APP-005548

THE PERMANENT CLOSURE, SUBDIVISION AND REZONING OF A PORTION OF THE REMAINDER PLAAS HENTIESBAAI NO.125 FOR CONSTRUCTION OF A SUBSTATION, HENTIES BAY, ERONGO REGION

ENVIRONMENTAL MANAGEMENT PLAN

Assessed by:

Assessed for:

June 2025

Project:	**THE PERMANENT CLOSURE, SUBDIVISION AND REZONING OF A PORTION OF THE REMAINDER PLAAS HENTIESBAAI NO.125 FOR CONSTRUCTION OF A SUBSTATION, HENTIES BAY, ERONGO REGION: ENVIRONMENTAL MANAGEMENT PLAN**	
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Prepared for: **(Proponent)**	Erongo Regional Electricity Distributor Company (Pty) Ltd P.O. Box 2925 Walvis Bay, Namibia	
Lead Consultant	Geo Pollution Technologies (Pty) Ltd PO Box 11073 Windhoek, Namibia	TEL.: (+264-61) 257411 FAX.: (+264) 88626368
Main Project Team:	**André Faul** (B.Sc. Zoology/Biochemistry); (B.Sc. (Hons) Zoology); (M.Sc. Conservation Ecology); (Ph.D. Medical Bioscience) **Ernest Pelser** (B.Sc. Zoology/Microbiology); (B.Sc. (Hons) Environmental Science); (M.Sc. Environmental Science)	
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1 INTRODUCTION

Erongo Regional Electricity Distributor Company (Pty) Ltd (Erongo RED or the Proponent) is the regional electricity distributor in the Erongo Region. As such their mandate includes the construction, operations and maintenance of electrical distribution substations. Due to an increase in the current and foreseen demand for electricity, the current transformer in Benguela Street, Henties Bay, is too small and needs to be replaced/upgraded. The Proponent thus proposes construction and operations of a new electricity distribution substation at the junction of Benguela and Kabeljou Streets (Figure 1-1).This will require rezoning of part of the road reserve to utility services.

The Proponent requested Geo Pollution Technologies (Pty) Ltd (GPT) to apply for an environmental clearance certificate (ECC) for the permanent closure, subdivision and rezoning of a portion of the remainder Plaas Hentiesbaai No.125 (a Portion of Kabeljou and Benguela Streets) and the subsequent construction of the electricity distribution substation. A risk assessment was undertaken to determine the potential impacts of the proposed project on the environment. The environment being defined in the Environmental Assessment Policy and Environmental Management Act as “land, water and air; all organic and inorganic matter and living organisms as well as biological diversity; the interacting natural systems that include components referred to in sub-paragraphs, the human environment insofar as it represents archaeological, aesthetic, cultural, historic, economic, paleontological or social values”.

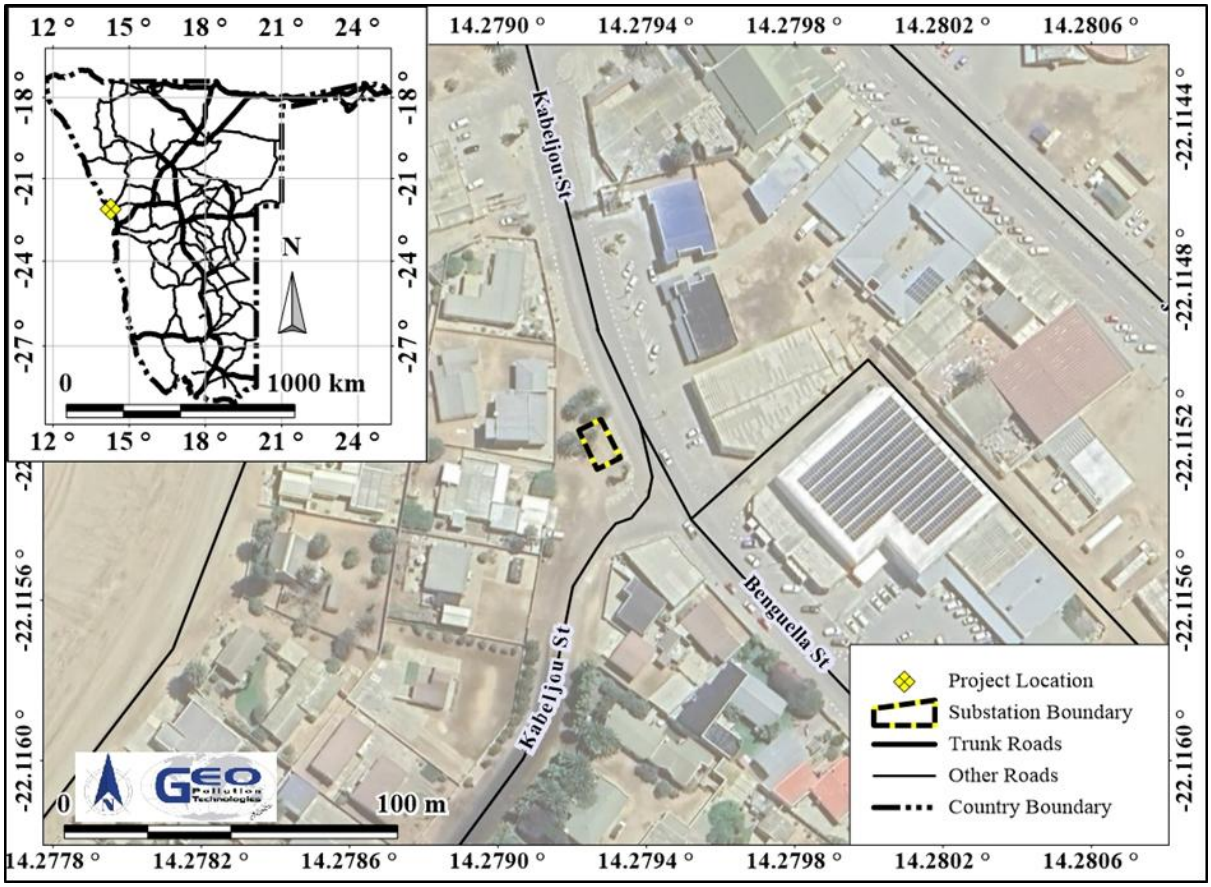

Figure 1-1 Project location

2 ENVIRONMENTAL MANAGEMENT PLAN

An EMP provides management options to ensure impacts of a project are minimised. An EMP is a tool used to take pro-active action by addressing potential problems before they occur. This should limit the corrective measures needed, although additional mitigation measures might be included if necessary. These management measures should be adhered to during the various phases of the operation of the substation. All personnel taking part in the construction and operation of the substation should be made aware of the contents in this section, so as to plan the operations accordingly and in an environmentally sound manner.

The objectives of the EMP are:

- to include town planning aspects and all components of construction activities (upgrades, maintenance, etc.) and operations of the substation;
- to prescribe the best practicable control methods to lessen the environmental impacts associated with the project;
- to monitor and audit the performance of operational personnel in applying such controls; and
- to ensure that appropriate environmental training is provided to responsible operational personnel.

Various potential and definite impacts will emanate from the operations, construction and decommissioning phases. The majority of these impacts can be mitigated or prevented. The impacts, risk rating of impacts as well as prevention and mitigation measures are listed below.

Impacts related to the project are expected to mostly be of low to medium significance and can mostly be mitigated to have a low significance. The extent of impacts are mostly site specific to local and are not of a permanent nature. Due to the nature of the project, cumulative impacts are mainly related to lights' impact on birds.

2.1.1 Planning

The subdivision, rezoning and closure activities are administrative in nature and thus forms part of the planning phase. During the phases of planning for construction, operations and decommissioning of the substation, it is the responsibility of Proponent to ensure they are and remain compliant with all legal requirements. The Proponent must also ensure that all required management measures are in place prior to and during all phases, to ensure potential impacts and risks are minimised. The following actions are recommended for the planning phase and should continue during various other phases of the project:

The Proponent should:

- Ensure that all necessary approvals to allow for the subdivision, rezoning and closure activities are in place and valid.
- Ensure that all necessary permits from the various ministries, local authorities and any other bodies that governs the construction (maintenance) and operations of the substation are in place and valid.
- Ensure all appointed contractors and employees enter into an agreement which includes the EMP. Ensure that the contents of the EMP are understood by the contractors, sub-contractors, employees and all personnel present or who will be present on site.
- Make provisions to have a Health, Safety and Environmental Coordinator to implement the EMP and oversee occupational health and safety as well as general environmental related compliance at the site.
- Make provisions to have a community liaison officer on site who will handle complaints and community input, and through whom, where reasonable, monitoring data can be requested. Communicate the contact details of the community liaison officer to interested and affected parties when the project is initiated.
- Have emergency plans, equipment and personnel on site where reasonable to deal with all potential emergencies.

- If one has not already been established, establish and maintain a fund for future ecological restoration of the project site should project activities cease and the site is decommissioned and environmental restoration or pollution remediation is required.
- Establish and / or maintain a reporting system to report on aspects of construction activities, operations and decommissioning as outlined in the EMP.
- Prepare and submit environmental monitoring reports as per the conditions of the environmental clearance certificate.
- Appoint a specialist environmental consultant to apply for renewal of the ECC prior to expiry, if the substation have not been constructed within its three year validity.

2.1.2 Employment

No additional employment is expected during the construction and operational phases of the project. Existing employment offered by contractors and the Proponent will however be sustained. An increase in employment is thus not a direct consequence of this project.

Desired Outcome: Contracting local Namibians to be involved in the planning and construction of the substation

Actions

Mitigation:

- The Proponent must contract local Namibians where possible. If the skills exist locally, employees must first be sourced from the town, then the region and then nationally.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Bi-annual summary report based on records of contractors.

2.1.3 Skills Transfer

Some skills transfer may take place among consultants contracted to execute the subdivision, rezoning and closure activities. During planning and construction some training may be provided to a portion of the various contractors' employees. Skills can be transferred to an unskilled workforce for general tasks.

Desired Outcome: Skills transfer among members of the Namibian workforce.

Actions

Enhancement:

- The Proponent must source Namibian consultants as far as is practically possible. Deviations from this practise must be justified.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Record should be kept of contracted consultants.

2.1.4 Revenue Generation

Contractors and consultants used for the project will generate income, pay salaries and procure goods and services. This will result in the payment of taxes to government. Revenue generated in the operational phase is not a direct consequence of this project, but rather indirect through the provision of reliable electricity to existing and new local businesses. The spending power of consultants and their employees will also be supported for the duration of the project.

Desired Outcome: Contribution to the local, regional and National economy. Contribution to National treasury.

Actions

Enhancement:

- The Proponent must source Namibian consultants as far as is practically possible. Deviations from this practise must be justified.
- Uninterrupted electricity supply to local businesses must be insured by conducting regular maintenance, repairs and upgrades to the substation.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Record should be kept of contracted consultants.

2.1.5 Demographic Profile and Community Health

The project is reliant on labour during the construction phase. Local construction teams in Henties Bay will be used for all general maintenance and upgrade activities. The scale of the construction portion of the project is limited and it is not expected to create a change in the demographic profile of the local community. Existing labourers, already employed by contractors will probably be used. The local community may be exposed to factors such as communicable disease like HIV/AIDS and alcoholism/drug abuse potential brought on by the increased spending power of the labour force.

Positive impacts will related to contractors and their employees' increased economic resilience and improved livelihoods.

Desired Outcome: To prevent the in-migration and growth in informal settlements, prevent the spread of communicable disease and prevent / discourage socially deviant behaviour.

Actions:

Prevention:

- Employ local contractors from the area where possible. Deviations from this practise should be justified appropriately.
- Adhere to all municipal by-laws relating to environmental health which includes, but is not limited to, sanitation requirements for workers on site.
- Appointment of reputable contractors.
- Source building materials locally to avoid the need for truck drivers to stay overnight.

Mitigation:

- Educational programmes for employees (especially truck drivers) on HIV/AIDs and general upliftment of employees' social status.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Record should be kept of contractors employed.

2.1.6 Health and Safety

Injuries can occur due to incorrect lifting of heavy equipment and materials, falling from heights and accidents involving construction equipment and vehicles. Electrocution is also possible when installing and maintaining the substation components.

Substations emit electric and magnetic fields. The levels near substations are however too low to cause adverse health effects (see section 2.1.13). Unauthorised persons gaining access to the inside of the substation may be at risk of being electrocuted. If the substation is not securely locked, criminals may use it to hide and this may increase criminal activities in the area.

Desired Outcome: To prevent electrocution and criminal activities

Actions

Prevention:

- Appoint contractors with a known track record of safe and responsible work practices.
- Contractors should implement and maintain an integrated health and safety management system, or similar, to act as a monitoring and mitigating tool, which includes: operational, safe work and medical procedures, permits to work, emergency response plans, housekeeping rules and signage requirements (personal protective equipment (PPE), high voltage etc.).
- Clearly label dangerous and restricted areas as well as dangerous equipment and products.
- Provide all employees with required and adequate PPE.
- Ensure that all personnel and contractors who will work on the project, especially during the construction phase receive adequate training on:
  - operation of equipment.
  - working at heights
  - identification of potential hazardous conditions or events
- The contact details of all emergency services must be readily available.
- Access into the substation should be restricted.

Mitigation:

- For all emergency situations, the appropriate emergency response plan must be implemented as soon as possible in order to minimise the magnitude of impacts or prevent such impacts from developing into more severe impacts
- If the substation is frequently used for illicit activities, the Proponent should consider fencing or walling of the newly established erf.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any complaints should be recorded and attended to at the appropriate level.
- Any incidents must be recorded with action taken to prevent future occurrences.
- A bi-annual report should be compiled of all incidents reported. The report should contain dates when training were conducted and when safety equipment and structures were inspected and maintained.

2.1.7 Security

Security risks associated with the substation are primarily related to unauthorized access, theft, and potential sabotage. These risks are heightened by the perception that electrical cables and other equipment are of high value, making them attractive targets. Theft or sabotage compromising substation operations could negatively impact nearby residents and businesses.

Security concerns extend to the surrounding area during the construction phase, as opportunistic criminals might use the opportunity to gain entry to adjacent residential or business properties. Once operational, the substation structure itself could potentially attract local criminals and squatters, offering a concealed location for shelter or illicit activities, further impacting community security.

Desired Outcome: To prevent criminal activities

Actions

Prevention:

- A security management plan must be in place to protect workers and the public.
- Communicate the start and duration of construction to all nearby residents and businesses.
- Appointing contractors with a known track record of safe and responsible work practices.
- Keeping the substation securely locked at all times.
- Equipment on site must be locked away or placed in a way that does not encourage criminal activities (e.g. theft).
- Clearly labelling dangerous and restricted areas as well as dangerous equipment and products.
- Apply no loitering and / or hawking signs on the substation building.
- The contact details of all emergency services must be readily available to all persons working in or at the substation.

Mitigation:

- Communicate the public liaison officer's contact details to neighbouring residents and businesses and have an open door policy for any complaints.
- If the substation is frequently used for illicit activities, the Proponent should, in consultation with residents, businesses and the town council, devise strategies to address the same. This can include considering the hiring a local security company to monitor unusual activity at all the substations in Henties Bay.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any complaints should be recorded and attended to at the appropriate level.
- Any incidents must be recorded with action taken to prevent future occurrences.
- A bi-annual report should be compiled of all incidents reported. The report should contain dates when training were conducted and when safety equipment and structures were inspected and maintained.

2.1.8 Traffic

The volume of trucks in town will slightly increase during the construction of the substation. Heavy motor vehicles turning in these roads may result in in an increased, cumulative impact on the road surface of the area. Trucks delivering building materials and equipment may block neighbouring businesses and home entrances and increase the likelihood of accidents and incidents. Operations will not see an increase of traffic.

Desired Outcome: Minimum impact on traffic and no transport or traffic related incidents.

Actions

Mitigation:

- Trucks delivering or collecting goods should not be allowed to obstruct any traffic in surrounding areas and the town.
- Vehicles present at the site should not obstruct any entry and / or exit of nearby residents or businesses.
- Trucks associated with the substation should not be allowed to park or overnight in in the vicinity, and may only overnight at areas designated for this purpose.
- Adhere to The Road Traffic and Transport Regulations, 2001 and all other applicable legislation related to road transport and maximum axle loads.
- If any traffic impacts are expected, traffic management should be performed to prevent these.
- The placement of signs to warn and direct traffic will mitigate traffic impacts.
- If applicable, vehicles on which abnormal loads are to be transported must comply with all regulatory requirement related to abnormal loads. Verify that the driver of the vehicle has undergone appropriate training.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- The Road Traffic and Transport Regulations, 2001.
- Any complaints received regarding traffic issues should be recorded together with action taken to prevent impacts from repeating itself.
- A bi-annual report should be compiled of all incidents reported, complaints received, and action taken.

2.1.9 Fire

Due to the nature of the project, the likelihood of a fire is very small. If a fire originates, it will most likely be localised (e.g. grinder sparks igniting nearby flammable packaging material or flammable liquids such as solvents used during painting). During operations, the only possibility of a fire may be a small electrical fire involving electrical connections.

Desired Outcome: To prevent property damage, possible injury and impacts caused by uncontrolled fires.

Actions:

Prevention:

- Even though the likelihood of fire is low, a holistic fire protection and prevention plan must be developed for the site and it should specifically take into account flammable products stored on site. This plan must include an emergency response plan, firefighting plan and a spill recovery plan and should have dedicated assigned personnel to oversee their development and implementation.
- Firefighting equipment must be maintained and regularly serviced.
- Regular personnel training (firefighting, fire prevention and responsible housekeeping practices).
- Maintain regular site, mechanical and electrical inspections and perform regular maintenance.

Mitigation:

- For any fire related emergency situation, the appropriate emergency response plan must be implemented as soon as possible in order to minimise the magnitude of impacts or prevent such impacts from developing into more severe impacts.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of all incidents must be maintained on a daily basis. This should include measures taken to ensure that such incidents do not repeat themselves.
- A bi-annual report should be compiled of all incidents reported. The report should contain dates when fire drills were conducted and when fire equipment was tested and training given.

2.1.10 Noise

Operational noise emissions from 630 kVA transformers typically manifest as a continuous low-frequency hum, with sound pressure levels ranging from 55–60 dBA at the substation boundary (equivalent to a refrigerator or air-conditioning unit). This humming originates primarily from transformer core magnetostriction and winding vibrations, which remain relatively consistent regardless of load variations. Noise levels generally decrease rapidly with distance and are commonly mitigated through structural and design interventions, such as brick enclosures, acoustic damping materials, vibration isolation mounts, strategic positioning of ventilation openings, and landscape barriers. These practices help ensure noise emissions remain within recommended residential noise limits (typically below 50–55 dBA at night), minimising potential nuisance impacts.

During construction, heavy motor vehicles accessing the site to offload construction materials will cause some noise. Construction and heavy equipment used (maintenance and upgrades) may generate excessive noise for short periods of time.

Substations can produce low pitch buzzing sounds, especially when it has faulty components. This may be a nuisance to nearby residents. The substation is however in an enclosed brick-walled structure which will reduce the noise emissions.

Desired Outcome: To prevent any nuisance due to noise generated.

Actions

Prevention:

- The Health and Safety Regulations of the Labour Act and World Health Organization (WHO) guideline on maximum noise levels (Guidelines for Community Noise, 1999) to prevent hearing impairment for workers on site and a nuisance to nearby communities should be followed during the construction and operational phases.
- Schedule construction of the substation to fall outside of the main holiday season (i.e. outside December/January)
- Confine noise generating construction and operational activities to daytime hours as far as possible.
- Contact details of Erongo RED to be fixed to the outside of the substation to allow reporting of excessive noise being generated by the substation.
-

Mitigation:

- Hearing protectors as standard PPE for workers in situations with elevated noise levels.
- All machinery must be regularly serviced to ensure minimal noise production.
- Replace faulty electronics and components in the substation that cause buzzing or humming sounds.
- A noise survey should must be conducted if regular complaints are received regarding substation noise.
- Additional noise dampening material must be installed inside the substation if noise levels generated by the substation exceed WHO guideline values at nearby receptors.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- WHO guidelines on community noise
- Maintain a complaints register.
- Bi-annual report on complaints and actions taken to address complaints and prevent future occurrences.

2.1.11 Waste production

Some waste will result from the construction of the substation. Construction waste may include building rubble and discarded equipment. Contaminated soil and water is considered as a hazardous waste.

Desired Outcome: To reduce the amount of waste produced, and prevent pollution and littering.

Actions

Prevention:

- Waste reduction measures should be implemented and all waste that can be re-used / recycled must be kept separate.
- Ensure adequate temporary waste storage facilities are available.
- Ensure waste cannot be blown away by wind.
- Prevent scavenging (human and non-human) of waste.

Mitigation:

- Waste should be disposed of regularly and at appropriately classified disposal facilities, this includes hazardous material (empty containers, contaminated rugs, paper water and soil).
- See the material safety data sheets available from suppliers for disposal of contaminated products and empty containers.
- Liaise with the municipality regarding waste and handling of hazardous waste.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A register of hazardous waste disposal should be kept. This should include type of waste, volume as well as disposal method/substation.
- Any complaints received regarding waste should be recorded with notes on action taken.
- All information and reporting to be included in a bi-annual report.

2.1.13 Electromagnetic Fields and Non Iodising Radiation

Electromagnetic fields (EMFs) are a form of non-ionizing radiation that occurs naturally, but are also produced by other sources such as electrical distribution substations, power lines and devices such as cellular phones, microwaves, computers, etc. Electricity substations (including brick-built units in residential areas) emit extremely low-frequency (ELF) (around 50–60 Hz) electromagnetic fields, generated by the movement of electrical charges in the power supply. ELF fields being non-ionizing, means they lack the energy to ionize atoms or directly damage deoxyribonucleic acid (DNA) as opposed to higher-frequency radiation (like X-rays or ultraviolet light) or intense radiofrequency energy. The ELF fields do not cause tissue heating or photochemical reactions in the body. However, they can induce very small electric currents in conductive tissues. At the exposure levels near homes, any induced currents are extremely weak, comparable to or below natural physiological currents.

Measurement of non-ionising radiation from electrical substations combine magnetic flux density, measured in microteslas (µT), and electric field strength, measured in volts per meter (V/m). Magnetic flux density is influenced by the magnetic field strength which fluctuates with the load (current) on the substation and can pass through most building materials like brick or concrete. Magnetic fields are the primary concern because they are not easily attenuated by walls. In contrast, external electric fields are typically minimal because the substation's metal enclosures, grounded structures and the building walls shield or absorb up to 50% of the electric field. In fact, small distribution substations often produce no electric outside their perimeter due to this shielding.

The strength of the EMF drops off rapidly with distance from the source. For a 630 kVA transformer, the magnetic flux density at 5 m is approximately 6.1 µT and at 10 m it decreases to about 2 µT. This is well below the International Commission on Non-Ionizing Radiation Protection (ICNIRP) guideline exposure value for the public of 100 µT.

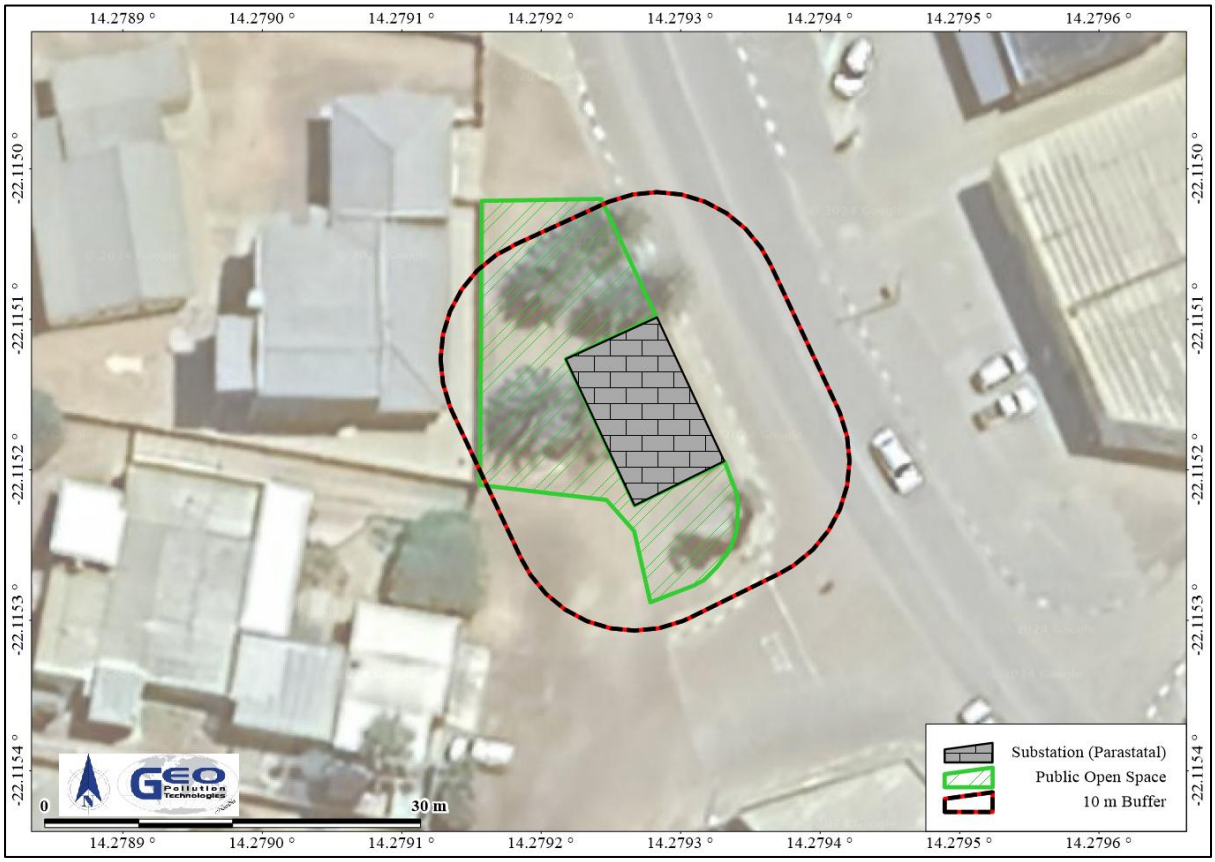

Figure 2-1 10 m Buffer around the substation boundary wall

Desired Outcome: Minimise exposure and cumulative effects form electric and magnetic fields.

Actions

Prevention:

- Plan the substation building layout to maximise the distance from the transformers to the nearest residence.
- Educate workers on occupational EMF levels and hazards.
- Action plans to address occupational exposure may include limiting exposure time through work rotation, increasing the distance between the source and the worker, when feasible, or the use of shielding materials.

Mitigation:

- A once-off EMF survey can be conducted to ascertain that EMF levels, resulting from the substation, are within ICNIRP guideline values at nearby residences.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- ICNIRP guidelines
- Record all complaints received with action taken.
- All information and reporting to be included in a bi-annual report.

2.1.14 Air quality

Particulate matter is a known health concern related to air quality. Specific parameters were developed by the World Health Organisation (WHO) relating to the safe limits of particulate matter in ambient air. Future construction and or maintenance activities could entail earth moving activities which may temporarily suspend material in the air. Frequent travelling of heavy motor vehicle over un-surfaced areas may increase soil disturbance resulting in finer particles which are more easily suspended in the air.

It is not foreseen that the greenhouse gas emissions from construction related activities, will have a significant impact.

Desired Outcome: To prevent health impacts and minimise dust generated.

Actions

Mitigation:

- If dust is a problem, erect a barrier (such as shade netting) around the construction site to act as a dust shield between the site operations and neighbouring buildings.
- Personnel are to be issued with dust masks when needed.
- Excavations and earthworks during strong wind conditions should be avoided to prevent dust from being a nuisance if dust suppression is not adequate.
- A complaints register should be kept for any dust related issues and mitigation steps taken to address complaints where necessary.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- Any complaints received regarding dust should be recorded with notes on action taken.
- Photos of shade netting be kept on file along with maintenance record of the construction perimeter fence.
- All information and reporting to be included in a bi-annual report.

2.1.15 Ecosystem and Biodiversity Impact

Some land clearing might be required. Further impacts will mostly be related to pollution of the environment. The substation roof may serve as a roosting and nesting sites for birds. Bird droppings can increase corrosion rates of the substation.

Desired Outcome: To avoid pollution of the environment and impacts on birds.

Actions.

Mitigation:

- Report any extraordinary ecological sightings to the Ministry of Environment, Forestry and Tourism.
- Mitigation measures related to waste handling and the prevention of groundwater, surface water and soil contamination should limit ecosystem and biodiversity impacts.
- Prevent scavenging of waste by fauna.
- Roosting and nesting by birds should be prevented by installing structures to deter birds from landing on the structures (spikes and netting). Input from a bird specialist should be obtained to determine the best method which is safe for the birds as well.

Responsible Body:

- Proponent

Data Sources and Monitoring:

- Take note of any birds roosting or nesting on the substation and take corrective action.
- All information of extraordinary ecological sightings to be included in a bi-annual report.

2.1.16 Groundwater, Surface Water and Soil Contamination

There is no surface water present nearby. Paints, solvents, oil, hydraulic fluid and fuel leaks from vehicles and the oil used to cool the transformers may present a soil and groundwater pollution risk.

Desired Outcome: To prevent the contamination of water and soil.

Actions

Prevention:

- Maintain all vehicles in a good working order.
- The floor of the substation must be built with an impermeable concrete floor with a spill catchment structure to prevent transformer oils form spills or leaks from entering the surrounding environment. .

Mitigation:

- Clean-up action must be taken immediately for any spill.
- Regular maintenance to be conducted on the transformers to identify and repair oil leaks.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- The procedures followed to prevent environmental damage during service and maintenance, and compliance with these procedures, must be audited and corrections made where necessary.
- A report should be compiled bi-annually of all spills.

2.1.17 Utilities and Existing Infrastructure

The site is within a residential and local business area. During the construction phase, earthmoving activities will be necessary for establishing the substation and installing electrical cables. These operations could directly impact nearby residential properties and businesses, particularly if cable placement requires excavations over driveways and roads. Temporary road closures will disrupt local traffic patterns and accessibility.

Subsurface infrastructure such as existing telecommunications cables, pipelines, sewers, etc. may be damaged during excavations, leaving residents and businesses in the area without services.

Desired Outcome: To minimise impacts and disruptions to the local residents and businesses.

Actions

Mitigation:

- Schedule construction of the substation to fall outside of the main holiday season (i.e. outside December/January).
- Notify all residents and businesses of the start and duration of construction activities.
- Determine if any subsurface infrastructure is present where excavations will be made. The suppliers of services should be engaged or surveys such as ground-penetrating radar should be conducted.
- Notify all residents and businesses of road closures and liaise regarding suitable times to excavate over driveways.
- All surfaces should be rehabilitated and restored to their original state without delay.
- All vegetation that was removed during construction, if any, should be replaced. Large palm trees should be replanted on site if they need to be moved.
- Any infrastructure damage that was incurred during construction shall be replaced and / or fixed by the Proponent.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A bi-annual report should be compiled of all complaints received and actions taken.
- Any complaints received regarding infrastructure damage should be recorded with notes on action taken.

2.1.18 Visual Impact

This is an impact that not only affects the aesthetic appearance, but also the integrity of the substation. The site is within a residential and local business area. The substation may have a negative visual aesthetic to the nearby residents. The building however does not obstruct a scenic view of the nearby residents, as it will be built in the direction of the business area.

Operations will be kept tidy and neat which will promote pollution prevention while being aesthetically pleasing.

Desired Outcome: To minimise aesthetic impacts.

Actions

Mitigation:

- Regular waste disposal, good housekeeping and routine maintenance on infrastructure will ensure that the longevity of structures are maximised and a low visual impact is maintained.
- All structures and infrastructures constructed on site should be line with the visual character of the landscape as far as practically possible.
- All changes and or removal of fauna and flora should be rehabilitated to its original state.

Responsible Body:

- Proponent
- Contractors

Data Sources and Monitoring:

- A bi-annual report should be compiled of all complaints received and actions taken.

2.2 DECOMMISSIONING AND REHABILITATION

Subdivision, rezoning and closure activities are purely administrative in nature. No decommissioning or rehabilitation can thus be linked to it. Decommissioning is not foreseen during the validity of the ECC or in the foreseeable future. Similar substations in the region have been in existence for over 40 years, thus making decommissioning unlikely. Should the decommissioning occur at any stage, rehabilitation of the area may be required. Decommissioning will entail the complete removal of all infrastructure and underground infrastructure not forming part of post decommissioning use. Any pollution present on the site must be remediated. The impacts associated with this phase include noise and waste production as structures are dismantled. Noise must be kept within Health and Safety Regulations of the Labour Act and WHO standards and waste should be contained and disposed of at an appropriately classified and approved waste substation and not dumped in the surrounding areas. Future land use after decommissioning should be assessed prior to decommissioning and rehabilitation initiated if the land would not be used for future purposes. The EMP for the substation will have to be reviewed at the time of decommissioning to cater for changes made to the site and implement guidelines and mitigation measures.

3 CONCLUSION

The EMP should be used as an on-site reference document for the construction and operations of the substation. Parties responsible for transgressing of the EMP should be held responsible for any rehabilitation that may need to be undertaken. The Proponent or its contractors could use an in-house Health, Safety, Security and environment management system in conjunction with the EMP. All operational personnel must be taught the contents of these documents.

Should the Directorate of Environmental Affairs (DEA) find that the impacts and related mitigation measures, which have been proposed in this report are acceptable, an ECC may be granted to the Proponent. The ECC issued, based on this document, will render it a legally binding document which should be adhered to. It should be noted that the assessment process's aim is not to stop the activity, or any of its components, but to rather determine its impact and guide sustainable and responsible development as per the spirit of the EMA.