



ENVIRONMENTAL AND SOCIAL ADVISORY SERVICES

NOTICE OF INTENT TO DEVELOP (NID) IN TERMS OF SECTION 38 OF THE NATIONAL HERITAGE RESOURCES ACT (ACT NO. 25 OF 1999)

PROPOSED DORADO 1 SOLAR PARK PROJECT, WATERBERG DISTRICT MUNICIPALITY, LIMPOPO PROVINCE.

2023-08-18

This document serves to inform the South African Heritage Resources Agency (SAHRA) of the intent by Dorado Energy (Pty) Ltd to establish the Dorado 1 Solar Park Project on Portions of the Remainder, Portions 2 and 3 of the Farm Goevernements Plaats 417KG; remainder of the farm Kopje Alleen 422KG in the Waterberg District Municipality of the Limpopo Province. This development is currently subject to an Environmental Impact Assessment (EIA) process.

1. Project Scope

AGES Limpopo was commissioned by Dorado Energy (Pty) Ltd to facilitate an Environmental Impact Assessment (EIA) process for the proposed Dorado 1 Solar Park Project in the Limpopo Province

Dorado Energy (Pty) Ltd is assessing the feasibility of an energy generation facility, consisting of the construction, operation and maintenance of a 240MW Photovoltaic (PV) Power Plant on the Remainder, Portions 2 and 3 of the Farm Goevernements Plaats 417KG; remainder of the farm Kopje Alleen 422KG. The proposed **Dorado 1 Solar Park** is planned over a developed area (footprint) of up to **490ha**. The final size and location of the project footprint will be assessed following the outcomes of the Public Participation Process and of the recommendations and conclusions of the Specialist Studies to be conducted during the Environmental Impact Assessment (EIA) process. Access to the development areas will be from Access to the development areas will be from the regional road R510 from Northam to Thabazimbi, west of the project areas or from the D56 Koedoeskop/Middeldrift road south of the project areas. The proposed development (the Photovoltaic (PV) Power Plants and connection infrastructure) consists of the installation of the following equipment:

- Photovoltaic modules (mono-crystalline, poly-crystalline or bi-facial modules)
- Mounting systems for the PV arrays (single-axis horizontal trackers or fixed structures) and related foundations
- Internal cabling and string boxes
- DC/AC inverters
- Medium voltage stations, hosting LV/MV power transformers & medium voltage receiving station(s)
- Workshops & warehouses
- On-site high-voltage substation (one per project) with 22kV/132kV step-up transformers, and a 132 kV busbar (switching station) with metering and protection devices.
- One 132 kV power line (double circuit), from the on-site substation & switching station up to the Eskom Phoko 1 Distribution Substation (Connection Alternative 1, powerline 3.5 km long) or up to the Eskom Spitskop Transmission Substation (Connection Alternative 2, powerline 16.7 km long).
- One Battery Energy Storage System, with a Maximum Export Capacity up to 240 MW and up to 6-hour storage capacity (up to 1440 MWh).

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- Electrical system and UPS (Uninterruptible Power Supply) devices
- Lighting system, grounding system
- Internal roads
- Fencing of the site and alarm and video-surveillance system
- Water access point, water supply pipelines, water treatment facilities
- Sewage system
- Interventions on the Eskom Theseus Main Transmission Substation (MTS).

During the construction phase, the site may be provided with additional:

- Water access point, water supply pipelines, water treatment facilities
- Prefabricated buildings
- Workshops & warehouses which will be removed at the end of construction.

The connection may also entail interventions on the Eskom grid, according to Eskom's connection requirements/solution. The following properties/farms fall within the Powerline Study Corridors and may be crossed by the proposed 132kV powerlines, depending on the final alignment and on the connection solution approved by Eskom:

Dorado 1 Powerline Study Corridor, Alternative 1, 3.5 km long, from the Dorado 1 Solar Park up to the Eskom "Phoko 1" Distribution Substation:

- RE of Portion 1, Portions 2, 7 and 10 of the Farm GOEVERNEMENTS PLAATS 417 KQ;
- Remainder of the Farm ELANDSFONTEIN 386 KQ.

Dorado 1 Powerline Study Corridor, Alternative 2, 17 km long, from the Dorado 1 Solar Park up to the Eskom "Spitskop" Transmission Substation:

- RE of Portion 1, Portions 2, 7 and 10 of the Farm GOEVERNEMENTS PLAATS 417 KQ;
- Portions 6 and 7 of the Farm KAALVLAKTE 416 KQ;
- Portions 2, 3 and 51 of the Farm LEEUWKOPJE 415 KQ;
- Remainder and Portion 173 of the Farm WILDEBEESTLAAGTE 411 KQ.

2. Project Location

The proposed Dorado 1 Solar Park Project occurs on portions of the Remainder, Portions 2 and 3 of the Farm Goevernements Plaats 417KG; remainder of the farm Kopje Alleen 422KG; in the Waterberg District Municipality, Limpopo Province. The proposed project sites are located between 10 and 14 km North-North-East of Northam and ± 15 km North-East of the Eskom Spitskop Main Transmission Substation. The site lies directly east of the R510 road connecting Northam to Thabazimbi. The study areas appear on 1:50000 map sheet 2426DD (see Figure 2-1) and key location points for the project are:

- **Site (Relative Midpoint):** S24.87694° E27.31969°
- **Powerline Northern Offset:** S24.87299° E27.31387°
- **Powerline Relative Midpoint:** S24.88269° E27.25444°

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- **Powerline Southern Offset:** S24.96363° E27.22845°°

3. Site Description and Status

Portions of the project site to the south have been transformed by past agricultural activity. The fields in these areas have been cleared and ripped for agricultural purposes where the rest of the property is used as a game farm. The central and northern portions of the project area are more pristine with dense surface vegetation. Mine exploration is currently underway where drilling camps have been established across the property. The current land-use of the proposed development site and neighbouring farms is game farming with mining further away from the site. Existing infrastructure comprises an extensive network of internal farm roads, several dams/water holes, concrete drinking troughs, feeding bins and a residence and recreational bush camp. The chosen site is suitable for the installation of a photovoltaic (PV) power plant. It is appropriate morphologically (flat terrain) and regarding the favourable radiation conditions. The available radiation allows a high rate of electric energy production, as a combination of latitude-longitude and climatic conditions.

4. Heritage Input

Heritage specialist input is essential in any development, in order to ensure that through the management of change, development conserves our heritage. Heritage specialist input plays an essential role in the development process by enriching an understanding of the past and its contribution to the present. It is also a statutory requirement for certain categories of development defined in the relevant heritage legislation, which may have an impact on heritage resources. Thus, Environmental Impact Assessments (EIAs), Basic Assessments (BAs) and any other development application should, in all cases, consider the assessment of Heritage Resources. Here, the heritage component is provided for in the National Environmental Management Act, (Act 107 of 1998) and endorsed by section 38 of the National Heritage Resources Act (NHRA - Act 25 of 1999).

The purpose of this Notice of Intent to Develop (NID) document is to furnish the SAHRA with the basic information required to:

- Confirm the range of requirements of Heritage Assessment for the proposed development; and
- Should Heritage Assessment be required, to approve the proposed methodology outlined in this document for the assessment of such a study for the proposed development.

5. NID Form

The following table¹ provides an outline of the project landscape, heritage potential and implied impacts for the proposed Project :

¹ Adapted from the HWC NID Form (HWC002/02/ED)

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1. CATEGORY OF DEVELOPMENT (S. 38 (1))		Brief description of the nature and extent of the proposed development or activity (See also Part 3.1)
1. Construction of a road, wall, powerline, pipeline, canal or other similar form of linear development or barrier over 300m in length	X	The project consists of the construction, operation and maintenance of a 240MW Photovoltaic (PV) Power Plant over a developed area (footprint) of up to 490ha with a Power Line connection over approximately 3.5km (alternative 1) or 16km (alternative 2).
2. Construction of a bridge or similar structure exceeding 50 m in length		
3. Any development or activity that will change the character of a site—		
a) exceeding 5 000 m ² in extent	X	
b) involving three or more existing erven or subdivisions thereof		
c) involving three or more erven or divisions thereof which have been consolidated within the past five years		
4. Rezoning of a site exceeding 10 000 m ²	X	
5. Other (state)		
2. SITE CONTEXT		Brief description/explanation
	Urban environmental context	The farms Goevernements Plaats and Kopje Alleen lies within the Savanna biome which is the largest biome in Southern Africa. It is characterized by a grassy ground layer and a distinct upper layer of woody plants (trees and shrubs). Fire and grazing also keep the grassy layer dominant. The most recent classification of the area by Mucina & Rutherford shows that the site is classified as Dwaalboom Thornveld. The project area is characterised by slightly undulating to flat plains with a drainage channel bisecting the area from east to west. The topography across the site is slightly undulating with occasional hills (including “Koppie Alleen”) dotting the landscape.
	Rural environmental context	
X	Natural environmental context	
Formal protection (NHRA)		
	Is the property part of a protected area (S. 28)?	No (to be confirmed in the HIA)
	Is the property part of a heritage area (S. 31)?	
	Is the property near to or visible from any protected heritage sites?	Uncertain.
	Does the site form part of a historical settlement or townscape?	No (to be confirmed in the HIA)
	Does the site form part of a rural cultural landscape?	Uncertain.

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	Does the site form part of a natural landscape of cultural significance?	No (to be confirmed in the HIA)
	Is the site within or adjacent to a scenic route?	
3. PROPERTY FEATURES AND CHARACTERISTICS		
X	<i>(check box if YES)</i>	<i>Brief description</i>
X	Has the site been previously cultivated or developed?	Portions of the project site to the south have been transformed by past agricultural activity. The fields in these areas have been cleared and ripped for agricultural purposes where the rest of the property is used as a game farm.
	Are there any significant landscape features on the property?	Yes. The topography across the site is slightly undulating with occasional hills (including “Koppie Alleen”) dotting the landscape.
X	Are there any sites or features of geological significance on the property?	Uncertain
	Does the property have any rocky outcrops on it?	Yes
X	Does the property have any fresh water sources (springs, streams, rivers) on or alongside it?	No . .
4. HERITAGE RESOURCES ON THE PROPERTY		
Formal protections (NHRA)		
	National heritage site (S. 27)	Uncertain (to be confirmed in the HIA)
	Provincial heritage site (S. 27)	Uncertain (to be confirmed in the HIA)
	Provisional protection (s.29)	Uncertain (to be confirmed in the HIA)
	Place listed in heritage register (S. 30)	Uncertain (to be confirmed in the HIA)
General protections (NHRA)		
	Structures older than 60 years (S. 34)	Uncertain (to be confirmed in the HIA)
	Archaeological site or material (S. 35)	
5. SUMMARY OF CULTURAL SIGNIFICANCE OF THE PROPERTY (OR ANY PART OF THE PROPERTY) (S. 3(3))		
	Important in the community or pattern of South Africa's history.	Uncertain (to be confirmed in the HIA)

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	Associated with the life or work of a person, group or organisation of importance in history.	Uncertain (to be confirmed in the HIA)
	Associated with the history of slavery .	NO
	Strong or special association with a particular community or cultural group for social, cultural or spiritual reasons	Uncertain (to be confirmed in the HIA)
	Exhibits particular aesthetic characteristics valued by a community or cultural group	Uncertain (to be confirmed in the HIA)
	Demonstrates a high degree of creative or technical achievement at a particular period	Uncertain (to be confirmed in the HIA)
	Has potential to yield information that will contribute to an understanding of natural or cultural heritage	Uncertain (to be confirmed in the HIA)
	Typical: Demonstrates the principal characteristics of a particular class of natural or cultural places	Uncertain (to be confirmed in the HIA)
	Rare: Possesses uncommon, rare or endangered aspects of natural or cultural heritage	Uncertain (to be confirmed in the HIA)
Heritage Landscape: Statement of significance		
<p>The cultural landscape of the Waterberg encompasses a period of time that spans millions of years, covering human cultural development from the Stone Ages up to recent times. It depicts the interaction between the first humans and their adaptation and utilization to the environment, the migration of people, technological advances, warfare and contact and conflict. Resources, and in particular mineral resources, in what is now known as the Thabazimbi region have been extensively utilised by prehistoric and historic groups. The greater region has several important Stone Age localities with deep occupation deposits and importantly, a widespread occurrence of open-air sites. The shelter site of Olieboomspoor near Lephalale show a succession from the Earlier, Middle and Later Stone Ages (ESA, MSA and LSA) and up to historic times. Early Iron Age (EIA) localities such as Diamant are of interest as the site delivered the earliest evidence for glass trade beads and domesticated dogs in the Limpopo Province. The movement of African farmers into this region is documented by their ceramics and settlements and vast stone walled settlements are scattered over the landscape. The observations of travellers, missionaries and hunters who traversed the region throughout the 18th and the 19th centuries constitute a source of implicit ethnography on the late presence of hunting and gathering groups, the African farmers and inmoving colonists and European Farmers. The region is also rich in rock art.</p>		
6. POTENTIAL IMPACT		
	What impact will the proposed development have on the heritage values of the context of the property? (e.g. visibility, change in character)	Uncertain (to be confirmed in the HIA).

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<p>Are any heritage resources listed in Part 2 affected by the proposed development? If so, how?</p>		
<p>7. RECOMMENDATIONS SPECIALIST ASSESSMENTS</p>		
Palaeontology	No	<p>According to the SAHRIS PalaeoSensitivity Map, the project area is situated in an area of INSIGNIFICANT/ZERO fossil sensitivity and the likelihood that palaeontological receptors might be impacted by the project seems to be negligible.</p>
Pre-colonial archaeology	YES	<p>In terms of heritage resources, the general landscape around the project area is primarily well known for its Iron Age Farmer and Colonial / Historical Period archaeology related to farming, rural expansion and warfare of the past century. Several sites dating to the Iron Age period in particular are on record for the larger geographical area (van Schalkwyk 2004; van der Walt & du Piesanie 2009; van der Walt 2010; van der Walt 2019 & Lavin 2021) with several located on Northam owned property. A high-level analysis of historical aerial imagery and archive maps of areas subject to this project suggests a landscape which has been subjected to historical farming activities possibly sterilising the area of heritage remains. However, this landscape is known to contain extensive stone walled sites dating to the Later Iron Age Farmer Period situated along the base and between the saddles of the hills. Similarly, large Iron Age occupation areas consisting of central terraces, kraals, smaller livestock enclosures, lower grindstones and ceramic scatters as well as cattle dung deposits were noted along the northern periphery of the Dorado project area. The likelihood exists for tangible remains of Iron Age farmer activities, structures and material might be impacted by the project. It is recommended that the development footprint associated with the project and surrounding areas be assessed on foot by an archaeologist.</p>
Historical archaeology	YES	<p>The landscape around Northam and Thabazimbi holds remnants of historical farming . As such, the likelihood exists for tangible remains of historical activities, structures and material from the Historic Period might be impacted by the project. It is recommended that the development footprint associated with the project and surrounding areas be assessed on foot by an archaeologist.</p>
Industrial archaeology	YES	<p>The landscape around Northam and Thabazimbi holds remnants of historical mining and it is recommended that the development footprint associated with the project and surrounding areas be assessed on foot by an archaeologist.</p>

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This Notice of Intent to Develop (NID) in terms of Section 38 of the National Heritage Resources Act (Act No. 25 of 1999) is submitted to the South African Heritage Resources Agency (SAHRA) to obtain comment at the initial stages of the proposed Project with regards to heritage resources assessment requirements, as part of the Environmental Authorisation process in terms of the NEMA EIA Regulations and Amendments.

SAHRA is requested to direct any such comments to the heritage consultant for further perusal.

Kind Regards,

Nelius Kruger

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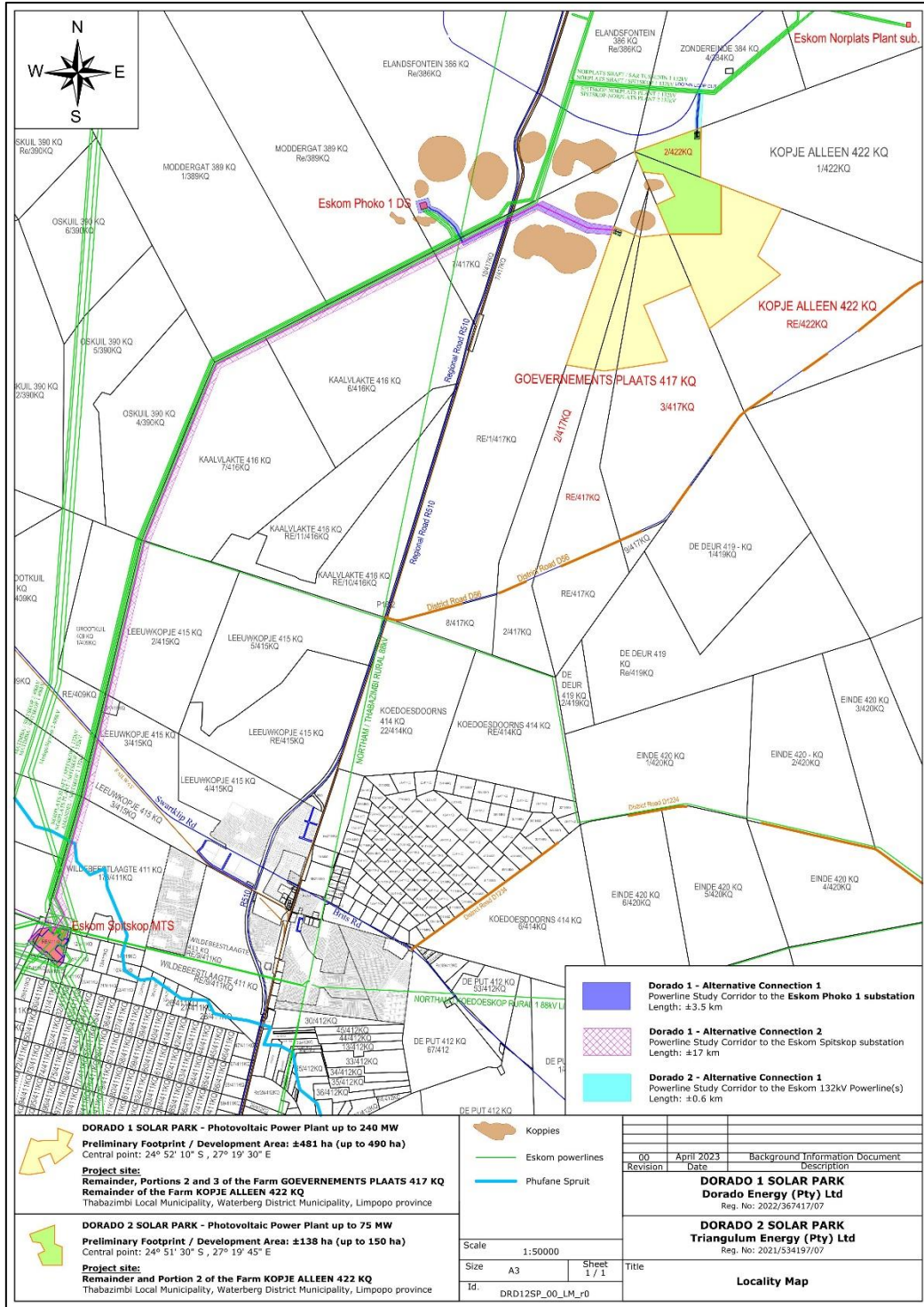
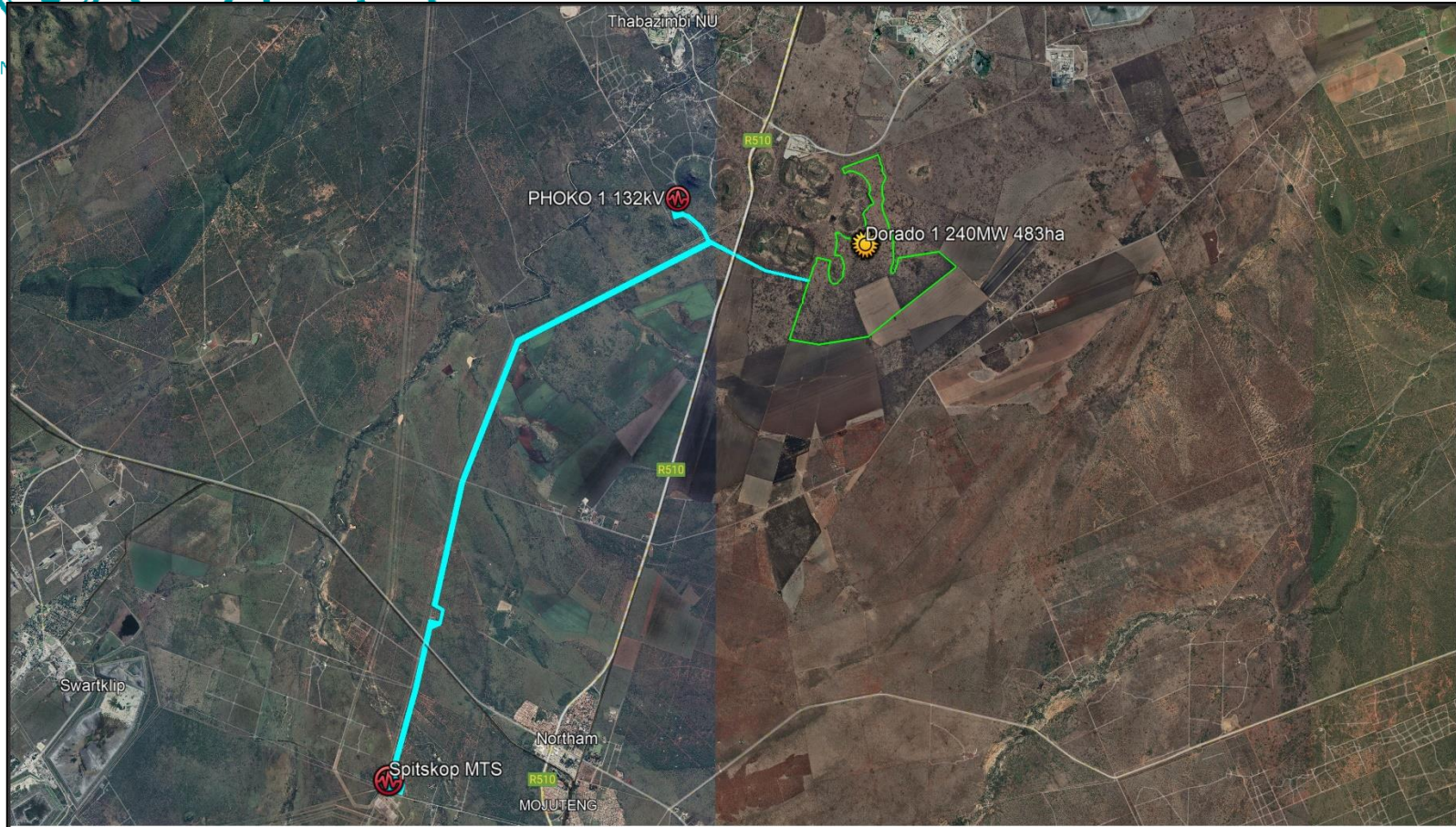








Figure 1: Map indicating the extent of the proposed development areas subject to the Dorado 1 Solar Park project.



 ENVIRONMENTAL AND SOCIAL ADVISORY SERVICES Drawn by: N Kruger Date: 2023-06-10	TITLE: Regional Map	LEGEND:  Dorado 1 Solar Park  Proposed Power Line Corridor  Roads	 
	PROJECT: Dorado 1 Solar Park Aerial		

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Figure 2: Aerial map indicating a regional context for the project.



Figure 3: The SAHRIS PalaeoSensitivity Map indicating the project area in terms of its fossil sensitivity (GREY) (<https://sahris.sahra.org.za/map/palaeo>).

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Figure 4: View of trees and grasslands in more pristine areas in the project area.



Figure 5: View of general surroundings along the power line corridors the project area.

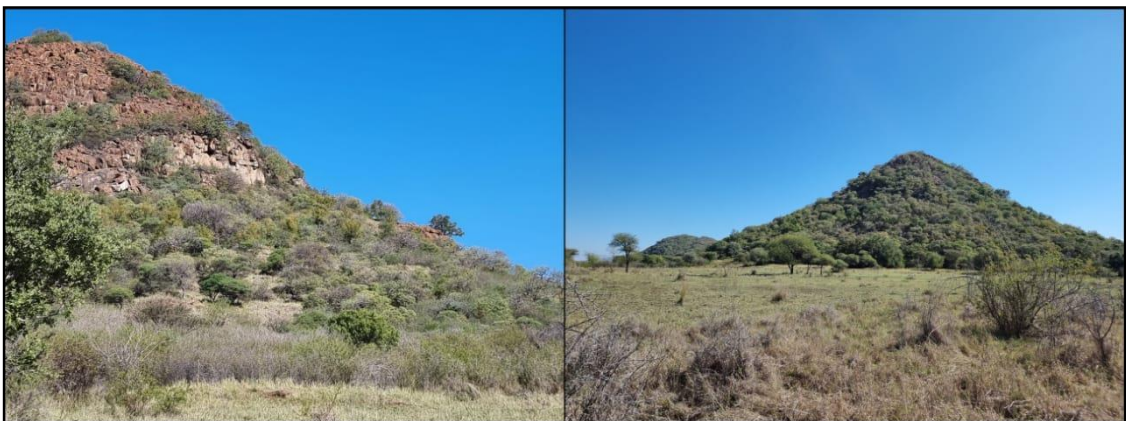


Figure 6: View of general surroundings in the project area along occasional hills.

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Figure 7: View of vegetation and grasslands in the project area.



Figure 8: View of the powerline corridor along the R510 road in the project area.

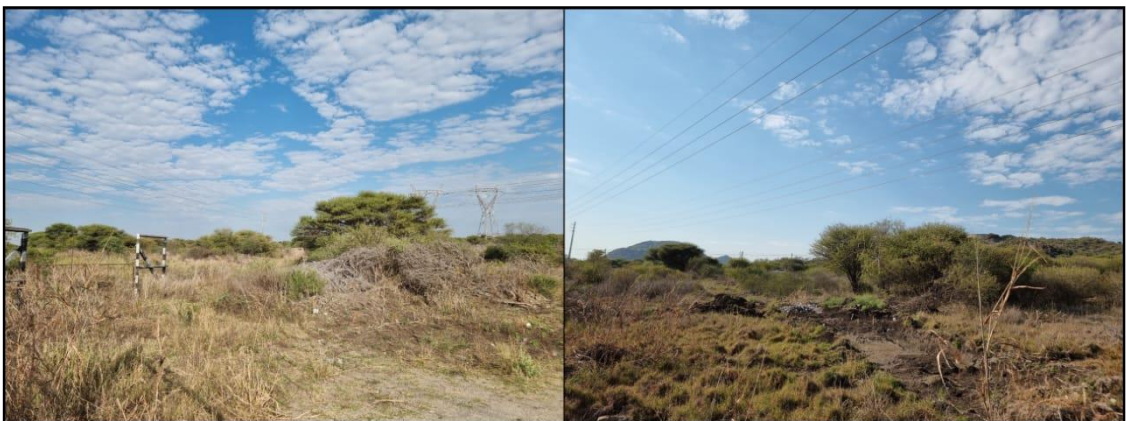


Figure 9: View of the powerline corridors along the existing ESKOM Powerline servitude.



Figure 10: View of the powerline corridors along the existing ESKOM Powerline servitude.



Figure 11: View of the powerline corridors along the existing ESKOM Powerline servitude.