

T-N003-03 Kohler

Pre-application Scoping Report

THE PROPOSED KOHLER RENEWABLE SOLAR PV ENERGY GENERATION PLANT AND ELECTRIC TRUCK CHARGING FACILITY ON A PORTION OF THE REMAINING EXTENT OF THE FARM ROOIRAND NO. 990, OFF THE N3 HIGHWAY, NEAR VREDE, FREE STATE PROVINCE

APPLICATION FOR:

Environmental Authorisation

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ENERGY GENERATION PLANT AND ELECTRIC
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VREDE, FREE STATE PROVINCE**



**PRE-APPLICATION SCOPING REPORT
AND PLAN OF STUDY**

DESTEA REF: To be provided

August 2026

**N3 ELECTRIC HIGHWAY CO.
T-N003-03 KOHLER**

EXECUTIVE SUMMARY

N3 Electric Highway Co. is proposing the development of the Kohler solar photovoltaic renewable energy generation plant and electric truck charging facility on the Remaining Extent of the Farm Rooirand No. 990, off the N3 highway, near Roadside, Free State. The facility will include a solar photovoltaic (PV) energy generation facility connected to the electric vehicle and truck charging facilities via a distribution line with a capacity of approximately 33 kV. Additional infrastructure includes

- Electrical equipment area (BESS)
- Truck wash area
- Farm stall
- Security office
- Ablution blocks
- Stormwater pond
- Overnight parking
- Day parking
- Charging stations

The proposed site is located off the N3, at the corner of the N3 and Reitz / Roadside Road (S589) intersection (107 turnoff), approximately 32km south-west of Vrede, 33km north of Warden, and 61km south of Villiers, in the Thabo Mofutsanyana District Municipality, Free State. An area of approximately 84 ha will be considered and assessed.

The development will cover an area of approximately 63.5 hectares (ha), with the solar PV array occupying about 50.8 hectares. This configuration will allow for an installed capacity of up to 50.8 megawatt-peak (MWp), which measures the maximum output of power from the solar array.

Site coordinates (approximate central point): 27°33'50.8" S ; 28°50'16.80" E

The applicant - N3 Electric Highway Co., who will undertake the activity should it be approved, appointed EnviroAfrica CC as the independent Environmental Assessment Practitioner (EAP) to undertake the relevant EIA and the Public Participation Process required in terms of the National Environmental Management Act (Act 107 of 1998) (NEMA).

This Pre-application Scoping Report has been prepared to introduce the proposed development to Interested and Affected Parties (I&APs), relevant authorities and key stakeholders, and to identify the environmental issues that require further investigation during the Environmental Impact Assessment (EIA) process. The report is based on desktop investigations, preliminary specialist input, site visits and project planning undertaken to date. The report will now be made available for public review and comment as part of the pre-application public participation process.

This pre-application Scoping Report, being undertaken in terms of NEMA, summarises the process undertaken, the alternatives presented, and the issues and concerns raised. As a result of the above, the need for the following specialist studies has been identified:

- Biodiversity Assessment
- Freshwater Assessment
- Heritage Impact Assessment
- Socio-economic Impact Assessment
- Visual Impact Assessment
- Agricultural Compliance Statement
- Avifauna Impact Assessment

Preliminary specialist assessments have been undertaken, and some specialist studies have been completed. The remaining specialist studies and assessments will be finalised during the Environmental Impact Assessment (EIA) phase. The findings of some of these studies have already been incorporated into this report; however, the studies will be finalised and the findings included during the EIA phase.

Any further issues raised as a result of the Public Participation Process will be dealt with during the EIA phase. The significance of the impacts associated with the alternatives proposed will be assessed in these specialist studies, as part of the EIA. Once all the specialist studies have been completed, they will be summarised in an Environmental Impact Report (EIR), which integrates the findings of the assessment phase of the EIA.

Based on the nature and scale of the proposed development, together with the preliminary environmental investigations undertaken to date, it has been determined that the proposed development is appropriately subject to a full Scoping and Environmental Impact Assessment (EIA) process in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014 (as amended). This Pre-application Scoping Report has identified the key environmental issues and specialist studies that will inform the EIA process. Following completion of the pre-application public participation process, the Draft Scoping Report and Application Form will be submitted to DESTEA, after which the identified specialist studies will be finalised and incorporated into the Environmental Impact Report (EIR).

PRELIMINARY RECOMMENDATIONS / CONDITIONS FOR AUTHORISATION

- Drainage lines, wetlands and dams provide important habitat for fauna and are generally associated with high biodiversity. The drainage line and dam located immediately north of the proposed development area are considered to be highly sensitive. Accordingly, the drainage line in the north-western corner of the site must be avoided by the proposed development, and the buffer requirements recommended by the freshwater specialist must be implemented.
- Rocky areas are considered highly sensitive as they increase habitat heterogeneity and support greater species diversity. Accordingly, the rocky outcrop in the southern portion of the site must be avoided by the proposed development, with a minimum buffer of 50 m maintained around the feature.
- Although the site has been disturbed by grazing livestock, the grassland covering the majority of the development area remains natural and provides the primary habitat for fauna occurring within the area. This habitat is considered to be of medium sensitivity. As impacts to this habitat cannot be entirely avoided, they should be minimised through the implementation of appropriate mitigation measures and rehabilitation of disturbed areas.
- Suitable fencing should be installed and maintained during both the construction and operational phases to prevent livestock and wildlife from entering active work areas and operational infrastructure.
- Where the proposed development does not result in a significant impact on agricultural land, opportunities to diversify the landowner's income stream should be considered. Through an appropriate agreement between the Applicant and the landowner(s), the landowner(s) may benefit from income generated by the proposed charging facility, thereby assisting in offsetting any potential financial losses associated with the permanent loss of agricultural land, predominantly used for grazing, within the development footprint.

DOCUMENT CONTROL

Version	Name	Role / Responsibility	Date
AA	Lian Roos	Author / First draft for review	10 June 2024
BB	Clinton Geyser	Technical reviewer	20 June 2024
CC	Lian Roos	Second draft for review	27 June 2024
DD	Lian Roos	Third draft for review	21 October 2024
EE	Bianca Gilfillan	Update Report	03 August 2026
Final			

CONTENTS

EXECUTIVE SUMMARY	3
Preliminary Recommendations / Conditions for Authorisation	4
Document Control	5
1 INTRODUCTION	10
1.1 BACKGROUND	10
1.2 DESCRIPTION OF THE PROPOSED ACTIVITY	10
2 Need and Desirability	15
2.1 Need	15
2.2 Desirability	16
2.3 The Constitution of the Republic of South Africa	19
2.4 National Environmental Management Act (Act 107 of 1998)	19
2.5 National Heritage Resources Act	23
2.6 EIA Guideline and Information Document Series	23
2.7 National Water Act	24
2.8 National Environmental Management: Biodiversity Act	24
2.9 The Spatial Planning And Land Use Management Act (Act 16 Of 2013)	24
2.10 The Conservation of Agricultural Resources Act (Act 43 Of 1983)	24
3 Alternatives	25
3.1 Site Alternatives	25
3.2 Activity Alternatives	25
3.3 Design/Technology Alternatives	25
3.4 Layout Alternatives	25
3.5 No-Go Alternatives	25
4 Site Description	27
4.1 Location	27
4.2 DFFE Screening Tool Report	28
Sensitivity is high due to the moderate-high land capability. However, the land use is predominantly natural grassland without any field crops present, resulting in a proposed medium sensitivity. The property is currently zoned Agricultural and is used for grazing.	29
An initial Agricultural Compliance Statement has been undertaken and the preliminary findings is included in this report, but will be finalised during the EIA phase.	29
4.3 Climate	31
4.4 Landscape / Visual	32
4.5 Biodiversity	33
4.6 Avifauna	37
4.7 Freshwater	42
4.8 Agriculture	44
4.9 Heritage / Archaeological & Palaeontological	51
4.10 Socio-Economic Context	54
5 Environmental Issues and Potential Impacts	58

5.1	Biodiversity Impact.....	58
5.2	Freshwater Impact	58
5.3	Avifaunal Impact	60
5.4	Heritage / Archaeological Impact.....	63
5.5	Landscape / Visual Impact.....	64
5.6	Agricultural Impact	64
5.7	Socio-Economic Impact	66
6	Details of the Public Participation Process	68
7	Plan of Study for the EIA.....	77
7.1	Tasks to be undertaken.....	77
7.2	Public Participation and Interested and Affected Parties.....	78
7.3	Criteria for Specialist Assessment of Impacts	79
8	Conclusion and Recommendations	82
8.1	Preliminary Recommendations / Conditions for Authorisation	83
9	Details and Expertise of the EAP.....	84

FIGURES

Figure 1: Google Earth image showing the locality of the proposed site (indicated by the red dot).....	12
Figure 2: Google Earth image (1) of the proposed property and the development footprint (red polygon).....	12
Figure 3: Google Earth image (2) of the proposed property and the development footprint (red polygon).....	13
Figure 4: Overall layout	13
Figure 5: Draft SDP (Site Development Plan).....	14
Figure 6: Global Solar Atlas image showing the Global Horizontal Irradiation levels for the proposed site	17
Figure 7: Proposed development site - Locality Map.....	27
Figure 8: Proposed development site	27
Figure 9: Meteoblue - Simulated historical climate & weather data for the Frankfort / Vrede area	32
Figure 10: North to South (towards the <i>koppie</i>) Elevation Profile (captured from the site's midpoint).....	33
Figure 11: West to East (towards the N3) Elevation Profile (captured from the site's midpoint)	33
Figure 12: The study area in relation to regional vegetation types	35
Figure 13: FSBP (2015), indicating that the site does not fall within a Critical Biodiversity Area (CBA)	37
Figure 14: Site features and habitats	40
Figure 15: Preliminary avifaunal habitat sensitivity	41
Figure 16: Drainage lines	42
Figure 17: The land capability of the study as used in the Screening Tool.....	45
Figure 18: Land types found in the study area and the surrounding area (Land type survey staff, 1972-2002)	47
Figure 19: South African National Land-Cover 2020 (SANLC, 2020).....	48
Figure 20: Observations made during the site visit.....	49
Figure 21: The agricultural sensitivity of the site	50
Figure 22: An example of a sample of Glenrosa soil type augured in the study area during site verification	50
Figure 23: Location of stone walled features – Outcrop (<i>koppie</i>) in the south of the site	52
Figure 24: Stone walled features	53
Figure 25: Palaeontological sensitivity map	54
Figure 26: Thabo Mofutsanyana District Municipality	55

Figure 27: Summary of the EIA process and public participation process. The red indicates the stages where the competent authority will be consulted during the process 78

TABLES

Table 1: NEMA Listed Activities	21
Table 2: Proposed development area - Environmental Sensitivity Results (Screening Tool Results) ..	28
Table 3: Themes and associated sensitivity as per the DFFE Screening Tool	28
Table 4: Site feature sensitivity rating - Avifauna Assessment	38
Table 5: Present Ecological State - Class	43
Table 6: Category's assigned to the scores for wetland habitat assessment	43
Table 7: Soil types found in the study area	49
Table 8: Palaeontological sensitivity rating	54
Table 9: Phumelela Local Municipality - Employment data (IDP 2022-2027)	57
Table 10: Possible impacts arising from the proposed development.....	61
Table 11: Public participation process Regulations as per NEMA EIA Regulations, 2014 (as amended 2021)	69
Table 12: EIA process - Timeline*	77
Table 13: Criteria used for evaluating impacts	80
Table 14: The stated assessment and information will be determined for each individual issue or related groups of issues and presented in descriptive format in the following table example or a close replica thereof	81

APPENDICES

APPENDIX 1:	LOCALITY MAP
APPENDIX 2:	SITE DEVELOPMENT PLANS (PROPOSED PREFERRED LAYOUT)
APPENDIX 3:	SITE OVERVIEW PHOTOS
APPENDIX 4:	PUBLIC PARTICIPATION PROCESS
APPENDIX 4D:	INTERESTED AND AFFECTED PARTIES LIST
APPENDIX 5:	DFFE SCREENING TOOL REPORT

ACRONYMS

BGIS	Biodiversity Geographic Information System
CBA	Critical Biodiversity Area
DFFE	Department of Forestry, Fisheries and the Environment
DWS	Department of Water and Sanitation
DESTEA	Department of Small Business Development, Tourism and Environmental Affairs
EAP	Environmental Assessment Practitioner
ECA	Environment Conservation Act (Act No. 73 of 1989)
EIA	Environmental Impact Assessment
EIR	Environmental Impact Report
EMP	Environmental Management Programme
ESA	Ecological Support Area
EV	Electric Vehicle
EWR	Environmental Water Requirements
HIA	Heritage Impact Assessment
I&APs	Interested and Affected Parties

MWp	Megawatt peak
NEMA	National Environmental Management Act (Act No. 107 of 1998)
NEMBA	National Environmental Management: Biodiversity Act (Act No. 10 of 2004)
NHRA	National Heritage Resources Act (Act No. 25 of 1999)
NID	Notice of Intent to Develop
NWA	National Water Act
OESA	Other Ecological Support Area
PV	Photovoltaic
SAHRA	South African Heritage Resources Agency
SANBI	South African National Biodiversity Institute
SEF	Solar PV Energy Generation Facility
VIA	Visual Impact Assessment
WULA	Water Use Licence Application

1 INTRODUCTION

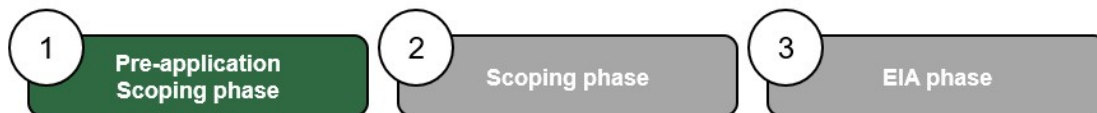
1.1 BACKGROUND

N3 Electric Highway Co. is proposing the development of the Kohler Solar Photovoltaic (PV) Renewable Energy Generation Plant and Electric Truck Charging Facility on the Remaining Extent of Farm Rooirand No. 990, adjacent to the N3 highway near Roadside, Free State. The facility will comprise a solar photovoltaic (PV) energy generation facility connected to the electric vehicle and truck charging facilities via a 33 kV distribution line. Additional infrastructure will include a battery energy storage system (BESS), overnight parking, a truck wash bay, a stormwater attenuation pond, water storage tanks, a lounge area with a kitchen, ablution facilities with a septic tank, a shop, offices and associated infrastructure.

The proposed site is located adjacent to the N3, at the intersection of the N3 and the Reitz/Roadside Road (S589) (Exit 107), approximately 32 km south-west of Vrede, 33 km north of Warden and 61 km south of Villiers, within the Thabo Mofutsanyana District Municipality, Free State Province. An area of approximately 84 ha will be considered and assessed.

Site coordinates (approximate central point): 27°33'50.8" S; 28°50'16.80" E.

N3 Electric Highway Co., the Applicant, has appointed EnviroAfrica CC as the independent Environmental Assessment Practitioner (EAP) to undertake the Environmental Impact Assessment (EIA) process and Public Participation Process (PPP) in accordance with the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA).



This Pre-application Scoping Report forms part of the pre-application phase of the Scoping and Environmental Impact Assessment (EIA) process and will be submitted to the Free State Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTE) for consideration. The purpose of this report is to describe the proposed development, outline the process undertaken to date, present the development alternatives, and identify the environmental issues requiring further investigation during the EIA phase.

Should the Scoping Report and Plan of Study for EIA be accepted by DESTE, the specialist studies identified in Section 8 will be completed and finalised, and the issues identified in Section 6 will be assessed in detail during the Environmental Impact Assessment (EIA) phase. Their findings will be integrated into the Draft Environmental Impact Report (EIR).

1.2 DESCRIPTION OF THE PROPOSED ACTIVITY

N3 Electric Highway Co. is proposing the development of the Kohler solar photovoltaic renewable energy generation plant and electric truck charging facility on the Remaining Extent of the Farm Rooirand No. 990, off the N3 highway, near Roadside, Free State. The facility will include a solar

photovoltaic (PV) energy generation facility connected to the electric vehicle and truck charging facilities via a distribution line with a capacity of approximately 33 kV. Additional infrastructure includes the development of a battery energy storage system, overnight parking, a wash bay, a stormwater pond, water tanks, a lounge area with a kitchen, ablution facilities with a septic tank, a shop, offices and associated infrastructure.

The solar PV plant will be connected to the electric vehicle and truck charging facilities via a distribution line with a capacity of approximately 33 kV. The development will cover an area of approximately 63.5 hectares (ha), with the solar PV array occupying about 50.8 hectares. This configuration will allow for an installed capacity of up to 50.8 megawatt-peak (MWp), which measures the maximum output of power from the solar array.

In addition to the solar PV installation, the facility will incorporate a Battery Energy Storage System (BESS) to support the electric vehicle and truck charging infrastructure. The BESS will store electricity generated by the solar PV facility, thereby providing a reliable and continuous power supply to the charging stations, particularly during periods of high demand or reduced solar generation. This system will store the generated energy, ensuring a reliable and continuous power supply for the charging stations, particularly during times of high demand.

In addition to the solar PV installation and battery storage, the development will incorporate several support structures. These will include overnight parking areas for vehicles, a wash bay for cleaning, and a stormwater pond to manage runoff. Rainfall on the site will be harvested for reuse, and any surplus or flood event stormwater will be managed and released in a controlled manner. Stormwater will be collected via pipes and drainage channels, then directed to an attenuation pond (stormwater), where excess water is stored and gradually released to prevent flooding. Elevated PV panels will have gutters to collect runoff, which will also be directed to the pond; the collected water will be treated for reuse.

To support the operation of the facility, the development will include a lounge area with a kitchen, as well as ablution facilities equipped with a septic tank. Additionally, there will be a shop and office spaces to facilitate the operation and management of the facility and its services.

Vehicle and truck access to the site will be via an access point located approximately 350 meters south-west of the N3 and Reitz / Roadside Road (S589) intersection (Exit 107), along the Reitz / Roadside Road (S589), adjacent to the Sasol N3 West - Truck Stop.



Figure 1: Google Earth image showing the locality of the proposed site (indicated by the red dot)

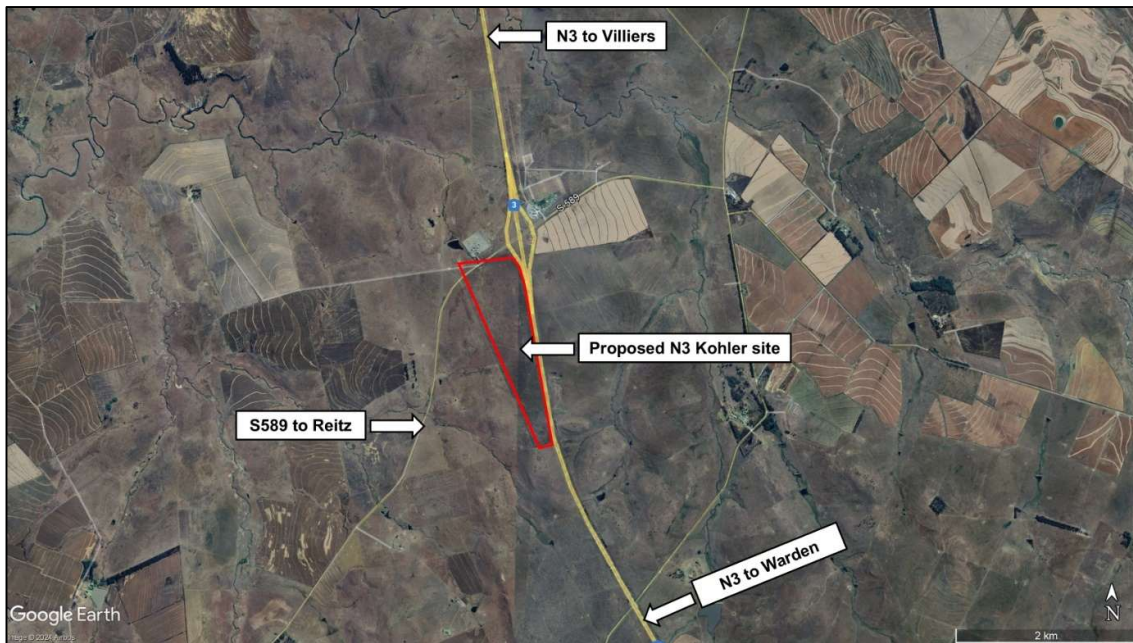


Figure 2: Google Earth image (1) of the proposed property and the development footprint (red polygon)

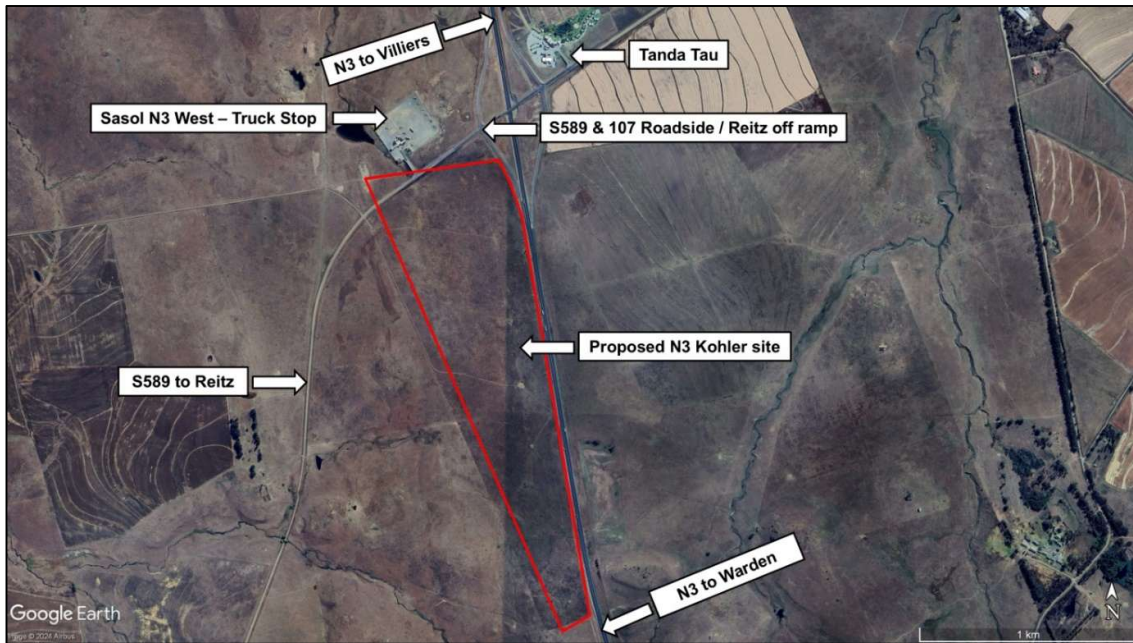


Figure 3: Google Earth image (2) of the proposed property and the development footprint (red polygon)

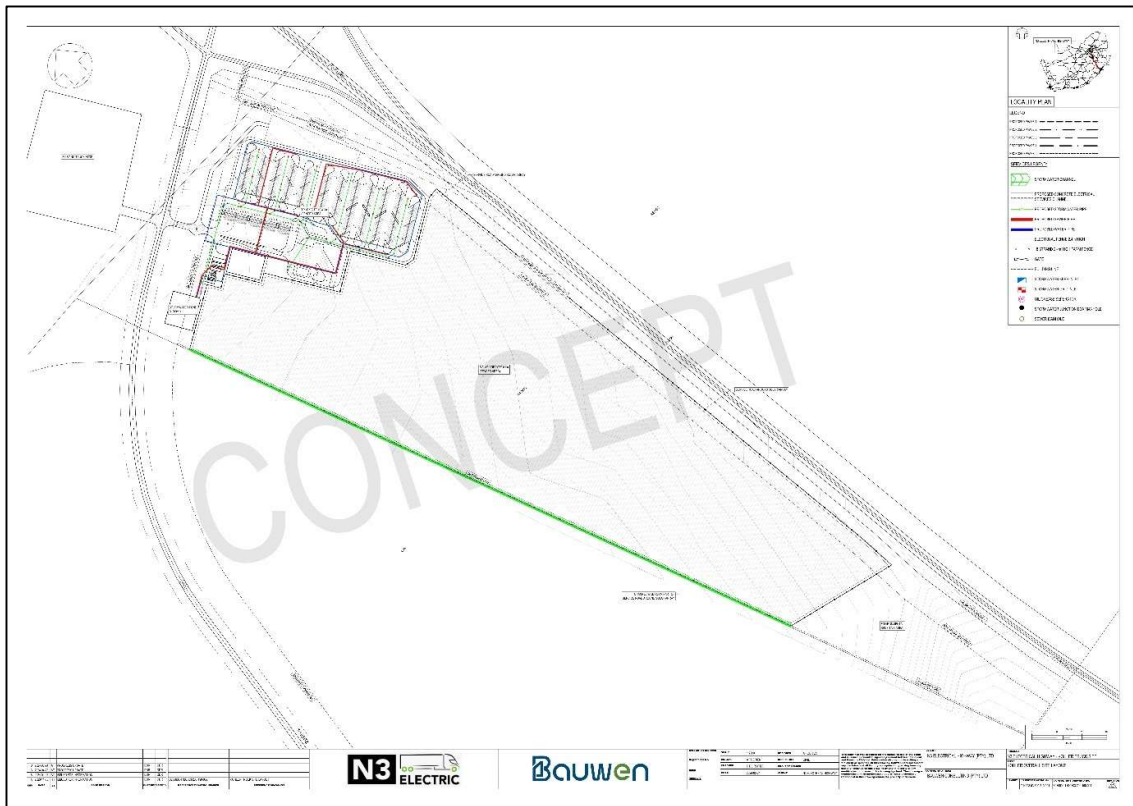


Figure 4: Overall layout

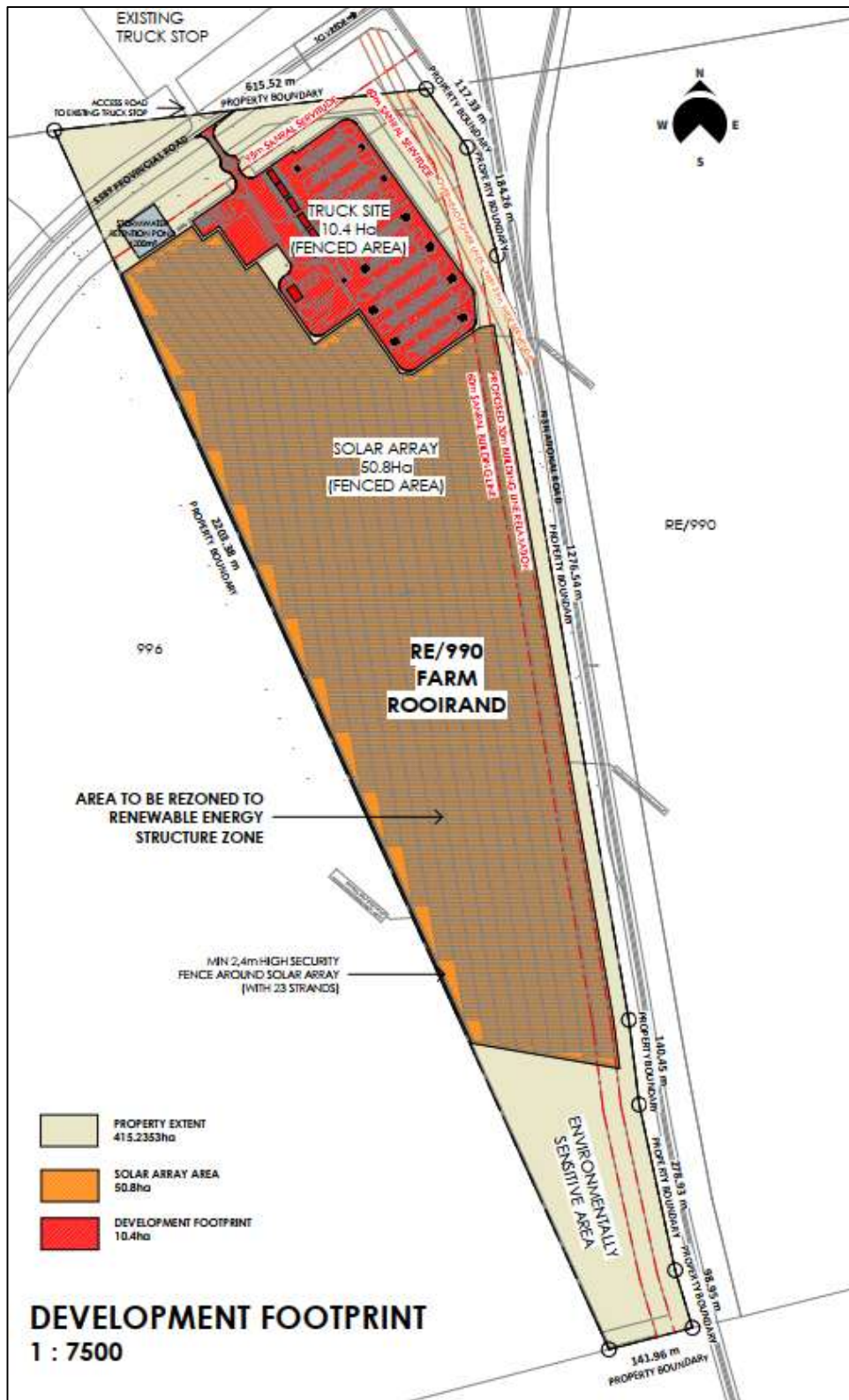


Figure 5: Draft SDP (Site Development Plan)

2 NEED AND DESIRABILITY

In terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014 (as amended), Scoping and EIA Reports must include a description of the need and desirability of the proposed activity. The consideration of “need and desirability” in EIA decision-making requires the consideration of the strategic context of the development proposal along with the broader societal needs and the public interest.

While the concept of need and desirability relates to the *type* of development being proposed, essentially, the concept of need and desirability can be explained in terms of the general meaning of its two components, in which *need* refers to *time* and *desirability* to *place* – i.e. is this the right time and is it the right place for locating the type of land-use/activity being proposed? Need and desirability can be equated to *wise use of land* – i.e. the question of what the most sustainable use of land is.

2.1 NEED

South Africa is committed to the Paris Agreement by making efforts to reduce greenhouse gas emissions (GHG) to 398-510 MtCO_{2e}¹ by 2025 and 350-420 MtCO_{2e} by 2030. In support of these commitments, the South African Government has developed the Green Transport Strategy for South Africa (2018–2050). As a part of this commitment, South Africa intends to widely adopt the use of electric vehicles (EVs) in its vehicle population to reduce emissions from the Transport sector, which accounts for 10.8% of the country’s total GHG emissions.

Currently, the market share of EVs in South Africa is minimal and if this number is to grow exponentially, the availability and accessibility of charging infrastructure for EVs will need to be seriously considered. While the push to electrify the automotive sector is well underway in urban and suburban areas, the same cannot be said for rural South Africa, with the lack of rural charging infrastructure remaining the most significant barrier to large-scale EV adoption.

In light of the current situation in South Africa, where the market share of EVs remains minimal, it becomes crucial to address the lack of reliable chargers, particularly in rural areas, to facilitate the exponential growth of EV adoption. While the focus of EV adoption has largely been on passenger vehicles, heavy-duty freight transport remains a significant contributor to greenhouse gas emissions and carbon emissions. As heavy vehicles generally operate along major freight corridors, charging infrastructure must be developed along these routes to enable the electrification of freight transport.

Electric truck charging facilities in rural areas of South Africa, especially along the N3 Route corridor (Durban, KwaZulu-Natal to Johannesburg, Gauteng), are imperative for ensuring efficient and sustainable transportation. With the growing demand for goods transport, particularly in the agricultural and industrial sectors, diesel-powered trucks dominate the highways. Introducing recharging stations specifically tailored for long-haul trucks not only facilitates smoother operations but also aligns with global efforts to reduce carbon emissions and dependence on fossil fuels. Moreover, investing in such infrastructure in rural communities can stimulate local economies and foster job creation, contributing to overall regional development. Thus, the establishment of EV recharging stations is not just a necessity but a strategic step towards a sustainable, more connected future for South Africa’s transport industry.

As part of the global energy crisis and the shift to renewable energy, the trend towards electric vehicles is ever-growing, and South Africa will be no exception. High-powered, ultra-fast charging is the minimum

¹ Million Tonnes of carbon dioxide equivalent

viable standard to provide a stop-and-charge capability comparable with filling a vehicle with petrol or diesel (ZCC Info-Booklet, 2022). In South Africa, with a weak electrical grid and load-shedding, high-power, ultra-fast charging will require on-site power generation, and with the need to charge when needed, a national network of charging facilities will be required (ZCC Info-Booklet, 2022).

2.2 DESIRABILITY

The following factors determine the desirability of the area for the proposed development:

2.2.1 Location and Accessibility

The proposed site is located on the Remaining Extent of Farm Rooirand No. 990, adjacent to the N3 highway near Roadside, within the Thabo Mofutsanyana District Municipality, Free State Province. The proposed site is located adjacent to the N3 Route, at the corner of the N3 and Reitz / Roadside road (S589) intersection (Exit 107), approximately 32km south-west of Vrede, 33km north of Warden, and 61km south of Villiers.

Site coordinates (approximate central point): 27°33'50.8" S ; 28°50'16.80" E

The site is ideally located on the N3, the major route between Durban (with South Africa's busiest port) and Johannesburg (South Africa's largest city and economic hub). The N3 Route is one of the busiest freight corridors in South Africa. Trucks carrying approximately 50 million tonnes of freight per annum constitute around 38% of the traffic using the N3 Toll Route.

Trucks constitute approximately 44% of all vehicles travelling on the N3 Toll Route daily. During the past decade, a significant increase (between 8% and 10% per annum) in the number of trucks on the N3 Toll Route has been recorded. This is mainly due to the transfer of freight, especially bulk products, from rail to road. On average, 7000 trucks move thousands of tons of goods on the N3 every day².

The property has been partially disturbed by historical and current agricultural activities, primarily livestock grazing. Although the site is generally well managed, some areas exhibit localised overgrazing.

The vegetation type (Frankfort Highveld Grassland – Gm6) associated with the proposed site is currently listed as a Least Threatened ecosystem at a national level (SANBI, 2021; DFFE, 2022). No rare or threatened plant species nor any endangered faunal biota were found on the site. No freshwater features occur within the proposed development footprint, although drainage features occur adjacent to the site and have informed the layout design and buffer requirements. The site is therefore ideal, as there are no significant biodiversity constraints on the site.

The topography is also ideal, as the terrain of the property is generally flat to slightly undulating.

The general area is also ideally suited for a solar PV facility due to the relatively high irradiation levels. The Global Horizontal Irradiation (GHI) average for the area is 2016.5 kWh/m² according to the Global Solar Atlas (Figure 6)³. According to the Global Weather Corp Global horizontal irradiance (GHI) is a measurement of the total solar electromagnetic radiation above a horizontal surface at a given location and time. It is the most useful metric for predicting solar panel output. It accounts for 71.6% of PV performance variations.

² <http://www.n3tc.co.za>

³ <https://globalsolaratlas.info/map>

According to the Department of Forestry, Fisheries and the Environment (DFFE) Screening Tool Report (Appendix 1), no intersections with Environmental Management Framework areas were found.

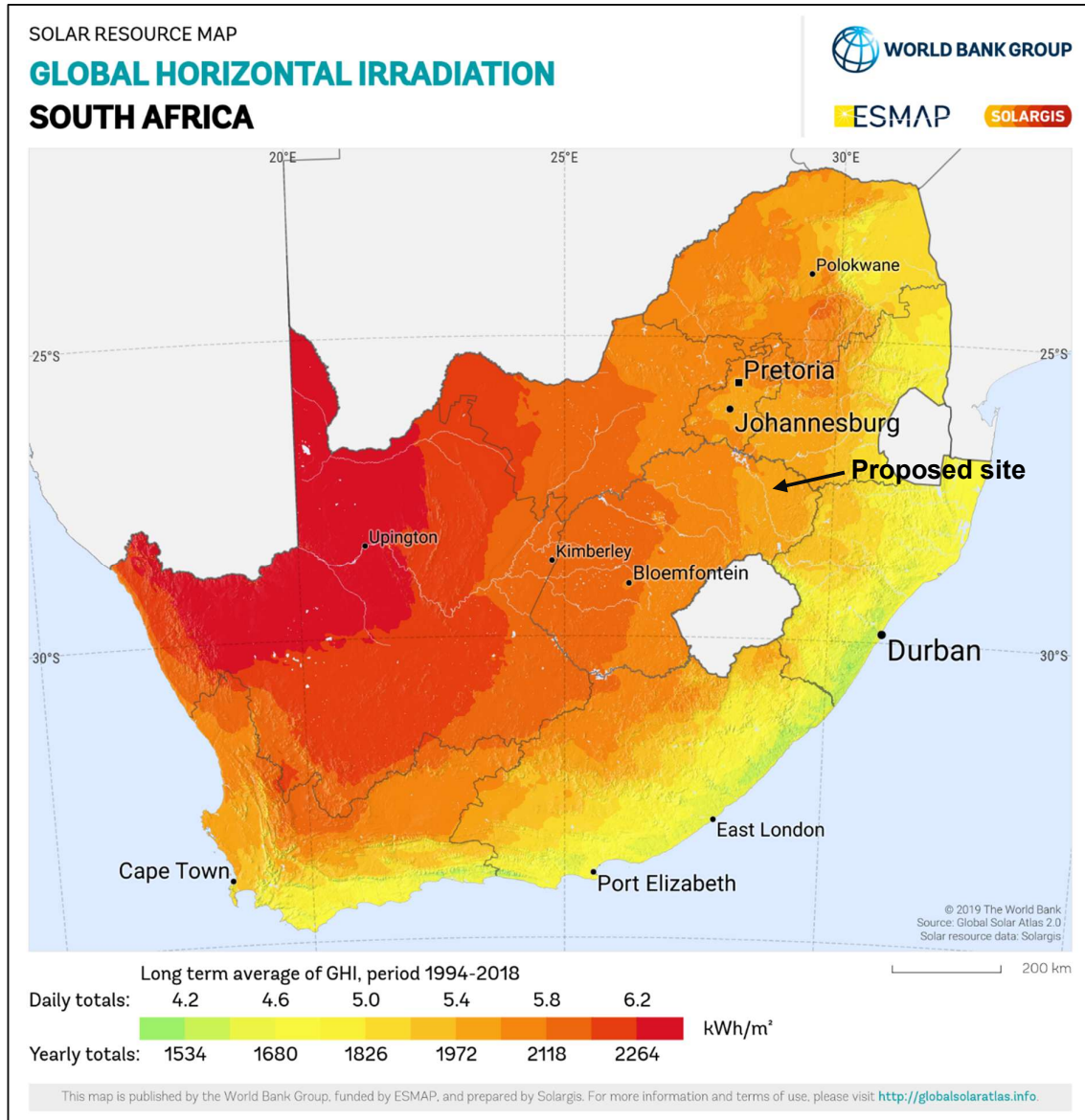


Figure 6: Global Solar Atlas image showing the Global Horizontal Irradiation levels for the proposed site

2.2.2 Compatibility with the Surrounding Area

The proposed activity is not accommodated within the existing land use rights of the property. The property is currently zoned Agricultural, and a rezoning application in terms of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) (SPLUMA) will be required.

The surrounding land uses are predominantly agricultural in nature, consisting primarily of livestock grazing and associated farming activities. The proposed development is not anticipated to result in

significant impacts on the health or well-being of surrounding receptors (e.g. in terms of noise, odours or other nuisance impacts). However, the development has the potential to alter the visual character and sense of place of the surrounding rural landscape. These potential visual impacts will be assessed as part of the Visual Impact Assessment and appropriate mitigation measures will be identified where necessary.

Notwithstanding these potential visual changes, the proposed development supports national and regional objectives aimed at promoting renewable energy generation, sustainable transport infrastructure and the transition to a lower-carbon economy, while seeking to minimise impacts on the surrounding rural landscape.

2.2.3 Objectives of Integrated Environmental Management

The general objectives of Integrated Environmental Management have been considered through the following:

- The actual and potential impacts of the proposed development on the environment, socio-economic conditions and cultural heritage have been identified and will be evaluated, together with the associated risks, consequences, alternatives and mitigation measures, with the aim of minimising adverse impacts, maximising benefits and promoting compliance with the principles of environmental management.
- The potential effects of the proposed development on the environment have been considered prior to decision-making. Reasonable alternatives have been identified and will be further investigated during the EIA phase.
- Adequate opportunity for public participation is being provided through the Public Participation Process (PPP), in accordance with the requirements of the NEMA EIA Regulations, 2014 (as amended).
- Environmental considerations have informed the planning and decision-making process for the proposed development. An Environmental Management Programme (EMPr) will be prepared as part of the Environmental Impact Assessment (EIA) process, and the proposed development will be required to comply with all applicable legislative requirements and conditions imposed by the relevant competent authorities.

2.2.4 Principles of Environmental Management

The principles of environmental management contained in Section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA) have been considered during the planning and assessment of the proposed development. The principles relevant to the proposed activity include the following:

- People and their needs have been placed at the forefront of the assessment, while serving their physical, psychological, developmental, cultural and social interests. The proposed development is expected to provide socio-economic benefits; however, any potential adverse environmental impacts will be identified, assessed and mitigated during the EIA process.
- Development must be socially, environmentally and economically sustainable. Where the disturbance of ecosystems, loss of biodiversity, pollution, environmental degradation, or impacts on landscapes and cultural heritage resources cannot be avoided, such impacts will be minimised and appropriately mitigated. The significance of these impacts will be assessed during the EIA phase, and appropriate mitigation measures will be incorporated into the Environmental Management Programme (EMPr).

- Where waste cannot be avoided, it will be minimised, managed and disposed of in accordance with the waste hierarchy and applicable legislative requirements. Waste management measures will be included in the EMP.
- The use of natural resources will be undertaken in a responsible and sustainable manner, with due consideration given to resource efficiency and environmental protection.
- Potential negative impacts on the environment and on people's environmental rights have been identified and will, where possible, be avoided. Where avoidance is not possible, impacts will be minimised and appropriately mitigated.
- The interests, needs and values of all Interested and Affected Parties (I&APs) will be considered throughout the Public Participation Process and incorporated, where appropriate, into the environmental assessment and decision-making process.
- The social, economic and environmental impacts of the proposed development, including both the benefits and potential disadvantages, will be assessed during the Environmental Impact Assessment (EIA) phase and presented in the Environmental Impact Report (EIR).
- The assessment has sought to identify the best practicable environmental option by considering all relevant environmental, social and economic factors. The proposed development is anticipated to have acceptable environmental impacts, provided that the recommended mitigation measures and environmental management requirements are implemented.

Legal Requirements

This assessment is being undertaken in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA), read together with the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), promulgated in terms of Section 24(5) of NEMA. In addition, the provisions of various other legislation applicable to the proposed development have been considered. The legislation relevant to this assessment is briefly outlined below:

2.3 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA

The Constitution of the Republic of South Africa, 1996 (Act No. 108 of 1996), provides that everyone has the right to an environment that is not harmful to their health or well-being and requires reasonable legislative and other measures to protect the environment. This includes preventing pollution and ecological degradation, promoting conservation, and securing ecologically sustainable development and the use of natural resources while promoting justifiable economic and social development.

2.4 NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998)

The National Environmental Management Act (Act 107 of 1998) (NEMA), as amended, makes provision for the identification and assessment of activities that are potentially detrimental to the environment, and which require authorisation from the relevant authorities based on the findings of an environmental assessment. NEMA is national legislation administered by the Department of Forestry, Fisheries and the Environment (DFFE). Within the Free State Province, the responsibility for processing environmental authorisation applications has been delegated to the Department of Economic, Small Business Development, Tourism and Environmental Affairs (DESTEA).

On 4 December 2014, the Minister promulgated the Environmental Impact Assessment Regulations, 2014, in terms of Chapter 5 of NEMA. These Regulations were subsequently amended on 7 April 2017 (GN No. 326, No. 327 (Listing Notice 1), No. 325 (Listing Notice 2), No. 324 (Listing Notice 3) in Government Gazette No. 40772 of 07 April 2017). Listing Notice 1 and 3 are for a Basic Assessment and Listing Notice 2 for a full Environmental Impact Assessment.

In terms of Section 24(5) of NEMA and the EIA Regulations, 2014 (as amended), environmental authorisation is required for the listed activities applicable to the proposed Kohler Renewable Solar PV Energy Generation Plant and Electric Truck Charging Facility (Table 1).

Table 1: NEMA Listed Activities

No.	Listed Activities as per Listing Notice 1, 2 and 3 (GN R327, R324, R325)	Applicability to the development
Government Notice R327 (Listing Notice 1)		
11.	The development of facilities or infrastructure for the transmission and distribution of electricity; (i) outside urban areas or industrial complexes with a capacity of more than 33 but less than 275 kilovolts; or (ii) inside urban areas or industrial complexes with a capacity of 275 kilovolts or more.	The proposed solar PV plant and the electric vehicle and truck recharge facilities of the development will be connected via a 33 kV distribution line.
24.	The development of a road; (i) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Government Notice 545 of 2010; or (ii) with a reserve wider than 13,5 meters, or where no reserve exists where the road is wider than 8 metres; but excluding a road; a) which is identified and included in activity 27 in Listing Notice 2 of 2014; or b) where the entire road falls within an urban area; or c) which is 1 kilometre or shorter	An approximately 9 m wide access road will be constructed to provide vehicle and truck access to the proposed development site.
28.	Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development: (i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or (ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare.	The proposed development site will be located outside an urban area and will exceed 1ha of land currently utilised for agricultural purposes.
Government Notice R325 (Listing Notice 2)		
1.	The development of facilities or infrastructure for the generation of electricity from a renewable resource where the electricity output is 20 MW or more, excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs; a) an urban area; or	The proposed solar PV plant will allow for an installed capacity of up to 50.8 megawatt-peak (MWp), which measures the maximum output of power from the solar array.

No.	Listed Activities as per Listing Notice 1, 2 and 3 (GN R327, R324, R325)	Applicability to the development
	b) On existing infrastructure	
15.	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for; (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	The proposed development footprint is approximately 63.5 ha and will require the clearance of more than 20 ha of indigenous vegetation. Although the vegetation has been identified as predominantly degraded, the proposed development will nevertheless result in the clearance of indigenous vegetation.
Government Notice R324 (Listing Notice 3)		
4.	The development of a road wider than 4 meters with a reserve less than 13,5m b) In the Free State i. Outside Urban Areas (ee) Critical Biodiversity Areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.	Internal roads wider than 4m with a reserve less than 13,5m is required for vehicles to gain access within the proposed development site for operational and maintenance purposes. The development site is outside an urban area.
12.	The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan. b) In the Free State i. Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA. ii. Within Critical Biodiversity Areas identified in bioregional plans. iv. Areas within a watercourse or wetland; or within 100m from the edge of a watercourse or wetland.	More than 300m ² of indigenous vegetation will be cleared; and the proposed development site may be within 100m of the watercourses identified on site; and the proposed development site falls outside an urban area.

An application form will be submitted to the Free State Department of Small Business Development, Tourism and Environmental Affairs (DESTE). On acknowledgment from DESTE, the Scoping phase process will be initiated and undertaken to further identify potential issues.

2.5 NATIONAL HERITAGE RESOURCES ACT

The protection and management of South Africa's heritage resources are governed by the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA).

Section 38(8) of the NHRA provides for the assessment of heritage impacts as part of an Environmental Impact Assessment (EIA) process and states that, where such an assessment is considered adequate, a separate Heritage Impact Assessment (HIA) is not required.

Furthermore, in terms of Section 34(1), no person may alter or demolish any structure or part of a structure, which is older than 60 years without a permit issued by the South African Heritage Resources Agency (SAHRA) or the relevant provincial heritage resources authority. Nor may anyone destroy, damage, alter, exhume or remove from its original position, or otherwise disturb, any grave or burial ground older than 60 years, which is situated outside a formal cemetery administered by a local authority, without a permit issued by the SAHRA, or a provincial heritage authority, in terms of Section 36 (3). In terms of Section 35 (4), no person may destroy, damage, excavate, alter or remove from its original position, or collect, any archaeological material or object, without a permit issued by the SAHRA, or the responsible resources authority.

Section 38(1) of the NHRA of 1999 requires the responsible heritage resources authority to notify the person who intends to undertake a development that fulfils the following criteria to submit an impact assessment report if there is reason to believe that heritage resources will be affected by such event:

- the construction of a road, wall, power line, pipeline, canal or other similar form of linear development or barrier exceeding 300m in length;
- the construction of a bridge or similar structure exceeding 50m in length;
- any development or other activity that will change the character of a site
 - exceeding 5000m² in extent; or
 - involving three or more existing erven or subdivisions thereof; or
 - involving three or more erven or divisions thereof which have been consolidated within the past five years; or
 - the costs of which will exceed a sum set in terms of regulations by SAHRA or a provincial heritage resources authority;
- the rezoning of a site exceeding 10 000m² in extent; or
- any other category of development provided for in regulations by SAHRA or a provincial heritage resources authority.

2.6 EIA GUIDELINE AND INFORMATION DOCUMENT SERIES

The following are the latest guidelines and information Documents that have been consulted:

- Department of Environmental Affairs and Development Planning's (DEA&DP) *Environmental Impact Assessment Guideline and Information Document Series (Dated: March 2013)*:
 - *Guideline on Transitional Arrangements*
 - *Generic Terms of Reference for EAPs and Project Schedules*
 - *Guideline on Alternatives*
 - *Guideline on Public Participation*
 - *Guideline on Exemption Applications*
 - *Guideline on Appeals*
 - *Guideline on Need and Desirability*
- Department of Environmental Affairs and Tourism (DEAT) *Integrated Environmental Management Information Series*

2.7 NATIONAL WATER ACT

In addition to the requirements of NEMA, the proposed development may require authorisation in terms of the National Water Act, 1998 (Act No. 36 of 1998) (NWA). The Department of Water and Sanitation (DWS) is the competent authority responsible for the administration of the NWA and will act as a key commenting authority during the EIA process. Subject to the findings of the Freshwater Assessment, a Water Use Licence Application (WULA) or registration under the General Authorisation may be required for water uses identified in terms of Section 21(c) and/or Section 21(i) of the NWA. The level of water use authorisation required will be confirmed by the freshwater specialist and, where applicable, will be undertaken concurrently with the Environmental Authorisation process.

2.8 NATIONAL ENVIRONMENTAL MANAGEMENT: BIODIVERSITY ACT

The National Environmental Management: Biodiversity Act, 2004 (Act No. 10 of 2004) (NEMBA) is part of a suite of legislation falling under NEMA, which includes the National Environmental Management: Protected Areas Act, the Air Quality Act, the Integrated Coastal Management Act and the Waste Act. Chapter 4 of NEMBA deals with threatened and protected ecosystems and species and related threatened processes and restricted activities. The need to protect listed ecosystems is addressed (*Section 54*).

2.9 THE SPATIAL PLANNING AND LAND USE MANAGEMENT ACT (ACT 16 OF 2013)

The proposed development falls within the jurisdiction of the relevant local municipality. The property is currently zoned Agricultural, and the necessary land use planning approvals, including a rezoning application and any associated consent required in terms of the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) (SPLUMA) and the applicable Free State Municipal Land Use Planning By-law, will be obtained prior to the commencement of the development.

2.10 THE CONSERVATION OF AGRICULTURAL RESOURCES ACT (ACT 43 OF 1983)

The Conservation of Agricultural Resources Act, 1983 (Act No. 43 of 1983) (CARA) provides for the conservation of South Africa's agricultural resources, including soil, water resources and natural vegetation, through the prevention of erosion, protection of water resources and sustainable management of agricultural land.

The following control measures contained in Section 6 of CARA may be applicable to the proposed development:

- the regulating of the flow pattern of run-off water;
- the utilisation and protection of the vegetation; and
- the construction, maintenance, alteration or removal of soil conservation works or other structures on land.

3 ALTERNATIVES

Alternatives to the proposed development are limited and have been considered below:

3.1 SITE ALTERNATIVES

The proposed site is considered the only feasible location for the proposed development at this stage. Site selection was informed by the project's operational requirements, proximity to the N3 freight corridor, availability of sufficient land, solar resource potential, and engineering feasibility. Consequently, no alternative sites will be assessed as part of this application.

3.2 ACTIVITY ALTERNATIVES

There are no feasible activity alternatives assessed. The primary activity is the development of a facility for the generation of renewable energy. Alternative renewable energy technologies, including wind energy and concentrated solar power (CSP), were considered at a high level; however, these technologies are not considered feasible for the proposed site or the objectives of the project.

3.3 DESIGN/TECHNOLOGY ALTERNATIVES

Three The detailed design of the solar PV facility has not yet been finalised. Various photovoltaic technologies may be considered during the detailed design phase, including polycrystalline, monocrystalline, thin-film and, where technically feasible, concentrated photovoltaic (CPV) technology. The final technology selection will take into account technical performance, environmental considerations, cost, efficiency and operational requirements.

3.4 LAYOUT ALTERNATIVES

The proposed property extends over approximately 415 ha, of which approximately 84 ha will be assessed as part of the environmental assessment process. The proposed development footprint is approximately 63.5 ha, including a 50.8 ha solar PV array and associated support infrastructure. This allows flexibility to refine the layout by avoiding identified environmentally sensitive areas and incorporating specialist recommendations into the preferred layout.

The layouts will consider the need to maximise the output from the facility (maximise the solar array area) and consider the environmentally sensitive and “no-go” areas identified by the specialists, either through desktop analysis and/or site investigations. These layouts will be assessed in the Environmental Impact Report.

3.5 NO-GO ALTERNATIVES

This is the option of not developing the proposed solar PV facility.

Although the no-go development might result in no potential negative environmental impacts, the direct and indirect socio-economic benefits of not constructing the solar PV facility will not be realised. The national and local need for renewable energy will not be realised. The no-go alternative will not result in any removal of vegetation or impacts on biodiversity (flora or fauna) or loss of agricultural land since the development will not take place. However, since the area is used for grazing and other agricultural activities, this does not guarantee that the natural vegetation and ecosystem as a whole will revive or continue to function undisturbed.

The No-Go Alternative would result in South Africa's existing electricity supply not being supplemented by renewable energy generation associated with the proposed development.

The potential employment opportunities associated with the construction and operational phases of the proposed development would also not be realised under the No-Go Alternative.

Considering the nature of the proposed development and its strategic location along the N3 freight corridor, the anticipated socio-economic benefits, including the provision of renewable energy infrastructure, support for the transition to electric freight transport, employment creation and regional economic development, are considered to outweigh the environmental benefits associated with not implementing the proposed development. The potential positive and negative environmental impacts associated with the proposed development will be assessed in detail during the Environmental Impact Assessment (EIA) phase and presented in the Environmental Impact Report (EIR).

4 SITE DESCRIPTION

4.1 LOCATION

The proposed site (hereafter referred to as the Kohler Site) is located on a portion of the Remaining Extent of Farm Rooirand No. 990, within the Thabo Mofutsanyana District Municipality, Free State Province. The site is situated adjacent to the N3 highway, at the intersection of the N3 and the Reitz/Roadside Road (S589) (Exit 107), approximately 32 km south-west of Vrede, 33 km north of Warden and 61 km south of Villiers.

Site coordinates (approximate central point): 27°33'50.8"S; 28°50'16.80"E.



Figure 7: Proposed development site - Locality Map

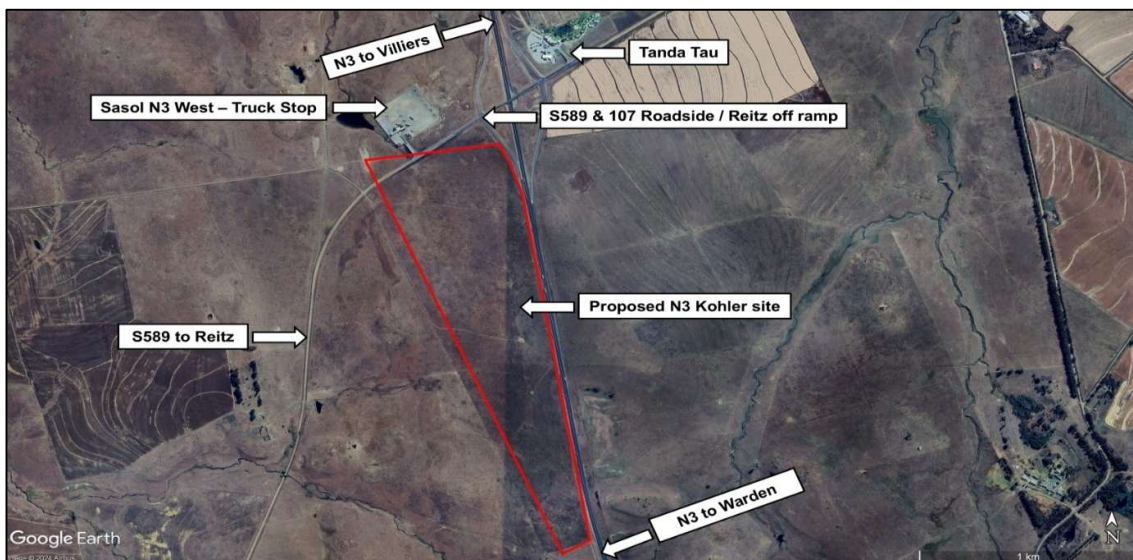


Figure 8: Proposed development site

4.2 DFFE SCREENING TOOL REPORT

4.2.1 Proposed development area - Environmental Sensitivity

The Department of Forestry, Fisheries and the Environment (DFFE) National Web-based Environmental Screening Tool is a geographically based, web-enabled application that enables proponents intending to apply for Environmental Authorisation in terms of the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), to identify the environmental sensitivities associated with a proposed development site.

A summary of the environmental sensitivities identified for the proposed development site is provided below. The environmental sensitivity ratings generated by the Screening Tool are indicative only and must be verified through site investigations undertaken by suitably qualified specialists. The findings of these specialist assessments will confirm the environmental sensitivities associated with the proposed development and inform the Environmental Impact Assessment (EIA) process.

Each environmental theme is linked to a series of spatial datasets that provide information on the environmental sensitivities associated with that theme. These datasets are used by the Screening Tool to generate a sensitivity rating for each theme at a specific location.

The DFFE Screening Tool Report for the proposed development is attached as **Appendix 1** to this report.

Table 2: Proposed development area - Environmental Sensitivity Results (Screening Tool Results)

Theme	Very High	High	Medium	Low
Agricultural		X		
Animal Species		X		
Aquatic Biodiversity	X			X
Archaeological and Cultural Heritage				X
Avian				X
Civil Aviation (Solar PV)				X
Defence				X
Landscape (Solar)	X			
Palaeontology	X			
Plant Species			X	
RFI ⁴				X
Terrestrial Biodiversity	X			

4.2.2 Site sensitivity verification

Table 3: Themes and associated sensitivity as per the DFFE Screening Tool

⁴ Radio Frequency Interference

Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation & Need for Specialist Investigation
Agriculture	High	Disagree ↓	Medium	Sensitivity is high due to the moderate-high land capability. However, the land use is predominantly natural grassland without any field crops present, resulting in a proposed medium sensitivity. The property is currently zoned Agricultural and is used for grazing. An initial Agricultural Compliance Statement has been undertaken and the preliminary findings is included in this report, but will be finalised during the EIA phase.
Animal Species	High	Disagree ↓	Medium	Sensitivity is high due to the potential sensitive species recorded for the site by SANBI. The presence of several bird species (mostly vulnerable or endangered birds-of-prey) is also associated with the site. Unfortunately, because of the long history of agriculture and the transformed nature of the veld it is considered highly unlikely that the proposed development will result in any significant additional impact on any of these species, resulting in a proposed medium sensitivity. An initial Terrestrial Biodiversity Assessment has been undertaken and the preliminary findings is included in this report, but will be finalised during the EIA phase.
Aquatic Biodiversity	Very High	Disagree ↓	Medium	Sensitivity is very high due to the site being associated with a FEPA-subcatchment. There are no significant freshwater resources found on the site but there is a drainage line that runs through the proposed development footprint, resulting in a proposed medium sensitivity. An initial Freshwater Impact Assessment has been undertaken and the preliminary findings is included in this report, but will be finalised during the EIA phase.
Archaeology and Cultural Heritage	Low	Disagree ↑	Medium to High	Sensitivity is low; however, after a phase 1 heritage survey it was determined that most of the site has no heritage features, except for stone walled features associated with the dolerite outcrop (<i>koppie</i>) in the south of the site. These features are of medium to high heritage significance. An initial Archaeology Impact Assessment has been undertaken and the preliminary findings is included in this report, but will be finalised during the EIA phase. A Notice of Intent to Develop (NID) will also be submitted to the Heritage Authority.

Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation & Need for Specialist Investigation
Avian	Low	Agree	Low	An initial Avifaunal Impact Assessment has been undertaken regardless of the low sensitivity. The preliminary findings are included in this report, but will be finalised during the EIA phase.
Civil Aviation (Solar PV)	Low	Agree	Low	No major or other types of civil aviation aerodromes are within the immediate site area and thus will not pose any threat to civil aviation.
Defence	Low	Agree	Low	Due to the nature of the proposed development, it is not envisaged that the proposed expansion will impact any defence-related activities.
Landscape (Solar)	Very High	Agree	Very High	Sensitivity is very high due to the high ridges and steep slope (between 1:4 and 1:10) associated with the site. The dolerite outcrop (koppie) in the south of the site is such a feature that contributes to this very high sensitivity. An initial Visual Impact Assessment has been undertaken, with the preliminary findings included in the pre-application Scoping Report; however, it will be finalised during the EIA phase.
Palaeontology	Very High	Disagree ↓	Low to Medium	Sensitivity is very high due to the likelihood of finding significant fossils within the geologic unit associated with the site. However as per the SAHRIS palaeontological sensitivity map the area associated with the site has an insignificant / zero (grey) sensitivity, resulting in the proposed low to medium sensitivity. Nevertheless, an initial Palaeontological Impact Assessment has been undertaken and the preliminary findings is included in this report, but will be finalised during the EIA phase. A Notice of Intent to Develop (NID) will also be submitted to the Heritage Authority.
Plant Species	Medium	Agree	Medium	Sensitivity is medium due to the natural grassland being degraded by prolonged livestock grazing. However, potential sensitive species recorded for the site by SANBI may be present. An initial Terrestrial Biodiversity Assessment has been undertaken and the preliminary findings is included in this report, but will be finalised during the EIA phase.
RFI	Low	Agree	Low	Sensitivity is low.
Terrestrial Biodiversity	Very High	Disagree ↓	Medium	Sensitivity is very high due to the site being associated with a FEPA-subcatchment. The site

Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation & Need for Specialist Investigation
				also falls under the National Protected Area Expansion Strategy (NPAES) for the Free State Highveld Grasslands. However, there are no significant freshwater resources found on the site but there is a drainage line that runs through the proposed development footprint, resulting in a proposed medium sensitivity. An initial Freshwater Impact Assessment and initial Terrestrial Biodiversity Assessment has been undertaken and the preliminary findings is included in this report, but will be finalised during the EIA phase.

4.3 CLIMATE

According to the South African National Biodiversity Institute (SANBI), the climatic conditions associated with the proposed site are characteristic of a summer rainfall region, with a Mean Annual Precipitation (MAP) of approximately 638 mm, the majority of which occurs in the form of summer thunderstorms. The Mean Annual Temperature (MAT) ranges between 14°C and 15°C, indicating a cool to warm temperate climate characterised by marked seasonal temperature variation resulting from the inland location and relatively high altitude of the area. Frost occurs frequently during winter.

Historical climate and weather data were obtained from Meteoblue for the town of Vrede, which is located closest to the proposed development site. The climate diagrams presented below are based on approximately 30 years of hourly weather model simulations and provide an indication of the typical climatic conditions experienced in the area, including temperature, precipitation, sunshine and wind patterns.

The simulated weather data have a spatial resolution of approximately 30 km and may not accurately represent all localised weather phenomena, such as thunderstorms, local wind patterns or other site-specific climatic variations associated with topography and landform.

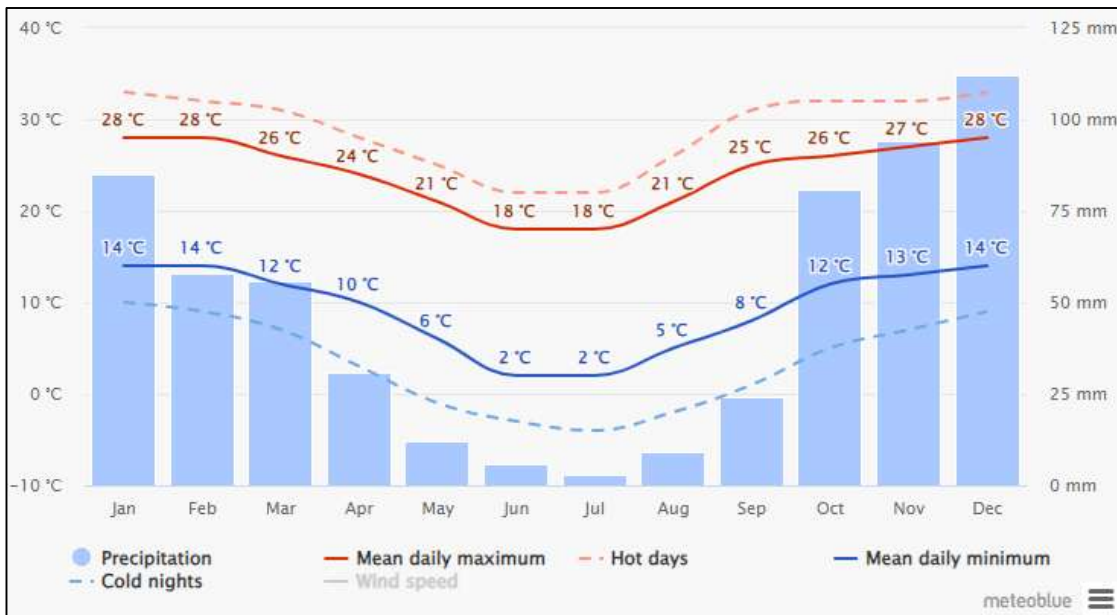


Figure 9: Meteoblue⁵ - Simulated historical climate & weather data for the Frankfort / Vrede area

The general area is well suited to the development of a solar photovoltaic (PV) facility due to its relatively high solar irradiation levels. According to the Global Solar Atlas, the average Global Horizontal Irradiation (GHI) for the area is approximately 2 016.5 kWh/m²/year (Figure 12). Global Horizontal Irradiation (GHI) is a measure of the total solar radiation received on a horizontal surface at a specific location and is one of the primary indicators used to assess the solar energy potential and expected performance of photovoltaic systems. The relatively high GHI values associated with the proposed site support the suitability of the area for solar PV development. Refer to Figure 12.

4.4 LANDSCAPE / VISUAL

A preliminary Visual Impact Assessment has been undertaken, and the preliminary findings have been incorporated into this Pre-application Scoping Report. The assessment will be completed and finalised during the Environmental Impact Assessment (EIA) phase.

The purpose of the Visual Impact Assessment is to identify the important visual characteristics of the surrounding landscape, including those features that contribute to the scenic quality and sense of place, in order to determine the potential visual impacts of the proposed development and identify appropriate mitigation measures.

The landscape sensitivity of the site is considered to be very high in areas associated with the prominent ridges and steeper slopes (generally between 1:4 and 1:10). In particular, the dolerite outcrop (koppie) located in the southern portion of the site is an important landscape feature that contributes significantly to the visual sensitivity of the area.

⁵ (<https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/frankfort-south-africa-1003763>)

4.4.1 Topography and Landscape

Situated within the expansive grasslands of the Free State Province, the proposed site is characterised by a predominantly flat to gently undulating landscape. Elevations across the site range from approximately 1 623.07 m to 1 682.19 m above mean sea level (amsl), providing subtle topographical variation across the development area.

The north-to-south elevation profile, derived from the central portion of the site, shows a gradual rise in elevation from 1,626.67 meters at the northern end to approximately 1,682.19 meters at the southern boundary. This indicates a consistent but gentle slope across the site's length. Similarly, the west-to-east elevation profile reveals a gentle ascent, starting at an elevation of 1,635.81 meters on the western boundary and rising to around 1,649.87 meters on the eastern side. However, certain parts of the site exhibit a maximum slope of approximately 36.90%, which represents relatively steep terrain that may constrain development in those areas and may present challenges for construction and infrastructure placement.

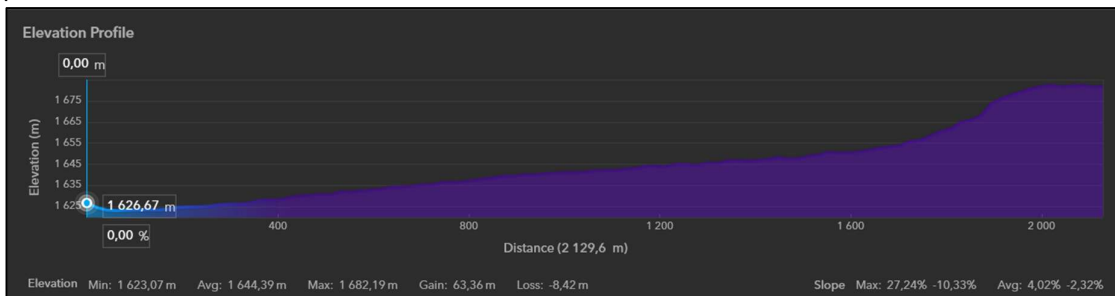


Figure 10: North to South (towards the *koppie*) Elevation Profile (captured from the site's midpoint)

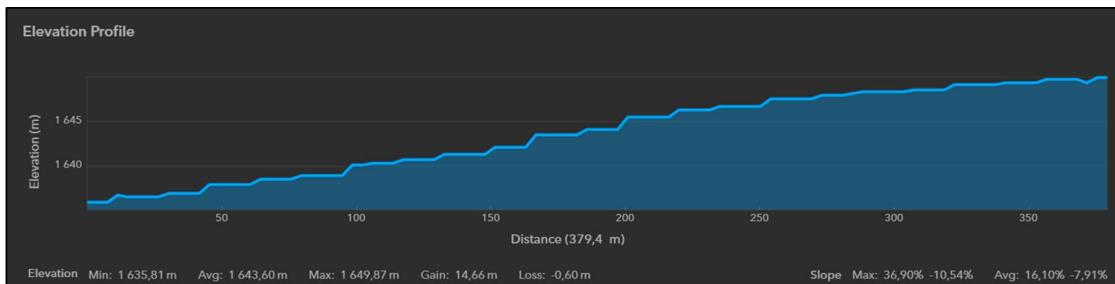


Figure 11: West to East (towards the N3) Elevation Profile (captured from the site's midpoint)

4.5 BIODIVERSITY

A preliminary Terrestrial Biodiversity Assessment has been undertaken, and the preliminary findings have been incorporated into this Pre-application Scoping Report. The assessment will be completed and finalised during the Environmental Impact Assessment (EIA) phase.

A Terrestrial Biodiversity Assessment aims to understand the terrestrial ecology and evaluate the potential impacts of the proposed development on site. The assessment aims to identify and assess the terrestrial biodiversity features (flora, fauna and terrestrial ecosystems) associated with the proposed development area and to evaluate the potential impacts of the proposed development on these environmental features.

A Screening Tool Report was generated (see Section 5.2) and classified the proposed development area's biodiversity sensitivities as follows:

- Plant species (medium sensitivity)
- Animal species (high sensitivity)
- Terrestrial biodiversity (very high sensitivity)

The plant species sensitivity is medium due to the natural grassland occurring within the proposed development area being degraded by prolonged livestock grazing. However, potentially sensitive species recorded for the site by SANBI may be present.

The animal species sensitivity is high due to the potentially sensitive species recorded for the site by SANBI. The presence of several bird species (mostly vulnerable or endangered birds-of-prey) is also associated with the site. The animal species sensitivity is rated as High due to the presence of potentially sensitive species identified by the DFFE Screening Tool and SANBI databases. Several bird species of conservation concern, including vulnerable and endangered raptors, have been recorded in the broader area. Although the site has been historically utilised for agriculture and is affected by grazing, the significance of potential impacts on these species will be assessed in detail during the EIA phase.

The terrestrial biodiversity Sensitivity is very high due to the site being associated with a Freshwater Ecosystem Priority Area subcatchment (FEPA-subcatchment). The site also falls under the National Protected Area Expansion Strategy (NPAES) for the Free State Highveld Grasslands. The terrestrial biodiversity sensitivity is rated as Very High due to the site's association with a Freshwater Ecosystem Priority Area (FEPA) sub-catchment and its inclusion within the National Protected Area Expansion Strategy (NPAES) for the Free State Highveld Grasslands. The significance of these biodiversity features and the implications for the proposed development will be assessed further during the EIA phase.

4.5.1 Vegetation

The proposed development area is located within the Grassland Biome, within the Mesic Highveld Grassland Bioregion (Rutherford and Westfall, 1994). It falls within the Frankfort Highveld Grassland vegetation type (Scott-Shaw and Escott, 2011; Mucina and Rutherford, 2006; 2018), which is currently listed as a Least Threatened ecosystem at a national level (SANBI, 2021; DFFE, 2022). Frankfort Highveld Grassland vegetation occurs in the Free State and marginally in Mpumalanga at an altitude of 1460-1800 m a.m.s.l. on flat to slightly undulating terrain. The vegetation is characterised by grass species including *Eragrostis curvula* and *Themeda triandra*. Other common species include *E. capensis*, *E. plana*, *Cymbopogon pospischilii*, *Elionurus muticus*, and *Aristida junciformis* (Mucina and Rutherford, 2006).

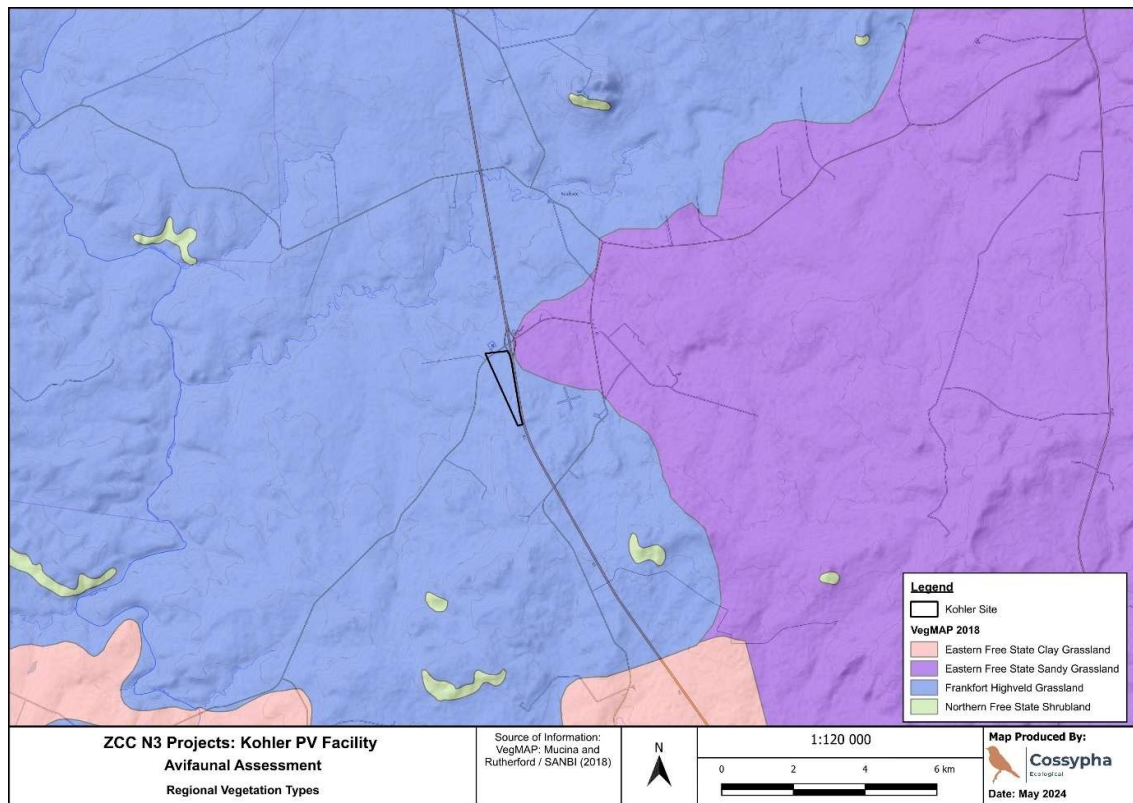


Figure 12: The study area in relation to regional vegetation types

4.5.2 Fauna

Based on the MammalMAP database available through the Virtual Museum, a total of five (5) mammal species have the potential to occur within and around the study area. According to the DFFE National Web-based Environmental Screening Tool, one (1) mammal Species of Conservation Concern (SCC) has been identified for the site, namely the Spotted-necked Otter (*Hydrictis maculicollis*), which is listed as Near Threatened.

The Spotted-necked Otter is typically associated with permanent rivers, streams and other freshwater habitats. As the drainage feature associated with the site is generally ephemeral and only conveys water following rainfall events, the likelihood of the species utilising the proposed development area is considered to be low. This will be confirmed during the detailed faunal assessment undertaken as part of the EIA phase. With specific reference to Species of Conservation Concern (SCC) listed on the screening tool, the area is considered of low sensitivity. Other mammal species observed during the site visit included porcupine, mongoose and ground squirrel. Small mammal species are also likely to occur within the study area.

Based on the ReptileMAP database available through the Virtual Museum, a total of five (5) reptile species have the potential to occur within and around the study area. Similarly, the FrogMAP database indicates that two (2) amphibian species may occur within the area. According to the DFFE National Web-based Environmental Screening Tool, one (1) reptile Species of Conservation Concern is identified for the site, while no amphibian species of conservation concern are flagged. The reptile species is listed as Vulnerable.

4.5.3 Free State Biodiversity Plan

The Free State Biodiversity Plan (FSBP; Collins, 2016) is a systematic biodiversity planning tool used to identify priority biodiversity areas and ecological infrastructure within the province. The FSBP is a spatial tool that indicates areas that are important for the representation and persistence of terrestrial species and ecosystems. These areas are referred to as Critical Biodiversity Areas (CBAs) and are the minimum area required to ensure the persistence and representation of biodiversity.

The bioregional plan also includes land use management guidelines, which, if implemented, will avoid further loss and degradation within the CBAs (Collins, 2016). The key output of the biodiversity planning process is the CBA map. Categories included in the CBA map are as follows:

- **CBA1 (Irreplaceable):** A site that is irreplaceable or near irreplaceable for meeting biodiversity targets.
- **CBA2 (Optimal):** A site that has been selected based on its suitability for meeting biodiversity targets.
- **ESA:** An area that plays an important role in supporting the ecological functioning of a protected area or CBA, or in delivering ecosystem services. In most cases ESAs are currently in at least fair ecological condition and should remain in at least fair functioning condition.
 - **ESA1:** Sites with minimal degradation.
 - **ESA2:** Sites with degradation, i.e. they can be totally degraded, but not totally transformed.
- **Other:** An area of natural habitat not required to meet biodiversity targets for ecosystem types, species or ecological processes, i.e. natural areas not selected as CBA or ESA.
- **Degraded:** An area of degraded or transformed habitat that has not been selected as an ESA, i.e. all remaining areas.

According to the FSBP, the study area falls within an ESA1 (Figure 13). This is represented by near-natural grassland used for grazing purposes. Degraded areas occur on either side and to the south, and the site is bordered by the N3 highway on the eastern side. Overall, the study area is considered to have a Low to Medium biodiversity sensitivity.

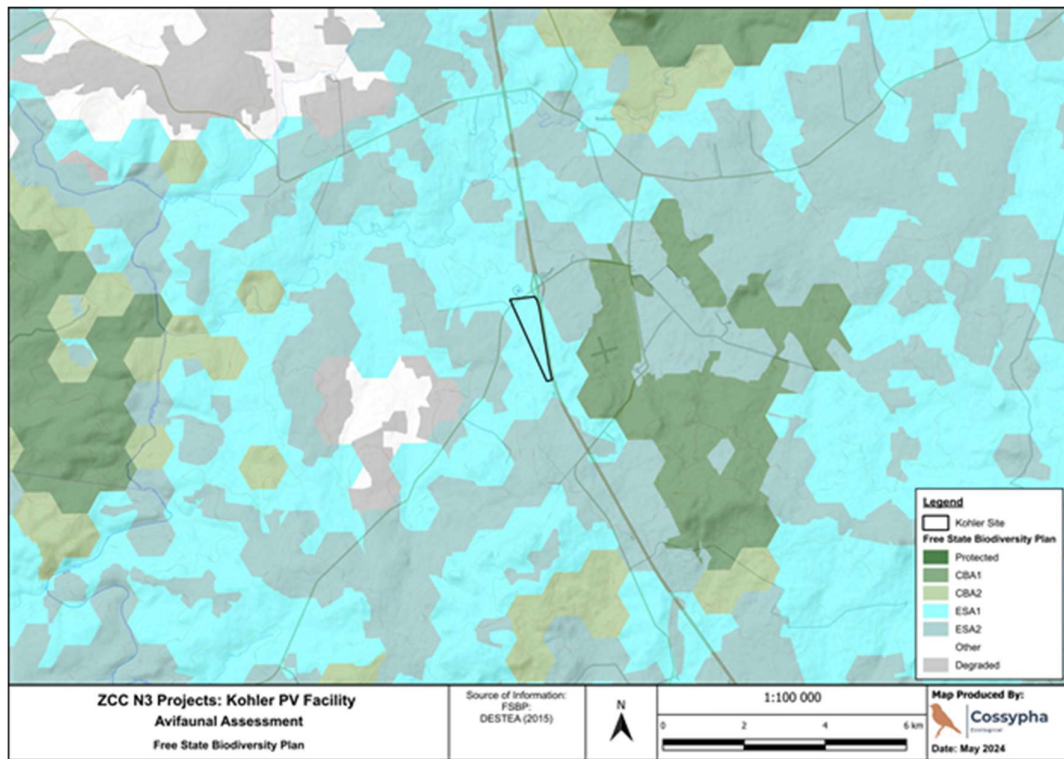


Figure 13: FSBP (2015), indicating that the site does not fall within a Critical Biodiversity Area (CBA)

4.6 AVIFAUNA

A preliminary Avifaunal Assessment has been undertaken, and the preliminary findings have been incorporated into this Pre-application Scoping Report. The assessment will be completed and finalised during the Environmental Impact Assessment (EIA) phase.

The preliminary Avifaunal Assessment provides an overview of the avifaunal sensitivity of the study area, identifies potential constraints to the proposed development, and determines whether additional baseline surveys are required to adequately inform the detailed Avifaunal Impact Assessment. The preliminary assessment is based on a desktop review of available information, supplemented by a reconnaissance field survey of the proposed development site.

A DFFE National Web-based Environmental Screening Tool Report was generated (refer to Section 5.2), which classified the avifaunal sensitivity of the proposed development area as Low. Notwithstanding this rating, the Environmental Assessment Practitioner (EAP) considers an Avifaunal Impact Assessment necessary due to the nature and scale of the proposed development, as well as the potential occurrence of bird species of conservation concern within the broader area. Several bird species, including vulnerable and endangered raptors, have been recorded in the vicinity of the proposed development site. Accordingly, a detailed Avifaunal Impact Assessment will be undertaken during the EIA phase to assess potential impacts and recommend appropriate mitigation measures.

4.6.1 Distribution of avifauna in the study area

According to SABAP2 data, 145 bird species have been recorded within the pentad (2730_2850) in which the majority of the study area occurs, together with the adjacent pentad (2730_2845). Of these,

approximately 90 species can be regarded as priority species with respect to their sensitivity to solar photovoltaic (PV) developments. These include Species of Conservation Concern (SCC), range-restricted species, small passerines that congregate in large numbers, and large-bodied species such as waterfowl, herons, gamebirds and raptors (including owls and vultures) (Jenkins *et al.*, 2017).

According to the SABAP2 data, the priority species most frequently recorded within these pentads include gregarious passerines, several waterfowl species (ducks and geese), and gamebirds and large bird species such as herons, guineafowl and Hadedda Ibises.

Although no priority species were recorded during the site visit, there is a reasonable likelihood that certain species may utilise the study area from time to time, primarily for foraging purposes. Documented records of priority species occurring within approximately 10 km of the proposed development include several Species of Conservation Concern (SCC), namely the Near Threatened (NT) Blue Korhaan, Endangered (EN) Grey Crowned Crane, Vulnerable (VU) Southern Bald Ibis, Vulnerable (VU) Lanner Falcon, and Endangered (EN) African Marsh Harrier.

4.6.2 Key habitats and preliminary sensitivity

The natural grassland vegetation within the broader surrounding area represents the primary habitat for avifauna in the region. Key habitat features, including drainage lines, farm dams, wetlands and rocky koppies, contribute to habitat heterogeneity and support a diversity of bird species, including priority species such as gamebirds, waterfowl, raptors and gregarious passerines.

The majority of the study area comprises natural to near-natural grassland that has been moderately disturbed by livestock grazing and, to a lesser extent, the proximity of the N3 highway. This habitat is considered to be of medium sensitivity. The north-western corner of the site, where the S589 road traverses the property, is considered modified (low sensitivity), while the grassland adjacent to the road has been disturbed by historical land use activities and is considered to be of medium-low sensitivity.

Key habitats within the study area include the natural rocky outcrop located in the southern portion of the site, which is considered to be of high sensitivity. The preliminary layout has been designed to avoid this feature. Although no streams or wetlands occur within the proposed development footprint, the upper reaches of a drainage line that feeds a small farm dam immediately north of the site are considered to be of high sensitivity and will be further assessed during the EIA phase.

Table 4: Site feature sensitivity rating - Avifauna Assessment

Site Feature	Description and Recommendation	Sensitivity Rating
Drainage lines, wetlands, and dams	Drainage lines, wetlands, and dams provide important habitat for avifauna and are usually areas of high biodiversity. The small drainage line and dam just to the north of the site are considered highly sensitive	High
Rocky outcrops	Rocky areas are considered highly sensitive as they increase local habitat heterogeneity and species diversity	High
Natural / near-	Although disturbed by grazing cattle, the grassland covering the majority of the site is natural and provides the main habitat for the avifauna found in	Medium

natural grassland	the area. This habitat is considered to be of medium sensitivity	
Modified habitat / disturbed grassland	Areas of natural grassland that have been disturbed or modified in the past are of medium-low sensitivity	Medium-low
Modified – roads	Areas that have been modified by road construction are not considered sensitive	Low

4.6.3 Protected areas and Important Bird Areas

According to the latest versions of the South African Protected Areas Database (SAPAD) and the South African Conservation Areas Database (SACAD) (DEA, 2023a; 2023b), the proposed development site is not located within or immediately adjacent to any protected area. The nearest protected area is the Shozaloza Safaris Nature Reserve, located approximately 16 km south-east of the site. The Schuinshoogte Game Farm is situated approximately 22 km to the south-east, while the Moreson Nature Reserve occurs approximately 22 km to the east.

The proposed development site does, however, fall within a National Protected Area Expansion Strategy (NPAES) Priority Focus Area associated with the Free State Highveld Grasslands. The study area is not located within an Important Bird Area (IBA).

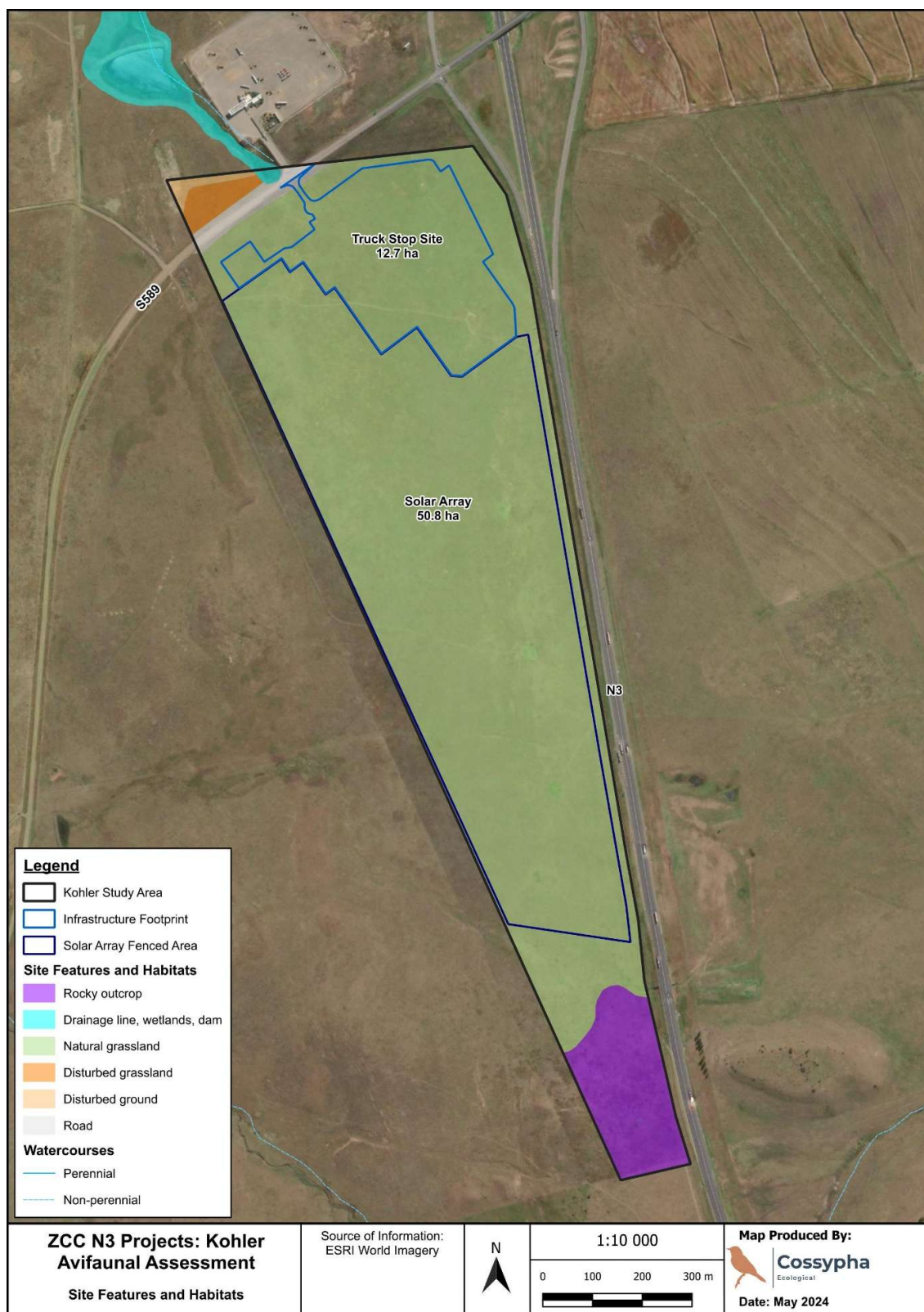


Figure 14: Site features and habitats

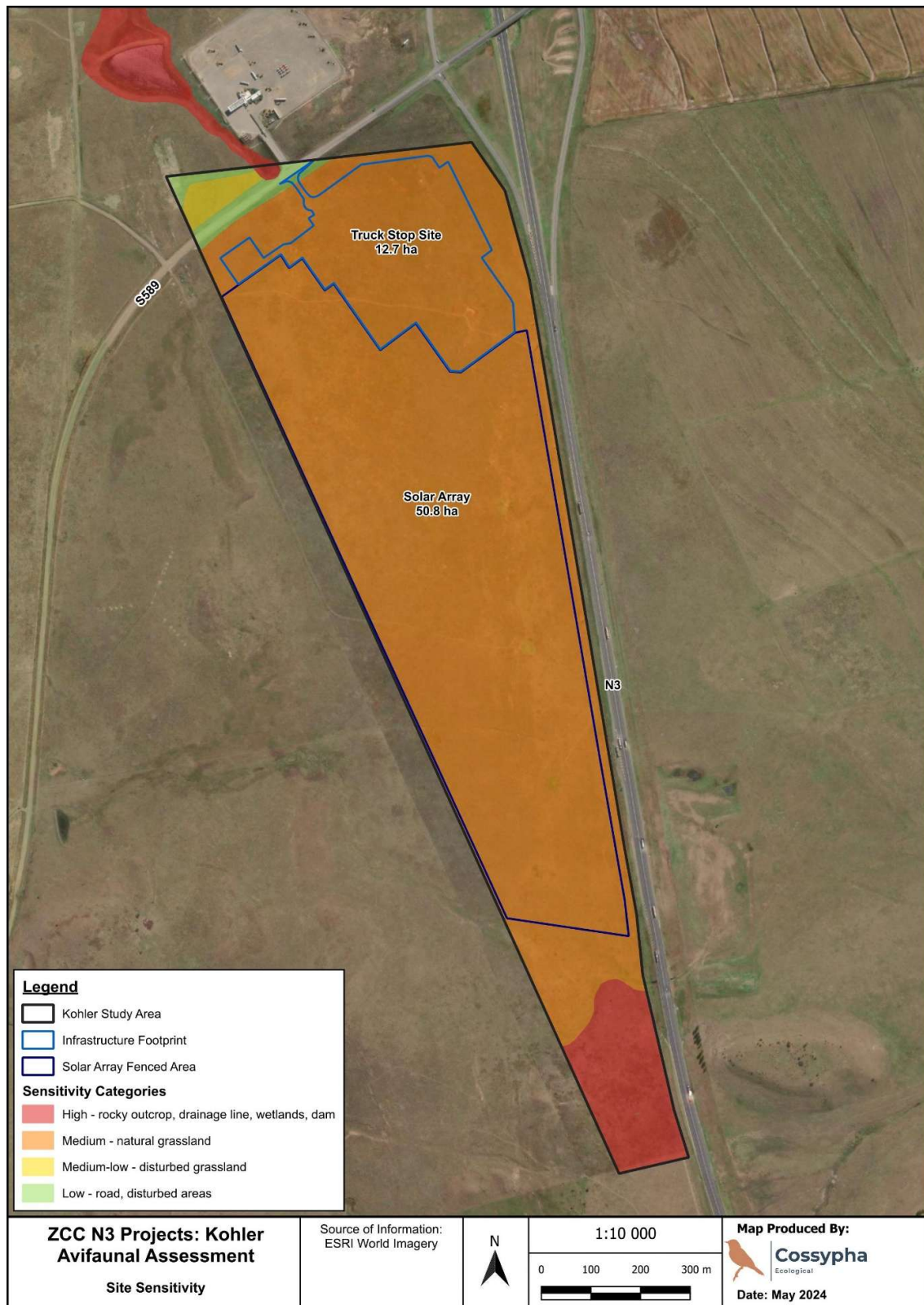


Figure 15: Preliminary avifaunal habitat sensitivity

4.7 FRESHWATER

A preliminary Freshwater Assessment has been undertaken, and the preliminary findings have been incorporated into this Pre-application Scoping Report. The assessment will be completed and finalised during the Environmental Impact Assessment (EIA) phase.

A Freshwater Assessment evaluates the potential impacts of a proposed development on freshwater resources, including watercourses and wetlands. It considers aspects such as hydrology, water quality, aquatic habitat and ecosystem functioning to inform the environmental assessment process and identify appropriate mitigation measures.

A DFFE National Web-based Environmental Screening Tool Report was generated (refer to Section 5.2), which classified the aquatic biodiversity sensitivity of the proposed development area as Very High.

The aquatic biodiversity sensitivity is rated as Very High due to the site's association with a Freshwater Ecosystem Priority Area (FEPA) sub-catchment and its inclusion within the National Protected Area Expansion Strategy (NPAES) for the Free State Highveld Grasslands. The preliminary Freshwater Assessment has identified freshwater features associated with the broader study area, and the significance of these features, together with the associated buffer requirements and potential development constraints, will be confirmed during the EIA phase.

4.7.1 Drainage lines

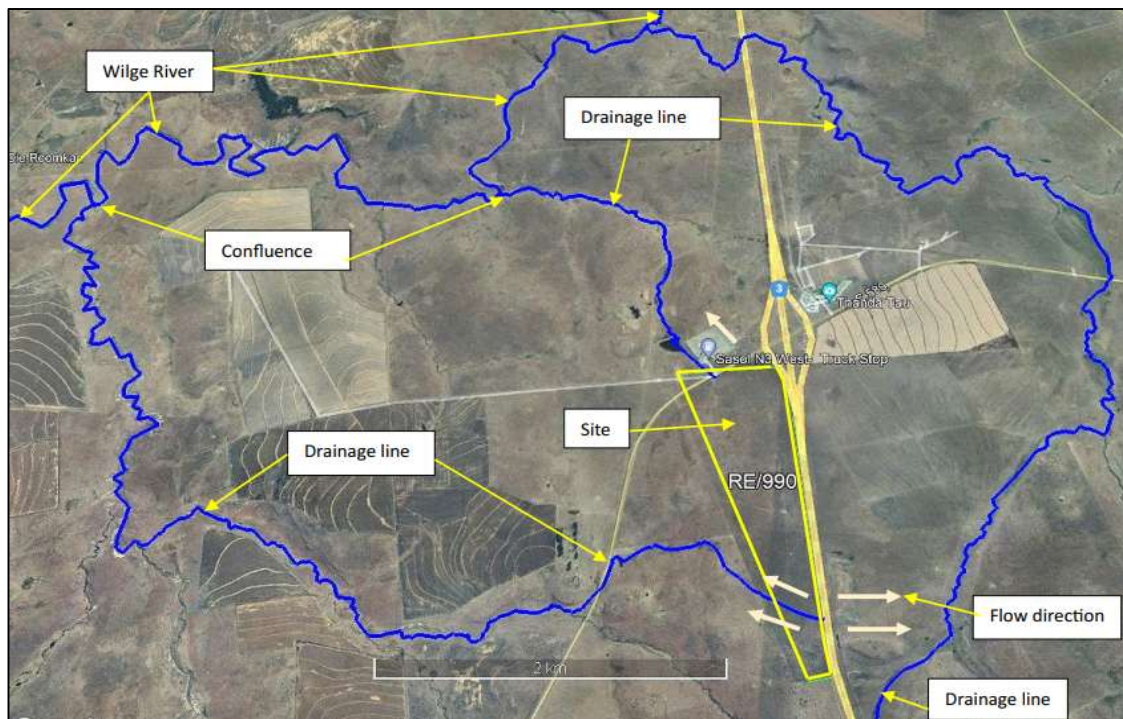


Figure 16: Drainage lines

None of the drainage features on or immediately adjacent to the proposed development site is identified as National Freshwater Ecosystem Priority Areas (NFEPA) in the National Freshwater Ecosystem

Priority Areas database. The nearest NFEPA river is the Wilge River, located approximately 2.15 km from the proposed development site.

The aquatic biodiversity sensitivity has been classified as Very High by the DFFE National Web-based Environmental Screening Tool, despite none of the drainage features on or immediately adjacent to the proposed development site being identified as National Freshwater Ecosystem Priority Areas (NFEPA). This rating is attributable to the site being located within the C82F quaternary catchment, which forms part of a Freshwater Ecosystem Priority Area (FEPA) sub-catchment. The sub-catchment falls within the Wilge River catchment, an important water resource contributing to the Vaal Dam catchment, which supplies water to Gauteng, South Africa's primary economic hub.

4.7.2 Present Ecological State

The drainage line extending from the N3 embankment to the eastern boundary of the site is considered to be in an approximately natural ecological condition, with livestock grazing representing the primary anthropogenic disturbance observed during the site visit. At the time of the survey, the area had received summer rainfall and was characterised by well-established grass cover. Runoff from the N3 contributes to the hydrological regime of the drainage line. The instream habitat is considered to be in a largely natural condition, with ecosystem functioning remaining intact. Similarly, the riparian zone showed little evidence of disturbance during the site visit.

The preliminary development layout positions the proposed charging facility well away from this drainage line, and stormwater generated by the proposed development has been designed to drain away from the watercourse. Based on the current layout, significant impacts on the ecological condition of this drainage line are not anticipated. A minimum 32 m buffer on either side of the drainage line is considered sufficient to protect its ecological functioning. The adequacy of this buffer and any additional mitigation measures will be confirmed during the EIA phase.

The northern drainage line has been substantially modified by the construction of the road embankment and associated culvert infrastructure. As a result, both the instream habitat and the riparian zone are considered to be moderately modified. The proposed charging facility has the potential to result in additional alterations to local runoff patterns through the introduction of impermeable surfaces such as roofs, parking areas and associated infrastructure. However, provided that appropriate stormwater management measures are implemented, the preliminary Freshwater Assessment indicates that the ecological condition of this drainage line is unlikely to deteriorate beyond its current moderately modified state. This will be confirmed during the detailed Freshwater Assessment in the EIA phase.

Table 5: Present Ecological State - Class

Drainage line	Instream	Riparian
Transverse drainage line	B	A
Northern drainage line	C	C

Table 6: Categories assigned to the scores for wetland habitat assessment

Category	Score	Description
A	>4	Unmodified or approximated natural condition.
B	>4 and ≤3	Largely natural with few modifications, but with some loss of natural habitats.
C	>2 and ≤3	Moderately modified, but with some loss of natural habitats.

D	2	Largely modified with a large loss of natural habitat and ecosystem function.
E	>0 and ≤2	Seriously modified with extensive loss of habitat and ecosystem function.
F	0	Critically modified with a near-complete loss of natural habitat.

The overall Present Ecological State (PES) assessment classifies the dam as Category C (Moderately Modified). Although the dam is an artificial waterbody, it currently provides aquatic habitat and performs ecological functions within the local landscape. The proposed charging facility has the potential to increase runoff to the dam through the introduction of additional impermeable surfaces. However, based on the preliminary Freshwater Assessment, this increase is not expected to be significant or sufficient to result in a deterioration of the Present Ecological State beyond its current Category C (Moderately Modified) classification. This conclusion will be confirmed during the EIA phase.

4.8 AGRICULTURE

A preliminary Agricultural Compliance Statement has been undertaken, and the preliminary findings have been incorporated into this Pre-application Scoping Report. The assessment will be completed and finalised during the Environmental Impact Assessment (EIA) phase.

An Agricultural Compliance Statement aims to identify and assess the agricultural characteristics and capability of the proposed development area, evaluate the potential impacts of the proposed development on agricultural resources, and provide recommendations to inform the environmental assessment process.

A DFFE National Web-based Environmental Screening Tool Report was generated (refer to Section 5.2), which classified the agricultural sensitivity of the proposed development area as High. The High sensitivity rating is primarily attributable to the moderate to high land capability identified for portions of the site. However, the current land use comprises predominantly natural grassland utilised for livestock grazing, with no cultivated fields or irrigated crops occurring within the proposed development footprint.

The agricultural sensitivity reflected in the DFFE Screening Tool is based on a combination of land use (South African National Land Cover (SANLC), 2014) and land capability (Department of Agriculture, Forestry and Fisheries (DAFF), 2017). In terms of the Screening Tool methodology, all cultivated land is assigned a High sensitivity, while irrigated land and unique agricultural land are assigned a Very High sensitivity, irrespective of land capability. The land use classification utilised by the Screening Tool is based on the SANLC (2014); however, more recent land cover datasets (2018 and 2020) are also available.

According to DAFF (2017), land capability is defined as the most intensive long-term use of land for rain-fed agriculture, determined by the interaction of climate, soil and terrain. Land capability is determined using the following weighting:

$$\text{Land Capability} = \text{Climate (40\%)} + \text{Terrain (30\%)} + \text{Soil (30\%)}$$

The DAFF (2017) land capability assessment classifies the soils within the proposed development area as having low to moderate and moderate to high agricultural capability (Figure 17). No cultivated fields occur within the proposed development footprint, with the land currently being utilised primarily for livestock grazing.

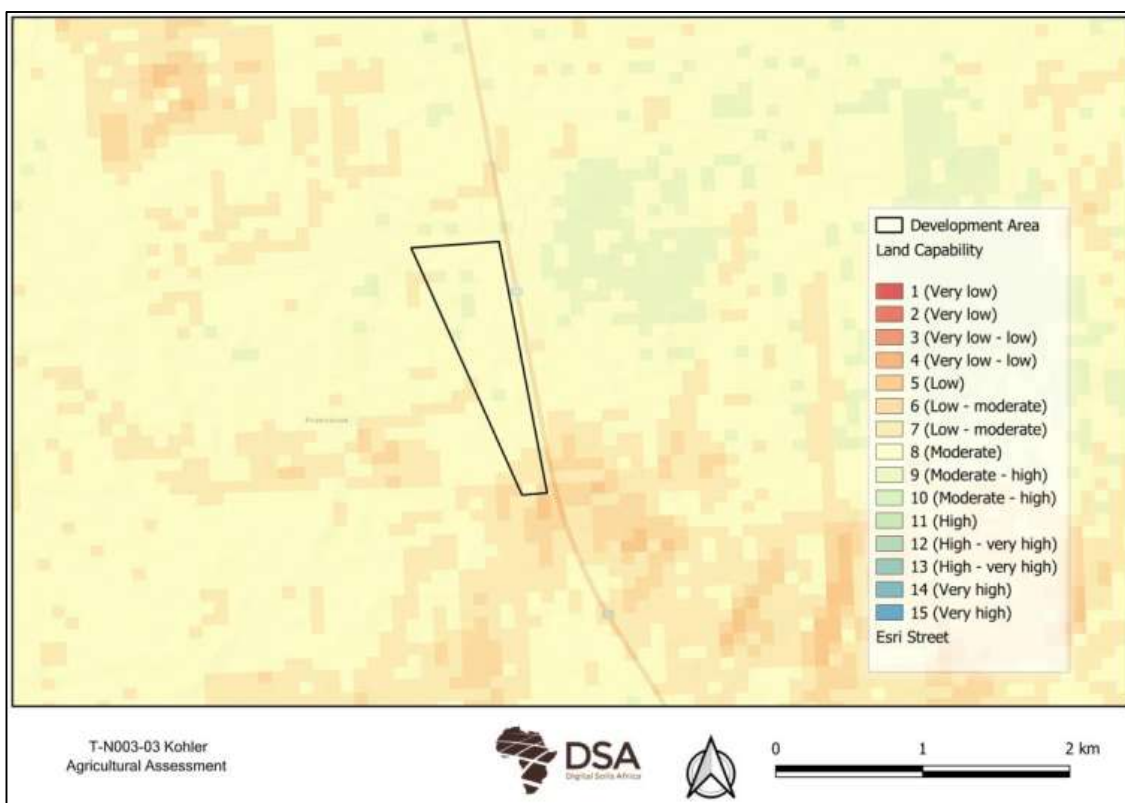


Figure 17: The land capability of the study as used in the Screening Tool

4.8.1 Land capability

According to DAFF (2017), land capability is defined as the most intensive long-term use of land for rain-fed agriculture, as determined by the interaction between climate, soil and terrain. The relative contribution of each attribute to the overall land capability assessment is as follows:

$$\text{Land Capability} = \text{Climate (40\%)} + \text{Terrain (30\%)} + \text{Soil (30\%)}$$

4.8.1.1 Climate capability

According to the preliminary Agricultural Compliance Statement (May 2024), the climate of the study area is characterised as mild to moderate. The Köppen-Geiger climate classification is Cwb⁶. The average annual temperature is 15.2 °C. Rainfall occurs predominantly during the summer months, with a mean annual precipitation of approximately 799 mm. Accordingly, dryland crop production is considered possible, although climatic conditions may impose constraints on agricultural productivity.

Climate capability is the highest weighted factor (40%) in the calculation of land capability (DAFF, 2017), which is used by the DFFE Screening Tool to determine the agricultural sensitivity of the site. The climate capability assessment comprises nine rating classes, with 9 representing the highest capability. The climate capability is determined by factors including moisture availability, physiological suitability

⁶ Subtropical highland climate or temperate oceanic climate

and climatic constraints. According to DAFF (2017), the study area has a climate capability rating of 5, representing moderate climate capability.

4.8.1.2 Terrain capability

Terrain plays an important role in determining the suitability of land for agricultural production by influencing both plant growth requirements and land accessibility. Accordingly, the terrain capability assessment considers factors relating to plant physiology and terrain sensitivity.

The terrain capability assessment comprises nine rating classes, with 1 representing the lowest capability and 9 representing the highest capability.

According to DAFF (2017), the terrain capability of the proposed development area ranges from 5 (Moderate) to 7 (High). Overall, the site is considered to have a moderate to high terrain capability, with the majority of the proposed development footprint falling within the High (7) terrain capability class.

4.8.1.3 Soil capability

A land type is an area that can be mapped at a scale of 1:250 000, within which similar soil-forming factors and soil distribution patterns occur. A land type does not represent a single uniform soil unit but rather provides information on the occurrence and distribution of different soil forms across various terrain units. Land type information was used in the calculation of the soil capability (DAFF, 2017) and therefore indirectly contributes to the agricultural sensitivity rating generated by the DFFE Screening Tool.

The proposed development area is predominantly underlain by the Ea (31) land type, with a small portion in the southern section of the site comprising the Ea (81) land type (Land Type Survey Staff, 1972–2002) (refer to Figure 18).

The Ea land types are characterised by black and red clay soils, which comprise more than 50% of the land type. Although these clay-rich soils may exhibit shrink-swell characteristics that could present engineering considerations during construction, their relatively high water-holding capacity generally makes them favourable for agricultural production.

The soil capability assessment comprises nine rating classes, with 1 representing the lowest capability and 9 representing the highest capability. The principal factors contributing to the soil capability assessment are plant available water (80%), soil sensitivity (17%) and soil fertility (3%).

According to DAFF (2017), the proposed development area has a soil capability rating of 5, representing moderate soil capability.

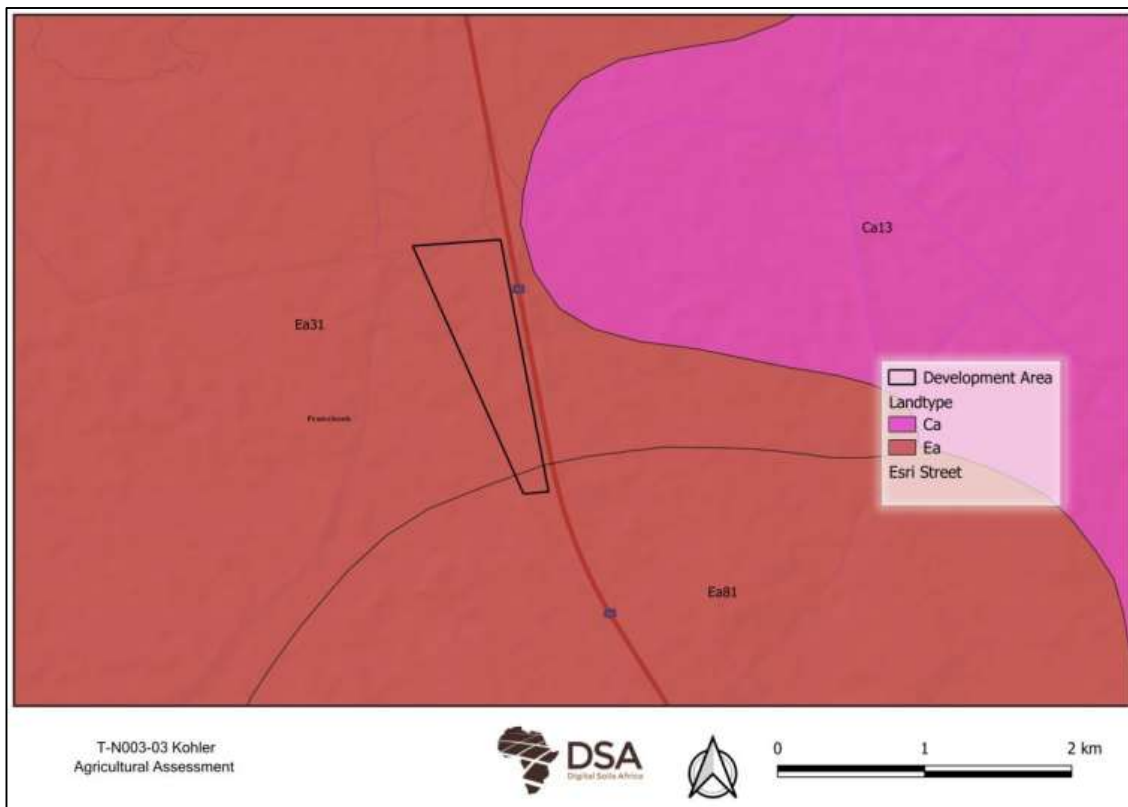


Figure 18: Land types found in the study area and the surrounding area (Land type survey staff, 1972-2002)

4.8.1.4 Land capability

The revised Land Capability Classification (Department of Agriculture, Forestry and Fisheries (DAFF), 2017) comprises 15 land capability classes, compared to the eight classes described by Schoeman *et al.* (2002). The dataset is intended for use at mapping scales of 1:50 000 to 1:100 000 and is therefore not suitable for site-specific or farm-scale planning.

- Classes 1 to 7 represent land with low agricultural capability, generally suitable only for grazing, conservation or wilderness purposes.
- Classes 8 to 15 represent arable land, with the potential for agricultural production increasing as the land capability class increases.

The proposed development area comprises land capability classes ranging from 7 (Low to Moderate) to 9 (Moderate to High), representing a transition between non-arable and arable land. The majority of the proposed development footprint falls within Land Capability Class 8 (Moderate), which is classified as arable land.

4.8.2 Grazing capacity

The Grazing capacity is expressed as hectares per Large Stock Unit (ha/LSU). The proposed development area has a relatively high grazing capacity of approximately 4–5 ha/LSU.

A Large Stock Unit (LSU) is defined as an animal with a mass of 450 kg that gains approximately 0.5 kg/day on forage with a digestible energy content of 55% (Trollope *et al.*, 1990). Grazing capacity therefore represents the area of land required to sustainably support one LSU over an extended period without resulting in deterioration of the vegetation or soil resource.

4.8.3 Land use

The South African National Land Cover 2020 (SANLC 2020) dataset (GeoTerraImage, 2020) was compared with the SANLC 2014 dataset to determine whether any significant land use changes had occurred since 2014. Very little difference in land use classification was identified within the study area.

The SANLC 2020 dataset classifies the proposed development area predominantly as Natural Grassland (Class 13). A small area in the north-western portion of the site is classified as Bare Land (Class 31), while the S589 road (Class 67) traverses the study area (refer to Figure 19).

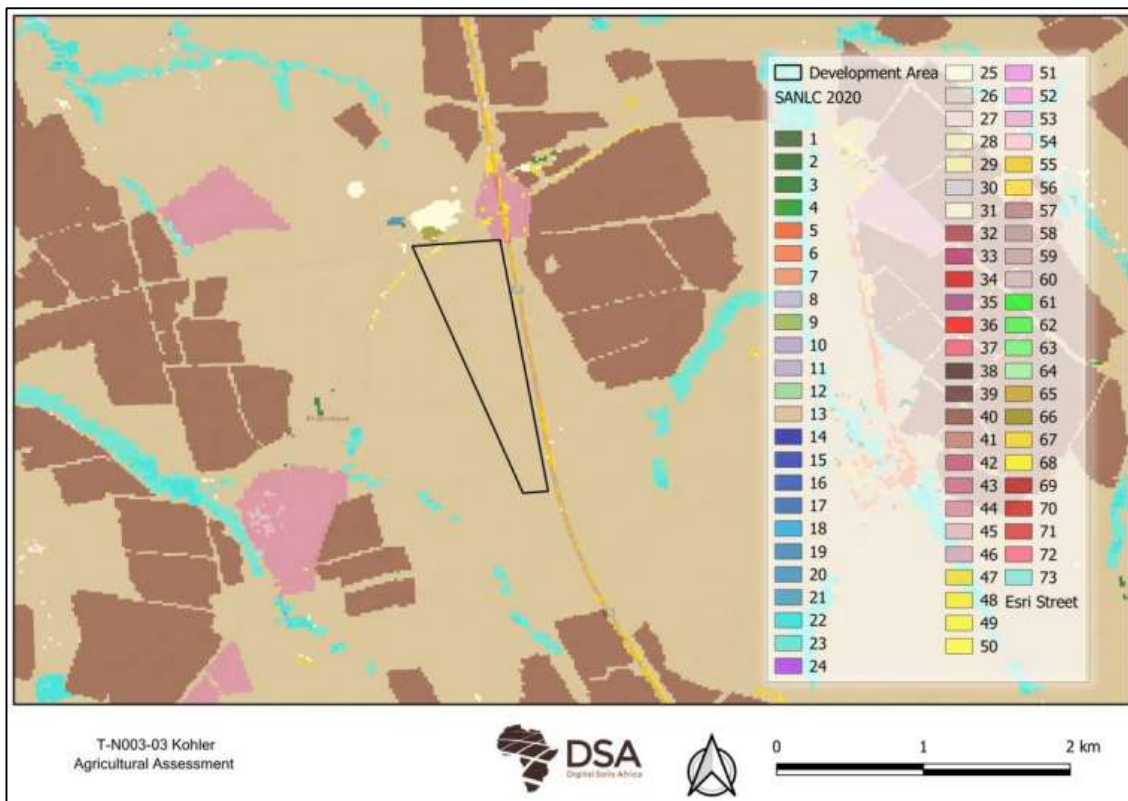


Figure 19: South African National Land-Cover 2020 (SANLC, 2020)

4.8.4 Site verification

On 9 November 2023, the specialist, Darren Bower, undertook a field verification survey using a soil auger. Soil profiles were observed, described and classified in accordance with the Soil Classification Working Group (2018) guidelines. The locations of the soil observation points are illustrated in Figure 20.

The study area is characterised predominantly by shallow soils, with the exception of a small area located within a slight depression in the northern portion of the site, where soils exhibit signs of poor drainage. Rock outcrops occur throughout much of the study area. Apart from the poorly drained soils within the depression, the soils are relatively uniform, with the primary variation being a slight increase in soil depth where the lithic horizon is moderately weathered. No evidence of historical or current cultivation was observed during the site survey.

Table 7: Soil types found in the study area

Soil type	A horizon	B horizon	Land capability
Glenrosa	Orthic A	Lithic	Medium
Mispah	Orthic A	Rock	Medium
Westleigh	Orthic A	Soft plinthic	Low



Figure 20: Observations made during the site visit

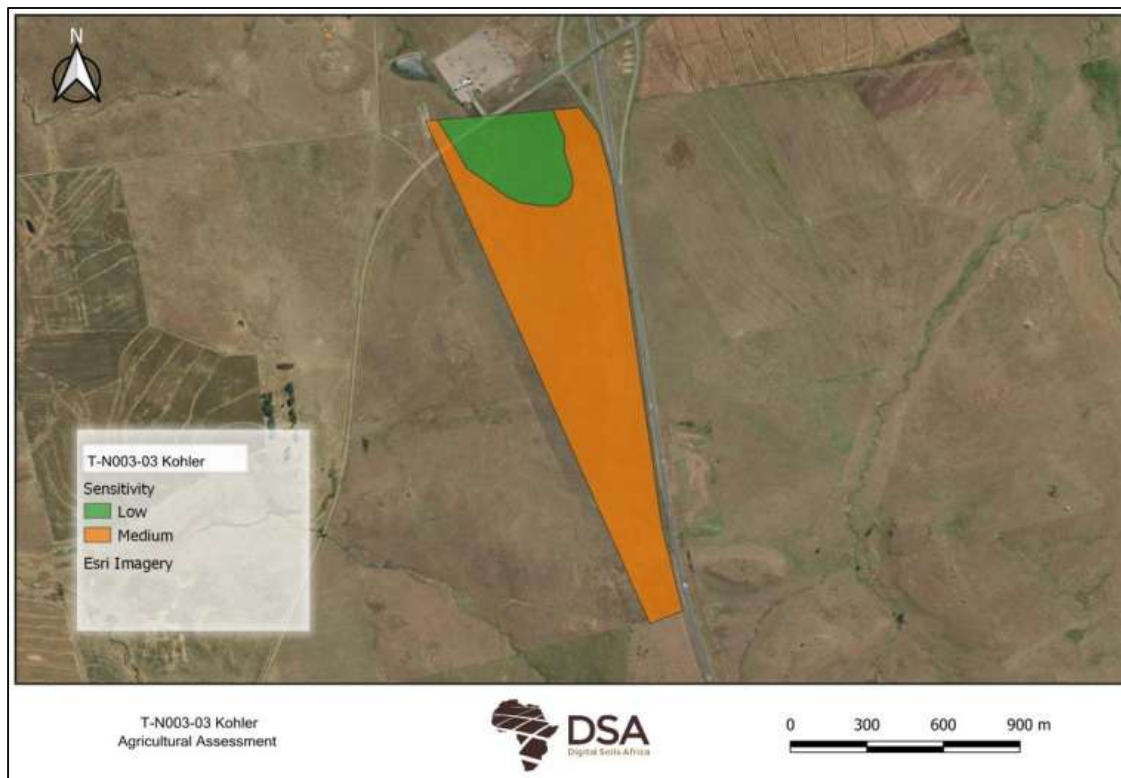


Figure 21: The agricultural sensitivity of the site



Figure 22: An example of a sample of Glenrosa soil type augured in the study area during site verification

4.8.5 Protected Agricultural Area

The Preservation and Development of Agricultural Land Framework (PD-ALF) is currently in the process of being promulgated. Once enacted, this legislative framework will replace the Subdivision of Agricultural Land Act, 1970 (Act No. 70 of 1970).

The draft framework defines a Protected Agricultural Area as:

"An agricultural land use zone protected for the purposes of food production and ensuring that high-potential and best available agricultural land are protected against non-agricultural land uses in order to promote long-term agricultural production and food security."

According to the preliminary Agricultural Compliance Statement, the proposed development site is not located within a Protected Agricultural Area.

4.9 HERITAGE / ARCHAEOLOGICAL & PALAEOONTOLOGICAL

An initial Heritage / Archaeological Impact Assessment has been undertaken, with the preliminary findings included in the pre-application Scoping Report; however, it will be finalised during the EIA phase.

A Heritage Assessment, like the Heritage Survey conducted for the proposed development, aims to identify and assess the heritage / archaeological and palaeontological themes associated with the proposed development area and the environmental interactions and impacts it imposes.

A Screening Tool Report was generated (see Section 4.2) **and classified the proposed development area's environmental sensitivity themes as the following:**

- **Archaeology and Cultural Heritage (low)**
- **Palaeontology (very high)**

The archaeological and cultural heritage sensitivity is low; however, after a phase 1 heritage survey it was determined that most of the site has no heritage features, except for stone walled features associated with the dolerite outcrop (koppie) in the south of the site. These features are of medium to high heritage significance. The palaeontological sensitivity is very high due to the likelihood of finding significant fossils within the geologic unit associated with the site.

A Notice of Intent to Develop (NID) will also be submitted to the Heritage Authority.

4.9.1 Heritage / Archaeological findings

A desktop assessment is conducted using databases which include information on archaeological sites, national and provincial monuments, battlefields, and cemeteries in Southern Africa. These databases aid in locating and dating heritage / archaeological sites like buildings, graves, monuments, etc. Topographical maps and aerial photographs are also utilised and consultations with local data recording centres, historical architects, palaeontologists, and historians may be necessary.

Once heritage / archaeological sites have been identified, the significance of each recorded site is rated. Sites are categorised into low, medium, and high significance. Depending on the significance determined, a corresponding mitigation measure is recommended based on the impact on the proposed development. The desktop study consisted of analysing various maps for evidence of prior habitation in the study area, as well as for previous archaeological surveys. There are no known surveys within the study area.

The area occurs ~25 km south of Ntsuanatsatsi, the birthplace of the Basotho Nation (Maggs 1976. Another similar site is OU2 that occurs 51km northeast of the study area. Both sites were partially excavated and date to the 15th century. Both of these sites are relating Type N stone walling.

The Google Earth imagery indicates that there are many stone walled structures in the southern part of the study area. These types of sites extend to all of the hilltops in the general area. There are several recorded family cemeteries in the general area and these would relate to specific farmhouses. The adjacent farm, Rooikraal, has a cemetery for farm labourers. Other types of heritage sites include 18th and 19th century farm buildings.

However, most of the study area has no heritage features, except for the dolerite outcrop (*koppie*) in the south. The *koppie* consists of many primary enclosures with multiple secondary walling. There is no cultural deposit and there is a distinct lack of artefacts to suggest the walling was used for domestic purposes. The walling appears to have been robbed for the adjacent stone walling.

Figure 23 indicates the central point of each byre or *kraals* with a few possible houses. These stone-walled features are associated with Type N settlements that date to the 15th century. Most of the hilltops within a 50km radius have Type N or Type V stone-walled settlements. These are of medium to high heritage significance.

A few possible graves occur around the site, but these need to be confirmed. Sites such as this one are abundant across the local landscape, and better-preserved examples occur. The stone-walled area will not be affected by the proposed development.



Figure 23: Location of stone-walled features – Outcrop (*koppie*) in the south of the site



Figure 24: Stone walled features

4.9.2 Palaeontological findings

The palaeontological sensitivity is very high due to the likelihood of finding significant fossils within the geologic unit associated with the site. However, as per the SAHRIS palaeontological sensitivity map (Figure 25) the area associated with the site has an insignificant / zero (grey) sensitivity.

A desktop study indicates that the site may consist of intrusive rocks out of the Phanerozoic eon, the Palaeozoic era and Permian and carboniferous time periods. The sedimentary and volcanic rocks expected to be encountered on site is Balfour Formations forming part of the Adelaide subgroup in the Beaufort group which is part of the Karoo Supergroup. Intrusive rocks consisting of the Karoo Dolerite Suite may also be encountered on site.

The study area is in an area of no palaeontological sensitivity. No further palaeontological mitigation is required.



Figure 25: Palaeontological sensitivity map

Table 8: Palaeontological sensitivity rating

Colour	Sensitivity	Required action
Red	Very high	Field assessment and protocol for finds is required.
Orange / Yellow	High	Desktop study is required and based on the outcome of the desktop study, a field assessment is likely.
Green	Moderate	Desktop study is required.
Blue	Low	No palaeontological studies are required; however, a protocol for finds is required.
Grey	Insignificant / Zero	No palaeontological studies are required.
White / Clear	Unknown	These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

4.10 SOCIO-ECONOMIC CONTEXT

4.10.1 Thabo Mofutsanyana District Municipality

The Thabo Mofutsanyana District Municipality, located in the Free State Province, covers an area of approximately 30 000 km². According to the Municipality's Integrated Development Plan (IDP), the District has a population of approximately 800 000 people. The District comprises six local municipalities, namely Dihlabeng, Maluti-a-Phofung, Mantsopa, Nketoana, Phumelela and Setsoto. Agriculture is one of the principal economic sectors within the District, with maize, wheat and livestock production forming an important component of the local economy. The District also supports a well-established tourism sector centred around attractions such as the Golden Gate Highlands National Park, the Drakensberg Mountain region and associated outdoor recreation opportunities.

The District is traversed by the N3 National Route, one of South Africa's most important freight and transport corridors linking Johannesburg and Durban. The N3 facilitates the movement of goods, services and people between the country's principal economic centres and plays a significant role in

supporting regional economic development, trade and investment. The strategic location of the proposed development along this transport corridor supports the provision of renewable energy infrastructure and electric truck charging facilities required to facilitate the transition towards lower-carbon freight transport.



Figure 26: Thabo Mofutsanyana District Municipality⁷

The Thabo Mofutsanyana District Municipality's Gross Domestic Product (GDP) was projected to be approximately R29 billion (constant 2015 prices) in 2023, contributing approximately 17.5% of the total GDP of the Free State Province. The District has recorded an average annual economic growth rate of approximately 1.3%, reflecting modest but steady economic growth. Although the regional economy has experienced periods of constrained growth, there are indications of gradual recovery, particularly within the agricultural and tertiary sectors.

During 2017, all local municipalities within the District recorded positive economic growth. Setsoto recorded growth of 7.1%, Dihlabeng 4.7%, Nketoana 8.7%, Maluti-a-Phofung 1.4%, Phumelela 4.8%, and Mantsopa 7.7%. This growth was largely attributed to increased agricultural production. The tertiary sector remains the largest contributor to the District's Gross Value Added (GVA), accounting for approximately 72.3%, with community services contributing 29.4%. Within the primary sector, agriculture contributes 11.5%, while manufacturing accounts for 7.6% of the secondary sector.

⁷ <https://municipalities.co.za/>

The proposed development has the potential to contribute positively to the local economy through employment creation during both the construction and operational phases, increased demand for local goods and services, and investment in renewable energy and electric vehicle infrastructure. Owing to its strategic location along the N3 freight corridor, the development will support the transition towards lower-carbon freight transport, improve regional logistics infrastructure, and contribute to broader economic diversification and resilience within the District.

According to the Thabo Mofutsanyana District Municipality Integrated Development Plan (IDP) 2025/2026, the most recent detailed employment statistics available for the District remain those derived from Statistics South Africa Census 2011. At that time, the majority of the economically active population was employed within the formal sector, followed by the informal sector and private households. The table below summarises the employment distribution by sector and gender.

Unemployment within the District was estimated at 32.0% in 2017, with women experiencing higher unemployment (39.1%) than men (32.4%). The Maluti-a-Phofung Local Municipality recorded the highest unemployment rate (44.1%), followed by Setsoto (34.9%) and Phumelela (26.4%). These figures continue to demonstrate the need for investment, economic diversification and sustainable job creation initiatives within the District. The proposed development is expected to make a positive contribution towards these objectives through temporary employment during construction, permanent operational employment, and increased economic activity associated with the provision of renewable energy and electric truck charging infrastructure.

4.10.2 Phumelela Local Municipality

The Phumelela Local Municipality, a Category B municipality, is situated within the Thabo Mofutsanyana District Municipality in the Free State Province. It is the largest local municipality in the District by geographical extent, accounting for approximately one-quarter of the District's total area. The municipality comprises the towns of Vrede, Warden and Memel, together with the surrounding rural farming communities.

The local economy is strongly influenced by the agricultural sector, particularly crop production and livestock farming. Agricultural activities include the production of maize, wheat, sunflower and other field crops, together with cattle and sheep farming. Limited agro-processing activities, including grain handling, milling, cold storage and meat processing, support the agricultural sector. In addition to agriculture, the wholesale and retail trade, catering and accommodation sector contributes significantly to the local economy, while the finance, insurance, real estate and business services sector, together with transport and storage, also play an important economic role owing to the municipality's strategic location along the N3 freight corridor. Building and construction further contribute to local economic activity through ongoing infrastructure development.

The Municipality continues to promote Local Economic Development (LED) through investment promotion, business support, infrastructure development, tourism promotion and support for small, micro and medium enterprises (SMMEs). The review and implementation of the Municipality's Local Economic Development Strategy remains a priority, with the objective of stimulating sustainable economic growth, improving employment opportunities and enhancing the quality of life of local communities.

According to the Phumelela Local Municipality Integrated Development Plan (IDP) 2025/2026, the most recent detailed employment statistics available remain those derived from Statistics South Africa Census 2011. At that time, 10,681 people between the ages of 15 and 64 years were employed, comprising 7,067 males and 3,613 females. The unemployment rate was approximately 25.3%, with

female unemployment exceeding that of males. The Municipality continues to recognise unemployment, poverty and limited economic opportunities as key development challenges, highlighting the need for investment, economic diversification and sustainable job creation.

The proposed development has the potential to contribute positively to the local economy through temporary employment during the construction phase, permanent employment during operation, increased demand for local goods and services, and investment in renewable energy and electric vehicle infrastructure. Given its strategic location along the N3 corridor, the project is also expected to support regional freight logistics and contribute to the Municipality's broader economic development objectives.

Table 9: Phumelela Local Municipality - Employment data (IDP 2022-2027)

Employment Status	Gender		Total	Unemployment rate
	Male	Female		
Employed	7067	3616	10681	25.3%
Unemployed	1437	2186	3624	
Not economically active	5988	9473	15461	

According to the Phumelela Local Municipality Integrated Development Plan (IDP) 2025/2026, the most recent detailed employment statistics available remain those derived from the Statistics South Africa Census 2011. The employment distribution by sector and gender for individuals aged 15 to 64 years is summarised in the table below. The majority of the employed population (7,745 individuals) were employed in the formal sector, comprising 5,294 males and 2,451 females. The informal sector employed 1,368 individuals (979 males and 389 females), while private households employed 1,293 individuals, with a higher proportion of females (701) than males (592). These figures indicate that the formal sector was the largest employer within the Municipality, followed by the informal sector and private households.

Although these employment statistics are based on the 2011 Census, they continue to provide the most recent detailed breakdown of employment by sector and gender available for the Municipality. The Phumelela Local Municipality IDP (2025/2026) identifies unemployment, poverty and limited economic opportunities as key socio-economic challenges, highlighting the need for investment, economic diversification and sustainable job creation initiatives.

The proposed development has the potential to contribute positively to the local economy through the creation of employment opportunities during both the construction and operational phases. The project is expected to generate demand for local labour, goods and services, while supporting employment within the construction, transport, logistics, maintenance and renewable energy sectors. Furthermore, the development of an electric truck charging facility and associated renewable energy infrastructure along the N3 corridor will contribute to regional economic development, strengthen freight logistics infrastructure and support the transition towards a more sustainable transport sector, consistent with the Municipality's broader economic development objectives.

5 ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS

Potential environmental issues have been identified through desktop investigations, site visits, consultation with the project team, preliminary specialist input, and comments received from authorities and Interested and Affected Parties (I&APs) during the pre-application public participation process.

These issues have informed the scope of the Environmental Impact Assessment (EIA) and will be assessed in detail through the specialist studies to be undertaken during the EIA phase. The findings of the specialist assessments, together with the significance of the identified impacts and proposed mitigation measures, will be incorporated into the Draft Environmental Impact Report (EIR).

Any additional issues identified through the ongoing public participation process, specialist investigations or consultation with commenting authorities will be documented and addressed in the Draft Scoping Report, with the final list of environmental issues and the Plan of Study for EIA presented in the Final Scoping Report.

The following potential environmental issues have been identified:

5.1 BIODIVERSITY IMPACT

A preliminary Terrestrial Biodiversity Assessment has identified a number of biodiversity features that require further investigation during the Environmental Impact Assessment (EIA) phase. Although the proposed development area has been historically utilised for livestock grazing and portions of the vegetation show evidence of disturbance, the site comprises predominantly natural grassland and contains biodiversity features that require further assessment.

The Terrestrial Biodiversity Assessment will evaluate:

- the biodiversity characteristics of the proposed development area, including vegetation communities, flora, fauna and terrestrial ecological processes;
- the significance of potential impacts associated with the proposed development and any reasonable alternatives, both with and without mitigation;
- opportunities to avoid or minimise impacts through refinement of the development layout;
- appropriate mitigation, rehabilitation and monitoring measures; and
- any residual impacts remaining after mitigation.

5.2 FRESHWATER IMPACT

A preliminary Freshwater Assessment has been undertaken to identify freshwater resources associated with the proposed development area and to identify potential impacts that may arise from the construction and operation of the proposed development. The preliminary findings indicate that the proposed electric truck charging facility and associated infrastructure are unlikely to result in significant impacts on freshwater resources, provided that appropriate mitigation measures are implemented. The findings and recommendations of the preliminary Freshwater Assessment will be confirmed and refined during the Environmental Impact Assessment (EIA) phase.

The preliminary Freshwater Assessment indicates that the drainage features associated with the site comprise relatively low-value aquatic habitats that are generally in a good ecological condition. Based on the preliminary risk assessment, it is anticipated that a General Authorisation may be the appropriate level of water use authorisation rather than a Water Use Licence Application (WULA). The final

authorisation requirements will be confirmed during the EIA phase and in consultation with the Department of Water and Sanitation (DWS), where required.

The preliminary Freshwater Assessment identified the following potential impacts requiring further assessment during the EIA phase:

- **Flow modification** – The existing road infrastructure, road embankments and farm dam have already altered the natural flow regime. The proposed charging facility has the potential to contribute additional stormwater runoff; however, relative to the size of the sub-catchment, this increase is expected to be limited and is not anticipated to significantly alter the existing flow regime or increase erosion potential.
- **Permanent inundation** – The proposed development is not expected to materially alter the inundation regime of the drainage features.
- **Water quality modification** – Construction activities, including excavation and earthworks, may loosen soil and create the potential for sediment-laden stormwater runoff to enter nearby aquatic habitats. Appropriate erosion and sediment control measures will be implemented to minimise this risk. Where practicable, construction activities should be undertaken during the drier months.
- **Sediment load modification** – Disturbance of soils during construction may result in increased sediment entering nearby drainage features during rainfall events. Appropriate stormwater management and sediment control measures will be implemented to prevent this impact.
- **Canalisation** – Access roads, parking areas and other impermeable surfaces may create preferential stormwater flow paths. Stormwater management measures, including landscaped swales, attenuation facilities and energy dissipation structures where required, will be incorporated into the final design to minimise erosion and maintain natural flow patterns.
- **Topographical alteration** – The proposed development is not expected to result in significant alteration of the natural topography of the site.
- **Terrestrial encroachment** – The proposed development is not expected to result in terrestrial vegetation encroaching into adjacent aquatic habitats.
- **Removal of indigenous vegetation** – Construction of the charging facility and associated infrastructure will result in the loss of natural grassland within the approved development footprint. Vegetation disturbance will be restricted to the demarcated construction areas and unnecessary disturbance of adjacent vegetation will be avoided.
- **Invasive alien vegetation** – No significant infestations of invasive alien vegetation were recorded during the site assessment. Construction activities should ensure that invasive species are not introduced or allowed to establish within disturbed areas.
- **Alien fauna** – The site is currently utilised for livestock grazing. Existing grazing practices should continue to be managed appropriately to prevent degradation of surrounding natural habitats.
- **Over-utilisation** – Continued grazing pressure should be managed to prevent overgrazing and degradation of the remaining grassland vegetation.
- **Habitat connectivity and migration** – The drainage features form part of the broader Wilge River catchment. Although regional habitat connectivity has been influenced by existing roads and other infrastructure, the proposed development is not expected to significantly increase fragmentation or impede ecological movement.
- **Groundwater** – The elevated solar PV structures are not expected to significantly affect infiltration or groundwater recharge. Consequently, no significant impacts on groundwater levels are anticipated.
- **Waste management** – Portable chemical toilets will be provided and regularly serviced during construction. During operation, wastewater will be managed through an appropriately designed septic tank and soakaway system. Solid waste will be stored in suitable receptacles and

disposed of at a licensed municipal waste disposal facility. Appropriate housekeeping measures will be implemented to ensure that waste management activities do not adversely affect the surrounding environment.

The significance of these potential impacts, together with the effectiveness of the proposed mitigation measures, will be assessed in detail during the EIA phase.

5.3 AVIFAUNAL IMPACT

5.3.1 Preliminary analysis

A preliminary Avifaunal Assessment has been undertaken to identify potential impacts associated with the proposed solar photovoltaic (PV) facility, electric truck charging station and associated infrastructure. The assessment is based on available desktop information and a reconnaissance field survey and will be completed during the Environmental Impact Assessment (EIA) phase.

Although the environmental impacts of solar photovoltaic developments on birds continue to be studied internationally, several potential impact pathways have been identified through previous research (Jenkins *et al.*, 2017).

The principal potential impacts associated with solar PV developments include:

- Permanent loss of habitat.
- Habitat fragmentation and the associated displacement of bird species, particularly species with restricted ranges.
- Collision with reflective PV panels where birds may mistake large panel arrays for water bodies (the "lake effect") (Lovich & Ennen, 2011; Smit, 2012; DeVault *et al.*, 2014; Visser, 2016; Kosciuch *et al.*, 2020; Chock *et al.*, 2021).

Additional impacts identified in the literature include temporary disturbance associated with construction activities, attraction of certain species through the creation of artificial nesting or shelter opportunities, and potential contamination associated with maintenance activities. Associated infrastructure, including roads, power lines and electrical infrastructure, may also contribute to habitat fragmentation and increase the potential for collision and electrocution (Jenkins *et al.*, 2017).

Potential impacts on avifauna during both the construction and operational phases will be assessed in detail during the EIA phase. The preliminary assessment indicates that the proposed development will require the clearance of approximately 52 ha of predominantly natural grassland vegetation for the solar PV facility and associated infrastructure. Consequently, the principal potential impacts are expected to include habitat loss and displacement of grassland-dependent bird species, particularly small passerines.

The preliminary layout has been developed to avoid the most sensitive habitats identified during the preliminary assessment, including the rocky koppie in the southern portion of the site and the drainage feature and associated farm dam located to the north of the proposed development area. Additional potential operational impacts include bird collisions with photovoltaic panels and associated power line infrastructure.

Indirect impacts that will also be assessed include the spread of invasive alien vegetation following soil disturbance, potential contamination of nearby drainage features through hydrocarbons associated with the truck charging facility and wash bay, and contamination associated with maintenance activities.

The detailed Avifaunal Impact Assessment undertaken during the EIA phase will assess the significance of these potential impacts before and after mitigation, identify appropriate avoidance and mitigation measures, and provide recommendations for monitoring during both the construction and operational phases.

Table 10: Possible impacts arising from the proposed development

Possible Impact	Source of Impact	Area and Species to be Affected	Development Phase	Nature of Impact
Loss of natural vegetation and avifaunal habitat	Clearing vegetation for installation of solar panels, roads, and buildings	Natural grassland vegetation; Small passerines; Raptors	Construction	Direct
Collision of avifauna with reflective surfaces of solar panels leading to injury or death	Solar panels perceived to be a water body by avifauna	Solar PV development site; Gamebirds, waterfowl; raptors	Operation	Direct
Collision and/or electrocution of avifauna with associated power lines	Existing power lines	Existing power lines; Gamebirds, waterfowl; raptors	Operation	Direct
Contamination of the environment by hazardous materials	Cleaning of solar panels during operation; Truck workshop, and cleaning of trucks	Watercourses downstream of the development, and soil below the panels; All species	Construction and Operation	Indirect
Spread of invasive alien plant species	Disturbance to soil and clearing of vegetation	Study area and surroundings	Construction	Indirect
Disturbance and displacement of resident bird species	Clearing of site and construction activities; Operational and maintenance activities; attraction of novel species	Site and immediate surroundings; Small terrestrial species; Common ground-dwelling gamebirds	Construction and Operation	Indirect
Habitat fragmentation	Clearing vegetation and installation of solar panels, roads, and buildings	Study area	Operation	Indirect
Increased human disturbance; Gradual environmental degradation	Disturbance to the study area, adding to existing pressures in the landscape (farming) Adding to cumulative pressures in the landscape caused by other approved or proposed renewable energy projects	Study area and surrounding natural areas	Operation	Cumulative

5.3.2 Recommendations

The preliminary Avifaunal Assessment identified several key recommendations to minimise potential impacts on avifauna and sensitive habitats. These recommendations will be refined and confirmed during the Environmental Impact Assessment (EIA) phase.

- Drainage lines, wetlands and dams provide important habitat for a variety of fauna and are generally associated with high biodiversity value. The drainage line and farm dam located immediately north of the proposed development area are considered highly sensitive. The preliminary development layout should therefore avoid these features and maintain the buffer distances recommended by the Freshwater Specialist.
- Rocky outcrops contribute significantly to habitat diversity and provide important habitat for a range of bird and other faunal species. The rocky outcrop located in the southern portion of the site is considered highly sensitive and should be avoided by the proposed development. A minimum buffer of 50 m is recommended around this feature.
- Although the grassland covering the majority of the site has been moderately disturbed by livestock grazing, it remains predominantly natural and provides important habitat for avifauna and other terrestrial fauna. This habitat is considered to be of medium sensitivity. As impacts on this habitat cannot be completely avoided, the development footprint should be limited to the minimum area required, with appropriate mitigation, rehabilitation and restoration measures implemented during construction and operation.

5.3.3 Pre-construction monitoring requirements

Although the proposed development area has been influenced by existing disturbance associated with livestock grazing and its proximity to the N3 highway, it continues to comprise predominantly natural grassland habitat capable of supporting a range of bird species occurring within the broader landscape. Existing records indicate that several priority bird species, including Species of Conservation Concern (SCC), occur within the surrounding area.

In accordance with the Best Practice Guidelines for Assessing the Impacts of Solar Energy Facilities on Birds (Jenkins *et al.*, 2017), it is recommended that appropriate pre-construction avifaunal monitoring be undertaken prior to the commencement of construction. This monitoring will form Stage 2 – Data Collection of the Avifaunal Assessment and will provide site-specific baseline information to inform the detailed impact assessment.

The baseline data collected during the monitoring programme will be used to:

- confirm the presence and seasonal use of the site by priority bird species;
- verify habitat utilisation and movement patterns within the study area;
- refine the assessment of potential impacts associated with the proposed development;
- inform the final mitigation measures and layout optimisation, where necessary; and
- provide a baseline against which any post-construction monitoring requirements can be assessed, should such monitoring be recommended.

This monitoring programme will be completed during the EIA phase and incorporated into the detailed Avifaunal Impact Assessment.

5.4 HERITAGE / ARCHAEOLOGICAL IMPACT

Potential impacts on heritage resources, including archaeological, palaeontological and cultural heritage resources, have been identified as environmental issues requiring further assessment as part of the Environmental Impact Assessment (EIA) process. A Heritage Impact Assessment (HIA) will be undertaken to identify any heritage resources that may be affected by the proposed development and to recommend appropriate avoidance, mitigation and management measures where required.

5.4.1 South African Heritage Resources Agency (SAHRA) AHRA

In accordance with Section 38(8) of the National Heritage Resources Act, 1999 (Act No. 25 of 1999) (NHRA), a Notification of Intent to Develop (NID) will be submitted to the South African Heritage Resources Agency (SAHRA) as part of the environmental assessment process. The outcome of the NID process will determine the heritage studies required and whether a Heritage Impact Assessment (HIA) is necessary.

Section 38(1) of the NHRA requires that developments meeting one or more of the following criteria be considered for heritage assessment where there is reason to believe that heritage resources may be affected:

- the construction of a road, wall, power line, pipeline, canal or other similar linear development or barrier exceeding 300 m in length;
- the construction of a bridge or similar structure exceeding 50 m in length;
- any development or activity that will change the character of a site:
 - exceeding 5 000 m² in extent;
 - involving three or more existing erven or subdivisions thereof;
 - involving three or more erven that have been consolidated within the previous five years;
 - where the cost exceeds the threshold prescribed by SAHRA or the relevant Provincial Heritage Resources Authority;
- the rezoning of a site exceeding 10 000 m² in extent; or
- any other category of development prescribed by SAHRA or the relevant Provincial Heritage Resources Authority.

The findings of the heritage process, including any requirements arising from SAHRA's review of the NID and any specialist heritage investigations, will be incorporated into the Environmental Impact Assessment (EIA) and the Draft Environmental Impact Report (EIR), where applicable.

5.4.2 Conclusion

A Phase 1 Heritage Impact Assessment of the proposed development area was undertaken in November 2023. The preliminary assessment identified that the majority of the proposed development area does not contain significant heritage resources. The principal heritage feature identified is a dolerite outcrop located in the southern portion of the site, which contains stone-walled structures associated with Type N settlements dating to approximately the 15th century.

Stone-walled settlements of this type are relatively common on hilltops within the broader region, with similar Type N and Type V settlements recorded within an approximate 50 km radius of the site. The identified stone walling is considered to be of low to medium heritage significance, primarily due to the absence of associated cultural deposits and the generally moderate state of preservation. Should any human burials or graves be identified during future investigations or construction activities, these would

be regarded as resources of high heritage significance and would require appropriate management in accordance with the National Heritage Resources Act, 1999 (Act No. 25 of 1999).

The preliminary development layout has been designed to avoid the identified stone-walled features and, based on the current layout, no direct impacts on these heritage resources are anticipated. Consequently, no heritage mitigation measures are currently considered necessary.

Should refinement of the development layout result in any direct impact on the identified stone walling, the following measures will be required:

- A permit to alter, damage or destroy the stone walling must be obtained from the South African Heritage Resources Agency (SAHRA) or the relevant heritage authority prior to the commencement of any such activities.
- The stone-walled features must be accurately surveyed, mapped and photographically recorded prior to any disturbance.
- Consideration should be given to the installation of an interpretive information board near the proposed charging facility to provide information on the historical significance of the stone-walled settlement.

The findings and recommendations of the preliminary Heritage Impact Assessment will be confirmed and, where necessary, refined during the Environmental Impact Assessment (EIA) phase.

5.5 LANDSCAPE / VISUAL IMPACT

The proposed development has the potential to result in visual impacts associated with the introduction of a solar photovoltaic (PV) facility, battery energy storage system, electric truck charging facility and associated infrastructure into the existing rural landscape. The visual environment is an important environmental resource that contributes to the scenic quality, sense of place and cultural identity of the surrounding area. Accordingly, potential visual impacts associated with the proposed development require careful assessment.

A preliminary Visual Impact Assessment has identified key landscape features, visual receptors and areas of elevated visual sensitivity within and surrounding the proposed development area. These preliminary findings will be refined during the Environmental Impact Assessment (EIA) phase.

The detailed Visual Impact Assessment will:

- identify and evaluate visually sensitive landscape features and viewpoints;
- assess the visual impacts associated with the construction and operation of the proposed development;
- evaluate the significance of visual impacts before and after mitigation;
- assess the effect of the proposed development on the sense of place and scenic character of the surrounding landscape; and
- recommend appropriate avoidance, mitigation and landscape management measures to minimise visual impacts where practicable.

5.6 AGRICULTURAL IMPACT

The proposed development is located on land currently zoned for agricultural purposes and presently utilised predominantly for livestock grazing. The development will result in the permanent loss of a relatively small portion of agricultural land within the overall farm; however, the majority of the property will remain available for agricultural use.

A preliminary Agricultural Compliance Statement has been undertaken to assess the agricultural capability and sensitivity of the proposed development area. The assessment identified the agricultural resources associated with the site and will be finalised during the Environmental Impact Assessment (EIA) phase.

5.6.1 Agricultural Compliance Statement

The preliminary Agricultural Compliance Statement identified the following:

- The climate capability of the study area was classified as moderate.
- The terrain capability ranges from moderate to high, with the majority of the proposed development area classified as high.
- The study area is predominantly underlain by the Ea broad land type, characterised by black clay soils. According to the Department of Agriculture, Forestry and Fisheries (DAFF), the soils are classified as having moderate soil capability.
- The overall land capability of the proposed development area is predominantly moderate, with portions classified as moderate to high.
- Field verification generally confirmed the desktop assessment, indicating an agricultural sensitivity of medium, with the site being dominated by natural grassland. The following observations were recorded:
 - shallow soils with moderate clay content and frequent rock outcrops;
 - a small area comprising Westleigh soils exhibiting poor drainage and limited suitability for crop production.
- The grazing capacity of the study area is relatively high, estimated at approximately 4–5 ha/LSU.
- The proposed development site is not located within a Protected Agricultural Area.
- No cultivated fields or registered crop boundaries occur within the proposed development area.

Based on the preliminary assessment, the proposed development area is considered to have an overall medium agricultural sensitivity. Owing to the relatively limited extent of agricultural land that will be permanently lost, together with the anticipated economic benefits associated with the proposed development, the preliminary Agricultural Compliance Statement concludes that the development is acceptable from an agricultural perspective, subject to the implementation of appropriate mitigation measures.

The preliminary assessment recommends the following:

- Appropriate fencing should be installed and maintained during both the construction and operational phases to prevent livestock from entering the construction area and operational facility.

5.6.2 Financial incentive for agriculture

The proposed development has the potential to contribute positively to the long-term sustainability of the farming enterprise by providing an additional and diversified income stream to the landowner. Provided that the development does not result in a significant loss of productive agricultural land or adversely affect long-term agricultural production, the diversification of farm income is considered a positive outcome.

Through an appropriate commercial agreement between the Applicant and the landowner, income generated from the proposed charging facility and associated renewable energy infrastructure may

contribute to the financial sustainability of the farming operation. Furthermore, the availability of renewable electricity generated on site may provide additional operational benefits to the farming enterprise through reduced energy costs and improved energy security.

5.7 SOCIO-ECONOMIC IMPACT

5.7.1 Socio-economic Impact Statement and Conclusion

A preliminary Socio-economic Impact Assessment has been undertaken to identify the potential socio-economic benefits and impacts associated with the proposed development. The assessment will be completed and finalised during the Environmental Impact Assessment (EIA) phase.

- The preliminary assessment indicates that the proposed development has the potential to generate positive socio-economic benefits at both the local and regional level. These benefits include improved transport infrastructure, employment creation, investment in renewable energy infrastructure and support for the transition towards a lower-carbon freight transport sector. The principal findings of the preliminary assessment are summarised below:
- **Sustainable Transport:** The proposed electric truck charging facility, supported by an on-site solar photovoltaic (PV) generation facility and battery energy storage system, will contribute towards the transition to electric freight transport. The project supports national and international objectives aimed at reducing greenhouse gas emissions and dependence on fossil fuels.
- **Economic Development:** Construction and operation of the proposed development are expected to contribute positively to the local economy through temporary and permanent employment opportunities, increased demand for local goods and services, and investment in regional infrastructure.
- **Employment and Skills Development:** The proposed development is expected to create employment opportunities during both the construction and operational phases. In addition, the project has the potential to contribute towards skills development through training and capacity-building initiatives associated with renewable energy, electrical infrastructure, facility operations and maintenance.
- **Environmental and Social Considerations:** The proposed development has the potential to result in temporary impacts during construction, including increased traffic, noise, dust and pressure on local infrastructure. These impacts are expected to be temporary in nature and can be effectively managed through the implementation of appropriate mitigation measures and good environmental management practices.
- The significance of these potential socio-economic benefits and impacts will be assessed in detail during the EIA phase, together with appropriate mitigation and enhancement measures.

5.7.2 Preliminary Recommendations

Recommendations Based on the preliminary Socio-economic Assessment, the following recommendations are proposed to maximise socio-economic benefits while minimising potential adverse impacts. These recommendations will be reviewed and refined during the EIA phase.

Employment and Local Economic Development

- Local labour should, where reasonably practicable, be prioritised during both the construction and operational phases, particularly for unskilled and semi-skilled positions.

- Opportunities should be provided for local skills development and training programmes associated with renewable energy, electrical infrastructure and facility operations.
- The project should seek to maximise local economic benefits through the procurement of goods and services from local businesses and service providers where feasible.

Local Supplier Participation

- A register of suitably qualified local suppliers, contractors and service providers should be developed and utilised during procurement processes to maximise local economic participation.
- Small, Medium and Micro Enterprises (SMMEs) within the local area should be afforded opportunities to participate in the supply chain where practicable.

Management of Construction-related Impacts

- Appropriate measures should be implemented to minimise temporary construction-related impacts, including dust generation, noise, traffic disruptions and public safety risks.
- Construction activities should be managed in accordance with the Environmental Management Programme (EMPr) and all relevant environmental, health and safety requirements.
- Ongoing communication with affected landowners, Interested and Affected Parties (I&APs) and local authorities should be maintained throughout the construction phase to ensure that concerns are addressed promptly.

The Socio-economic Assessment will evaluate the significance of the identified impacts and benefits and provide additional recommendations to enhance the positive socio-economic outcomes of the proposed development.

6 DETAILS OF THE PUBLIC PARTICIPATION PROCESS

Interested and Affected Parties (I&APs) will be identified and afforded an opportunity to participate throughout the Environmental Impact Assessment (EIA) process. Adjacent and neighbouring landowners, relevant organs of state, government departments, non-governmental organisations, community organisations, ward councillors, the local municipality and the district municipality have been identified for inclusion in the project database. A complete register of Interested and Affected Parties identified to date is provided in Appendix 4.

Public participation for the proposed development will be undertaken in accordance with the requirements of Regulation 41 of the Environmental Impact Assessment Regulations, 2014 (as amended), promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998). The purpose of the public participation process is to inform Interested and Affected Parties (I&APs) of the proposed development, provide them with a reasonable opportunity to comment, and identify environmental issues that require further investigation during the Environmental Impact Assessment (EIA) process.

This Pre-application Scoping Report will be made available for public review and comment as part of the pre-application public participation process. Comments received during this review period will be considered in the preparation of the Draft Scoping Report and will be captured in the Comments and Responses Report (C&RR). Additional comments received during the statutory Scoping phase will likewise be documented and addressed in the Final Scoping Report and, where applicable, incorporated into the Environmental Impact Assessment.

The following sections describe how the requirements of Regulation 41 will be implemented to ensure that all relevant Interested and Affected Parties (I&APs) are provided with a reasonable opportunity to participate in the environmental assessment process.

Table 11: Public participation process Regulations as per NEMA EIA Regulations, 2014 (as amended 2021)

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
Regulation 39 - Activity on land owned by person other than proponent		
1.	If the proponent is not the owner or person in control of the land on which the activity is to be undertaken, the proponent must, before applying for an environmental authorisation in respect of such activity, obtain the written consent of the landowner or person in control of the land to undertake such activity on that land.	Written consent of the landowner or person in control of the land to undertake the proposed activities on the land has been obtained through an established agreement.
2.	Subregulation (1) does not apply in respect of— a) linear activities; and	Noted. Not applicable to this proposed development.
	b) strategic integrated projects as contemplated in the Infrastructure Development Act, 2014.	Noted. Not applicable to this proposed development.
Regulation 40 - Purpose of public participation		
1.	The public participation process to which the— a) basic assessment report and EMPr, and the closure plan in the case of a closure activity, submitted in terms of regulation 19; and	As part of the pre-application Scoping process, the Pre-application Scoping Report will be made available for a 30-day public review period. All potential and registered Interested and Affected Parties (I&APs), including the Competent Authority, will be invited to submit comments on the proposed development.
	b) scoping report submitted in terms of regulation 21, the environmental impact assessment report, EMPr, and the closure plan in the case of a closure activity, submitted in terms of regulation 23; was subjected to must give all potential or registered interested and affected parties, including the competent authority, a period of at least 30 days to submit comments on each of the basic assessment report, EMPr, scoping report and environmental impact assessment report, and the closure plan in the case of a closure activity, as well as the report contemplated in regulation 32, if such reports or plans are submitted at different times.	
2.	The public participation process contemplated in this regulation must provide access to all information that reasonably has or may have the potential to influence any decision with regard to an application unless access to that information is protected by law and must include consultation with — a) the competent authority;	As part of the pre-application Scoping phase, initial notification letters will be sent to — a) The Free State Department of Small Business Development, Tourism and Environmental Affairs (DESTEA) is identified as the competent authority.
	b) every State department that administers a law relating to a matter affecting the environment relevant to an application for an environmental authorisation;	

Page | 70

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
3.	Potential or registered interested and affected parties, including the competent authority, may be provided with an opportunity to comment on reports and plans contemplated in subregulation (1) prior to submission of an application but must be provided with an opportunity to comment on such reports once an application has been submitted to the competent authority.	During the pre-application Scoping phase, potential or registered interested and affected parties, including the competent authority, will be notified and given the opportunity to comment on the proposed development. However, no reports or plans, as outlined in subregulation (1), were available at that time Nevertheless, an opportunity for potential or registered interested and affected parties, including the competent authority, to comment on such reports and plans will be given once an application has been submitted to the competent authority.
Regulation 41 – Public participation process		
1.	This regulation only applies in instances where adherence to the provisions of this regulation is specifically required.	Noted.
2.	The person conducting a public participation process must take into account any relevant guidelines applicable to public participation as contemplated in section 24J of the Act and must give notice to all potential interested and affected parties of an application or proposed application which is subjected to public participation by— a) fixing a notice board at a place conspicuous to and accessible by the public at the boundary, on the fence or along the corridor of — i. the site where the activity to which the application or proposed application relates is or is to be undertaken; and	During the pre-application Scoping phase, an A2-sized notice board will be fixed on the boundary / fence of the site where the activity to which the proposed application relates is to be undertaken. Additionally, multiple A3-sized notice boards will be placed at various locations around the site.
	ii. any alternative site	There is no alternative site.
	b) giving written notice, in any of the manners provided for in section 47D of the Act, to— i. the occupiers of the site and, if the proponent or applicant is not the owner or person in control of the site on which the activity is to be undertaken, the owner or person in control of the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken	As part of the pre-application Scoping phase, initial notification letters will be sent to occupiers and persons in control of the site via email and/or mail drops conducted during the site visit.

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
	ii. owners, persons in control of, and occupiers of land adjacent to the site where the activity is or is to be undertaken and to any alternative site where the activity is to be undertaken	As part of the pre-application Scoping phase, initial notification letters will be sent to occupiers of land adjacent to the site via email and/or mail drops conducted during the site visit.
	iii. the municipal councillor of the ward in which the site and alternative site is situated and any organisation of ratepayers that represent the community in the area	As part of the pre-application Scoping phase, an initial notification letter will be sent to the relevant municipal ward councillor at the Phumelela Local Municipality. No ratepayer organisations are identified for the community in the area.
	iv. the municipality which has jurisdiction in the area	As part of the pre-application Scoping phase, an initial notification letter will be sent to a representative of the Phumelela Local Municipality and the Thabo Mofutsanyana District Municipality.
	v. any organ of state having jurisdiction in respect of any aspect of the activity; and	As part of the pre-application Scoping phase, initial notification letters will be sent to the following organs of state having jurisdiction in respect of any aspect of the activity: - Department of Agriculture and Rural Development - Co-operative Governance and Traditional Affairs - Eskom - Department of Energy - Department of Water and Sanitation - SAHRA - Department of Public Works - Department of Transport - N3 Toll concession - SANRAL - Transnet - Department of Environment, Forestry and Fisheries

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
	vi. any other party as required by the competent authority	Noted. Should the competent authority require any other party to receive written notice, then this will be duly carried out.
	c) placing an advertisement in— i. one local newspaper; or	An advertisement will be placed in the VrystaatKroon, a local newspaper.
	ii. any official Gazette that is published specifically for the purpose of providing public notice of applications or other submissions made in terms of these Regulations;	Noted. Not applicable to this proposed development.
	d) placing an advertisement in at least one provincial newspaper or national newspaper, if the activity has or may have an impact that extends beyond the boundaries of the metropolitan or district municipality in which it is or will be undertaken: Provided that this paragraph need not be complied with if an advertisement has been placed in an official Gazette referred to in paragraph (c) (ii); and	Noted. Not applicable to this proposed development.
	e) using reasonable alternative methods, as agreed to by the competent authority, in those instances where a person is desirous of but unable to participate in the process due to — i. illiteracy;	Noted. In instances where a person desires to participate in the process but is unable to do so due to illiteracy, disability, or any other disadvantage, and makes such a desire known to the EAP, then reasonable alternative methods will be used, as agreed upon by the competent authority.
	ii. disability; or	
	iii. any other disadvantage	
3.	A notice, notice board or advertisement referred to in subregulation (2) must— a) give details of the application or proposed application which is subjected to public participation; and	The written notices — specifically, notification letters, notice boards, and advertisements — that form part of the pre-application Scoping phase's 30-day commenting period contain details of the proposed application, which is subject to public participation.
	b) state — i. whether basic assessment or S&EIR procedures are being applied to the application;	
	ii. the nature and location of the activity to which the application relates;	
	iii. where further information on the application or proposed application can be obtained; and	

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
	iv. the manner in which and the person to whom representations in respect of the application or proposed application may be made.	
4.	A notice board referred to in subregulation (2) must— a) be of a size of at least 60cm by 42cm; and	The notice boards measured 60cm by 42cm is size and will display the required information in a legible format.
	b) display the required information in lettering and in a format as may be determined by the competent authority.	
5.	Where public participation is conducted in terms of this regulation for an application or proposed application, subregulation (2) (a), (b), (c) and (d) need not be complied with again during the additional public participation process contemplated in regulations 19 (1) (b) or 23 (1) (b) or the public participation process contemplated in regulation 21 (2) (d), on condition that— a) such process has been preceded by a public participation process which included compliance with subregulation (2) (a), (b), (c) and (d); and	Noted.
	b) written notice is given to registered interested and affected parties regarding where the— i. revised documents as contemplated in regulation 19 (1) (b);	Noted.
	ii. revised documents as contemplated in regulation 23 (1) (b); or	Noted.
	iii. environmental impact assessment report and documents as contemplated in regulation 21 (2) (d); may be obtained, the manner in which and the person to whom representations on these reports or plans may be made and the date on which such representations are due.	Noted.
6.	When complying with this regulation, the person conducting the public participation process must ensure that— a) information containing all relevant facts in respect of the application or proposed application is made available to potential interested and affected parties; and	Noted.
	b) participation by potential or registered interested and affected parties is facilitated in such a manner that all potential or registered interested and affected parties are provided with a reasonable opportunity to comment on the application or proposed application.	Noted.

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
7.	Where an environmental authorisation is required in terms of these Regulations and an authorisation, permit or licence is required in terms of a specific environmental management Act, the public participation process contemplated in this Chapter may be combined with any public participation processes prescribed in terms of a specific environmental management Act, on condition that all relevant authorities agree to such combination of processes.	Noted.
Regulation 42 - Register of interested and affected parties		
1.	A proponent or applicant must ensure the opening and maintenance of a register of interested and affected parties and submit such a register to the competent authority, which register must contain the names, contact details and addresses of— a) all persons who, as a consequence of the public participation process conducted in respect of that application, have submitted written comments or attended meetings with the proponent, applicant or EAP; b) all persons who have requested the proponent or applicant, in writing, for their names to be placed on the register; and c) all organs of state which have jurisdiction in respect of the activity to which the application relates.	A register of interested and affected parties was opened and is maintained.
Regulation 43 - Registered interested and affected parties entitled to comment on reports and plans		
1.	A registered interested and affected party is entitled to comment, in writing, on all reports or plans submitted to such party during the public participation process contemplated in these Regulations and to bring to the attention of the proponent or applicant any issues which that party believes may be of significance to the consideration of the application, provided that the interested and affected party discloses any direct business, financial, personal or other interest which that party may have in the approval or refusal of the application.	This subregulation is communicated to registered interested and affected parties during the public participation process.

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
2.	In order to give effect to section 24O of the Act, any State department that administers a law relating to a matter affecting the environment must be requested, subject to regulation 7 (2), to comment within 30 days.	State departments that administer laws relating to environmental matters relevant to the application, as well as organs of state with jurisdiction over the activity, will be notified of the proposed application and will be invited to comment within 30 days. However, should comments not be received within the prescribed timeframes, it would be assumed that no comments are forthcoming.
Regulation 44 - Comments of interested and affected parties to be recorded in reports and plans		
1.	The applicant must ensure that the comments of interested and affected parties are recorded in reports and plans and that such written comments, including responses to such comments and records of meetings are attached to the reports and plans that are submitted to the competent authority in terms of these Regulations.	Comments of interested and affected parties are recorded together with the responses in a Comment and Response report (CRR) and where applicable, incorporated into reports and plans.
2.	Where a person desires but is unable to access written comments as contemplated in subregulation due to— a) a lack of skills to read or write; b) disability; or c) any other disadvantage; reasonable alternative methods of recording comments must be provided for.	Noted. Where a person desires to but is unable to access written comments due to illiteracy, disability, or any other disadvantage, and makes such a desire known to the EAP, then reasonable alternative methods of recording comments will be provided for.

7 PLAN OF STUDY FOR THE EIA

7.1 TASKS TO BE UNDERTAKEN

Due to the nature of the proposed development, a number of activities will still be undertaken during the subsequent phases of the Environmental Impact Assessment (EIA) process. The proposed process is outlined below, subject to the outcome of the pre-application process with the Free State Department of Small Business Development, Tourism and Environmental Affairs (DESTEa).

Following the completion of the pre-application public participation process and consideration of comments received on the Pre-application Scoping Report, the NEMA Application Form will be submitted to DESTEa together with the Draft Scoping Report. The Draft Scoping Report will be made available for a 30-day public review and comment period in accordance with the Environmental Impact Assessment Regulations, 2014 (as amended). Comments received during this statutory public participation process will be considered and incorporated into the Final Scoping Report, together with the updated Comments and Responses Report (C&RR), before submission to DESTEa for consideration and acceptance of the Scoping Report and Plan of Study for EIA.

Following acceptance of the Final Scoping Report by DESTEa, the Environmental Impact Assessment (EIA) phase will commence. During this phase, the specialist studies identified in the Plan of Study for EIA will be completed, the significance of identified impacts will be assessed, mitigation measures will be refined, and a Draft Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) will be prepared for public review. Following consideration of comments received during the EIA public participation process, the Final EIR and EMPr will be submitted to DESTEa for decision-making. The following tasks are proposed as part of the Environmental Impact Assessment process. Should the process be modified or additional requirements be identified by DESTEa, the Plan of Study for EIA will be amended accordingly and the Department will be informed where necessary.

Table 12: EIA process - Timeline*

EIA Process	
Task	Timeframes
Distribution and submission of Pre-App Scoping Report	August 2026
Submit NEMA Application and Draft Scoping Report (DSR) and Plan of Study for EIA to DESTEa and distribute to registered I&APs for comment.	September 2025
Submit Final Scoping Report (FSR) and Plan of Study to DESTEa for a decision.	October 2026
Receive approval for the FSR and the Plan of Study for EIA.	November 2026
Undertake specialist studies and compile the Draft Environmental Impact Report (EIR) for public comment based on specialist information.	November 2026
Submit Draft EIR for public comment.	December 2026
Receive responses to the Draft EIR.	January/ February 2027

Preparation of a FINAL EIR and submission to DESTEA

February March
2027

**Timeframes provided are estimates and are subject to change. They serve as a tentative indication and may be adjusted as the process progresses.*

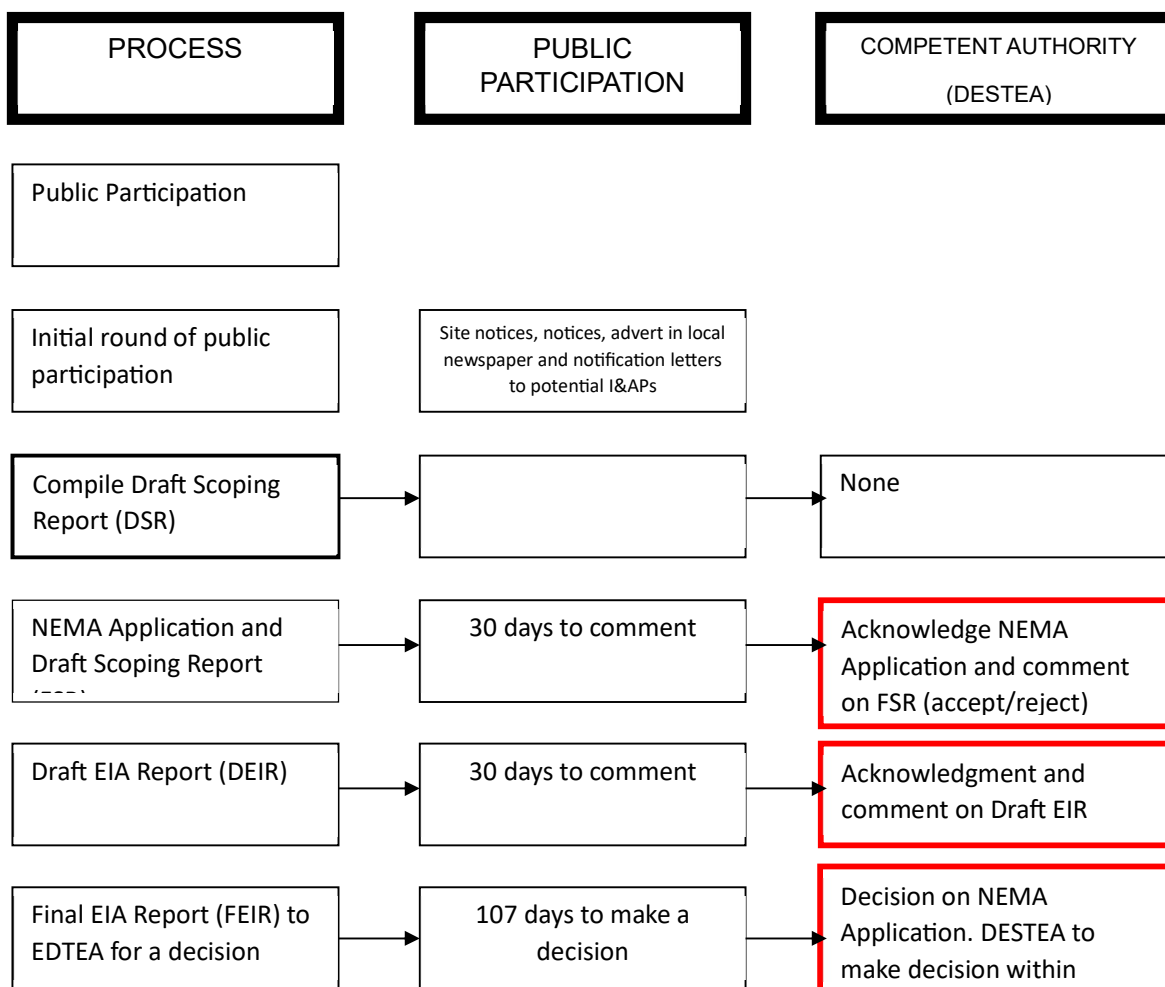


Figure 27: Summary of the EIA process and public participation process. The red indicates the stages where the competent authority will be consulted during the process

7.2 PUBLIC PARTICIPATION AND INTERESTED AND AFFECTED PARTIES

Figure 27 illustrates the Environmental Impact Assessment (EIA) process and identifies the stages at which public participation will be undertaken. Interested and Affected Parties (I&APs) will be afforded the opportunity to review and comment on the Pre-application Scoping Report, Draft Scoping Report, and Draft Environmental Impact Report (EIR) in accordance with the requirements of the Environmental Impact Assessment Regulations, 2014 (as amended). The figure also indicates the applicable public review periods associated with each phase of the process. Where considered necessary, meetings with key stakeholders and commenting authorities may be convened.

Following completion of each public review period, all comments received from I&APs and commenting authorities will be considered and addressed in the relevant Comments and Responses Report (C&RR). The reports will be revised, where appropriate, prior to submission to the Free State Department of

Small Business Development, Tourism and Environmental Affairs (DESTE) for consideration. The Final Scoping Report will be submitted to DESTE for acceptance of the Scoping Phase and Plan of Study for EIA, after which the Environmental Impact Assessment phase will commence. Following completion of the EIA phase, the Final Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) will be submitted to DESTE for decision-making.

Correspondence with Interested and Affected Parties (I&APs) will be undertaken through appropriate communication methods, including email, telephone, registered post (where required), newspaper advertisements and site notices. The public participation process may be refined where necessary in response to comments received during the assessment process or additional requirements identified by DESTE. Any material changes to the public participation process will be communicated to DESTE and documented in the relevant environmental assessment reports.

7.3 CRITERIA FOR SPECIALIST ASSESSMENT OF IMPACTS

As a result of the environmental issues and potential impacts identified in Section 5, the need for the following specialist studies has been identified:

- Biodiversity Assessment
- Freshwater Assessment
- Heritage Impact Assessment
- Socio-economic Impact Assessment
- Visual Impact Assessment
- Agricultural Compliance Statement
- Avifaunal Impact Assessment

Preliminary specialist assessments have been undertaken to inform this Pre-application Scoping Report and to identify the key environmental constraints, opportunities and issues requiring further investigation. The preliminary findings of these specialist assessments have been incorporated into this report where appropriate. The specialist studies will be refined and finalised during the Environmental Impact Assessment (EIA) phase, and their findings will be incorporated into the Draft Environmental Impact Report (EIR).

The impacts associated with the proposed development will be assessed in detail during the EIA phase. This assessment will consider both the construction and operational phases of the proposed development and will evaluate the significance of potential impacts on the receiving environment in terms of duration (temporal scale), extent (spatial scale), magnitude, probability and significance, in accordance with the methodology presented in Table 13. Both positive and negative impacts will be assessed, including the assessment of reasonable alternatives and the No-Go Alternative (refer to Section 3).

The determination of impact significance will be based on a combination of the assessment criteria, including the nature, extent, duration, magnitude and probability of each identified impact. The significance ratings will be determined by the relevant specialist based on professional judgement and the available information.

Where potential impacts can be avoided, reduced or managed, appropriate mitigation measures will be identified and their effectiveness assessed. The residual significance of impacts following implementation of mitigation measures will also be evaluated. In addition, each specialist will indicate the level of confidence associated with their findings, taking into account any assumptions, limitations and uncertainties identified during the assessment.

All specialist studies will be undertaken in accordance with the applicable Environmental Impact Assessment Regulations, 2014 (as amended) and the relevant Protocols for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes, published in Government Notice No. 320, Government Gazette No. 43110 of 20 March 2020, as amended where applicable.

Table 13: Criteria used for evaluating impacts

Criteria	Category
Nature of impact	This is an evaluation of the effect that the construction, operation and maintenance of a proposed dam would have on the affected environment. This description should include what is to be affected and how.
Duration (Predict whether the lifetime of the Impact will be temporary (less than 1 year) short term (0 to 5 years); medium term (5 to 15 years); long term (more than 15 years, with the Impact ceasing after full implementation of all development components with mitigations); or permanent.	Temporary: < 1 year (not including construction) Short-term: 1 – 5 years Medium term: 5 – 15 years Long-term: >15 years (Impact will stop after the operational or running life of the activity, either due to natural course or by human interference) Permanent: Impact will be where mitigation or moderation by natural course or by human interference will not occur in a particular means or in a particular time period that the impact can be considered temporary
Extent (Describe whether the impact occurs on a scale limited to the site area; limited to broader area; or on a wider scale)	Site Specific: Expanding only as far as the activity itself (<i>onsite</i>) Small: restricted to the site's immediate environment within 1 km of the site (<i>limited</i>) Medium: Within 5 km of the site (<i>local</i>) Large: Beyond 5 km of the site (<i>regional</i>)
Intensity (Describe whether the magnitude (scale/size) of the Impact is high; medium; low; or negligible. The specialist study must attempt to quantify the magnitude of impacts, with the rationale used explained)	Very low: Affects the environment in such a way that natural and/or social functions/processes are not affected Low: Natural and/or social functions/processes are slightly altered Medium: Natural and/or social functions/processes are notably altered in a modified way High: Natural and/or social functions/processes are severely altered and may temporarily or permanently cease
Probability of occurrence Describe the probability of the Impact <u>actually</u> occurring as definite (Impact will occur regardless of mitigations)	Improbable: Not at all likely Probable: Distinctive possibility Highly probable: Most likely to happen Definite: Impact will occur regardless of any prevention measures
Status of the Impact Describe whether the Impact is positive, negative (or neutral).	Positive: The activity will have a social/ economical/ environmental benefit Neutral: The activity will have no affect Negative: The activity will be socially/ economically/ environmentally harmful
Degree of Confidence in predictions State the degree of confidence in predictions based on availability of information and specialist knowledge	Unsure/Low: Little confidence regarding information available (<40%) Probable/Med: Moderate confidence regarding information available (40-80%) Definite/High: Great confidence regarding information available (>80%)
Significance	No change: A potential concern which was found to have no impact when evaluated

Criteria	Category
(The impact on each component is determined by a combination of the above criteria and defined as follows) The significance of impacts shall be assessed <u>with and without mitigations</u>. The significance of identified impacts on components of the affected biophysical or socio-economic environment (and, where relevant, with respect to potential legal requirement/s) shall be described as follows:	Very low: Impacts will be site specific and temporary with no mitigation necessary. Low: The impacts will have a minor influence on the proposed development and/or environment. These impacts require some thought to adjustment of the project design where achievable, or alternative mitigation measures Moderate: Impacts will be experienced in the local and surrounding areas for the life span of the development and may result in long term changes. The impact can be lessened or improved by an amendment in the project design or implementation of effective mitigation measures. High: Impacts have a high magnitude and will be experienced regionally for at least the life span of the development, or will be irreversible. The impacts could have the no-go proposition on portions of the development in spite of any mitigation measures that could be implemented.

Table 14: The stated assessment and information will be determined for each individual issue or related groups of issues and presented in descriptive format in the following table example or a close replica thereof

Impact Statement:		
Mitigation:		
Ratings	Duration	
	Extent	
	Intensity	
	Probability of impact	
	Status of Impact (Positive/negative)	
	Degree of confidence	
Significances	Significance without Mitigation	
	Significance <u>WITH</u> Mitigation	
Indication of the certainty of a mitigation measure considered, achieving the end result to the extent indicated, is given on a scale of 1-5 (1 being totally uncertain and 5 being absolutely certain), taking into consideration uncertainties, assumptions and gaps in knowledge:		
Legal Requirements (Identify and list the specific legislation and permit requirements which are relevant to this development):		

8 CONCLUSION AND RECOMMENDATIONS

This Pre-application Scoping Report has been prepared to introduce the proposed Kohler Solar Photovoltaic (PV) Renewable Energy Facility and Electric Truck Charging Facility to Interested and Affected Parties (I&APs) and to identify the key environmental opportunities, constraints and issues requiring further investigation during the Environmental Impact Assessment (EIA) process.

The report provides a description of the proposed development, outlines the applicable legislative framework, considers reasonable alternatives, summarises the receiving environment, identifies potential environmental impacts, and presents the preliminary findings of the specialist studies undertaken to date. These preliminary specialist assessments have informed the identification of the environmental themes requiring further assessment during the EIA phase.

The following specialist studies have been identified for completion during the EIA process:

- Biodiversity Assessment
- Freshwater Assessment
- Heritage Impact Assessment
- Socio-economic Impact Assessment
- Visual Impact Assessment
- Agricultural Compliance Statement
- Avifaunal Impact Assessment

Preliminary specialist investigations have already been undertaken to support this Pre-application Scoping Report. The findings of these preliminary assessments have been incorporated where appropriate; however, the specialist studies will be refined and finalised during the EIA phase, following completion of the pre-application and statutory Scoping public participation processes.

This Pre-application Scoping Report will be made available for public review and comment as part of the pre-application public participation process. Comments received from Interested and Affected Parties (I&APs), commenting authorities and key stakeholders will be considered in the preparation of the Draft Scoping Report and incorporated into the Comments and Responses Report (C&RR). Following submission of the NEMA Application Form and Draft Scoping Report to the Free State Department of Small Business Development, Tourism and Environmental Affairs (DESTEA), the statutory Scoping process will be undertaken in accordance with the Environmental Impact Assessment Regulations, 2014 (as amended).

Following acceptance of the Final Scoping Report and Plan of Study for EIA by DESTEA, the Environmental Impact Assessment phase will commence. During this phase, the specialist studies will be completed, the significance of identified impacts and reasonable alternatives will be assessed, appropriate mitigation measures will be developed, and a Draft Environmental Impact Report (EIR) and Environmental Management Programme (EMPr) will be prepared for public review before submission of the Final EIR to DESTEA for decision-making.

Based on the preliminary findings presented in this report, no fatal environmental flaws have been identified that would preclude the proposed development from proceeding to the statutory Scoping and Environmental Impact Assessment phases. It is therefore recommended that the environmental assessment process continue in accordance with the approved Plan of Study for EIA and the requirements of the National Environmental Management Act, 1998 (Act No. 107 of 1998), and the Environmental Impact Assessment Regulations, 2014 (as amended).

8.1 PRELIMINARY RECOMMENDATIONS / CONDITIONS FOR AUTHORISATION

The preliminary specialist assessments have identified the following recommendations, which should be considered during the detailed design, Environmental Impact Assessment (EIA) phase and, where applicable, incorporated into the Environmental Management Programme (EMPr):

- Drainage lines, wetlands and dams provide important habitat for fauna and are generally associated with high biodiversity value. The drainage line and farm dam located immediately north of the proposed development area are considered highly sensitive. The development should avoid these features and maintain the buffer distances recommended by the Freshwater Specialist.
- Rocky outcrops contribute significantly to habitat diversity and species richness. The rocky outcrop located in the southern portion of the site should be avoided by the proposed development, with a minimum 50 m buffer maintained around this feature.
- Although the grassland covering the majority of the site has been moderately disturbed through livestock grazing, it remains predominantly natural and provides important habitat for terrestrial fauna and avifauna. As impacts on this habitat cannot be completely avoided, the development footprint should be restricted to the minimum area required, and appropriate mitigation, rehabilitation and restoration measures should be implemented.
- Appropriate fencing should be installed and maintained during both the construction and operational phases to prevent livestock from entering the construction and operational areas.
- Provided that the proposed development does not result in a significant loss of productive agricultural land, opportunities to diversify the landowner's income should be encouraged. Through an appropriate commercial agreement between the Applicant and the landowner(s), income generated from the proposed charging facility and associated renewable energy infrastructure may contribute to the long-term financial sustainability of the farming enterprise while offsetting the permanent loss of a limited portion of grazing land.

9 DETAILS AND EXPERTISE OF THE EAP

Author / Compiler	Bianca Gilfillan
Qualifications	ND: Environmental Management BTECH: Environmental Management BSc Hons: Environmental Science
Registrations	EAPASA Registered EAP (2023/7929)
Expertise	Bianca Gilfillan is an Environmental Consultant and Assessment Practitioner with over 20 years of experience across South Africa. She specialises in environmental monitoring, compliance, management, and assessment, with strong expertise in NEMA and EPR Regulations. Her work spans diverse industries and provinces, where she has successfully managed complex authorisation processes and regulatory approvals. Her expertise includes, but is not limited to: - Environmental Authorisation applications - Waste Management Licence applications - Environmental Monitoring & Compliance - Housing and resort developments in the Western - Cemeteries in the Western Cape - Agricultural developments - Solar PV and wind energy facilities - S24G Applications - Environmental Management Programmes

Reviewer / Supervisor	Clinton Geyser
Qualifications	MSc. Geography and Environmental Management (2002) (UJ) BSc. (Hons): Geography and Environmental Management (2001) (UJ) BSc. Earth Sciences, Majors in Geology and Geography and Environmental Management (1998 – 2000) (UJ)
Registrations	EAPASA Reg no. 2021/3287
Expertise	Clinton Geyser has over fifteen years' experience in the environmental management field as an Environmental Assessment Practitioner and as an Environmental Control Officer, having worked on a variety of projects in the Western, Eastern and Northern Cape. Previous completed applications include, but are not limited to: - Civil engineering infrastructure including pipelines, Waste Water Treatment Works, and roads in the Western and Northern Cape. - Solar PV facilities in the Free State and Western Cape - Agricultural developments, including reservoirs and dams, in the Western, Eastern and Northern Cape. - Telecommunications masts in the Western and Eastern Cape - Housing Developments in the Western and Northern Cape. - Resort developments in the Western and Northern Cape. - Cemeteries in the Western Cape - Waste Management Licences in the Western Cape

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