
SITE SENSITIVITY VERIFICATION REPORT

FOR THE PROPOSED CONSTRUCTION OF THE 6.5 KM IMPALA ZIRCON TEMPORARY BY-PASS 132KV POWERLINE WITH ASSOCIATED INFRASTRUCTURE WITHIN THE UMHLATHUZE MUNICIPALITY IN KWA- ZULU NATAL PROVINCE

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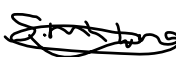
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UMHLATHUZE MUNICIPALITY IN KWA-ZULU NATAL PROVINCE**

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1 INTRODUCTION

This Site Sensitivity Verification (SSV) Report was conducted in terms of the Protocols for the Assessment and Minimum criteria for reporting on identified Environmental Themes (as referred to in the protocols) as per Government Notice No. 320 (published in Government Gazette No. 43110 on 20 March 2020). These protocols, effective as of 9 May 2020, must be complied with for every new application submitted after the effective date of the protocols. The Site Sensitivity Verification was conducted on 09 March 2026, through the on-site inspection.

Selahle Consultancy and Projects (Pty) Ltd (SCP) was appointed by Eskom Holding SOC Limited ("herein referred to as Eskom") to undertake the Basic Assessment, Maintenance Management Plan and the Water Use License Application Processes for the Proposed Construction of the Impala Zircon Temporary By-Pass 132kV Powerline with Associated Infrastructure and the Maintenance of the existing Impala Zircon 132kV Main Powerline within the jurisdiction of Umhlathuze Local Municipality in Kwa-Zulu Natal Province, South Africa.

2 AIM OF THE SITE SENSITIVITY VERIFICATION REPORT

- To verify the land use and theme sensitivity identified by the DFFE Screening tool.
- To agree or dispute on the theme sensitivity ratings.
- To motivate as to why the need for the identified specialist studies is challenged.

3 METHODOLOGY

According to the protocols, the EAP must verify the site's environmental sensitivity in accordance with theme sensitivity and the required specialist studies, as identified by the Department of Forestry, Fisheries and Environment (DFFE) Screening Tool. This site verification report was compiled based on specialist input in combination with a site visit (ground truthing), whose aim was to investigate, identify, and evaluate potential impacts associated with the proposed development of the receiving environment.

4 PROJECT DESCRIPTION AND LOCATION

Eskom intends to undertake the Maintenance and Refurbishment of the Impala Zircon 132kV powerline located in Empangeni, which is located under Richards Bay. The existing powerline spans approximately 10,582 km in length, but Eskom is only responsible for about 7.6km of this line; the remaining length of the powerline belongs to the uMhlathuze Local Municipality. The Impala Zircon 132kV powerline is a radial line with no back-feeding capabilities and distributes electricity to approximately 6062 customers. It feeds Cygnus Substation, which supplies all the Esikhaweni networks, the uMhlathuze Local Municipality and Lake Qube water pump (LPU).

The 10km powerline is from the North coast of KwaZulu-Natal and is exposed to both industrial and coastal pollution. Due to the proximity to the coast, this powerline is experiencing severe corrosion and deterioration on tower foundations. Therefore, a temporary bypass powerline is required in order to continue with the Maintenance of the Main powerline.

The proposed temporary 132kV bypass powerline spans approximately 6.5 km in length, and it will be built on wooden poles as a temporary option. This will allow for the Maintenance of the Main powerline. The temporary bypass powerline will be in use for a period of 3 years and will run parallel within the main powerline's servitude (~ 18m apart) to the existing Main powerline and cross the uMhlathuze River. Most of the powerline traverses a sugarcane farm.

5 PROJECT LOCATION

The proposed Temporary Bypass Powerline is located within Wards **12, 14, 17, 20** and **21** of the uMhlathuze Local Municipality, under the jurisdiction of the King Cetshwayo District Municipality. See the maps below.

The proposed temporary and existing main powerline routes can be accessed along the N2 and R34 roads. The coordinates to the site are:

Table 1: Project Location Information

TEMPORARY POWERLINE	
Co-ordinates	Start Point- 28°49'10.68" S 31°57'08.14" E Middle Point- 28°47'49.89" S 31°55'59.54" E End point- 28°46'22.34" S 31°56'27.22" E
MAIN POWERLINE	
Co-ordinates	Start Point- 28°50'43.00" S 31°55'49.28" E Middle Point- 28°48'13.80" S 31°56'20.81" E End point- 28°46'05.25" S 31°56'43.18" E
ERVENS	SG Code
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RE/11520	N0GV04210001152000000
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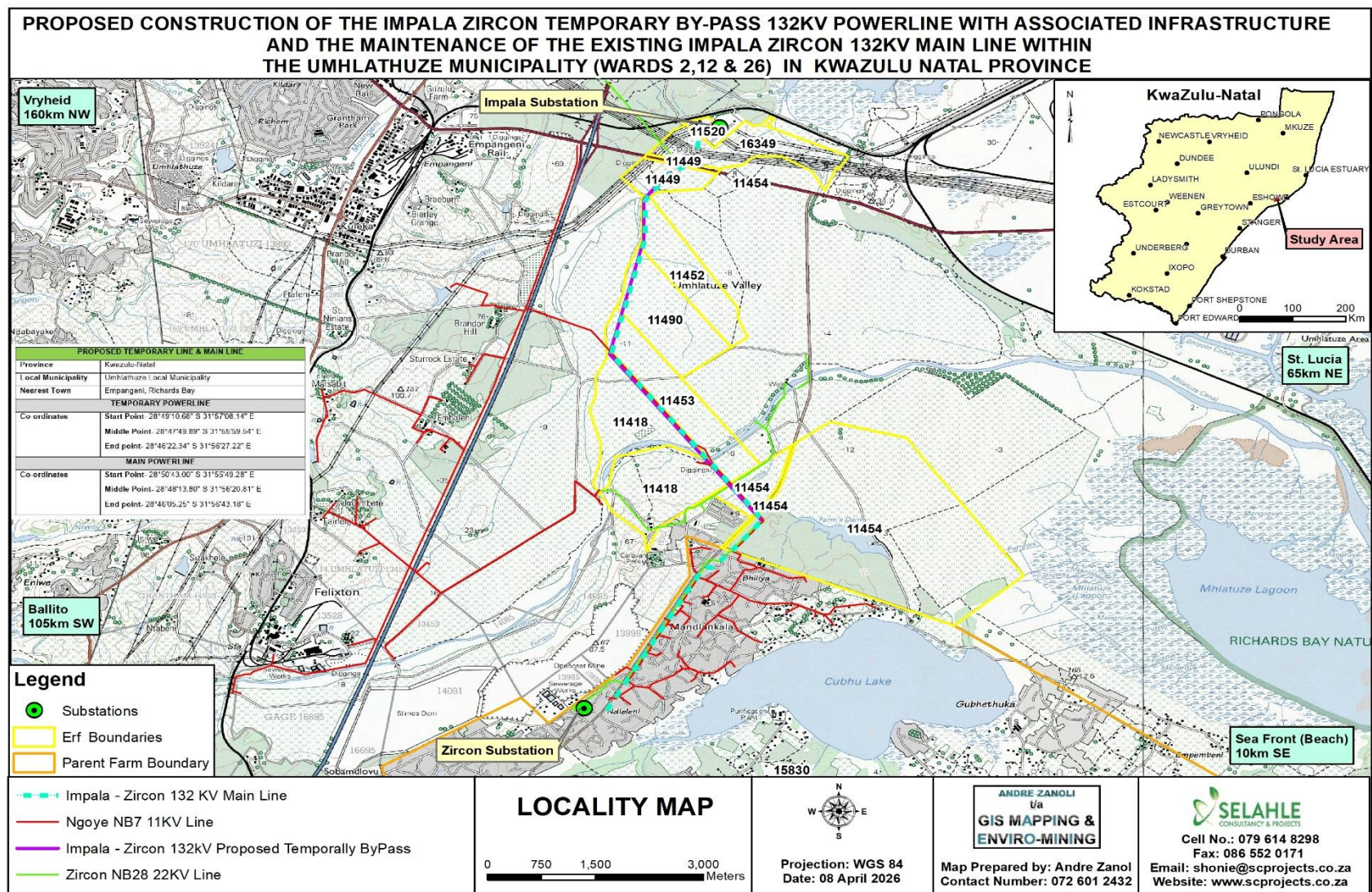


Figure 1: Proposed Study Area Locality Map

6 THEMES AND ENVIRONMENTAL SENSITIVITY IDENTIFIED BY THE SCREENING TOOL

Table 2: DFFE Screening Tool Findings

Theme	Very High Sensitivity	High Sensitivity	Medium Sensitivity	Low Sensitivity
Agriculture Theme	X			
Animal Species Theme	X			
Aquatic Biodiversity Theme	X			
Archaeological and Cultural Heritage Theme		X		
Civil Aviation Theme		X		
Defense Theme				X
Paleontology Theme		X		
Plant Species Theme			X	
Terrestrial Biodiversity Theme	X			

Table 3: DFFE Sensitivity Themes and Motivation from EAP

No	Theme	DFFE Sensitivity	Agree/ Disagree	Proposed Sensitivity	Motivation
1	Agriculture Theme	Very High Sensitivity	Dispute	Medium Sensitivity	The Agricultural Impact Assessment study undertaken identified that the proposed development footprint is relatively limited and located within an already transformed agricultural landscape predominantly utilised for commercial sugarcane farming. The soils are classified as having moderate agricultural potential, corresponding to Land Capability Classes II to IV, and that the anticipated impacts are localised, manageable, and largely reversible through the implementation of appropriate mitigation measures. Therefore, the proposed sensitivity is Medium. An Agricultural Impact Assessment Study is appended to this BAR.
2	Animal Species Theme	Very High Sensitivity	Dispute	Medium Sensitivity	The desktop assessment undertaken by the specialists identified several fauna Species of Conservation Concern that may potentially occur within the broader study area; however, the field survey did not confirm the presence of animal SCC within the proposed development Powerline route. The assessment assigned habitat sensitivities ranging from Very Low to Medium Site Ecological Importance (SEI,) indicating reduced ecological functionality and limited potential to support sensitive terrestrial fauna populations. Considering the disturbed condition of the project area, the absence of confirmed terrestrial animal

No	Theme	DFFE Sensitivity	Agree/ Disagree	Proposed Sensitivity	Motivation
					SCC within the footprint and the temporary nature of the bypass powerline development, it is concluded that the site sensitivity is medium, disputing the assigned Very High Animal Species Theme sensitivity.
3	Aquatic Biodiversity Theme	Very High Sensitivity	Dispute	High Sensitivity	The aquatic study confirmed that the study area overlaps with several aquatic biodiversity features of conservation importance, including South African Inventory of Inland Aquatic Ecosystems (SAIIAE wetlands, National Freshwater Ecosystem Priority Areas NFEPA wetlands, a Strategic Water Source Area (SWSA), perennial and non-perennial drainage lines, wetlands and the uMhlathuze River, thereby supporting the high sensitivity identified by the Screening Tool. However, the Department of Water & Sanitation Risk Assessment matrix concluded that potential aquatic impacts are low and manageable with mitigation measures. Therefore, while the presence of significant aquatic features justifies the very high aquatic sensitivity, it is concluded that it is High instead of very high
4	Archaeological and Cultural Heritage Theme	Very High Sensitivity	Dispute	Low Sensitivity	The Heritage Impact Assessment study undertaken identified that the proposed Powerline route is largely transformed due to existing agricultural activities, plantation forestry, infrastructure development, and other historical disturbances. Therefore, no Stone Age or Iron Age archaeological sites, burial grounds, graves, or structures of historical significance were identified within the surveyed corridor that would require mitigation prior to construction. Although the possibility of encountering

No	Theme	DFFE Sensitivity	Agree/ Disagree	Proposed Sensitivity	Motivation
					subsurface archaeological materials cannot be entirely excluded, the likelihood of significant heritage resources occurring within the proposed footprint is considered low, which disputes or refutes the findings of the screening tool The Heritage Impact Assessment Report is appended to this BAR.
5	Civil Aviation Theme	High Sensitivity	Dispute	Low Sensitivity	The assessment undertaken by the specialist has identified that the proposed temporary By-pass Powerline will not materially alter the existing aviation risk profile, as the distribution line already exists within the area and the proposed temporary By-pass Powerline largely follows the existing Main Powerline. Although a short section of the proposed deviation falls within the 8 km obstacle restriction zone of Empangeni Aerodrome, the infrastructure is effectively shielded by intervening topography and does not pose a significant obstacle risk to aircraft operations. Furthermore, the proposed development falls outside critical obstacle limitation surfaces associated with nearby aerodromes and is not expected to interfere with civil aviation radar systems, navigational infrastructure, communication systems, or controlled flight routes. The anticipated impacts on civil aviation operations are therefore considered low, which disputes or refutes the findings of the screening tool. The Civil Aviation Compliance statement is in this BAR

No	Theme	DFFE Sensitivity	Agree/ Disagree	Proposed Sensitivity	Motivation
6	Defence Theme	Low Sensitivity	Agree	Low Sensitivity	The development will not have any impact on defence-related activities. Furthermore, no military base camps were observed in proximity to the study area. Therefore, the findings of the Screening Tool are concurred with.
7	Palaeontology Theme	High Sensitivity	Dispute	Low Sensitivity	The Screening Tool identified the Palaeontology Theme as having a High Sensitivity within portions of the study area due to the presence of the Umkwelane Formation and associated Geological Formations of the Maputaland Group, which are known to contain marine invertebrate fossils, shell fragments, shark teeth, and foraminifera. Based on the findings of the Phase 1 Desktop Palaeontological study, confirmed that the majority of the study area has been extensively disturbed by historical and ongoing agricultural activities, existing infrastructure development, and associated land transformation, which have significantly reduced the likelihood of intact fossil resources occurring within the proposed footprint. The anticipated impacts are therefore regarded as localised, low in significance, and manageable through the implementation of a Fossil Chance Find Protocol, which then disputes or refutes the findings of the screening tool. The PIA Report is in this BAR
8	Plant Species	Medium Sensitivity	Agree	Medium Sensitivity	The desktop assessment undertaken by the specialist indicated the potential occurrence of certain Flora Species of Conservation Concern within the broader region, however, the field survey did not confirm the presence of

No	Theme	DFFE Sensitivity	Agree/ Disagree	Proposed Sensitivity	Motivation
					threatened, protected or significant plant species within the proposed development footprint. The vegetation communities encountered were predominantly severely modified agricultural, forestry and disturbed habitats, with extensive invasion by alien invasive plant species and limited natural habitat remaining. Given the degraded ecological condition, absence of confirmed sensitive flora within the footprint, and the temporary powerline nature of the proposed development adjacent to existing infrastructure, therefore the sensitivity is indeed considered to be medium.
9	Terrestrial Biodiversity Theme	Very High Sensitivity	Dispute	Medium Sensitivity	The DFFE Screening Tool identified the Project Area of Influence (PAOI) as having a Very High sensitivity for the Terrestrial Biodiversity Theme. However, based on the findings of the specialist assessment, this sensitivity rating is disputed. The desktop assessment and field verification confirmed that the proposed development footprint is situated within a predominantly transformed landscape characterised by agricultural activities, forestry plantations, urban influences, existing infrastructure corridors, invasive alien plant infestation and historical anthropogenic disturbance. The field survey determined that habitats within the PAOI range from Very Low to Medium Site Ecological Importance (SEI), with no intact high-value terrestrial

No	Theme	DFFE Sensitivity	Agree/ Disagree	Proposed Sensitivity	Motivation
					habitats identified within the development footprint. Furthermore, the proposed development comprises a temporary linear bypass powerline that will run parallel to an existing powerline corridor, thereby limiting additional habitat transformation and fragmentation. The Terrestrial Biodiversity Report is in this BAR

Table 4: Specialist assessments identified as per the DFFE Screening Tool

No	PROPOSED SPECIALIST ASSESSMENT	VERIFICATION OF SITE SENSITIVITY AND MOTIVATION ON THE NEED FOR SPECIALIST INVESTIGATION	WILL THE SPECIALIST STUDY BE CONDUCTED?
DFFE SCREENING TOOL PROTOCOLS (RECOMMENDED SPECIALIST ASSESSMENTS AS PER THE SCREENING TOOL)			
10	Geotechnical Assessment	The desktop study was undertaken which identified presence of geotechnical constraints within the powerline route, including potentially collapsible sandy soils, shallow groundwater conditions, high soil permeability, flooding susceptibility associated with the 1:100-year floodplain, and watercourse crossings, all of which support an elevated geotechnical sensitivity. The Geotechnical Desktop study is in this BAR	A Geotechnical Desktop Study was undertaken
11	Visual Impact Assessment	The Visual Impact Assessment found that the proposed temporary bypass is located within a largely transformed landscape characterised by agricultural activities, degraded residential areas and existing infrastructure. The surrounding environment has limited visual cohesion, with existing powerline infrastructure already forming part of the landscape character. As the proposed bypass is	A Visual Impact Assessment was undertaken

No	PROPOSED SPECIALIST ASSESSMENT	VERIFICATION OF SITE SENSITIVITY AND MOTIVATION ON THE NEED FOR SPECIALIST INVESTIGATION	WILL THE SPECIALIST STUDY BE CONDUCTED?
DFFE SCREENING TOOL PROTOCOLS (RECOMMENDED SPECIALIST ASSESSMENTS AS PER THE SCREENING TOOL)			
		temporary and associated with the maintenance of an existing powerline, the additional visual impact is expected to be of short-term duration. The Visual Impact Assessment Report is in this BAR	
12	Radio Frequency Interference (RFI)	Based on the findings of the Radio Frequency Interference (RFI) Compliance Statement, it is confirmed that the proposed development will not result in significant RFI or Electromagnetic Interference (EMI) impacts on surrounding infrastructure or sensitive electronic systems. The overhead distribution lines do not inherently generate radio frequency emissions under normal operating conditions and that potential interference would only occur under abnormal conditions such as poor installation practices, faulty joints, arcing, sparking, or corona discharge. The anticipated RFI impacts are therefore considered low. The RFI Compliance Statement is in this BAR	Radio Frequency Interference (RFI) Compliance Statement was undertaken
13	Avian Impact Assessment	The impact assessment identified that the proposed powerline developments pose risks of habitat loss, collisions and electrocutions to bird species. However, the study also established that the project area is largely characterised by transformed land uses, including agriculture, plantations, roads, existing powerline infrastructure and other human-caused disturbances, which reduce the ecological integrity of the site. An Avifauna Impact study is in this BAR	An Avian Impact Assessment was undertaken

PHOTOGRAPHIC EVIDENCE OF THE STUDY AREA



Figure 1: Crop Farming was observed along the study area



Figure 2: A drainage line was observed next to pylon 8



Figure 3: Sugarcane Farming was observed within the proposed route of the Powerline



Figure 4: Internal Roads within the farm, used by the farmers during their farming activities

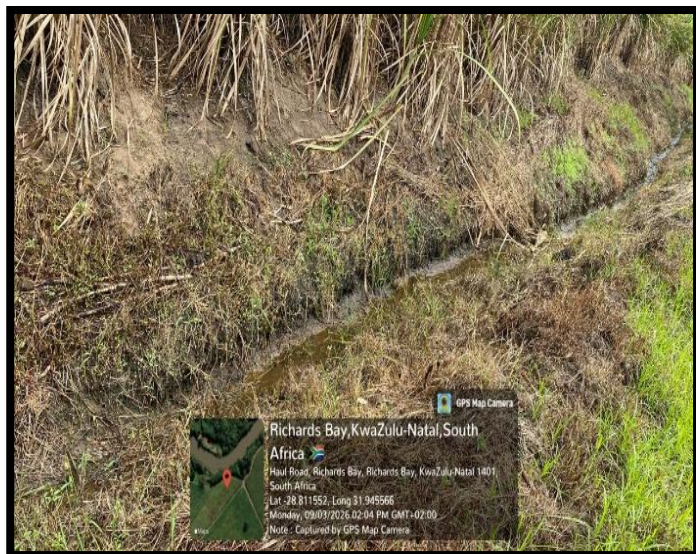


Figure 5: The Stormwater drainage for the farming activities.



Figure 6: A fixed structure was observed on site



Figure 7: Blue Gum (Eucalyptus) trees were observed next to the study area

7 ENVIRONMENTAL ASSESSMENT PRACTITIONER STATEMENT

Following the site inspection of the proposed development route, together with a review of specialist studies and GIS datasets, the environmental sensitivities identified by the DFFE Screening Tool were evaluated and verified. While the Screening Tool identified several environmental themes as having Very High to High sensitivities, the site verification process and specialist studies confirmed that a significant portion of the Powerline route has already been transformed by existing infrastructure and intensive agricultural activities, particularly sugarcane cultivation. As a result, the on-site conditions do not fully support the extent of sensitivities indicated by the Screening Tool.

Overall, the site sensitivity for the proposed construction of the Impala Zircon Temporary By-Pass 132kV Powerline and the associated infrastructure, is considered to range from High to Low. Areas of relatively higher sensitivity are primarily associated with the Aquatic Biodiversity Theme, due to the presence of the uMhlathuze River and associated drainage features, as well as the Terrestrial Biodiversity. Medium sensitivity is further recognised for Avifauna, Visual and Geotechnical assessment protocols in terms of the Protocols for the Assessment and Minimum criteria for reporting on identified Environmental Themes. Therefore, given the nature of the proposed powerline infrastructure, all identified sensitivities are site-specific and limited in extent and are being appropriately addressed through specialist input and mitigation measures.

With the implementation of recommended mitigation measures, and adherence to the Environmental Management Programme (EMPr), Rehabilitation Plan, and Monitoring requirements, the proposed development is not expected to result in significant environmental impacts. The project can therefore proceed in an environmentally responsible and sustainable manner.

8 CONCLUSION

The Site Sensitivity Verification process confirmed that the majority of the proposed temporary bypass Powerline route is situated within an already disturbed and transformed area, characterised predominantly by existing main powerline infrastructure, agricultural activities (primarily sugarcane cultivation), roads and other anthropogenic land uses. While certain environmental features, particularly the uMhlathuze River, wetlands and drainage lines, present localised areas of high environmental sensitivity, these features have been identified, delineated and comprehensively assessed through the Aquatic Biodiversity study undertaken.

The Site Sensitivity Verification further confirmed that environmental sensitivities within the powerline route do not uniformly correspond with the sensitivities identified by the DFFE Screening Tool. The required specialist studies, including Aquatic Biodiversity, Avifauna, Visual, Agricultural, Heritage and Palaeontological impact assessments, Geotechnical desktop study, and the Radio Interference & Terrestrial Biodiversity Compliance Statements, have been undertaken and their

findings incorporated into the Draft Basic Assessment report, Environmental Management Programme (EMPr) and appropriate mitigation and management measures have been developed to avoid, minimise, rehabilitate and manage potential environmental impacts associated with the proposed Powerline project.

Based on the findings of the Site Sensitivity Verification process, specialist assessments and field verification, the proposed Impala Zircon Temporary By-Pass 132kV Powerline and associated infrastructure are considered environmentally feasible. Therefore, from an environmental perspective, the proposed development can be considered viable provided that all specialist recommendations, mitigation measures and rehabilitation requirements and Environmental Management Programme (EMPr) provisions are strictly implemented, monitored and maintained throughout the planning, construction, operational, maintenance and decommissioning phases of the project.