plumbing and interior;
- technical service centre;
- customer service centre;
- parking;
- stand-by accommodation for staff;
- enclosed equipment and general store;
- 2.4m high steel palisade fence;
- parking for bin trucks;
- wash bay;
- facilities for storage of fuel with a capacity of 103,68m^3;
- small sewage treatment facility;
- new transformer storage plinth, drainage sump and oil bund

- 21 meter lighting tower;
- waste/refuse area;
- ladder racks;
- a pole yard that includes a scrap compartment;
- guardhouse.

The CNC will be constructed on a site with a total size of approximately 2.5 hectares. The physical size of the footprint/developed areas will be approximately 1830m^2 (also refer to Appendix C where a layout of a typical CNC site is presented).

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 Regulation 22(2)(h) of GN R.543. 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.

THE FOLLOWING ALTERNATIVES HAVE BEEN IDENTIFIED AND ARE DESCRIBED AS FOLLOWS:

2.1 NO-GO ALTERNATIVE

This project is part of Eskom' s implementation of a Master Plan for the rendering of services and maintenance by Eskom officials to existing customers and structures. Emergency personnel will also be based at the CNC and will be close at hand in case of any problems in the distribution network.

The natural environment of the study area has been moderately impacted upon. It is also within a region of rural development, with low-to medium-levels of urbanisation and as such is subject to many of the impacts associated with such levels of urbanisation. Historically, the soils have not been cultivated, but are a mix of natural veld and grazing for free-roaming cattle.

No areas within the study site were found to be environmentally sensitive (no-go zones). There are no wetlands within the study area or within a 500m radius of the study area. There are no suitable habitats for red data faunal species. The veld type does carry various protected tree species such as marula but none were observed in the study area.

Taking all of the above into consideration and all mitigating measures put forward be implemented, there are no identified 'fatal flaws' that could influence the viability of the project.

Should this application not be approved (in other words the applying of the No-Go Option), the Eskom support to the broader area will be unreliable and this can result in blackouts and major disturbances in energy provision.

2.2 ACTIVITY ALTERNATIVES

2.2.1 Agriculture

- There is no commercial or subsistence farming taking place in the study area. There is a fair amount of grazing from free-roaming cattle, typical of rural areas. However, due to the mixed bushveld veldtype and sandy to sandy-loamy soils the carrying capacity of the veld in terms of livestock is low. The soils of the study site are not high yielding in terms of dryland crop production. The area is also adjacent to urbanisation and certain areas have already been earmarked for development.

- The agricultural potential of the study area can be calculated as low arable to low grazing. In other words, the agricultural potential for the study area (or loss thereof caused by the construction of a customer network centre) is negligible.
- It is therefore submitted that agriculture could not be considered as an alternative activity on the site.

2.3 SITE ALTERNATIVES

2.3.1 Description of Site Alternative 1 and 2

Eskom is planning the construction of a number of customer network centres around the country and the need for one within the Marken area was identified. Two alternatives for the site of the CNC were identified and investigated. Alternative 1 is to the immediate south of Alternative 2 (refer to the map on page 8 and Appendix A). The two site alternatives are both approximately 2.5 hectares in size although the CNC will cover an area of approximately 1830m^2 only. This will allow for ample space in which to manoeuvre when the design and placement of the buildings are being finalised.

Both sites for the CNC are totally open bushveld. However, the veld is degraded and over-utilised in terms of resources (wood) and grazing. The carrying capacity of the veld is low due to it being on sandy soils which leach quickly and are low in nutrients. The area can however, be best described as a low-level urbanised area, interspersed with cultivation and bushveld utilised for free-roaming cattle grazing.

No areas were found to be sensitive (no-go zones). There are no wetlands nor within a 500m radius of the study area. There are no suitable habitats for red data faunal species. The veld type does carry various protected tree species such as marula but none were observed in the study area.

There is no significant differences between Alternative 1 and Alternative 2 in terms of the natural environment. A comparison between the two Alternatives, as to the number of ecologically sensitive units each one potentially impacts on, is shown below.

Table: Comparison of Potential Impacts by Alternative Options

Ecological Sensitive Units	Alternative 1	Alternative 2
Areas of High ecological sensitivity	0	0
No-Go areas in close proximity	0	0
No. of river & stream crossings	0	0
No. of major drainage line crossings	0	0
Rocky outcrops in corridor	0	0
Ridges in corridor	0	0
Floodplains encountered	0	0
Wetlands encountered	0	0
Total impacts per route	0	0

Alternative 1 is the preferred option for the CNC because it sits right next to a new proposed development (a shopping centre) and will therefore cause less segmentation of the veld type.

2.3.2 Property descriptions

The proposed location for the Alternative 1 site as well as for the Alternative 2 site for the Marken CNC is on the Remaining Extent of Portion 1 of the Farm Kroonstad 468-LR in the Mogalakwena Local Municipality, Limpopo Province.

2.3.3 Co-ordinates

The alternatives for the project are found at approximately:

Alternative 1	Latitude	Longitude
NW Corner	23°34'21.671"S	28°7'47.808"E
NE Corner	23°34'19.196"S	28°8'7.053"E
SE Corner	23°34'30.9"S	28°8'8.624"E
SW Corner	23°34'32.786"S	28°7'49.261"E
Alternative 2	Latitude	Longitude
NW Corner	23°34'9.653"S	28°7'46.826"E
NE Corner	23°34'7.1"S	28°8'5.482"E
SE Corner	23°34'18.568"S	28°8'6.935"E
SW Corner	23°34'21.199"S	28°7'47.69"E

2.3.4 Specialist input

Specialist input was obtained to investigate the impact of the various alternatives that could accomplish the purpose of the project. The specialist input is summarised as follows:

2.3.4.1 Ecological Status Report

The ecological status report identified the following:
(Refer to the full Ecological Status Report in Appendix D)

Conservation status

The study site is situated within Roodeberg Bushveld, which is part of the Central Bushveld Bioregion and the Savanna Biome. The conservation status of the veldtype (Roodeberg Bushveld) in which the study area is situated is considered Least Threatened (LT). Approximately 6% is statutorily conserved, mainly in the Wonderkop and Blouberg (Malebocho) Nature Reserves. An additional 3% is conserved in other reserves, mainly in areas adjacent to the Wonderkop Nature Reserve. About 18% of the veldtype has been transformed, primarily by cultivation and secondly through urbanisation.

Species of conservation concern

No floral species of conservation concern were encountered during field investigations. However, the near threatened herb species (*Dicliptera fruticosa*) does occur in the region, as well as a number of protected tree species.

No faunal species of conservation concern were encountered during field investigations, nor are any expected to be permanently present.

Ecological sensitivity

No ecological communities in the study area were found to have a high ecological sensitivity and deemed as 'No-Go' zones.

Ecological Community	Floristic Sensitivity	Faunal Sensitivity	Ecological Sensitivity	Development Go-Ahead
Mixed Bushveld	Medium / Low	Medium / Low	Medium / Low	GO

Surface water in the region and study area

No large perennial rivers are found in the immediate vicinity of the study area. The closest river is the Lephalala River, which is approximately 1,5 km to the west of the site. No wetlands, drainage lines or watercourses (such as rivers and streams) are present, nor any large bodies of open water, such as farms dams. The study site is situated within the Limpopo Water Management Area (WMA).

Go, No-Go Option

From an environmental viewpoint no fatal flaws (no-go options) were identified. If all recommended mitigating measures are enforced then the project can be supported in terms of the ecological component of the project.

Proposed alternative site recommendations

There is very little difference between Alternative 1 and Alternative 2 in terms of the natural environment and the development on either site can be supported.

Impacts

The impact of the activities associated with the project could initially be seen as high. The main reasons are that buildings and parking lots will be constructed; the terrain will be fenced; and numerous trees will need to be removed. This all creates a more definite footprint on the natural environment.

However, the reality is that the identified sites are within impacted veld that is on the outer urban edge of rural townships and the site is almost surrounded by built up environment.

Mixed Bushveld

The significance of the impacts (activities) associated with the construction and maintenance of the Marken CNC will be low in relation to the region or entire Roodeberg Bushveld veld type. However, in terms of just the study site the impacts will be medium because a number of trees will need to be removed to make space for the buildings and parking areas. There are however no protected trees and no areas or spots of pristine bushveld in the study area. Impacts can be reduced with the implementation of mitigating and management measures.

General impacts

The construction of the CNC will increase traffic flow in the immediate area. However, the footprint of the proposed project is relatively small and already in a medium urbanised area and will not have any significant negative impacts on other activities.

General impacts rated before and after mitigating measures are implemented

Issue	Significance rating before and after mitigation	
	Before	After
Farming Related & Other Issues		
Access to properties	Low	Low
Access roads (damage, blocking)	Low	Low
Loss of agricultural potential	Low	Low
Loss of cultivation potential	Low	Low
Loss of grazing potential	Low	Low
Impacts on seasonal activities	Low	Low
Natural Environment		
Erosion	Low	Low
Impact on flora	Medium	Medium
Impact on fauna	Low	Low
Impact on watercourses	Low	Low
Impact on wetlands	Low	Low
Importation of alien vegetation	Low	Low
Impact of herbicides	Low	Low
Impact on conservation areas	Low	Low

Mitigation of Impacts

Construction phase

- No area for a campsite or temporary storage site should be selected where it would be necessary to cut down any trees or clear any shrubland whatsoever.
- Any selected temporary site (accommodation and storage) must be on the demarcated site itself.
- No indigenous trees or shrubs outside of the selected CNC site may be removed.
- No unnecessary removal of trees above 2m on the selected site may occur. Careful planning to be done to avoid the indiscriminate bulldozing and removal of trees and natural vegetation. This is typically done by contractors and needs to be avoided and monitored.
- An ongoing programme must be implemented to control alien plant species that invade the disturbed soils within the CNC site.
- Only locally indigenous trees to be planted on CNC site (if landscaping is to be done).
- All construction material, equipment and any foreign objects brought into the area and onto the sites by contractors and staff to be removed immediately after construction.

- Removal of all waste construction material to an approved waste disposal site. And only by an officially registered waste removal company. Eskom to ensure that the company does remove waste to a registered site and does not dump illegally.

General Recommendations

Construction phase

- Camp site, storage facilities and other necessary temporary structures to preferably be erected within the confines of the CNC site.
- No open fires to be allowed outside of designated sites.
- Collection of wood for fires and cooking from out of the surrounding veld is prohibited.
- A designated area for camp fires and cooking needs to be made. Should open fires be used then an area of at least 2m x 2m needs to be cleared of any flammable materials such as grass.
- No material or machinery to be stored or placed in the open veld outside the designated area of the CNC site.
- Proper and adequate containers (rubbish bins) to be placed in campsites for the temporary disposal of food waste and general litter generated by construction workers. These containers need to close securely to avoid items (eg. Paper and plastic) been blown into the veld, etc. Proper waste management is essential.
- Containers for food and general waste to be removed weekly to avoid bins overflowing their capacity.
- Under no circumstances may any sewage, waste food or general litter be dumped, or buried in the veld.
- No concrete to be allowed to be mixed in the veld. Only premixed cement to be used and only to be transported onto site in registered concrete trucks.
- All construction activities and movement of people and machinery to remain within the designated CNC site, as far as possible and within reason.

Post-construction phase

- All leftover construction material, equipment, refuge, etc. needs to be completely removed after construction. This immediately after completion of construction, as well as on a continual basis during construction.
- Removal of all waste construction material must be to an approved waste disposal site only.
- Proper and complete take down and removal of all temporary accommodation sites, storage sites, etc. needs to take place immediately after the completion of the project. This includes all litter (paper, plastic, bottles, etc.).
-

- All disturbed sites and surfaces to be rehabilitated. Rehabilitation work to start during and immediately on completion of the project.
- No unused piles of sand, soil or construction materials of any kind whatsoever to be left in the powerline corridors, or at temporary construction or storage sites.

Maintenance phase

- During any maintenance activities all storage of equipment, temporary structures, etc. must all be within the CNC site itself.
- No new veld or areas outside of the CNC terrain may be used for storage.
- No new veld or areas outside of the CNC terrain may be used (even on a temporary basis) for the holding of rubbish or other removed materials whatsoever.
- All storage and temporary dumping sites to be within the CNC terreain and only on disturbed areas. These disturbed areas could include paving and/or parking lots.

2.3.4.2 Bird Impact Assessment

The Bird Impact Assessment indicated the following:
(Refer to the full Bird Impact Assessment Report in Appendix D)

Vegetation types and bird habitat

1 Woodland

The natural woodland where the new CNC is to be constructed comprises natural woodland, but the grass layer has been heavily depleted due to grazing pressure, and there is evidence of littering. Due to the existing impacts, few Red Data species are likely to be attracted to the remaining natural woodland on a regular basis, but sporadic occurrence cannot be ruled out.

2 Agriculture

The study area contains lands where the woody elements were cleared in the past, and the grass cover is completely removed. Few Red Data species are likely to be attracted to these areas, but Lanner Falcon might occasionally hunt passerines in these clearings, and European Rollers could perch on the few remaining trees to hawk insects.

3 River, dams and wetlands

The only river in the area is the semi-perennial Lephalale River. Rivers and drainage lines are important habitat for birds in that they act as corridors of microhabitat for waterbirds while the riparian vegetation provide cover for skulking species, as well as large trees for raptors to breed and roost in.

The project does not impact directly on the river, as the riverine channel is located largely outside the study area. The two alternative sites for the CNC itself are located approximately 1.5km away from the river at its closest point. The CNC is not expected to impact directly on any birds attracted to the river.

4 Urban and industrial infrastructure

The study area contains the village of Matladi, which is located directly west of both proposed sites. The impact zone of the village extends to the sites themselves, as can be seen in the highly disturbed state of the vegetation and the litter which is found on the site. All of this makes the occurrence of sensitive Red Data species likely to be a sporadic rather than regular occurrence due to disturbance and habitat degradation.

Assessment of impacts

1 Displacement through habitat transformation and disturbance

During the construction phase and maintenance of the proposed CNC, habitat destruction and transformation inevitably takes place. This happens with the construction of access roads, and the actual construction of the CNC infrastructure, which will result in the total transformation of the site. These activities will have an impact on birds breeding, foraging and roosting in or in close proximity of the site, through the modification of habitat and disturbance during the construction activities, which will result in the displacement of birds from the area.

The study area has been transformed for decades to accommodate a change in land use (i.e. urban and agriculture) which reduced the number and variety of species originally inhabiting the area on account of the loss of habitat and decline in food availability. In the case of the larger Red Data species, this has resulted in these species becoming increasingly rarer, although sporadic occurrence in the study area cannot be ruled out. It is not envisaged that any Red Data species will be permanently displaced by the habitat transformation that will take place at the site of the proposed CNC, irrespective of which alternative is ultimately used. The avifauna that will be directly affected by the loss of habitat are the birds breeding and foraging in the area that will be taken up by the CNC.

These are almost entirely made up of smaller, non-threatened passerines, with the exception of a few non-threatened raptors and terrestrial species. In this instance, the impact should not materially threaten the local or regional populations of any of these species, due to the small size of the development.

Mitigation

Potential mitigations for the identified impacts are shown in the table below.

Construction Phase

Impact	Mitigation
Habitat destruction	The construction activities must be restricted to the actual footprint of the development. Measures must be put in place to ensure that construction personnel are prevented from accessing the property outside the actual construction site. Care must be taken to ensure that the habitat destruction is kept to what is absolutely necessary for the construction of the CNC.

Comparison of alternatives

None of the options emerges as a clear preferred alternative from a bird impact perspective. The reason for that is that the two options are all clustered in the same area, and of comparable size, meaning that the envisaged impacts are likely to be very similar. Any of the two options is therefore regarded as potentially suitable, provided appropriate mitigation is implemented.

Conclusion of Avi-fauna Impact Assessment

The study area has been transformed for decades to accommodate a change in land use (i.e. industrial, urban and agriculture) which reduced the number and variety of bird species originally inhabiting the area on account of the loss of habitat and decline in food availability.

In the case of the larger Red Data bird species, this has resulted in these species long since disappearing from the area for all practical reasons. It is therefore not envisaged that any Red Data species will be permanently displaced by the habitat transformation that will take place at the site of the proposed CNC, irrespective of which alternative is ultimately used.

The avifauna that will be directly affected by the loss of habitat are the birds breeding and foraging in the area that will be taken up by the CNC. These are almost entirely made up of smaller, non-threatened passerines, with the exception of a few non-threatened raptors and terrestrial species. In this instance, the impact should not materially threaten the local or regional populations of any of these species, due to the small size of the development.

The construction of the proposed Marken CNC will pose a limited threat to the birds occurring in the vicinity of the new infrastructure primarily through habitat destruction and disturbance. However, the impact of habitat transformation associated with the construction of the CNC should be low and should mostly affect non-Red Data species resident or foraging at the site itself, and not local or regional populations.

2.3.4.3 Heritage Impact Assessment

The main findings of the Heritage Impact Assessment (HIA) are summarised as follows:-
(Refer to Appendix D of the BAR for the full report)

The Phase I HIA did not reveal the presence of any of the types and ranges of heritage resources as outlined in Section 3 of the National Heritage Resources Act (No 25 of 1999) within the study area. There is consequently no reason from a heritage point of view why the development should not continue. Both Alternative 1 as well as Alternative 2 seems to be suitable from a heritage point of view for the construction of the proposed Marken CNC .

Mitigation

If any heritage resources of significance is exposed during construction the South African Heritage Resources Authority (SAHRA) should be notified immediately, all development activities must be stopped and an archaeologist accredited with the Association for Southern African Professional Archaeologist (ASAPA) should be notify in order to determine appropriate mitigation measures for the discovered finds. This may include obtaining the necessary authorisation (permits) from SAHRA to conduct the mitigation measures.

2.3.4.4 Palaeontological Impact Assessment

The main findings of the Palaeontological Impact Assessment are as follows:-
(Refer to Appendix D of the BAR for the full report)

The National Heritage Resources Act 25 of 1999 requires that all heritage resources, that is, all places or objects of aesthetic, architectural, historical, scientific, social, spiritual, linguistic or technological value or significance are protected. In accordance with the national legislation any sites to be

developed must be assessed for the occurrence of any palaeontological material. If any fossils are likely to be present then their importance and rarity must be gauged and if they are important then plans must be put in place to remove the fossils (under a SAHRA permit and housed in a recognized institution), protect them and/or divert the proposed construction.

Summary of findings

The Karoo Supergroup is very poorly exposed in the Ellisras Basin and Marken is positioned on overlying very young Quaternary sediments. However from borehole data the underlying sediments comprise a number of Formations with coal seams. The underlying Formations are from top (youngest) down to oldest are the Clarens Formation, Lisbon formation, Greenwich Formation and six others. There are a few outcrops of the Clarens Formation in the general area (but not on the proposed site) which is predominantly aeolian. The next formation, the Lisbon Formation is predominantly of fluvial origin with some aeolian contribution but has no plant material preserved.

The proposed CNC development are not likely to penetrate below the usual building regulation foundations of 1-2m depth and so will not penetrate any of the other sedimentary layers.

Recommendation

Since the surface rocks in this region are either much too young, Quaternary, or much too old (Archaean in age) to contain fossils and that no fossils have been recorded on the surface (previously agricultural land) it is extremely unlikely that any fossils will be found in the proposed construction area. If, however, any fossils are discovered during construction then it is strongly recommended that a palaeontologist be called to assess their importance and rescue them if necessary.

As far as the palaeontology is concerned the proposed development can go ahead. A phase 2 study is not necessary.

Mitigation

If any palaeontological material is exposed during digging, excavating, drilling or blasting then SAHRA must be notified. All development activities must be stopped and a palaeontologist should be called in to determine proper mitigation measures.

2.4 CONCLUSION ON SELECTING A SITE ALTERNATIVE

Alternative sites have been investigated for the project. As can be seen from the above discussions, both sites are acceptable if the proposed mitigations are implemented.

Site Alternative 1 is the preferred option for this development because it sits right next to a proposed new development (a shopping centre) and will therefore cause less segmentation of the veld type.

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

The areas where the alternatives for the proposed line are located do not contain any specific features that will make them critically different from the surrounding areas and from one another. The contents of Paragraph 3-13 below would therefore be the same for Site Alternatives 1 and 2.

3. PHYSICAL SIZE OF THE ACTIVITY

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

Alternative:		Size of the activity:
Alternative A1[1] (preferred alternative)		Approximately 1 830m^2
Alternative A2 (if any)		Approximately 1 830m^2

or, for linear activities:

Alternative:		Length of the activity:
Alternative 1 (preferred alternative)		
Alternative 2		

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

Alternative:		Size of the site/ servitude:
Alternative 1 (preferred alternative)		Approximately 2.5 hectare (25 000 m^2)
Alternative 2		Approximately 2.5 hectare (25 000 m^2)

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

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:		
No new access to the site is planned.		

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 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 DWA);*
- *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.

No ecological sensitive areas were identified.

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.

The Site Layout Plan of a typical Eskom Customer Network Centre is attached in Appendix C.

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
There will be a change in the land use of the property (it is currently zoned as agriculture).			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
The Province identified key sectors namely Agriculture, Mining, Tourism, and Manufacturing; as well as the existing opportunities identified in the Municipality, that will assist to stimulate economic growth poverty reduction and overall economic impact. All these activities will need support in supply of energy.			
(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
The project would not compromise the integrity of the urban edge.			
(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

The Mogalakwena Local Municipality is situated in the Waterberg District Municipality within the Southern part of the Limpopo Province. The Waterberg District Municipality is comprised of six local municipalities, namely Bela Bela, Lephalale, Modimolle, Mogalakwena, Mookgophong and Thabazimbi.

Mogalakwena has a very well defined and established development footprint. It consists of 3 proclaimed townships and 178 villages. The proclaimed townships are Mokopane, Mahwelereng and Rebone area. The municipal area also covers a range of smaller settlements in the area between Mokopane and Rebone about 100km to the north along the N11 and Marken along the R518. The N1, N11, and R518, together with the Mogalakwena River and mountains provide very strong structural elements that shaped the development in the municipal area.

The Municipality identified certain Strategic Objectives to be achieved of which Sustainable infrastructure development and maintenance is a priority.

Local economic development requires acceptable levels of infrastructure to thrive. Infrastructure provision such as water, sanitation, waste management, communication, electricity, etc. should support economic growth. The development of municipal infrastructure will assist local business to thrive. Infrastructure development should be provided in time and maintained regularly. The service industry strives within an environment where there are good roads, communication, electricity, water, and sanitation networks. These and other issues will make the environment conducive to do business and create jobs and grow the local economy.

The development of the SDF was thus firstly informed by the basic principle to improve the quality and quantity of municipal infrastructure and services. Further to the above, the lack of municipal infrastructure is regarded as a critical impediment to ensuring a dignified quality of life for the majority of the population. Especially critical is the situation with regard to water, sanitation, housing, roads and stormwater and electricity. Relevance The proposed activity/project will provide support to electrical infrastructure that will contribute to sustainable economic growth, provide for sustainable human settlements and support the local industry.			
(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
The development will not conflict/compromise the structure plan of the municipality.			
(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
Specialist studies conducted for this project, namely ecology-, bird- heritage- and paleontological impact assessments all concluded that, with the proposed mitigation measures in place, the Preferred Site for this development will not jeopardize the integrity of the environment. These findings were taken into account when the Preferred Site, as proposed for Environmental Authorisation, was selected. The integrity of existing environmental management priorities will not be compromised by the development as proposed.			
(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
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
Refer to 1(c)			

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

South Africa is coming out of the economic downturn but inadequate power supply could undermine the country's economic recovery and ability to create new jobs. A World Bank loan was granted and offers low-cost capital with long repayment periods. In addition the loan offers a chance to borrow for renewable technologies.

In 2003 the Government of South Africa launched the Free Basic Electricity (FBE) policy that provides 50 kilowatt hours (KWh) of free electricity per month to poor families. For a sense of scale, 1 kWh can run a small business kiosk for a day; 50 kWh per month is enough to light 3 lamps and run a small appliance (water heater, TV, or refrigerator). Local governments decide who qualifies for free basic services under criteria set for registering households. Today Eskom provides free basic electricity to 27% of its customer households.

The FBE system is supplemented by cross-subsidies from large customers to households using less than 350 KWh/months. The tariffs for this category of customers are usually 25% lower than for customers who consume more than 350 kWh/month.

The current Environmental Impact Assessment application is part of a broader scope of work to improve Eskom's network performance.

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

1 Water supply

Water to the proposed development will be supplied from the water reticulation of the Local Municipality. Note that no construction could commence without sufficient official proof that the water supply for the development is secure.

2 Sewage

A chemical sewer plant will be constructed on site with a daily throughput capacity that is lower than the NEMA listed activities' threshold of 2000 cubic metres and the relevant listed activity is not triggered.

3 Waste management

An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate.

Any solid waste that cannot be recycled shall be disposed of at an appropriate landfill site licensed

in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act No 59 of 2008).
The collection of solid waste will be carried out by a private company to be appointed by Eskom for this purpose. The solid waste will be transported to the appropriate solid waste disposal site of Mogalakwena Local Municipality - To be advised by the Local Municipality. A letter of agreement between the developer and the Permit Holder of the waste disposal site to be kept on site.
These above measures are included as requirements in the EMPr under the headings "Waste Management ". Also refer to the other mitigation measures under the same headings.

4 Stormwater drainage

A piped stormwater system is proposed. A storm water management plan that conforms to the requirements of the Department of Water Affairs as well as the Local Municipality has to be compiled by a civil engineer for approval by the above-mentioned authorities.

5 Electricity

There is an existing Eskom network in the vicinity of the proposed development. The availability of the required supply will have to be confirmed by Eskom.

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
Refer to above responses.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO	Please explain
Over the past 20 years, South Africa and Eskom have increased access to electricity from 34% to 81%. The Government of South Africa has an annual budget for rural electrification and a program in place to connect the remaining 19% of households by 2014. In addition to household needs, demand is also growing from commercial and small industrial developments as well as schools and health services in rural areas. This project aims to strengthen the Eskom Distribution networks in providing a more efficient support service closer to the customer.			
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 project entails the identification of a potential site for the construction of a Customer Network Centre.			

The following is relevant: • The CNC should be in close vicinity to the customers. Eskom identified this area/site as suitable and in line with the technical requirements for the CNC. The CNC has to be close to the customer network it is proposed to support. • Eskom relies on the goodwill of landowners to obtain property for the construction of the Customer Network Centre. Land is not always easily available and it is challenging to find a willing seller of land. Further, the land has to fit the technical parameters for the CNC.			
9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
Refer to the above. Specialist inputs guided the decision and negative impacts that this development may have on the environment can all be mitigated to acceptable levels. The protection of the bio-physical environment is therefore not jeopardised.			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
Chronic power problems take a heavy toll on society. Without reliable energy, the basic services that people in rich countries take for granted cannot be offered. Since South Africa' s electricity crisis began in December 2007, it has been obvious that without an immediate increase in its energy supply South Africa' s economy will suffer, public services will become more expensive, and businesses will have to scale back. Failing to address South Africa' s energy crisis will have dire consequences for the poor, for industry, and for neighbouring countries.			
11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO	Please explain
Eskom Distribution has a master plan for electricity strengthening/supply. Similar activities will be conducted in future, as well as possible energy supply projects conducted by the local municipality.			
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 no comment was received.			
13. Will the proposed activity/ies compromise the "urban edge" as defined by the local municipality?	YES	NO	Please explain
The project would not compromise the integrity of the urban edge.			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO	Please explain
"SIP 10: Electricity transmission and distribution for all: Expand the transmission and distribution network to address historical imbalances, provide access to electricity for all and support economic development." The current project contribute to the above SIP. The project provides support to the distribution network in the area and thus supports economic development.			

15. What will the benefits be to society in general and to the local communities?	Please explain
The project will assist to stimulate economic growth and poverty reduction.	
16. Any other need and desirability considerations related to the proposed activity?	Please explain
The Eskom Conversion Act, 2001 (Act No. 13 of 2001) establishes Eskom as a State Owned Company (SOC) with the Government of South Africa as the only shareholder, represented by the Minister of Public Enterprises. The main objective of Eskom is to "provide energy and related services including the generation, transmission, distribution and supply of electricity, and to hold interests in other entities". The proposed Marken Customer Network Centre will facilitate the rendering of services and maintenance by Eskom officials to existing customers and structures, i.e. emergency personnel will be based at the CNC and will be close at hand in case of any electricity problems. Eskom therefore proposes to construct the Marken Customer Network Centre to improve the rendering of services and maintenance to the area.	
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. In short, the plan amongst others, aims by 2030 to produce sufficient energy to support industry at competitive prices, ensuring access for poor households, while reducing carbon emissions per unit or power by about one-third. This current EIA application fits into the National Development Plan for 2030 in addressing the first two targets as described above. Further to the above, the Plan in specific stipulates the following objectives to improve the 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 to the rest. This current EIA application supports the customers/users with access to the grid.	
18. Please describe how the general objectives of Integrated Environmental Management (IEM) as set out in section 23 of NEMA have been taken into account.	

IEM as set out in NEMA section 23	**How has it been taken into account?**
a) Promote the integration of the Principles of NEMA in terms of section 2 into the making of all decisions that may have a significant effect on the environment;	See 19 below
b) Identify, predict and evaluate the actual and potential impacts on the environment, socio-economic conditions and cultural	See section F: Impact Assessment.

heritage, the risks and consequences and alternatives and options for mitigation of activities, with a view to minimizing negative impacts, maximizing benefits, and promoting compliance with the principles of environmental management as 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;	See section F: Impact Assessment.
d) Ensure adequate and appropriate opportunity for public participation in decisions that may affect the environment;	Details of the public announcements and engagements already made are recorded in Section E: Public Participation of this report.
e) Ensure the consideration of environmental attributes in management and decision-making which may have a significant effect on the environment; and	See section F: Impact Assessment.
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 as set out in Section 2 of NEMA.	See EMPr attached as Appendix G.

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

NEMA Principle	**How has it been taken into account?**
2) 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.	The EAP has recognised the advantages and disadvantages of the alternative sites in terms of the effects its usage would have on people (see Appendix F: Impact assessment).
3) Development must be socially, environmentally and economically sustainable.	The social, environmental and economic impacts of the use of the sites have been evaluated in the Environmental Impact Assessment.
4) a) Sustainable development requires the consideration of all relevant factors including;	

(i) That the disturbance of ecosystems and loss of biological diversity are avoided, or where they cannot be altogether avoided, are minimised and remedied	The impact of the alternatives on biodiversity have been shown to be of low significance (see Section B:9).
(ii) That pollution and degradation of the environment are avoided or, where they cannot be altogether avoided, are minimised and remedied	Means to avoid or mitigate pollution have been described in the Environmental Management Programme (EMPr).
(iii) That the disturbance of landscapes and sites that constitute the nation' s cultural heritage is avoided, or where is cannot be altogether avoided, is minimised and remedied	The cultural value/features of the sites have been assessed (see Appendix D).
(iv) That waste is avoided, or where it cannot be altogether avoided, minimised and reused or recycled where possible and otherwise disposed of in a responsible manner	Waste management measures have been suggested in the EMPr.
(v) That the use and exploitation of non-renewable natural resources is responsible and equitable and takes into account the consequences of the depletion of the resource	This principle is not of key relevance in this particular project as well as not within the scope of this project.
(vi) That the development, use and exploitation of renewable resources and the ecosystems of which they are part do not exceed the level beyond which their integrity is jeopardised	This principle is not of key relevance in this particular project as well as not within the scope of this project.
(vii) That a risk averse and cautious approach is applied, which takes into account the limits of current knowledge about the consequences of decisions and actions; and	A cautious approach was applied and recommendations informed by specialist's input.
(viii) That the negative impacts on the environment and on people' s environmental rights be anticipated and prevented, and where they cannot be altogether prevented, are minimised and remedied.	The EMPr sets out possible measures to prevent or minimise impacts.
b) Environmental management must be integrated, acknowledging that all elements of the environment are linked and interrelated, and it must take into account the effects of decisions on all aspects of the environment and all people in the environment by pursuing the selection of the best practicable environmental option.	This assessment acknowledges the need for integrated environmental management and evaluates the potential consequences of use of these sites on people and the environment.

c) Environmental justice must be pursued so that adverse environmental impacts shall not be distributed in such a manner as to unfairly discriminate against any person, particularly vulnerable and disadvantaged persons.	The affected parties have been identified and the equity of these impacts assessed. Thorough consultation took place between landowner(s) and the EAP (EIA team).
d) Equitable access to environmental resources, benefits and services to meet basic human needs and ensure human wellbeing must be pursued and special measures may be taken to ensure access thereto by categories of persons disadvantaged by unfair discrimination.	This project aims to provide for basic human needs and wellbeing.
e) Responsibility for the environmental health and safety consequences of a policy, programme, project, product, process, service or activity exists throughout its life cycle.	The health and safety consequences of the use of the sites for support for electricity distribution are evaluated in the assessment.
f) The participation of all interested and affected parties in environmental governance must be promoted, and all people must have the opportunity to develop the understanding, skills and capacity necessary for achieving equitable and effective participation, and participation by vulnerable and disadvantaged persons must be ensured.	Participation opportunities have been provided.
g) Decisions must take into account the interests, needs and values of all interested and affected parties, and this includes recognising all forms of knowledge, including traditional and ordinary knowledge.	The interests, needs and values of interested and affected parties are being determined through participation processes and reflected in the assessment of the impacts.
h) Community wellbeing and empowerment must be promoted through environmental education, the raising of environmental awareness, the sharing of knowledge and experience and other appropriate means.	The EMPr makes suggestions for environmental awareness raising with regards to the contruction workers.
i) The social, economic and environmental impacts of activities, including disadvantages and benefits, must be considered, assessed and evaluated, and decisions must be appropriate in the light of such consideration and assessment.	The environmental assessment fulfills this role and should inform decision making.

j) The right of workers to refuse work that is harmful to human health or the environment and to be informed of dangers must be respected and protected.	This priniciple is not of particular relevance in this project.
k) Decisions must be taken in an open and transparent manner and access to information must be provided in accordance with the law.	Decisions are to be taken by the relevant state department. The reasons for these decisions are expected to be documented and accessible.
l) There must be intergovernmental coordination and harmonisation of policies, legislation and actions relating to the environment	Intergovernmental coordination is being pursued through the NEMA process.
m) Actual or potential conflicts of interest between organs of state should be resolved through conflict resolution procedures.	Noted.
n) Global and international responsibilities relating to the environment must be discharged in the national interest.	Noted. This project is of local and regional relevance.
o) The environment is held in public trust for the people, the beneficial use of environmental resources must serve the public interest and the environment must be protected as the people' s common heritage.	The IEM process and environmental impact assessment for this project recognise the need to protect people' s common heritage.
p) The costs of remedying pollution, environmental degradation and consequent adverse health effects and of preventing, controlling or minimising further pollution, environmental damage or adverse health effects must be paid for by those responsible for harming the environment.	Noted. The EMPr makes suggestions for prevention of pollution.
q) The vital role of women and youth in environmental management and development must be recognised and their full participation therein must be promoted.	Noted.
r) Sensitive, vulnerable, highly dynamic or stressed ecosystems, such as coastal shores, estuaries, wetland and similar systems require specific attention in management and planning procedures, especially where they are subject to significant human resource usage and development pressure.	No ecological communities in the study area were found to have a high ecological sensitivity.

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:
The following legislation is applicable to the proposed project: National Environmental Management Act (Act No 107 of 1998) – NEMA EIA Regulations of 2010 Limpopo Environmental Management Act (7 of 2003), published 30 April 2004, Provincial Gazette No.997 National Heritage Resources Act, 1999 (Act No 25 of 1999) Occupational Health and Safety Act, 1993 (Act No 85 of 1993) National Water Act, 1998 (Act No 36 of 1998) National Environmental Management: Biodiversity Act, 2004 (Act No 10 of 2004) National Environmental Management: Protected Areas Act, 2003 (Act No. 57 of 2003) (NEMPAA). National Environmental Management: Waste Act (Act 59 of 2008) (NEMWA) Minerals and Petroleum Resources Development Act, 2002 (Act No 28 of 2002) administered by Department of Minerals and Energy National Forests Act (Act No 84 of 1998) Protected species – provincial ordinances Conservation of Agricultural Resources Act (Act No 43 of 1983) National Veld and Forest Fire Act (Act No 101 of 1998) Soil Conservation Act, 1969 (Act No 76 of 1969) Civil Aviation Technical Standards (CATS)

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

12(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?	$2,5m^3$	
How will the construction solid waste be disposed of (describe)?		
The disposal of any construction waste will be the responsibility of the developer and should be done at least twice a week. A letter of agreement between the developer and the Permit Holder of the waste disposal site shall be kept on site.		

Where will the construction solid waste be disposed of (describe)?		
An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste that cannot be recycled shall be disposed of at an appropriate landfill site licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act No 59 of 2008). These above measures are included as requirements in the EMPr under the headings "Waste Management ". Also refer to the other mitigation measures under the same headings.		
Will the activity produce solid waste during its operational phase?	YES	NO
If yes, what estimated quantity will be produced per month?	only domestic waste	
How will the solid waste be disposed of (describe)?		
An integrated waste management approach must be implemented that is based on waste minimisation and must incorporate reduction, recycling, re-use and disposal where appropriate. Any solid waste that cannot be recycled shall be disposed of at an appropriate landfill site licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act No 59 of 2008).		
If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.		
Appropriate Landfill site in Mogalakwena Local Municipality - To be advised by the Local Municipality. A letter of agreement between the developer and the Permit Holder of the waste disposal site to be kept on site.		
Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?		
N/A		
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 relevant legislation?	YES	NO
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 NEMWA 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 NEMWA must also be submitted with this application.		

12(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. A chemical sewer plant will be constructed on site with a daily throughput capacity that is lower than the NEMA threshold of 2000M^2. Therefor the relevant listed activity is not triggered.			
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:			

12(c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than 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:		
Dust emissions are expected as result of the construction phase activities. Mitigating measures are proposed and included in the EMPr to limit impact.		

12(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.		

12(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
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.		
If no, describe the noise in terms of type and level:		
Generation of noise is expected to occur during the construction phase, but it will be a low level of noise and will occur for a limited time only. Measures, as included in the EMPr, will be implemented to avoid or minimise generation of noise during construction.		

13. WATER USE

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

municipal	water board	Groundwater	river, stream, dam or lake	other	the activity will not use water
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.					

Relevant to this project-

Water to the proposed development will be supplied from the water reticulation of the Local Municipality. Note that no construction could commence without sufficient official proof that the water supply for the development is secure.

Measures that could be taken to ensure the optimal reuse or recycling of waste water, are the following: Grey water could feed back into the toilet systems. Grey water could also be used to irrigate the landscaping of the proposed development.

14. ENERGY EFFICIENCY

Describe the design measures, if any, that have been taken to ensure that the activity is energy efficient:
The following measures are proposed : • Low voltage or CFLs (compact fluorescent lights) and LEDs (light emitting diodes) should be incorporated into the architectural designs of the buildings and incandescent light bulbs must be used. • Low-energy lamps must also be used for exterior lighting • Solar panels could be used for supplementary power supply
Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:
The requirement for energy sufficiency and alternative energy sources will be communicated with the project architects during the design phase of the project.

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.*
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. Attached to the application form		
All specialist reports must be contained in Appendix D.		

Property description/ physical address:		Limpopo Province Waterberg District Municipality Mogalakwena Local Municipality (Ward 7) The affected property for the proposed Site Alternative 1 and Site Alternative 2 is the Remaining Extent of Portion 1 of the Farm Kroonstad 468-LR, Limpopo Province.
		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:		Agricultural
		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 application required?	YES	NO
Is a consent use application required?	YES	NO
Must a building plan be submitted to the local authority?	YES	NO

Note: Site Alternative 1 does not contain any specific features that will make the site critically more different to Site Alternative 2. Paragraphs 1 - 6 below are therefore exactly the same for both alternatives.

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative 1:

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 2:

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

2.2 Plateau

2.3 Side slope of hill/mountain

2.4 Closed valley

2.5 Open valley

2.6 Plain - Alt1 & Alt2

2.7 Undulating plain/low hills

2.8 Dune

2.9 Seafront

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

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

	Alternative 1		Alternative 2	
Shallow water table (less than 1.5m deep)	YES	NO	YES	NO
Dolomite, sinkhole or doline areas	YES	NO	YES	NO
Seasonally wet soils (often close to water bodies)	YES	NO	YES	NO
Unstable rocky slopes or steep slopes with loose soil	YES	NO	YES	NO
Dispersive soils (soils that dissolve in water)	YES	NO	YES	NO
Soils with high clay content (clay fraction more than 40%)	YES	NO	YES	NO
Any other unstable soil or geological feature	YES	NO	YES	NO
An area sensitive to erosion[3.1]	YES	NO	YES	NO

Notes to Superscript above

3.1. Although the area and soil type is not highly sensitive to erosion, there is potential for low levels of erosion. Mitigation measures are provided in the EMPr.

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).

Alternative 1

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

Alternative 2

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 doesnt have the necessary expertise.

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 does 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:

6.1 Natural area - Alt1 and Alt2
6.2 Low density residential
6.3 Medium density residential - Alt1 and Alt2
6.4 High density residential
6.5 Informal residential[A]
6.6 Retail commercial & warehousing
6.7 Light industrial
6.8 Medium industrial [AN]
6.9 Heavy industrial [AN]
6.10 Power station
6.11 Office/consulting room
6.12 Military or police base/station/compound - Alt 1 and Alt 2
6.13 Spoil heap or slimes dam[A]
6.14 Quarry, sand or borrow pit
6.15 Dam or reservoir
6.16 Hospital/medical centre
6.17 School - Alt 1 and Alt 2
6.18 Tertiary education facility
6.19 Church
6.20 Old age home
6.21 Sewage treatment plant[A]
6.22 Train station or shunting yard [N]
6.23 Railway line [N]
6.24 Major road (4 lanes or more) [N]
6.25 Airport [N]
6.26 Harbour
6.27 Sport facilities
6.28 Golf course
6.29 Polo fields
6.30 Filling station[H]
6.31 Landfill or waste treatment site

6.32 Plantation
6.33 Agriculture - Alt 1 and Alt 2 (Grazing – free roaming cattle; cultivation – dryland mielies)
6.34 River, stream or wetland
6.35 Nature conservation area
6.36 Mountain, koppie or ridge
6.37 Museum
6.38 Historical building
6.39 Protected Area
6.40 Graveyard
6.41 Archaeological site
6.42 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:

N/A

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:

N/A

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:

N/A

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.

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		YES	NO
Archaeological or palaeontological sites, on or close (within 20m) to the site?		Uncertain	
If YES, explain:	Refer to the Heritage Impact Assessment in Appendix D and summary in 2.3.4.3. Refer to Palaeontological Assessment in Appendix D and summary in 2.3.4.4.		

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:	Refer to below.		
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.			

The main findings of the Heritage Impact Assessment and the Palaeontological desktop study are summarised as follows:-

- Both Alternative 1 and Alternative 2 for the proposed site are viable from a heritage as well as a palaeontological impact assessment point of view.
- If any evidence of archaeological sites or remains (eg, remnants of stone-made structures, indigenous ceramics, bones, stone artefacts, ostrich eggshell fragments, marine shell and charcoal/ash concentrations), unmarked human burials, fossils or other categories of heritage resources are found during the proposed activities, SAHRA APM Unit (Colette Scheermeyer 021 462 4502) must be alerted immediately, and a professional archaeologist or palaeontologist, depending on the nature of the finds, must be contacted as soon as possible to inspect the findings. If the newly discovered heritage resources prove to be of archaeological or palaeontological significance, a Phase 2 rescue operation might be necessary.

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.

Level of unemployment:

One of the key social problems facing the Mogalakwena Municipality is poverty. The unemployment estimates in the Municipality vary between 45% and 70% of the economically active population (people between the ages of 15 and 64 years). Women, and especially rural women, form the greatest number affected by the lack of job opportunities as well as other social problems.

Economic profile of local municipality:

The majority of the population is aged between 0 and 19 followed by those aged between 20 and 34, which suggests that the municipality is dominated by people who are both socially and economically active. In addition, the municipal area has a high dependency ratio due to the majority of the population aged between 0-19. General education levels are low, as income earned by low-skilled labourers is lower than income earned by highly skilled workers. Since education levels are low, income earned is concentrated in the lower order, which suggests that the general population is poor. In addition, there is a tremendous amount of people who have no income and hence poverty is a major problem in the municipal area.

Level of education:

Over the years there has been a steady decline in the number of persons who have not received an education. The percentage of persons with no schooling have decreased from 15% in 2001 to 9% in 2011, whilst those with education higher than grade 12 has increased from 3% in 2001 to 5% in 2011. Most of the individuals without schooling were females but even so their numbers have decreased from 18% to 11% in 2011.

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?	15 million	
What is the expected yearly income that will be generated by or as a result of the activity?	Unknown	
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?	Unknown	
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?	Unknown	
What is the expected current value of the employment opportunities during the first 10 years?	R0	
What percentage of this will accrue to previously disadvantaged individuals?	0%	

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 development site is not identified as a CBA, ESA, ONA or NNR in any of SANBI's biodiversity plans.

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%	No pristine mixed bushveld present
Near Natural (includes areas with low to moderate level of alien invasive plants)	100%	Low to medium levels of impact on the veld. Low levels of movement of people through the area. Within urban edge of low urbanised area. Debris and litter present on site.
Degraded (includes areas heavily invaded by alien plants)	0%	Not much alien infestation in mixed bushveld. Biggest impact is human-related impacts such as wood collection & dumping. Other impacts include free-roaming cattle grazing in veld.
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	0%	No totally transformed areas within the study site.

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 unchanneled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline	
	Endangered							
	Vulnerable							
	Least Threatened	YES	NO	UNSURE	YES	NO	YES	NO

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)

Terrestrial Ecosystems: Study area only in Roodeberg Bushveld. Also known as Mixed Bushveld. Seen as Least Threatened by SANBI and Mucina & Rutherford (2006). No specific sensitive habitats occurring within the sties themselves. No protected trees identified during site visits. No pristine bushveld remaining.
Aquatic Ecosystems: No aquatic ecosystems present.

SECTION C: PUBLIC PARTICIPATION

Public participation plays an important role in the compilation of environmental reports as well as the planning, design, and ultimately the implementation of the project. Public participation is a process leading to informed decision-making, through joint effort by the proponent, technical experts, governmental authorities, and systematically identified Interested & Affected Parties (IAPs).

Landscape Dynamics has taken cognisance of the requirements for public participation in terms of the current 2010 EIA Regulations, and has ensured that the public participation principles are upheld. A successful Public Participation Programme (PPP) is one that is inclusive, actively engages the public and provides ample opportunity for the public to participate in the process.

The purpose of the PPP is to ensure that the issues, inputs and concerns of IAPs are taken into account during the decision-making process. This requires the identification of IAPs, communication of the process and findings to these IAPs and the facilitation of their input and comment on the process and environmental impacts, including issues and alternatives that are to be investigated. The steps taken during the execution of the PPP undertaken for this project are detailed below.

1. ADVERTISEMENTS AND NOTICES

1.1 Advertisements

In fulfilment of the EIA Regulations, G.N. R543 Section 54, advertisements were placed in the following newspaper:

Publication name	Northern News
Date published	16 May 2014

1.2 Public Notices

A2 laminated on-site notices informing IAPs of the application were placed at key points. These notices, in English and Northern Sotho, were placed, at the following locations (refer to Appendix E1 for photographic proof thereof):

Site notice position	
Date placed	27 March 2014

2. DETERMINATION OF APPROPRIATE MEASURES

- *Provide details of the measures taken to include all potential I&APs as required by Regulation 54(2)(e) and 54(7) of GN R.543.*
- *Include proof that the key stakeholder (other than organs of state), identified in terms of Regulation 54(2)(b) of GN R.543, received written notification of the proposed activities - as Appendix E2.*
- *Include proof that the Authorities and Organs of State identified as key stakeholders received written notification of the proposed activities - as Appendix E4.*

2.1 Public notification

A consultation process was undertaken with the intent of informing key community stakeholders, the municipal structures as well as the local communities (directly affected people) about the proposed development and the Basic Assessment process underway.

2.1.1 Identification of Interested and Affected Parties

The PPP for the project was initiated with the development of a comprehensive IAP database. The list of IAPs was updated on a regular basis during the course of the project. Refer to Appendix E5: Register of Interested & Affected Parties for a complete list.

- Department of Water Affairs: Water Regulation and Use
- Limpopo Province Region Department of Water Affairs: Water Resources Management
- South African Heritage Resources Authority (via SAHRIS)
- Limpopo Heritage Resources Agency / LIHRA
- Limpopo Department of Economic Development, Environment and Tourism: Environmental Impact Management
- Department of Agriculture, Forestry and Fisheries
- Limpopo Department of Mineral Resources
- South African National Roads Agency (SANRAL)
- Road Agency Limpopo (RAL)
- Department of Roads and Transport
- Dep of Cooperative Governance, Human Settlement and Traditional Affairs: Spatial and Human Settlement Planning
- Department of Rural Development and Land Reform: Land Restitution
- Department of Rural Development and Land Reform: Land Claims
- Transnet Freight Rail
- Mogalakwena Local Municipality
- Waterberg District Municipality
- Eskom Holdings SOC Ltd - Transmission
- Eskom Holdings SOC Ltd - Group Capital
- Eskom Holdings SOC Ltd - Limpopo Operating Unit, Distribution
- Landowners

2.1.2 Background Information Document

A Background Information Document (BID) was compiled, which provided a description of the proposed project and information on the BA process to be followed. The purpose of this document was to inform all IAPs about the project and afford them an opportunity to comment.
Notification of the project was emailed / posted / faxed to the relevant authorities, affected landowners and relevant organisations / stakeholders in during April 2014. Proof of the initial notification to all IAPs is attached as Appendix E2.

2.2 Meetings and site visits

2.2.1 Focus group meetings / One-on-one meetings

Discussions took place with the landowner (Eskom) to determine their requirements of the project. A site visit was undertaken together with the EAP, specialists and Eskom officials.

Public meeting / Public open day

- Due to the fact that no comment from any IAP was received during the initial PPP, it was determined that a public meeting / public open day will not serve any purpose at this stage.
- The reasons for the lack of comment could be due to the fact that the Lephalale CNC development as proposed is a low impact development (the coverage is less than 8%); site alternatives were thoroughly assessed; the preferred site would ensure that the biophysical environment is protected and all identified impacts could be mitigated to acceptable levels.
- However, comment received after the distribution of the Draft BAR will be thoroughly assessed in order to determine the need for a public meeting / public open day.

2.3 Distribution of Draft Basic Assessment Report for comment

The Draft BAR, this document, is distributed as follows (a 40-day commenting period applies):

- Hard and electronic copies of the report are being delivered to the
    - National Department of Environmental Affairs
    - Limpopo Province Department of Water Affairs: Water Resources Management
    - South African Heritage Resources Authority (via SAHRIS)
    - Limpopo Dept of Economic Development, Environment and Tourism: Environmental Impact Management
    - Mogalakwena Local Municipality

- All registered Interested and Affected Parties will receive an electronic copy of the Draft BAR where possible. They will also be notified that a hard copy of the document is available for perusal at the Marken Public Library.

2.4 Distribution of Final Basic Assessment Report for comment

All comment received as a result of the distribution of the Draft BAR will be addressed accordingly and will be documented in the Final BAR. Should the content of the Final BAR differ significantly from that of the Draft BAR, the Final BAR will be distributed to all IAPs for their final input for a 21 day commenting period.

2.5 Submission of Final Basic Assessment Report to DEA

Subsequently, the Final Basic Assessment Report will be submitted to the Department of Environmental Affairs for review and ultimately the issuing of the Environmental Authorisation.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Please note
Although this project was advertised as per the EIA Regulations, no comment was received from either the public, adjacent landowners, municipalities or any government departments.

Summary of main issues raised by I&APs	Summary of response from EAP
No comment was received at the time of submission of this Basic Assessment Report.	

4. COMMENTS AND RESPONSE REPORT

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.

No comment was received at the time of submission of this Basic Assessment Report.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders.
Proof that the Authorities and Organs of State received written notification of the proposed activities is attached as Appendix E4.

6. CONSULTATION WITH OTHER STAKEHOLDERS

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

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2010, 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.

Refer to the below summary as well as Appendix F for a complete impact assessment in terms of Regulation 22(2)(i) of GN R.543.

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, the following environmental impact statement could sum up the impact that the proposed activity 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.

It is expected that with the proposed mitigation of impacts and the implementation of the Environmental Management Programme, the expected negative impact could be mitigated to acceptable measures.

EVALUATION METHOD FOLLOWED

A table has been designed to facilitate evaluation of the expected negative impact in terms of significance (intensity), duration, probability and significance after mitigation.

The numerical values used for "**Impact Severity**" (significance / intensity) relates to the potential severity of the proposed project on the specific environmental component without any mitigation and is being evaluated and rated on a scale from 0 to 4 where the following values apply :

0 = no impact
1= low impact
2 = medium impact
3 = significant impact
4 = severe impact

The **duration** of the expected negative impact is supplied as either "temporary" - 0-3 years (generally during construction) or "permanent".

The **probability** that the expected negative impact would occur if not mitigated is rated as "low", "medium" or "high".

The negative impacts are also evaluated in terms of the effectiveness with which it could be mitigated: "**Severity of Impact after Mitigation**" is rated on a scale from 0 to 4, with a severe impact after mitigation receiving a rating of 4 (and can therefore influence the viability of the project) and no impact after mitigation receiving a rating of 0.

2.1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN PHASE

IMPACTS OF FUEL TANKS

Disregard of legislative requirement Disregard of legislation requirements could result in negative environmental impact and costly non-compliance actions by authorities	**Site**	**Extent**	**Duration**	**Probability**	**Significance without mitigation**	**Significance with mitigation**	**Proposed mitigation**
	Alternative 1	Local	Permanent	Medium	3	1	Ensure compliance with industry standards
	Alternative 2	Local	Permanent	Medium	3	1	

Poor design-structural failures Poor design will result in structural failures and subsequent leaks with resultant negative environmental impact	**Site**	**Extent**	**Duration**	**Probability**	**Significance without mitigation**	**Significance with mitigation**	**Proposed mitigation**
	Alternative 1	Local	Permanent	Medium	4	1	Ensure compliance with industry standards
	Alternative 2	Local	Permanent	Medium	4	1	

OTHER IMPACTS: PLANNING & DESIGN PHASE

Impact on natural habitat	**Site**	**Extent**	**Duration**	**Probability**	**Significance without mitigation**	**Significance with mitigation**	**Proposed mitigation**
	Alternative 1	Local	Permanent	Low	2	1	Site Alternative 1 is recommended for construction. Both site alternatives have low ecological sensitivity. Rehabilitate disturbed areas. Avoid erosion. Remove aliens. Avoid removing any trees taller than 2m if not necessary. Replanting of indigenous trees in gardens. Not using alien plants for landscaping. Protecting of large remaining trees No area for a campsite or temporary storage site should be selected where it would be necessary to cut down any trees or clear any shrub land whatsoever, not even alien species. Any selected temporary site (accommodation and storage) preferably must be on the demarcated site itself.
	Alternative 2	Local	Permanent	Low	3	1	

2.2 IMPACTS THAT MAY RESULT FROM THE CONSTRUCTION PHASE

IMPACTS OF THE FUEL TANKS

Risk for Leaks of Underground Storage Tanks (USTs)	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
Increased risk for leaks of underground storage tanks as a result of poor construction methods can result in significant pollution	Alternative 1	Local	Temporary	Medium	3	1	The installation of the UST's must take place in accordance with industry standards. To ensure the system is installed as required by the regulatory authorities, on-site works must be supervised at all times by an experienced person. It is essential that any protective coating applied to the tanks and pipework is not damaged during installation. The coating must be inspected during and after installation and any damage must be repaired immediately and before the excavation is filled in again. Records must be kept of how the UST system was built for future reference during site construction work and the decommissioning or removal of the equipment. These records must include technical drawings of the installation showing the location and orientation of the tanks and pipework, their dimensions and the materials used. It is recommended that all records are dated and maintained during the life of the UST; records are kept on-site for future reference (i.e. in the event of a leak or spillage) in a place from where they can be retrieved quickly.
	Alternative 2	Local	Temporary	Medium	3	1	

OTHER IMPACTS: CONSTRUCTION PHASE

Impact on Natural Habitat	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	High	2	1	Vegetation clearing and construction activities must be limited to the authorised development footprint. Mitigation measures must be implemented to reduce the risk of erosion and the invasion of alien species. Camp site, storage facilities and other necessary temporary structures to preferably be erected within the confines of the CNC site. No open fires to be allowed outside of designated sites. Collection of wood for fires and cooking from out of the surrounding veld is prohibited. A designated area for camp fires and cooking needs to be made. Should open fires be used then an area of at least 2m by 2m needs to be cleared of any flammable materials such as grass. No material or machinery to be stored or placed in the open veld outside the designated area of the CNC site.
	Alternative 2	Local	Tempor ary	High	2	1	

Impact on Avifauna	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	High	1	1	The construction activities must be restricted to the actual footprint of the development. Measures must be put in place to ensure that construction personnel are prevented from accessing the property outside the actual construction site.
	Alternative 2	Local	Temporary	High	1	1	

							Care must be taken to ensure that the habitat destruction is kept to what is absolutely necessary for the construction of the CNC.

Risk of surface and ground water pollution	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	Medium	2	1	Detailed mitigation measures are included in the EMPr to minimise impact of construction camp, waste and sewage.
	Alternative 2	Local	Temporary	Medium	2	1	

Erosion	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	Low	2	1	Refer to EMPr for erosion control measures. Erosion and loss of soil must be prevented by minimizing the construction site exposed to surface water run-off. Where necessary erosion stabilizing actions such as gabions or re-vegetation must be implemented to prevent further habitat deterioration. Construction must include appropriate design measures that allow surface and subsurface movement of water along drainage lines so as to not impede natural surface and subsurface flows. Drainage measures must promote the dissipation of storm water run-off.
	Alternative 2	Local	Temporary	Low	2	1	

Solid waste	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	Medium	2	1	The construction teams should ensure that all waste is removed from the site and that they recycle the items that can be used again. Any waste that cannot be recycled will be transported to the appropriate landfill site
	Alternative 2	Local	Temporary	Medium	2	1	

							licensed in terms of section 20 (b) of the National Environment Management Waste Act, 2008 (Act No 59 of 2008). A copy of the service agreement, to verify the disposal sites that will be accepting the waste, should be kept on site.

Impact of labourers	**Site**	**Extent**	**Duration**	**Probability**	**Significance without mitigation**	**Significance with mitigation**	**Proposed mitigation**
	Alternative 1	Local	Temporary	Low	2	1	Mitigation measures to counter impact on the natural environment and limit potential for crime include specifications in terms of control of construction workers (i.e. provision of toilet and cooking facilities, provision of either accommodation facilities or transport facilities, training, etc.). Accommodation for labourers must either be limited to guarding personnel on the construction site (with labourers transported to and from existing neighbouring towns) or a separate fenced and controlled area where proper accommodation and relevant facilities are provided. Eskom and the contractors should maximise the use of local labour where possible by developing a strategy to involve local labour in the contractor teams and construction process.
	Alternative 2	Local	Temporary	Low	2	1	

Employment	**Site**	**Extent**	**Duration**	**Probability**	**Significance without mitigation**	**Significance with mitigation**	**Proposed mitigation**
	Alternative 1	Local	Temporary	Medium	2	1	It should be ensured that contractors use local skills, or train semi-skilled people or re-skill appropriate candidates for employment purposes where possible. The applicant must train safety
	Alternative 2	Local	Temporary	Medium	2	1	

							representatives, managers and workers in workplace safety. All applicable safety standards and regulations, including for subcontractors must be enforced.

Local Procurement	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	Medium	2	2	Local procurement should be aimed at as far as possible. Local sourcing of materials would assist in providing more economic and employment opportunities for the local people.
	Alternative 2	Local	Temporary	Medium	2	2	

Local Economic Benefits	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Regional	Temporary	Medium	2	2	Maximise the use of local labour even if the number of locals that would be employed would be limited. Accommodate, but regulate the activities of vendors in the vicinity of the construction areas and at the construction camps.
	Alternative 2	Regional	Temporary	Medium	2	2	

Impact on Safety and Security	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	Medium	2	1	Safety measures are included in the EMPr.
	Alternative 2	Local	Temporary	Medium	2	1	

Impact of dust pollution	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	Medium	2	1	Water trucks must be used daily on roads and construction sites to dampen dust. Appropriate dust suppression techniques must be implemented on all exposed surfaces to minimise and control
	Alternative 2	Local	Temporary	Medium	2	1	

							airborne dust. Such measures could include wet suppression, chemical stabilisation, the use of a wind fence, covering surfaces with straw chippings and re-vegetation of open areas.

Impact on cultural heritage resources	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	Medium	2	1	If archaeological/ palaeontological or other types of heritage resources are uncovered during construction/ground clearance activities SAHRA (Mrs Colette Scheermeyer, tel: 021 462 4502) and a professional archaeologists/ palaeontologist dependent on the finds must be alerted immediately to inspect the finds. A rescue excavation may be required if the identified heritage resource/s is deemed to be significant.
	Alternative 2	Local	Temporary	Medium	2	1	

Visual Impact	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Temporary	Medium	2	1	Landscaping plays a crucial factor in reducing the visual impact of a development and proper planning is therefore required. The following guidelines should apply: The general aim with landscaping should be to integrate it with the natural environment of the site and its surrounding area. Therefore, indigenous landscaping, combined with the eradication of alien vegetation, will conserve and enhance the natural character of the site and its surrounds. The establishment of indigenous landscaped gardens and rehabilitation of the natural
	Alternative 2	Local	Temporary	Medium	2	1	

							areas will contribute to the biodiversity of fauna in the area, which would add to the aesthetic experience of the site. More detail with regards to landscaping principles and recommendations are stipulated in the EMPr.

Loss of agricultural land	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Permanent	Low	1	1	The agricultural potential of the site (or loss thereof caused by the construction of a customer network centre) is negligible.
	Alternative 2	Local	Permanent	Low	1	1	

2.3 IMPACTS THAT MAY RESULT FROM THE OPERATIONAL PHASE

IMPACTS OF THE FUEL TANKS

Leaks could occur	Site	Extent	Duration	Probability	Significance without mitigation	Significance with mitigation	Proposed mitigation
	Alternative 1	Local	Permanent	Medium	3	1	Prevent impact rather than manage impact. Undertake regular engineering inspections Pressure tests should be conducted regularly on fuel tanks to ensure that there are no leakages. Provide measures for emergency reporting and remedy Follow acceptable maintenance and operational practises to ensure consistent, effective and safe performance of the infrastructure
	Alternative 2	Local	Permanent	Medium	3	1	

Spillages could occur	**Site**	**Extent**	**Duration**	**Probability**	**Significance without mitigation**	**Significance with mitigation**	**Proposed mitigation**
	Alternative 1	Local	Temporary	Medium	3	1	Prevent impact rather than manage impact. Provide measures for emergency reporting and remedy Provide onsite remediation measures (i.e. spill kits) Follow acceptable maintenance and operational practises to ensure consistent, effective and safe performance of the infrastructure Ensure compliance with legal requirement at all times.
	Alternative 2	Local	Temporary	Medium	3	1	

Risk of fire and explosions The storage, handling and transport of fuel are potentially dangerous to humans and properties due to the risk of fire and explosions	**Site**	**Extent**	**Duration**	**Probability**	**Significance without mitigation**	**Significance with mitigation**	**Proposed mitigation**
	Alternative 1	Local	Permanent	Medium	4	1	Strict fire management measures must be implemented: A Fire Management Plan must be in place and regularly updated and communicated with all personnel. "No smoking" signs must be placed in visible areas on site. No fires may be made for the burning of vegetation and waste. No open fires are to be made on site – cooking facilities must be provided to personnel and labourers. In case of a fire, the local fire department must immediately be contacted. The adjacent land users must be informed and/or involved in case of any fire. It must be ensured that the basic firefighting equipment is supplied to the site office,
	Alternative 2	Local	Permanent	Medium	4	1	

							kitchen areas, workshop areas and stores. Welding gas cutting or cutting of metal will only be allowed inside the working/demarcated areas and with appropriate fire-fighting equipment at hand.

Health and Safety Health and Safety is an issue that requires serious consideration since negligence can result in serious bodily harm and injury and even death.	**Site**	**Extent**	**Duration**	**Probability**	**Significance without mitigation**	**Significance with mitigation**	**Proposed mitigation**
	Alternative 1	Local	Permanent	Medium	4	1	Personnel must at all times where protective clothing during instances when they can be affected by fuel hazardous materials and odours i.e. when omissions occur during the filling of UST' s, during spills, etc. Safety signs must be placed in visible areas all over the site. A complete First Aid Kit must be readily available on site and regularly serviced. Personnel must be trained in health and safety awareness and management of emergency situations.
	Alternative 2	Local	Permanent	Medium	4	1	

OTHER IMPACTS: OPERATIONAL PHASE

Impact of alien vegetation	**Site**	**Extent**	**Duration**	**Probability**	**Significance without mitigation**	**Significance with mitigation**	**Proposed mitigation**
	Alternative 1	Local	Long term	High	Medium	Low	Removal of alien invasive species or other vegetation and follow-up procedures must be in accordance with the Conservation of Agricultural Resources Act, 1983). Cleared alien vegetation must not be dumped on adjacent intact vegetation during clearing, but should be temporarily stored in a demarcated area.
	Alternative 2	Local	Long term	High	Medium	Low	

2.4 IMPACTS THAT MAY RESULT FROM THE DECOMISSIONING AND CLOSURE PHASE

It is not envisaged that the CNC will be decommissioned. Eskom is currently experiencing an increased demand for the supply and distribution of additional electricity in the project area.

It is generally assumed that the decommissioning process is the reverse of the construction process and as such the indicated impacts will also be relevant to decommissioning phase.

2.5 CUMULATIVE IMPACTS

Cumulative effects are caused by the accumulation and interaction of multiple stresses affecting the parts and the functions of ecosystems. Cumulative effects can be defined as the changes to the environment caused by an activity in combination with other past, present, and reasonably foreseeable human activities.

The magnitude, extent and duration of environmental effects depend on the characteristics of a development activity in a particular location.

The cumulative effect for constructing the CNC will be low. In time, the overall cumulative impact on this area is likely to increase as mining, urbanisation and other Eskom developments are placing pressure on the habitat. It is thus critical that major role players in the region' s economy create long term strategic plans that will accommodate and enhance a wide range of economic activities.

Equally important is the need for Eskom to align all the projects that are planned for the area in order to minimise the potential negative impacts and enhance potential positive outcomes. It is therefore crucial for Eskom to liaise very closely with the various municipalities to mainstream Eskom projects into the Integrated Development Plans (IDPs) and Spatial Development Frameworks (SDFs) of the respective municipalities.

Municipal Infrastructure

The extra pressure that this development could place on the existing municipal infrastructure for waste as well as water provisions could have an impact when seen together with other developments within the greater municipal area.

A Services Agreement will however be entered into between the Applicant and the local municipality in which the municipality will confirm that sufficient capacity exist to service the development. Such an agreement will only be possible if the municipality take the existing and future developments within the area into consideration. The cumulative effect of waste and water volumes will therefore be catered for.

CONCLUSION OF IMPACT SIGNIFICANT RATING

Alternative sites have been investigated for the project. As can be seen from the discussions, both sites are acceptable if the proposed mitigations are implemented. Alternative 1 is however preferred as the final Site Alternative because it sits right next to a new proposed development (shopping centre) and it will therefore cause less segmentation of the veld type.

All impacts that the proposed Marken Customer Network Centre may have on the environment can be easily and reasonably mitigated to acceptable levels. There are no impacts that could influence the feasibility and viability of 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:

The implementation of the Environmental Management Plan must be a condition in the authorisation of the project.

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.

_____

NAME OF EAP

_____ _____

SIGNATURE OF EAP DATE

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps
- Locality & Site Alternatives Map

Appendix B: Photographs
- Photo Report

Appendix C: Facility illustration(s)
- Site Layout Plan of a typical Eskom Customer Network Centre

Appendix D: Specialist reports (including terms of reference)
- Baseline Ecological Assessment – Flori Horticultural Services CC
- Bird Impact Assessment – Chris van Rooyen Consulting
- Heritage Impact Assessment – Dr Julius CC Pistorius
- Palaeontological Impact Assessment – Prof Marion Bamford

Appendix E: Public Participation
- E1a – Proof of Placement of Advertisements: Newspaper
- E1b – Proof of Placement of Advertisements: Onsite Notification
- E2a – Background Information Document
- E2b – Proof of initial notification to Interested &Affected Parties
- E3 – Comments and Reponses Report (no comment from any IAP was received up to compilation of the Draft BAR)
- E4 – Proof of Notification of availability of the Draft BAR to IA&P's *(to be included in the Final BAR)*
- E5 – Complete register of Interested & Affected Parties
- E6 – Copies of Correspondence, notes and minutes of meetings
  - No comment was received during the initial advertising period
  - Written comment received on the Draft BAR with EAP responses (*to be included in the Final BAR*)

Appendix F: Impact Assessment
- Impact Assessment

Appendix G: Environmental Management Programme (EMPr)
- Environmental Management Programme

Appendix H: Details of EAP and expertise
- Landscape Dynamics Company Profile and Condensed CV's

Appendix I: Specialist's declaration of interest
- Specialist's Declaration of Interest

Appendix J: Additional Information
- None