T-N003-06 Ashburton

Pre-application Scoping Report

THE PROPOSED ASHBURTON RENEWABLE SOLAR PV ENERGY GENERATION PLANT AND ELECTRIC TRUCK CHARGING FACILITY ON ERF 356 OF THE ASHBURTON ALLOTMENT TOWNSHIP, OFF THE N3 HIGHWAY, NEAR ASHBURTON, KWA-ZULU NATAL PROVINCE

APPLICATION FOR:
Environmental Authorisation

PREPARED FOR:
N3 Electric Highway Co.

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Environmental Management and Impact Assessment | Omgewingsbestuur en Impakbeoordeling

SITE CODE: T-N003-06

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PRE-APPLICATION SCOPING REPORT AND PLAN OF STUDY

KZNEDTEA REF: To be provided

September 2025

N3 ELECTRIC HIGHWAY CO.

T-N003-06 ASHBURTON

EXECUTIVE SUMMARY

N3 Electric Highway Co. is proposing that a solar photovoltaic (PV) energy generation plant, electric vehicle and truck charging facility, energy storage battery units, overnight parking, stormwater pond, water tanks, lounge area with a kitchen, ablution facilities with a septic tank, shop, offices including associated infrastructure be developed on Erf 356 of the Ashburton allotment township, Pietermaritzburg. The proposed site is located off the N3, at the corner of the N3 and Pope Ellis Drive, approximately 10 km south-east of Pietermaritzburg, in the uMgungundlovu District Municipality, Kwa-Zulu Natal.

The solar PV plant will be connected to the electric vehicle and truck charging facility via a distribution line with a capacity of approximately 33 kV. An area of approximately 60 ha will be considered and assessed. The proposed development will occupy an area of approximately 42.7 hectares, of which around 39.5 hectares will be allocated to the solar photovoltaic (PV) array. This configuration is expected to support an installed capacity of up to 39.5 megawatt-peak (MWp), which refers to the maximum power output under optimal solar irradiance conditions (i.e., peak performance at standard test conditions). The remaining area will accommodate associated infrastructure, including inverters, battery storage, access roads, and the electric vehicle (EV) charging facility.

Site coordinates (approximate central point): 29°39’30.73” S; 30°27’05.35” E

The applicant, N3 Electric Highway Co., which intends to undertake the proposed activities upon approval, has appointed EnviroAfrica CC as the independent Environmental Assessment Practitioner (EAP). The appointment is for the purpose of conducting the requisite Environmental Impact Assessment (EIA) and facilitating the Public Participation Process in accordance with the National Environmental Management Act (Act 107 of 1998) (NEMA).

A scoping exercise is being undertaken to present the proposed activities to the Interested & Affected Parties (I&APs) and to identify environmental issues discussed in this report and concerns raised as a result of the proposed development alternatives to date. The issues and concerns were raised by I&APs, authorities, the project team, as well as specialist input, based on baseline studies undertaken.

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 Potential Assessment
- Avifauna Impact Assessment

These specialist studies have been conducted and some have been concluded. The findings of some of the studies have already been included in 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 significance of the issues raised during the ongoing Public Participation Process and Scoping Phase, it is evident that an Environmental Impact Assessment (EIA) is required. ***It is therefore recommended that authorisation for the commencement of an EIA for the proposed development is granted.*** Should the EIA process be authorised, the issues raised in the process to date will be addressed and the specialist studies noted in this report will be undertaken.

PRELIMINARY RECOMMENDATIONS / CONDITIONS FOR AUTHORISATION

- In cases where there is not a significant impact on agricultural land, a diversification of income sources should be considered by the landowner(s). Through establishing an agreement between the applicant and the landowner(s), landowner(s) will be enabled to share in the profit generated from the charging facility, thereby offsetting their probable financial loss sustained through the loss of agricultural land (utilised or grazing mainly) over the development area.

DOCUMENT CONTROL

Version	Name	Role / Responsibility	Date
AA	Lian Roos	Author / First draft for review	01 October 2024
BB	Clinton Geyser	Technical reviewer	08 September 2025
CC	Lian Roos	Second draft for review	
DD	Bianca Gilfillan	Third draft for review	May 2025
EE			
Final			

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ACRONYMS

BGIS	Biodiversity Geographic Information System
CBA	Critical Biodiversity Area
DFFE	Department of Forestry, Fisheries and the Environment
DWS	Department of Water and Sanitation
KZNEDTEA	KwaZulu-Natal Department of Economic Development 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

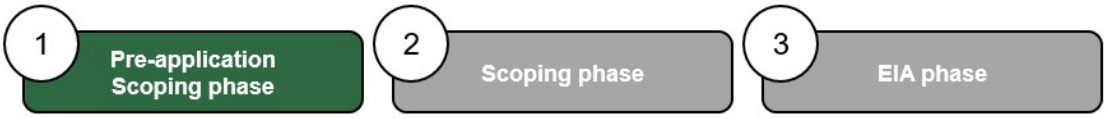
1.1 BACKGROUND

N3 Electric Highway Co. is proposing the development of the Ashburton solar photovoltaic renewable energy generation plant and electric truck charging facility on Erf 356 of the Ashburton allotment township, near Pietermaritzburg in Kwa-Zulu Natal. 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 proposed site is located off the N3, at the corner of the N3 and Pope Ellis Drive, approximately 10 km south-east of Pietermaritzburg, in the uMgungundlovu District Municipality, Kwa-Zulu Natal.

Site coordinates (approximate central point): 29°01'17.80'S; 29°49'33.80'E.

The applicant, N3 Electric Highway Co., which intends to undertake the proposed activities upon approval, has appointed EnviroAfrica CC as the independent Environmental Assessment Practitioner (EAP). This appointment is for the purpose of conducting the requisite Environmental Impact Assessment (EIA) and facilitating the Public Participation Process in accordance with the National Environmental Management Act (Act 107 of 1998) (NEMA).



The pre-application Scoping Report falls within the pre-application Scoping phase, which will be submitted to the Economic Department, Tourism and Environmental Affairs (KZNEDTEA)(KwaZulu-Natal) for consideration, and forms part of the Scoping & EIA process. The objective of this pre-application Scoping Report is to outline the proposed project, detail the processes undertaken thus far, present alternative options, and enumerate the issues identified for further examination and commentary by specialists.

Should the Scoping & Plan of Study for EIA process be authorised by the KZNEDTEA, the Specialist Studies (noted in Section 8) will be undertaken, and the issues (noted in Section 6) will be investigated and assessed during the next phase of the process (Scoping phase).

1.2 DESCRIPTION OF THE PROPOSED ACTIVITY

N3 Electric Highway Co. is proposing the development of the Ashburton solar photovoltaic renewable energy generation plant and electric truck charging facility on Erf 356 of the Ashburton allotment township, near Pietermaritzburg in Kwa-Zulu Natal. 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 proposed development will occupy an area of approximately 42.7 hectares, of which around 39.5 hectares will be allocated to the solar photovoltaic (PV) array. This configuration is expected to support

an installed capacity of up to 39.5 megawatt-peak (MWp), which refers to the maximum power output under optimal solar irradiance conditions (i.e., peak performance at standard test conditions). The remaining area will accommodate associated infrastructure, including inverters, battery storage, access roads, and the electric vehicle (EV) charging facility.

In addition to the solar PV installation, the facility will include a battery energy storage system. A key component of the facility will be a battery energy storage system specifically designed to support electric vehicle and truck charging. 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 staff and visitors, the facility will feature 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 100 meters east of the N3 and Ntabamhlope Road interchange, along the Ntabamhlope Road.

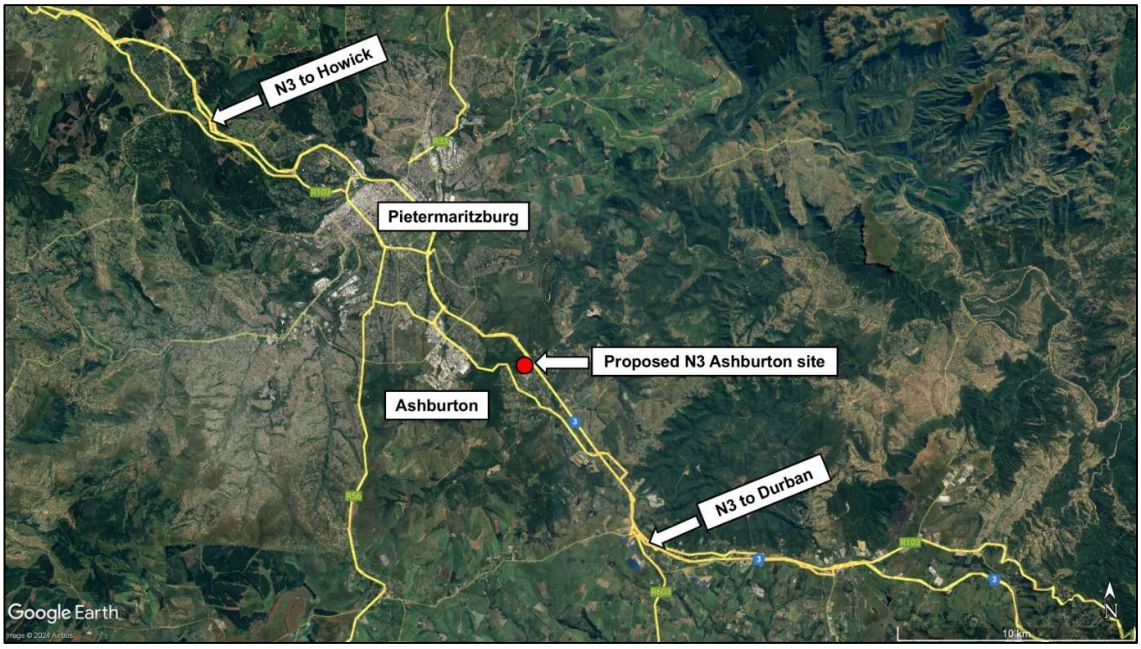


Figure 1: Google Earth image showing the locality of the proposed site (indicated by the red dot)

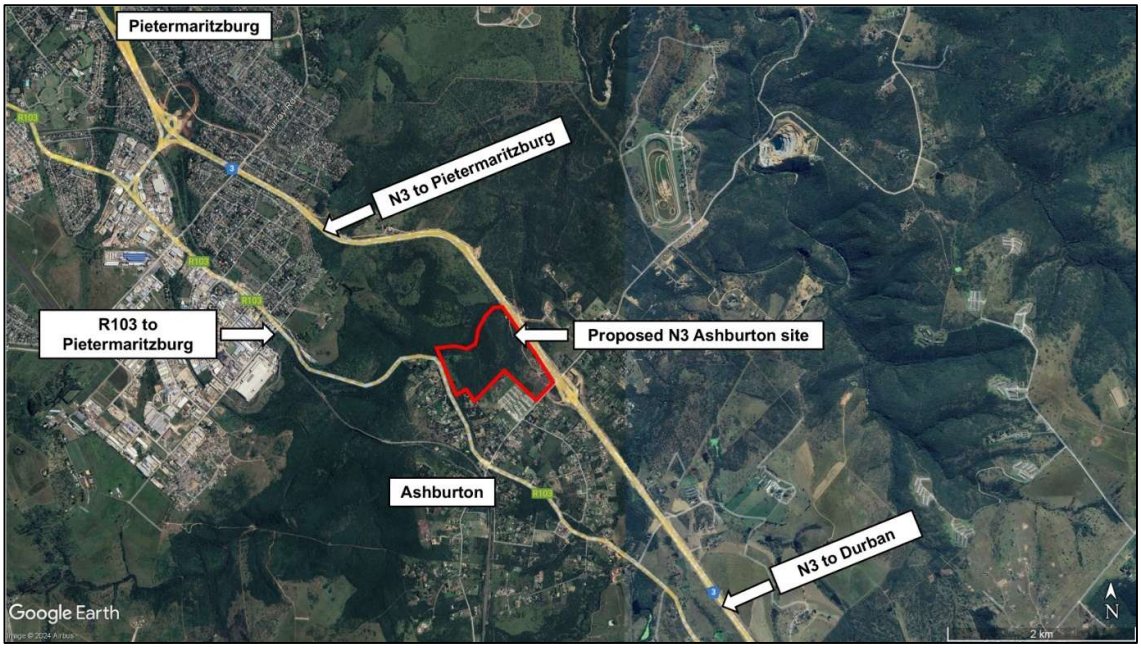


Figure 2: Google Earth image (1) of the proposed property and the development footprint (red polygon)

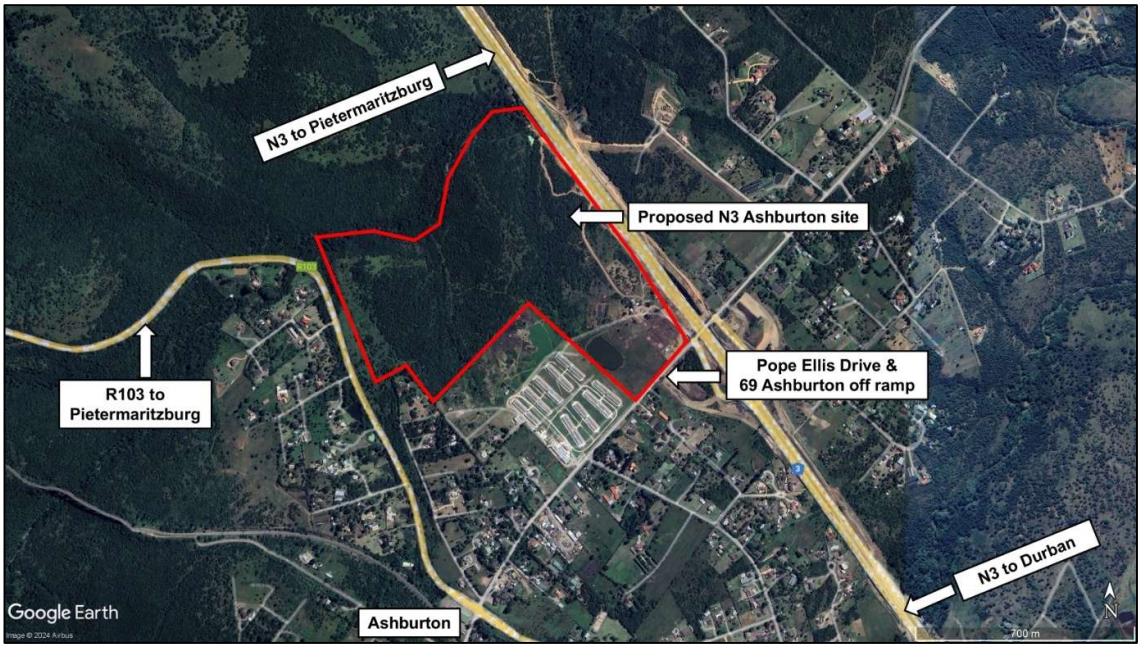


Figure 3: Google Earth image (2) of the proposed property and the development footprint (red polygon)

2 NEED AND DESIRABILITY

In terms of the National Environmental Management Act, as amended, EIA 2014 regulations, the Scoping & EIA reports must provide 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 the *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 pursuant of the mission, the government has formulated the Green Transport Strategy for South Africa (2018-2050), published by the Department of Transport. As a part of this commitment, South Africa intends to widely adopt the use of electric vehicles (EVs) in its vehicle population to reduce the 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 (approximately 2300 vehicles), 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

[1] Million Tonnes of carbon dioxide equivalent

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. The focus of EV adoption has been limited to passenger vehicles, but heavy vehicles are an important contributor to carbon emissions. As trucks generally follow major routes to transport the freight. Infrastructure must be developed independently of the existing grid to make the transportation of freight possible.

Truck EV recharging stations 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 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 loadshedding, 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).

Furthermore, the development of EV truck recharging stations in rural areas, especially along strategic logistics corridors like the N3, has the potential to:

- Enable a clean and efficient freight network.
- Reduce diesel dependency, which is both a financial and environmental burden.
- Create local jobs in construction, operations, and maintenance.
- Stimulate economic development in underinvested rural areas.

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 off the N3, at the corner of the N3 and Pope Ellis Drive, approximately 10 km south-east of Pietermaritzburg, in the uMgungundlovu District Municipality, Kwa-Zulu Natal.

Site coordinates (approximate central point): 29°39’30.73” S; 30°27’05.35” 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 routes in South Africa, with trucks carrying an average of 50 million tons of freight per annum, constituting around 38% of traffic on the N3[2].

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 day[3].

The proposed development site has been partially transformed by historical and ongoing agricultural activities, particularly livestock grazing and limited infrastructure associated with rural land use. According to field verification data from site visits conducted in November 2023, the veld is generally in good ecological condition, with well-managed grazing practices across much of the site. However, localised areas of overgrazing and bush encroachment were observed, especially around livestock enclosures and drainage lines.

The site falls within the KwaZulu-Natal Highland Thornveld vegetation type, as classified by Mucina and Rutherford (2006) in the National Vegetation Map, and as further detailed by SANBI (2018, 2021). At a national ecosystem level, this vegetation type is currently listed as "Least Concern" in the National Biodiversity Assessment 2018 (SANBI) and confirmed in DFFE's 2022 Ecosystem Threat Status and Protection Level Report. This classification indicates that the vegetation type is not currently under significant threat of transformation or degradation at a national scale. As such, the site does not trigger any vegetation-based "no-go" restrictions, making it ecologically suitable for solar PV development, provided that localised sensitivities such as riparian corridors and Critical Biodiversity Areas (CBAs) identified further downslope are respected.

Furthermore, the general region is well-suited for solar photovoltaic (PV) energy generation due to high solar resource availability. According to the Global Solar Atlas (World Bank Group, 2020), the site experiences a Global Horizontal Irradiance (GHI) average of approximately 1850.3 kWh/m²/year. GHI is a key metric in solar energy assessments, representing the total solar radiation received per unit area by a horizontal surface, and is widely accepted as the most critical parameter for predicting PV system output performance. Research by the Global Weather Corporation and industry benchmarks indicate that GHI accounts for over 70% of variability in PV energy yield, underscoring the site's suitability from a climatic and energy-efficiency perspective.

According to the Department of Forestry, Fisheries and the Environment (DFFE) National Screening Tool Report (October 2024), the site does not intersect with any Environmental Management Framework (EMF) zones, further confirming the absence of spatial planning conflicts or environmental overlays that would constrain development. This, along with the absence of high-potential agricultural soils and the site's position outside of formally protected vegetation types, supports the site's favourability for renewable energy infrastructure.

[2] http://www.n3tc.co.za/n3-toll-route-traffic-and-crash-data-provide-numerous-safety-clues/
[3] http://www.n3tc.co.za

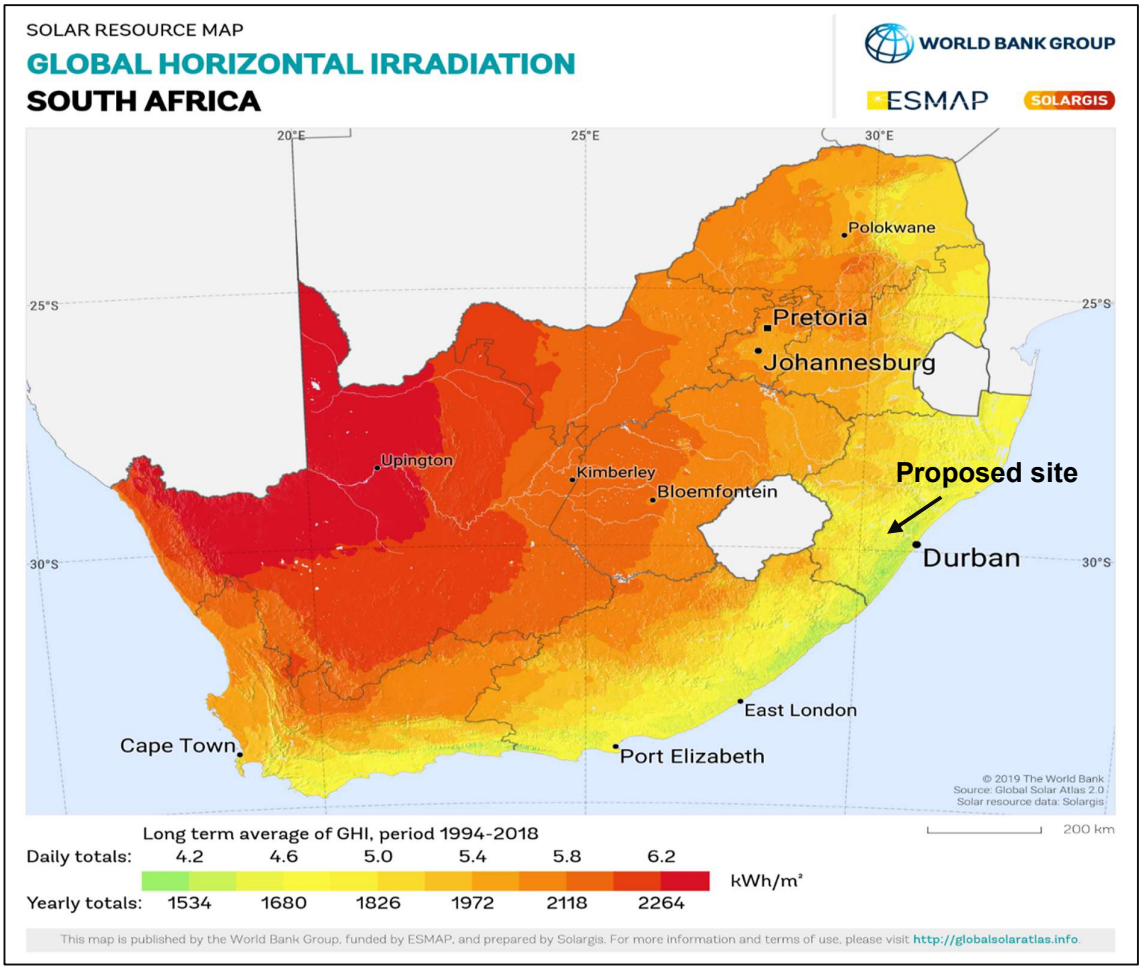


Figure 4: Global Solar Atlas image showing the Global Horizontal Irradiation levels for the proposed site

2.2.2 Compatibility with the Surrounding Area

The proposed solar PV and electric vehicle (EV) charging development is currently not aligned with the existing land use rights of the property, which is zoned for Agricultural use under the applicable municipal land use scheme. Therefore, in accordance with the Spatial Planning and Land Use Management Act, 2013 (Act No. 16 of 2013) (*SPLUMA*), a land use rezoning application will be required. This process must comply with the spatial development frameworks (SDFs) and municipal bylaws of the Msunduzi Local Municipality, ensuring alignment with local planning objectives, development principles, and land use management instruments.

The surrounding land uses are predominantly agricultural, comprising grazing fields, livestock enclosures, and rural homesteads. As per field verification and desktop analysis, the immediate landscape exhibits low to medium intensity agricultural practices, with some portions showing signs of ecological disturbance or limited productivity. The integration of a solar energy facility, while requiring a departure from the conventional agricultural zoning, is not inherently incompatible with rural landscapes, especially when designed to be non-intrusive, low-emission, and grid-independent.

From a health and well-being standpoint, the proposed development is not expected to result in significant environmental nuisances, such as odour, dust, or industrial noise, which are typically associated with more intensive land uses. Solar PV facilities are known for low operational impact once

constructed, and noise emissions are limited primarily to inverter and battery cooling systems, which can be acoustically shielded if necessary. No air or water pollution is anticipated during operations.

However, the project could impact the visual character and "sense of place" of the area, as it introduces a distinctly technological and geometric infrastructure into a historically pastoral and natural setting. As such, visual intrusion is a valid concern, particularly given the proximity to sensitive receptors such as rural lodges, agricultural enterprises, and scenic routes.

It is also important to frame the project within the broader strategic national and global context. South Africa's Integrated Resource Plan (IRP 2019) and the National Development Plan (NDP 2030) promote decentralised, renewable energy infrastructure as part of the Just Energy Transition and long-term carbon reduction goals. Aligning rural infrastructure with clean energy investment, especially in areas with adequate solar irradiation and low land conflict, is not only a national policy imperative but a practical solution to grid capacity challenges and rural underdevelopment.

In summary, while the proposed development represents a departure from traditional agricultural use, it is compatible with broader spatial planning principles, particularly those of sustainable development, resource efficiency, and spatial justice as outlined in SPLUMA. With thoughtful design and appropriate mitigation, the project can support both clean energy goals and the preservation of KwaZulu-Natal's rural landscape character, enabling a balanced integration of land use and energy planning.

2.2.3 Objectives of Integrated Environmental Management

The general objectives of Integrated Environmental Management have been taken into account through the following:

- The actual and potential impacts of the activity on the environment, socio-economic conditions and cultural heritage have been identified, predicted and will be evaluated, as well as the risks and consequences and alternatives and options for mitigation of activities, with a view to minimising negative impact, maximising benefits and promoting compliance with the principles of environmental management.
- The effects of the activity on the environment have been considered before actions taken in connection with them – *alternatives have been considered and will be investigated.*
- Adequate and appropriate opportunity for public participation is ensured through the public participation process.
- The environmental attributes have been considered in the management and decision-making of the activity – *an EMP will be compiled and included in the Environmental Impact Assessment Report for the proposed activity. The development must adhere to the requirements of all applicable state Authorities.*

2.2.4 Principles of Environmental Management

The principles of environmental management as set out in section 2 of NEMA have been taken into account. The principles pertinent to this activity include:

- People and their needs have been placed at the forefront while serving their physical, psychological, developmental, cultural and social interests – the proposed activity will have a beneficial impact on people. However, potential negative impacts will also be investigated.
- Development must be socially, environmentally and economically sustainable. Where disturbance of ecosystems, loss of biodiversity, pollution and degradation, and landscapes and sites that constitute the nation's cultural heritage cannot be avoided, they are minimised and remedied. - Although the activity is expected to have little significant environmental impact, these *impacts have*

been considered, and mitigation measures have been put in place. This will also be dealt with in the EMPr.

- Where waste cannot be avoided, it is minimised and remedied through the implementation and adherence to the EMPr.
- The use of non-renewable natural resources is responsible and equitable.
- The negative impacts on the environment and people's environmental rights have been anticipated and will be prevented, and where they cannot be prevented, are minimised and remedied.
- The interests, needs and values of all interested and affected parties will be taken into account in any decisions through the Public Participation Process
- The social, economic and environmental impacts of the activity have been considered, assessed and evaluated, including the disadvantages and benefits, which will be addressed in the Environmental Impact Assessment (EIA) Report.
- The effects of decisions on all aspects of the environment and all people in the environment have been taken into account by pursuing what is considered the best practicable environmental option as the proposed activity is expected to have minimal/negligible environmental impacts, especially after mitigation measures as described in the specialist reports and the EMPr are implemented.

3 LEGAL REQUIREMENTS

The current assessment is being undertaken in terms of the National Environmental Management Act (Act 107 of 1998, NEMA), to be read with section 24 (5): NEMA EIA Regulations 2014. However, the provisions of various other Acts must also be considered within this EIA. The legislation that is relevant to this study is briefly outlined below:

3.1 THE CONSTITUTION OF THE REPUBLIC OF SOUTH AFRICA

The Constitution of the Republic of South Africa, 1996 (Act 108 of 1996), under Section 24, preserves the right of every individual to "an environment that is not harmful to their health or well-being", and further mandates to take reasonable legislative and other measures to prevent pollution and ecological degradation**,** promote conservation, and secure ecologically sustainable development and use of natural resources while promoting justifiable economic and social development**.**

This constitutional provision forms the foundational legal basis for all environmental legislation and governance in South Africa, including the National Environmental Management Act (NEMA) and its associated regulations. It reflects the country's commitment to integrated environmental management that balances ecological integrity with human development needs.

The proposed development aligns with the objectives of Section 24 of the Constitution, contributing to a cleaner, more equitable, and sustainable future for South Africa. It demonstrates how infrastructure development, when properly planned and responsibly implemented, can advance both environmental rights and economic inclusion, in line with the legal framework.

3.2 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 a national act, which is enforced by the Department of Forestry, Fisheries and the Environment (DFFE). These powers are delegated in KwaZulu-Natal to the Department of Economic Development, Tourism and Environmental Affairs (KZNEDTEA).

On 04 December 2014, the Minister of Water and Environmental Affairs promulgated regulations in terms of Chapter 5 of the NEMA, namely the EIA Regulations 2014. These were amended on 07 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 Notices 1 and 3 are for a Basic Assessment and Listing Notice 2 is for a full Environmental Impact Assessment.

According to the regulations of Section 24(5) of NEMA, authorisation is required for the following listed activities for the proposed development, i.e., Ashburton Solar PV and EV 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)		
1.	The development of facilities or infrastructure for the generation of electricity from a renewable resource where- (i) the electricity output is more than 10 megawatts but less than 20 megawatts; or (ii) the output is 10 megawatts or less but the total extent of the facility covers an area in excess of 1 hectare; excluding where such development of facilities or infrastructure is for photovoltaic installations and occurs a) within an urban area; or b) On existing infrastructure	The proposed development will occupy an area of approximately 42.7 hectares, of which around 39.5 hectares will be allocated to the solar photovoltaic (PV) array. This configuration is expected to support an installed capacity of up to 39.5 megawatt-peak (MWp), which refers to the maximum power output under optimal solar irradiance conditions (i.e., peak performance at standard test conditions). The remaining area will accommodate associated infrastructure, including inverters, battery storage, access roads, and the electric vehicle (EV) charging facility. The site is outside an urban area. No exclusions apply.
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 access road of 9m is required for vehicles to gain access to the proposed development site.

No.	Listed Activities as per Listing Notice 1, 2 and 3 (GN R327, R324, R325)	Applicability to the development
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 utilised for agriculture.
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 b) On existing infrastructure	The proposed development will occupy an area of approximately 42.7 hectares, of which around 39.5 hectares will be allocated to the solar photovoltaic (PV) array. This configuration is expected to support an installed capacity of up to 39.5 megawatt-peak (MWp), which refers to the maximum power output under optimal solar irradiance conditions (i.e., peak performance at standard test conditions). The remaining area will accommodate associated infrastructure, including inverters, battery storage, access roads, and the electric vehicle (EV) charging facility. The development site is outside an urban area.
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 site is 42.7ha and will clear an area of 20ha or more of indigenous vegetation over the proposed site. Indigenous vegetation will be cleared for the proposed development site, even though the indigenous vegetation of the site has been identified as predominantly degraded.
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	An access road of 9m is required for vehicles to gain access to the proposed development site for operational

No.	Listed Activities as per Listing Notice 1, 2 and 3 (GN R327, R324, R325)	Applicability to the development
	(ee) Critical Biodiversity Areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans.	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 KwaZulu-Natal Department of Economic Development and Environmental Affairs (KZNEDTEA). On acknowledgement from KZNEDTEA, the Scoping phase process will be initiated and undertaken to further identify potential issues.

3.3 NATIONAL HERITAGE RESOURCES ACT

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

Section 38(8) also makes provision for the assessment of heritage impacts as part of an EIA process and indicates that if such an assessment is found to be adequate, a separate 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 SAHRA, or the responsible 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.

3.4 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*

3.5 NATIONAL WATER ACT

Besides the provisions of NEMA for this EIA process, the proposed development will also require authorisations under the National Water Act (Act No. 36 of 1998) (NWA). The Department of Water and

Sanitation (DWS), administrator of the Act, will be a leading role-player in the EIA. A Water Use Licence Application (WULA) or General Authorisation, in terms of Section 21 (c) and (i) of the NWA, may be required; however, the level of authorisation will be determined by the specialist. Once determined, the application level will run concurrently with the NEMA Application.

3.6 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 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*).

3.7 The Spatial Planning And Land Use Management Act (Act 16 Of 2013)

The subject area falls under the jurisdiction of the local municipality and the appropriate zoning and subdivision would need to be allocated in order to permit the development of the land for the intended purpose. A rezoning and consent use planning application in terms of Section 35 of the Spatial Planning and Land Use Management Act (SPLUMA), Act 16 of 2013, regulations, the KwaZulu-Natal Bylaw on Municipal Land Use Planning.

3.8 The Conservation of Agricultural Resources Act (Act 43 Of 1983)

According to the Department of Environmental Affairs (2015). EIA Guideline for Renewable Energy Projects. Department of Environmental Affairs, Pretoria, South Africa, the mandate of the Conservation and Agricultural Resources Act 1983 (Act No 43 of 1983) (CARA) is to conserve “natural agricultural resources” (the soil, the water sources and the vegetation, excluding weeds and invader plants) through production potential of land, by the combating and prevention of erosion and weakening or destruction of the water sources, and by the protection of the vegetation and the combating of weeds and invader plants.

Section 6 of the Act concerns the control measures which the following may be applicable to IPPS (subsections (2) (f), (g) and (o)):

- regulating 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.

4 ALTERNATIVES

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

4.1 SITE ALTERNATIVES

The consideration of site alternatives is a key requirement under the Environmental Impact Assessment (EIA) Regulations, 2014 (as amended), promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998). The proposed site at Erf 356, Ashburton, is the only viable and feasible location currently available. This is due to several compelling factors.

Strategically, the site is ideally positioned along the N3 national freight corridor between Durban and Johannesburg, which is critical for supporting the development of a zero-carbon truck stop and solar PV charging facility tailored to long-haul electric freight transport. No other land parcels identified to date offer the same level of accessibility, logistical functionality, or availability.

The site is already partially disturbed from previous agricultural use and hosts existing infrastructure, which reduces environmental impacts and avoids the need to clear ecologically pristine areas. Importantly, the land offers high solar potential with a Global Horizontal Irradiance (GHI) average of 1850.3 kWh/m² and sufficient space to allow for grid-independent, renewable energy generation, which is essential given the unreliability of grid electricity and the need for uninterrupted charging operations.

Furthermore, preliminary environmental assessments confirm that development can be concentrated in lower-sensitivity areas, allowing for the avoidance of high-value ecological features such as drainage lines and riparian zones. The urgency of the broader Zero Carbon Charge (ZCC) rollout across South Africa's strategic transport routes further underscores the importance of utilising this site without delay, as locating, assessing, and acquiring alternative properties would introduce unnecessary delays and risk.

While no alternative sites are proposed for this application, layout and design alternatives within the property will continue to be refined to minimise environmental impact and optimise compatibility with the surrounding landscape.

4.2 ACTIVITY ALTERNATIVES

There are no feasible activity alternatives assessed. The primary activity is the development of a facility for the generation of renewable energy. Other renewable energy generation facilities include wind and concentrated solar power, neither of which is viable on the proposed site.

The primary activity under consideration is the development of a renewable energy generation facility, specifically a solar photovoltaic (PV) plant integrated with an electric vehicle (EV) charging station, in support of South Africa’s transition toward clean energy and sustainable transport. The selection of solar PV technology is informed by a range of technical, environmental, and site-specific factors that render it the most appropriate and feasible option for this location.

While other renewable energy technologies, such as wind energy and concentrated solar power (CSP), are recognised as potential alternatives in the broader renewable energy sector, they are not viable for the Ashburton site. Wind energy requires specific wind resource conditions, typically average annual wind speeds exceeding 6.5 m/s at turbine hub height, which are not present in the inland KwaZulu-Natal Midlands. Additionally, wind turbine infrastructure would have a significantly greater visual and noise impact, which is incompatible with the surrounding agricultural and rural landscape character.

Concentrated solar power (CSP) technology, on the other hand, requires direct normal irradiance (DNI) levels exceeding 2000 kWh/m²/year to be effective. The Ashburton site has a Global Horizontal Irradiance (GHI) average of approximately 1850.3 kWh/m²/year, which is suitable for solar PV but insufficient for CSP, which relies on strong, direct beam sunlight and is typically viable only in arid, high-irradiance regions like the Northern Cape. Moreover, CSP systems require extensive land, substantial water for cooling (in wet-cooled designs), and higher capital expenditure, making them economically and environmentally unsuitable for this context.

Solar PV, in contrast, is highly scalable, cost-effective, and compatible with grid-independent operation, a critical consideration given the unreliability of South Africa's grid and the need for uninterrupted truck charging. PV systems also have a lower environmental footprint, reduced visual intrusion compared to wind turbines or CSP towers, and minimal operational noise.

Therefore, after considering the technical constraints, site characteristics, and broader sustainability objectives, solar PV is the only feasible and justifiable activity for this development. No alternative technologies meet the spatial, climatic, and logistical requirements of the project.

4.3 Design/Technology Alternatives

Three different solar photovoltaic (PV) technology alternatives are options for the PV:

- Poly-Crystalline photovoltaic
- Concentrated photovoltaic (CPV)
- Thin film PV

These technologies each have their own advantages and disadvantages, from cost and space efficiency to visual impacts. The various options will be considered and assessed in more detail in the Environmental Impact Report.

4.4 Layout Alternatives

The proposed property encompasses an area of approximately 65 hectares, of which around 42.7 hectares are earmarked for development. This includes approximately 39.5 hectares allocated for the installation of the solar photovoltaic (PV) array, with the remaining development area dedicated to associated infrastructure, such as the electric vehicle (EV) charging station, access roads, battery storage systems, inverters, and operational facilities. The overall site extent allows for flexibility in considering layout alternatives, ensuring that infrastructure placement can respond appropriately to environmental sensitivities, such as riparian buffers, drainage lines, areas of high biodiversity value, and other identified no-go zones. This spatial capacity supports an iterative design process that integrates environmental best practices and impact avoidance as part of sustainable site development.

The layouts will consider the need to maximise the output from the facility (maximise the solar array area) and consider the environmental 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.

4.5 No-Go Alternatives

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

Under the no-go alternative, the proposed development of the solar photovoltaic (PV) facility and associated electric vehicle (EV) charging infrastructure would not proceed. As a result, no direct negative environmental impacts, such as habitat transformation, vegetation clearance, or disturbance to faunal species, would occur. Similarly, there would be no loss of agricultural land or alteration to the

current land use, which is primarily grazing and low-intensity agriculture. However, while this may appear beneficial from an environmental perspective, it is important to acknowledge that the site is already partially disturbed, and the current land use does not guarantee ecological recovery or stability. Continued grazing pressure, bush encroachment, and the lack of active ecological management may, in fact, lead to gradual degradation of ecosystem functionality, undermining any assumed environmental benefit of non-intervention.

The no-go option would also mean that the significant socio-economic and strategic benefits associated with the proposed development would not be realised. These include the generation of clean, renewable energy, a reduction in greenhouse gas emissions, and the contribution toward South Africa's transition away from a coal-dominated energy system, in line with the Integrated Resource Plan (IRP 2019) and the country's Nationally Determined Contribution (NDC) under the Paris Agreement. At a local level, the development would create short-term employment opportunities during construction, as well as long-term operational and maintenance jobs, which are particularly valuable in a rural area with limited economic activity.

By contrast, the no-go alternative maintains the status quo, in which South Africa's electricity grid remains heavily reliant on fossil fuels, resulting in ongoing environmental degradation at a national level due to coal mining, air pollution, and carbon emissions. It also forfeits an opportunity to support rural infrastructure development and economic diversification through a strategically located, grid-independent renewable energy node.

In conclusion, while the no-go alternative avoids localised environmental impacts in the short term, it fails to support national imperatives related to clean energy, climate change mitigation, and sustainable development. Given the careful site selection, moderate environmental sensitivity, and the potential to avoid high-risk ecological areas through sensitive design, the socio-economic and environmental benefits of the proposed activity are considered to outweigh the benefits of the no-go alternative. A comprehensive assessment of potential impacts, both negative and positive, will be presented in the forthcoming Environmental Impact Report (EIR) to support informed decision-making.

5 SITE DESCRIPTION

5.1 LOCATION

The proposed development site is located off the N3 National Route, at the intersection with Pope Ellis Drive, approximately 10 km south-east of Pietermaritzburg, within the Msunduzi Local Municipality, which falls under the uMgungundlovu District Municipality, in the KwaZulu-Natal Province of South Africa. The site lies within the rural locality of Ashburton, an area characterised by agricultural land use, low-density rural development, and natural valley bushveld vegetation. The approximate central coordinates of the site are 29°39'30.73" S; 30°27'05.35" E.

The property is identified as Erf 356 of the Ashburton Allotment Township and spans approximately 65 hectares in total. It lies directly adjacent to the N3 corridor, one of South Africa's most critical freight and logistics routes, linking the Durban port with Gauteng. The R103 regional road runs parallel to the N3 and forms part of the local road network serving the area.

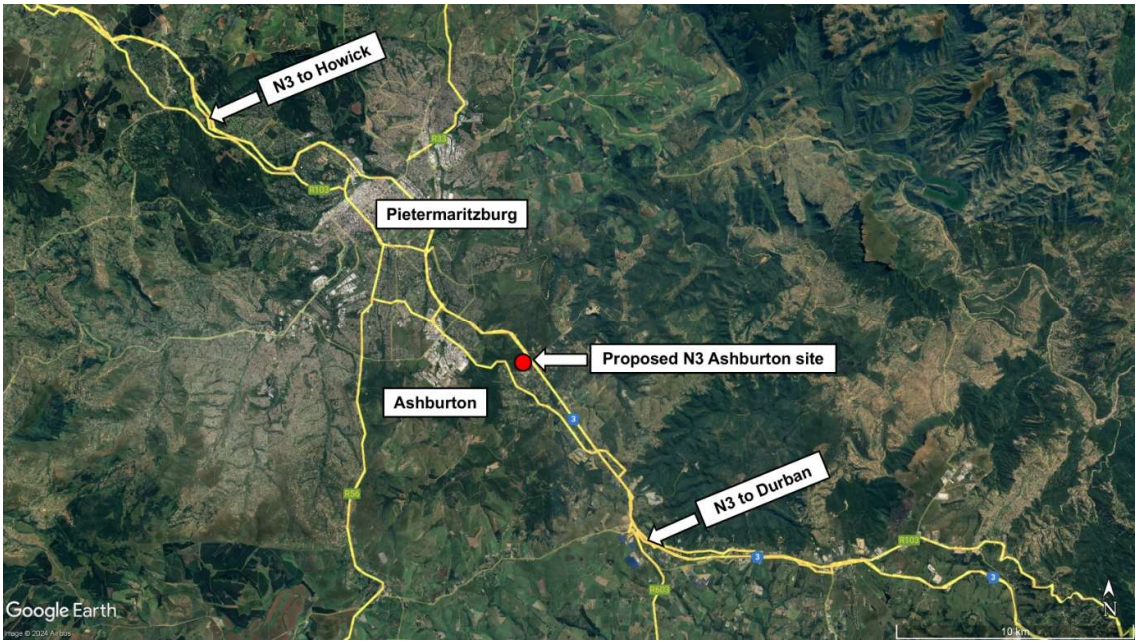


Figure 5: Proposed development site - Locality Map

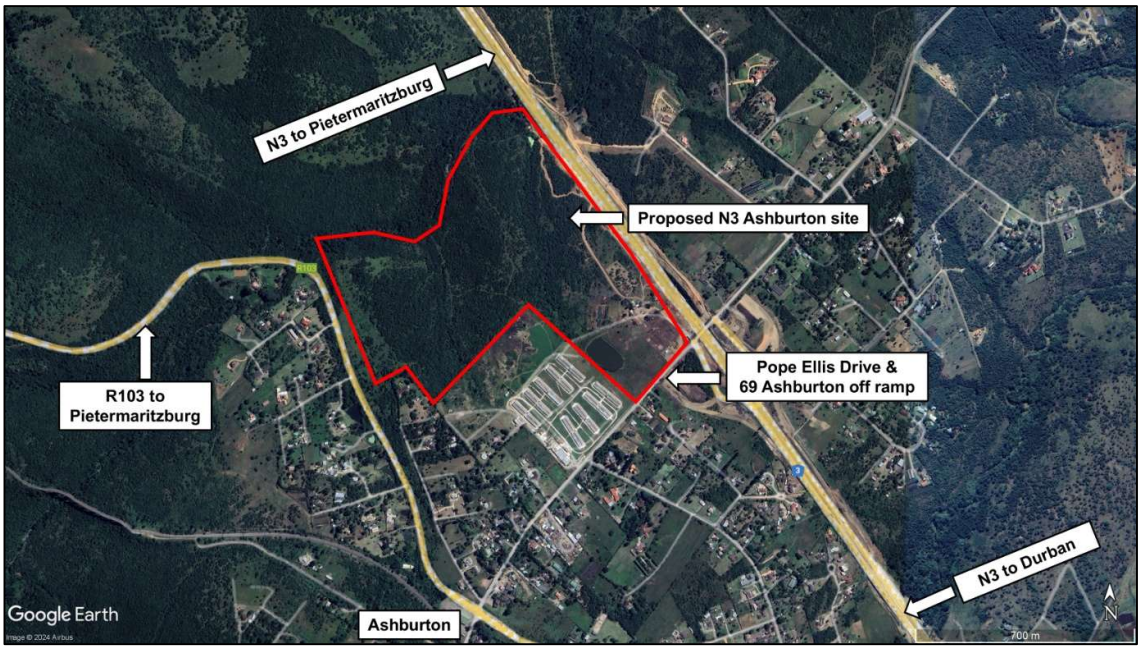


Figure 6: Proposed development site – Development footprint

5.2 DFFE Screening Tool Report

5.2.1 Proposed Development Area - Environmental Sensitivity

The Department of Forest, Fisheries and the Environment (DFFE) National Web-based Environmental Screening Tool is a geographically based web-enabled application which allows a proponent / applicant intending to submit an application for environmental authorisation in terms of the Environmental Impact Assessment (EIA) Regulations 2014, as amended, to screen the proposed development site for any environmental sensitivity.

The summary outlined below pertains to the environmental sensitivities of the proposed development site. The identified environmental sensitivities associated with the development footprint are indicative and must be verified in situ by a qualified professional prior to the confirmation of the specialist assessments referenced herein. Each thematic category is linked to a series of datasets that provide comprehensive information regarding the environmental sensitivities pertinent to that category. The tool utilises these datasets to produce a sensitivity rating for each theme at a specific location. The Department of Forestry, Fisheries and the Environment (DFFE) Screening Tool Report for the proposed development is included as Appendix 1 of this report.

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

Theme	Very High	High	Medium	Low
Agricultural		X		
Animal Species		X		
Aquatic Biodiversity	X			
Archaeological and Cultural Heritage	X			

Theme	Very High	High	Medium	Low
Avian		X		
Civil Aviation (Solar PV)			X	
Defence				X
Landscape (Solar)	X			
Palaeontology			X	
Plant Species			X	
RFI[4]				X
Terrestrial Biodiversity	X			

[4] Radio Frequency Interference

5.2.2 Site Sensitivity Verification

The following section is from the Site Sensitivity Verification (SSV) report. An SSV report was undertaken in terms of the *Protocols for the Assessment and Minimum Criteria for Reporting on identified Environmental Themes* (Protocols) as per Government Notice No. 320 (published in Government Gazette No. 43110 on 20 March 2020)[5].

These Protocols, effective as of 09 May 2020, must be complied with for every new application for Environmental Authorisation (EA) submitted after the effective date. According to the Protocols, the Environmental Assessment Practitioner (EAP) must verify the current use and environmental sensitivities of the site in relation to the proposed development, in accordance with the DFFE Screening Tool report results, to determine the need for specialist assessments for the identified environmental sensitivity themes.

This verification is done through a combination of desktop studies and onsite investigations by the Environmental Assessment Practitioner (EAP) and/or appointed specialists. Through studies and investigations, the team evaluates the environmental themes and the associated sensitivity ratings related to the proposed development. The evaluation aims to ascertain whether the findings of the Department of Forestry, Fisheries and the Environment (DFFE) Screening Tool are an accurate reflection of the actual conditions present on site. The aim of a Site Sensitivity Verification (SSV) report is to:

- Verify land use and environmental theme sensitivities as identified by the DFFE Screening Tool report
- Confirm or motivate against the need for a particular specialist assessment(s) as indicated by the DFFE Screening Tool report; and
- Should the need for a specialist assessment be refuted/challenged, provide a motivation as to why the particular specialist assessment is not applicable to the proposed development.

The following table provides an overview of sensitivity ratings for various environmental themes at the proposed development site, as determined by the DFFE. Each theme's proposed sensitivity rating reflects the agreement or disagreement of the EAP and/or specialist based on the site sensitivity verification. The proposed sensitivity rating is motivated accordingly, discussing the need for further specialist assessment as part of the EIA process.

Table 3: Environmental themes sensitivity (DFFE & Proposed) and motivation for specialist assessment

Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation & Need for Specialist Assessment
Agriculture	High	Disagree ↓	Medium	DFFE sensitivity is rated high due to the moderate-high land capability. During a field survey (07 November 2023), the soils of the site were observed, described, and classified. No high-potential soils were classified on the site, resulting in a proposed medium sensitivity. A site verification has been undertaken and the preliminary findings are included in the report but will be expanded on and supplemented during the EIA phase.

[5] The Protocols are in line with Section 24(5)(a) and (h) and Section 44 of the National Environmental Management Act (NEMA), 1998 (Act No. 107 of 1998).

Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation & Need for Specialist Assessment
Animal Species	High	Agree	High	Sensitivity is high due to the potential sensitive species recorded for the site by SANBI. The presence of several highly sensitive bird species, including the wattled crane, southern bald ibis and secretary bird, is also associated with the site. An initial Terrestrial Biodiversity Assessment has been undertaken and the preliminary findings are included in this report but will be finalised during the EIA phase.
Aquatic Biodiversity	Low	Agree	Low	Sensitivity is very high due to the site being associated with a FEPA subcatchment. According to the freshwater sensitivity mapping and preliminary site assessments, no significant freshwater systems or wetlands occur directly within the proposed development footprint. However, the site does contain two naturally wooded drainage lines that run in a northerly direction towards the Mkhondeni River, which borders the northern boundary of the property. These drainage features, along with adjacent riparian zones, are the only areas identified as having medium to high ecological sensitivity. These areas exhibit wetland-like characteristics in terms of vegetation and hydrology and should therefore be treated with caution. The proposed layout has been designed to avoid these sensitive areas, including compliance with the regulated 32-meter buffer zone as prescribed under the National Water Act, 1998 (Act No. 36 of 1998) and associated General Authorisations for watercourses. By positioning infrastructure outside these zones, the development can minimise potential impacts on aquatic biodiversity, hydrological functioning, and ecosystem connectivity. An initial Freshwater Impact Assessment has been undertaken and the preliminary findings are included in this report but will be finalised during the EIA phase.
Archaeology and Cultural Heritage	Low	Disagree ↑	Low	DFFE sensitivity is rated low. There are no heritage sites in this section as it is a crop field. An initial Archaeological Impact Assessment has been undertaken, regardless of the low sensitivity. The preliminary findings are included in the report but will be finalised during the EIA phase. A Notice of Intent to Develop (NID) will also be submitted to the Heritage Authority.
Avian	Very High	Agree	Very High	The Department of Forestry, Fisheries and the Environment (DFFE) Screening Tool rates the site's

Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation & Need for Specialist Assessment
				avian sensitivity as "Very High", primarily due to the potential occurrence of several threatened bird species within the area. These include Endangered and Vulnerable species such as the Grey Crowned Crane (*Balearica regulorum*), Southern Bald Ibis (*Geronticus calvus*), and *Secretarybird* (*Sagittarius serpentarius*), all of which are known to utilise open grassland and valley bushveld habitats like those found on the proposed site. In addition, a Cape Vulture (*Gyps coprotheres*) feeding site ("*vulture restaurant*") is known to exist within approximately 20 km of the site, increasing the likelihood of vulture flight paths intersecting the area. Due to these sensitivities, the site is flagged for its high conservation importance from an avifaunal perspective, particularly in relation to potential collisions with solar infrastructure, habitat displacement, and barrier effects. An initial Avifaunal Impact Assessment has been undertaken and the preliminary findings are included in this report but will be finalised during the EIA phase.
Civil Aviation (Solar PV)	Low	Agree	Low	There are no major civil aviation aerodromes or airports located within the immediate vicinity of the site, and the proposed development is not expected to pose any threat to civil aviation operations. According to the DFFE Screening Tool and regional mapping, the nearest registered airstrip is the Dawn View Airstrip, located approximately 2 km southeast of the site. Given the nature of the proposed infrastructure, primarily low-profile solar PV arrays and ancillary structures, it is unlikely to interfere with air traffic or aviation safety.
Defence	Low	Agree	Low	Due to the nature of the proposed development, which involves low-profile, static infrastructure such as solar photovoltaic (PV) panels and associated electric vehicle (EV) charging infrastructure, it is not anticipated that the project will interfere with any defence-related activities or infrastructure. The site is not located within a known South African National Defence Force (SANDF) strategic zone or near any military installation or training area, and therefore, no adverse impacts on national defence operations are expected.
Landscape (Solar)	Very High	Disagree ↓	High	According to the DFFE Screening Tool, the site has been assigned a "Very High" landscape sensitivity rating, due to specific landscape features that are considered sensitive to visual intrusion from solar PV infrastructure. These include slopes between 1:4 and 1:10, which create elevated vantage points and increase the likelihood of the development being visually prominent. In addition, the site's proximity to conservation areas, such as the Mpushini Protected Environment (approximately 1.3 km to the

Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation & Need for Specialist Assessment
				southeast), and its location within 500–1000 meters of rural homesteads and agricultural settlements in the Ashburton area, contribute to its elevated sensitivity rating. These criteria are consistent with the Landscape/Visual Theme assessment methodology defined in the Screening Tool and support the classification of the site as a visually sensitive landscape. However, the presence of existing anthropogenic features, such as the N3 highway, powerlines, and adjacent farm infrastructure, provides a degree of visual absorption capacity, potentially reducing the perceived visual impact of the solar PV infrastructure. These features indicate that the landscape is not pristine and already accommodates infrastructure of similar scale and character, which may support visual integration through sensitive design, appropriate placement, and mitigation such as vegetation buffers and low-reflectivity materials. As a result, while the site has been rated as having high to very high visual and landscape sensitivity, the actual impact significance will depend on site-specific layout, mitigation measures, and the degree to which local topography and land use patterns are considered in the final design. 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 ↓	Medium	The DFFE Screening Tool assigns a Medium palaeontological sensitivity rating to the site, based on the underlying Estcourt Formation and possible Karoo Dolerite, which may contain fossil-bearing material. Despite this, the infrastructure associated with the proposed solar PV and electric vehicle (EV) charging facility is expected to cause minimal subsurface disturbance, particularly given that components such as PV arrays and access roads typically require only shallow foundations. As such, the potential impact on fossiliferous deposits is considered to be low to moderate. A desktop-level palaeontological assessment has been undertaken as part of this pre-application phase. A detailed Palaeontological Impact Assessment (PIA) will be submitted during the Environmental Impact Assessment (EIA) phase, once the final development layout and excavation requirements are confirmed. In accordance with national heritage guidelines and best practice, a Fossil Chance Find Protocol will be implemented during construction. Should any excavation exceed 2 metres in depth, a field inspection by a qualified palaeontologist will be

Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation & Need for Specialist Assessment
				required to ensure that any fossil material encountered is identified, recorded, and managed in compliance with the National Heritage Resources Act (Act 25 of 1999). In addition, a Notice of Intent to Develop (NID) will be submitted to the provincial heritage authority to address other potential heritage resources on site, including archaeological artefacts and possible graves.
Plant Species	Medium	Agree	Medium	The study area falls within the KwaZulu-Natal Highland Thornveld vegetation type, as defined in the National Vegetation Map (Mucina & Rutherford, 2006). This vegetation type is indigenous to the region and occurs in the more natural, less disturbed portions of the site. According to the National Biodiversity Assessment (SANBI, 2018; 2021), the Ecosystem Threat Status of KwaZulu-Natal Highland Thornveld is classified as "Least Concern", indicating that it is not currently under significant threat at the national scale. As such, the overall vegetation sensitivity of the site is considered to be medium, based on its conservation status and current condition observed during field assessments. However, data from the SANBI species distribution database and the DFFE Screening Tool indicate the potential presence of species of conservation concern (SCC) that may be associated with this habitat. These include both flora and fauna species that are considered sensitive due to their restricted ranges, ecological requirements, or threatened status. Although these species have not yet been confirmed through detailed seasonal surveys, their potential occurrence contributes to an elevated ecological sensitivity in certain parts of the site, particularly where natural vegetation cover remains intact. Further site-specific surveys and species sensitivity assessments will be undertaken during the EIA phase to confirm the presence or absence of these species and to guide appropriate mitigation and layout design. 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.

Theme	DFFE Sensitivity	Agree / Disagree	Proposed Sensitivity	Motivation & Need for Specialist Assessment
RFI	Medium	Agree	Medium	The site is considered to have medium sensitivity for Radio Frequency Interference (RFI), as identified in the DFFE Screening Tool, primarily due to its location within 5 km of a Sentech High-Power Terrestrial Broadcasting Facility. Additionally, the site lies approximately 14 km to 32 km from a Square Kilometre Array (SKA) receptor, placing it outside the designated SKA core protection zone, but still within an area where RFI sensitivity may be relevant. Given the nature of the proposed infrastructure, which includes solar photovoltaic (PV) panels and associated electrical equipment, the potential for RFI emissions is expected to be negligible or low. Furthermore, as the site is not located within the declared SKA Radio Astronomy Reserve, and the development does not include telecommunications infrastructure or high-frequency emitters, a formal RFI assessment is not considered necessary at this stage. However, engagement with relevant authorities such as the South African Radio Astronomy Observatory (SARAO) may be undertaken as a precautionary measure.
Terrestrial Biodiversity	Very High	Agree	Very High	The terrestrial biodiversity sensitivity of the site is considered very high, as per both the DFFE Screening Tool and site verification. This is due to the presence of Critical Biodiversity Areas (CBAs) and the site's location within a National Protected Area Expansion Strategy (NPAES) focus area. These classifications highlight the site's role in supporting ecological processes and regional biodiversity priorities. While certain areas (e.g., southern disturbed zones) exhibit lower local sensitivity, large portions of the site retain natural vegetation and host Species of Conservation Concern, especially in proximity to riparian corridors. An initial Terrestrial Biodiversity Assessment and Freshwater Impact Assessment have been undertaken. Preliminary findings are included in this report and will be refined during the Environmental Impact Assessment (EIA) phase.

5.3 CLIMATE

According to the South African National Biodiversity Institute (SANBI), the climatic conditions associated with the proposed site location are characteristic of a summer-rainfall region, with a mean annual precipitation (MAP) of 750 mm (much of which falls in the form of thunderstorms). Mist is uncommon (14 days of mist per year for both Ladysmith and Estcourt). Mean annual temperature (MAT) 15.6–19.0°C (overall average 16.5°C). Summers are warm to hot; winters are cool. There are 15 frost days per year.

Simulated historical climate & weather data were obtained from meteoblue.com for the town closest to the proposed site – i.e., Estcourt. The Meteoblue climate diagrams indicated below are based on 30 years of hourly weather model simulations. They give good indications of typical climate patterns and expected conditions (temperature, precipitation, sunshine and wind). The simulated weather data have a spatial resolution of approximately 30 km and may not reproduce all local weather effects, such as thunderstorms, local winds, etc, and local differences as they occur in urban, mountainous, or coastal areas.

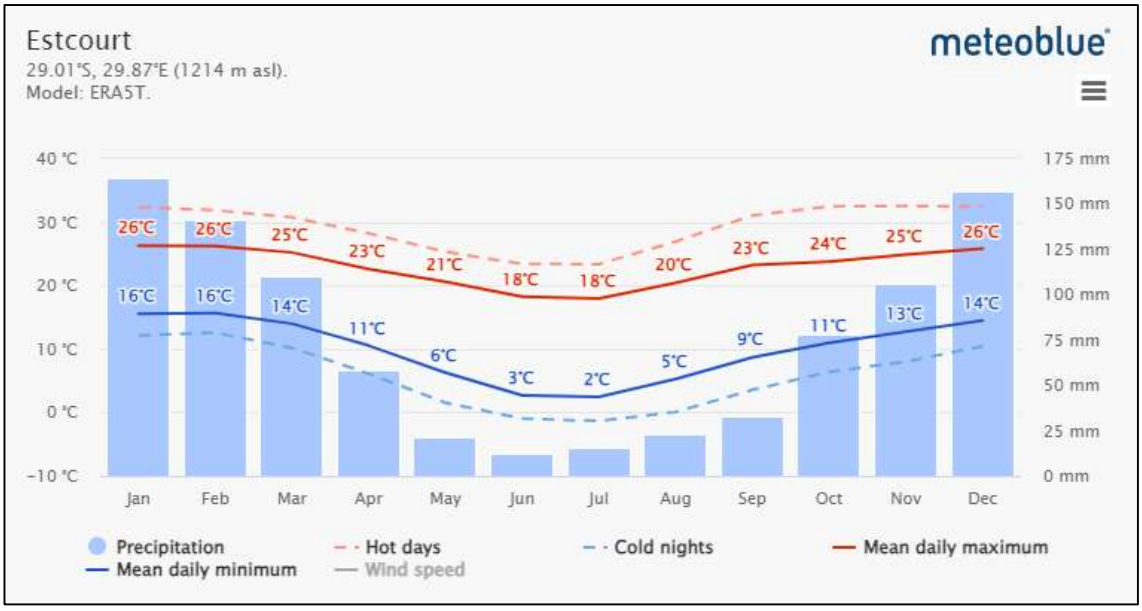


Figure 7: Meteoblue[6] - Simulated historical climate & weather data for the Estcourt area

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 1850.2 kWh/m^2 according to the Global Solar Atlas (https://globalsolaratlas.info/map)[7]. 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. Refer to Figure 4.

[6] https://www.meteoblue.com/en/weather/historyclimate/climatemodelled/estcourt_south-africa_1004962
[7] https://globalsolaratlas.info/map

5.4 LANDSCAPE / VISUAL

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

The aim of a VIA is not to predict whether individual receptors will find the development attractive or not. Instead, the aim is to identify important visual characteristics of the surrounding landscape, especially the features and characteristics that contribute to scenic quality, as the basis for determining how and to what degree the development project will affect those scenic values.

The landscape / visual sensitivity is rated very high due to specific features of the landscape. These include slopes between 1:4 and 1:10, which create elevated vantage points and increase the likelihood of the development being visually prominent. In addition, the site's proximity to conservation areas, such as the Mpushini Protected Environment (approximately 1.3 km to the southeast), and its location within 500–1000 meters of rural homesteads and agricultural settlements in the Ashburton area, contribute to its elevated sensitivity rating. These factors indicate significant landscape sensitivities that could potentially be affected by a solar PV development

The site is characterised by diverse landscapes, including grasslands and agricultural lands, which contribute to a visually appealing and unique setting. However, the site visit also revealed that the proposed development site is located in an area with existing homesteads, farms, and the N3 highway. These man-made elements could potentially reduce the visual impact of the proposed solar PV installations, suggesting the actual visual impact of the project may be mitigated by the existing land uses and features. Therefore, a rating of high was assigned to the site based on the site visit findings.

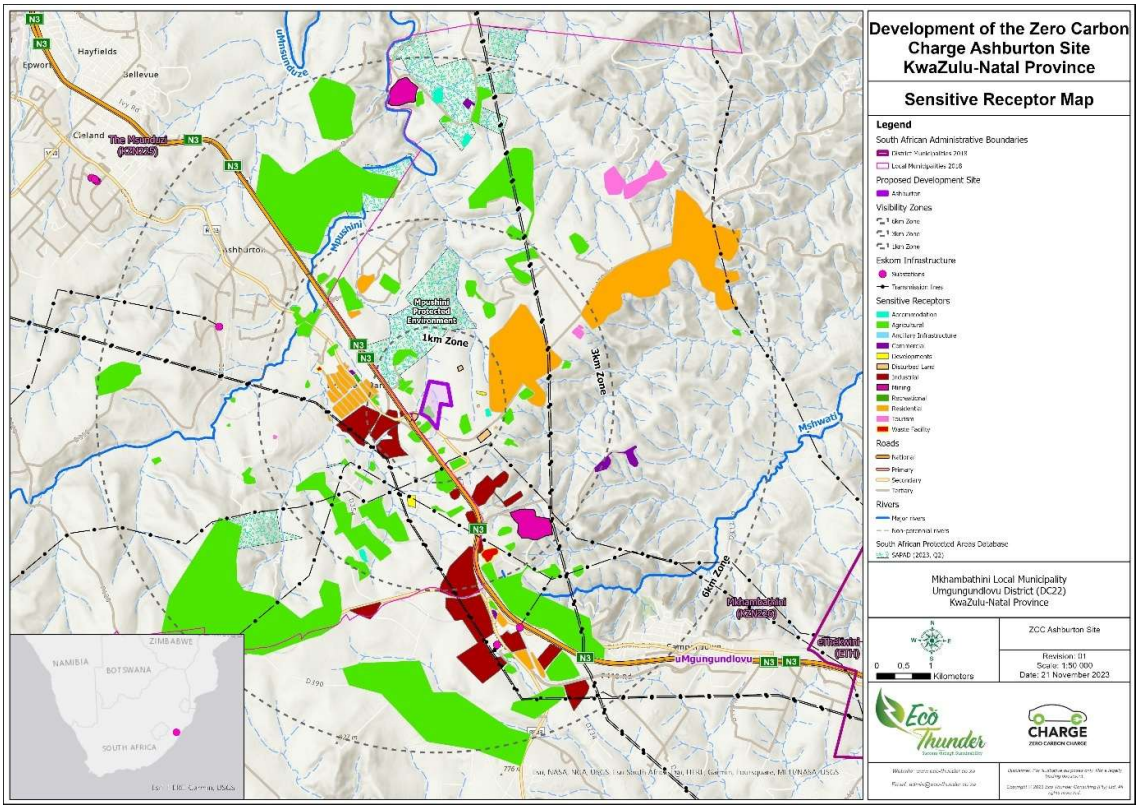


Figure 8: Preliminary sensitive receptor map

5.4.1 Visual Absorption Capacity (VAC)

A landscape's ability to absorb visual changes from a development while maintaining visual integrity is referred to as its Visual Absorption Capacity (VAC). For the proposed Ashburton solar photovoltaic renewable energy generation plant and electric truck charging facility, the VAC rating has been determined to be medium. This rating is based on biophysical and perceptual factors

Biophysical Factors

- Slope: The site has varying slopes, with some areas exhibiting significant gradients. Steeper slopes have lower VAC due to their visual prominence, but the overall variation results in a balanced impact. The presence of slopes between 1:4 and 1:10 contributes to the landscape's sensitivity.

- Vegetative Pattern and Screening: Natural grasslands interspersed with indigenous trees provide moderate visual screening. Opportunities exist to enhance VAC by supplementing existing vegetation with indigenous plantings, particularly along key view corridors. The site's location near the Mpushini Protected Environment (1.3 km away) enhances its ecological value but also raises visual sensitivity. The site is also located approximately:
  - 1.3 km from the Mpushini Protected Environment
  - 4.6 km from Bisley Valley Nature Reserve
  - 6 km from Umgeni Darvill Bird Sanctuary

  These areas contribute to the ecological value of the landscape and influence visual sensitivity.

- Site Recoverability: The grasslands of KwaZulu-Natal demonstrate moderate to high recoverability, supporting a higher VAC as the vegetation can quickly reestablish after disturbances. This recoverability is crucial in maintaining the visual integrity post-construction.

- Soil Colour Contrast: The soil colouration is generally consistent with the regional grassland palette, contributing to a seamless visual blend and moderate VAC due to minimal contrast between disturbed and natural areas.

Perceptual Factors

- Distance and Viewing Angles: The N3 highway, which runs adjacent to the site, offers mid- to long-range views of the landscape. The variation in elevation and viewing angles from different approach directions affects the degree of visual exposure, influencing overall VAC.

- Viewer Sensitivity: The N3 is a heavily trafficked national route, and nearby residences and tourism establishments (e.g., B&Bs, farms) suggest a moderately high level of visual sensitivity. Viewers familiar with the rural character of the area are likely to notice changes, making design integration essential.

- Visual Magnitude: Given the scale of the proposed development and its potential visibility from key points such as roads, homesteads, and nearby nature reserves, the visual magnitude is considered moderate to high. This reinforces the need for strategic mitigation to preserve the VAC.

The VAC for the Ashburton site is rated as medium, balancing both positive and challenging factors:

- Positive contributors: Recoverable grassland vegetation, moderate visual screening, and consistency in soil colour.

- Challenges: Proximity to sensitive receptors (e.g., homes, the N3 highway), steeper slopes in certain areas, and moderate to high visual exposure.

By incorporating low-profile structures, earth-toned materials, buffer zones with indigenous vegetation, and careful site layout, the project can align with the landscape's character, minimising visual intrusion while maintaining ecological and scenic integrity.

5.5 BIODIVERSITY

A site verification has been undertaken and the preliminary findings are included in this report but will be expanded on and supplemented during the EIA phase in the form of a Terrestrial Biodiversity Assessment. A Terrestrial Biodiversity Assessment aims to understand the terrestrial ecology and evaluate the potential impacts of the proposed development on the site. It identifies and assesses biodiversity aspects (fauna and flora and terrestrial ecosystems) associated with the proposed development area and the environmental interactions it imposes.

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 of the site is considered medium, due to the area being densely vegetated with indigenous trees and shrubs. However, potentially sensitive or protected plant species, as flagged in SANBI's species distribution data, may occur on site, warranting further verification through a botanical survey during the EIA phase.

The animal species sensitivity is assessed as high, primarily due to the potential presence of sensitive or threatened species identified in SANBI's databases. The site is also known to support several bird species of conservation concern, including vulnerable and endangered raptors, as confirmed through preliminary avifaunal observations and regional species records.

The site is classified as having very high terrestrial biodiversity sensitivity, based on both the DFFE Screening Tool and site verification. This is attributed to its location within irreplaceable Critical Biodiversity Areas (CBAs) and its inclusion in a National Protected Area Expansion Strategy (NPAES) focus area, which underscores the site's importance for long-term biodiversity conservation and the need to limit development in sensitive areas.

5.5.1 Field assessment results

The field assessment results were shortly summarised

1. Flora and Vegetation Sensitivity:

The site is predominantly densely vegetated with indigenous trees and shrubs. From a floral perspective, it holds medium to medium-high ecological importance, although it is not located within a Critical Biodiversity Area (CBA) or a protected vegetation unit.

2. Faunal Sensitivity (Avifauna):

The site potentially provides important habitat for bird species, particularly avi-faunal species of conservation concern. It is recommended that specialist input from an ornithologist be obtained to assess this aspect in detail.

3. Aquatic Features:

Multiple drainages and streams are present along or adjacent to the site, contributing to high ecological sensitivity, particularly in relation to riparian zones and aquatic biodiversity.

4. Topography and Soil Considerations:

The steep topography of the site necessitates careful evaluation of soil stability and erosion risks, especially in scenarios where vegetation may be cleared for development purposes.

Figure 9: Critical Biodiversity Area (CBA)

5.6 AVIFAUNA

A site verification has been undertaken and the preliminary findings are included in this report, but will be expanded on and supplemented during the EIA phase

A Screening Tool Report was generated (see Section 5.2) and classified the proposed development area's avifaunal sensitivity theme as high due to the potential occurrence of several endangered and vulnerable bird species, including the grey crowned crane, southern bald ibis and secretary bird, that are associated with the area. A known Cape Vulture restaurant is within 20 km of the site. A vulture restaurant is an undisturbed area where non-toxic, poison-free meat and carcasses are provided for vultures and other scavengers

5.6.1 Preliminary site visit results

The study area is located in a rural setting, with the south-eastern corner of the property used for livestock farming. A farm dam is situated adjacent to the farming infrastructure and farmhouse. The remainder of the site slopes down towards the Mkhondeni River, which forms the northern boundary of the property. The site is also bordered by the N3 highway to the east and the R103 to the west.

The majority of the site is covered by natural valley bushveld vegetation, which has become heavily encroached by woody species. Vegetation disturbance increases upslope toward the southern portion of the site where farming activities occur.

Two naturally wooded drainage lines run in a northerly direction, extending across the site and discharging into the Mkhondeni River.

A preliminary sensitivity assessment from a terrestrial faunal perspective with a focus on birds and mammals was conducted using field observations and satellite imagery. Refer to the figure below for a visual representation of the site features and their associated sensitivity ratings. The table below lists the observed features on-site and provides corresponding sensitivity descriptions.

5.6.2 Key habitats and preliminary sensitivity

The following assumptions and limitations apply to this screening assessment:

- Habitat boundaries often consist of subtle transitional zones or ecotones, which are difficult to delineate precisely. As a result, the boundaries of habitat types shown are approximate and indicative rather than definitive.
- Habitat types were defined and mapped based on their suitability and use by birds and mammals, rather than on botanical species composition. Similarly, riparian habitats associated with rivers, wetlands, and dams were assessed in terms of general habitat use by avifauna and mammals, and do not represent the formal delineation of wetland or watercourse boundaries.
- A comprehensive understanding of faunal communities, including Species of Conservation Concern (SCC), typically requires multi-seasonal, long-term studies conducted over several years. Such in-depth studies are not feasible within the scope of non-academic, baseline environmental assessments. This screening survey was based on a single field visit conducted in early summer, which is considered appropriate and sufficient for the purposes of this assessment.

Table 4: Preliminary site sensitivity for terrestrial fauna

Site Feature	Description and Recommendation	Sensitivity Rating
River, drainage lines, wetlands, and dams	The Mkhondeni River (northern boundary), two drainage lines, and a small farm dam provide important habitat for fauna and are typically associated with high biodiversity. These features are considered highly sensitive. **Recommendations:** ▪ The Mkhondeni River and associated drainage lines should be excluded from development using appropriate buffer zones as specified by the aquatic specialist. ▪ While it is preferable to avoid the farm dam, its role in site hydrology must be assessed by a wetland/aquatic specialist before any changes are made.	**High**
Natural but bush-encroached valley bushveld habitat	This habitat represents the primary area supporting faunal activity, especially birdlife. Although bush-encroached, the area retains ecological function and falls within a Critical Biodiversity Area (CBA). **Recommendations:** ▪ Development in this area is not recommended due to its ecological importance and role in buffering the river further downslope. ▪ The preferred mitigation measure is full avoidance ▪ If solar PV infrastructure is proposed in medium to high sensitivity areas, a minimum of 6 months of preconstruction avifaunal monitoring is recommended.	**Medium-high**
Natural but disturbed valley bushveld habitat	These areas support native vegetation but show increased levels of disturbance, particularly upslope toward the farming infrastructure in the southern part of the site. **Recommendations:**	**Medium**

Site Feature	Description and Recommendation	Sensitivity Rating
	▪ Avoid development where possible; if unavoidable, apply strict mitigation and habitat restoration measures. ▪ Soil erosion control will be essential. ▪ Avifaunal monitoring may still be required before solar PV development.	
Disturbed habitat	Areas degraded through grazing and other farming activities, with reduced ecological value but some remnant vegetation. **Recommendations:** ▪ Development may proceed in these areas with the implementation of standard mitigation measures and best practice environmental management.	**Medium-low**
Modified – Farm buildings, livestock kraals, farmhouse	These zones have been significantly altered and no longer support natural vegetation or significant faunal use. **Recommendations:** ▪ Development can proceed without restriction in these areas.	**Low**

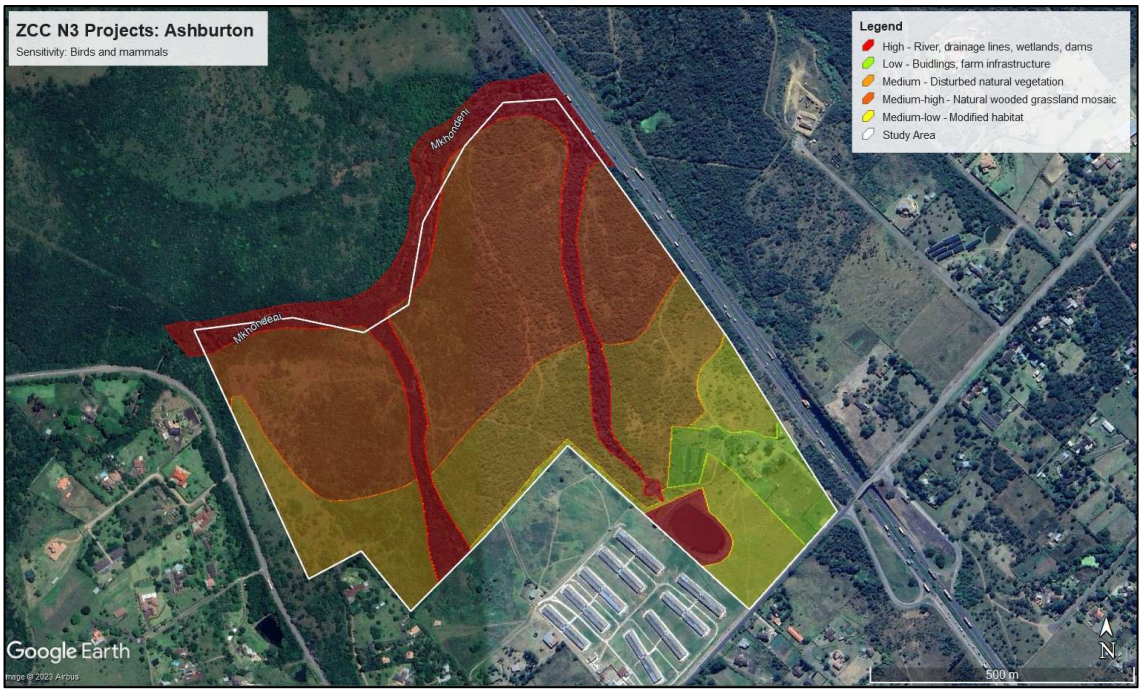


Figure 10: Site features and sensitivity ratings

5.7 FRESHWATER

An initial Freshwater 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 Screening Tool Report was generated (see Section 5.2) and classified the proposed development area's aquatic biodiversity sensitivity as low sensitivity.

The Mkhondeni River extends approximately 8.8 km, following the natural curve of the river from the top of the sub-catchment to the N3 road bridge, which lies on the boundary of the goat farm property. The sub-catchment encompasses an area of 1,825 hectares, with an elevation range from 905 metres above sea level (masl) at its highest point to 620 masl at its lowest. This results in a 285 m elevation drop over a 6,715 m distance, equating to an average gradient of approximately 4.4% (i.e., 4.4 vertical metres per 100 horizontal metres). This is considered very steep and suggests a high potential for erosion.

The tenant of the goat farm reported that the river on the property is heavily polluted. However, based on mapping, the sub-catchment includes relatively little urban or industrial development, indicating that pollution sources may lie within agricultural activities in the catchment rather than external anthropogenic inputs. The goat farm itself supports a large number of cattle, housed in confined enclosures, where a significant accumulation of animal waste is present. This waste likely contributes to nutrient and bacterial pollution of the river, especially during rainfall and stormwater runoff events.

It is therefore reasonable to conclude that the ecological condition of the river could be significantly improved by relocating or restructuring the farming operation to a less sensitive area with lower pollution potential. Replacing the current land use with the proposed electric vehicle (EV) charging station, a low-impact, non-polluting development, may offer ecological benefits for the Mkhondeni River and its riparian ecosystem.

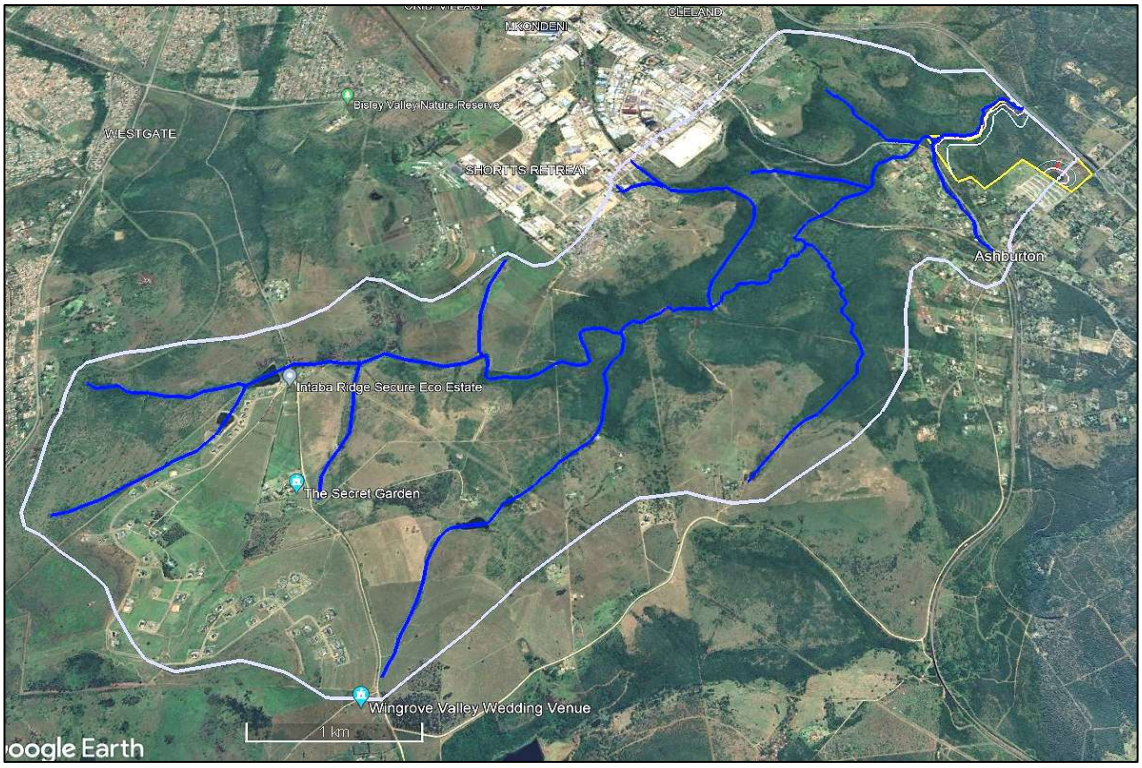


Figure 11: Mkhondeni River Catchment

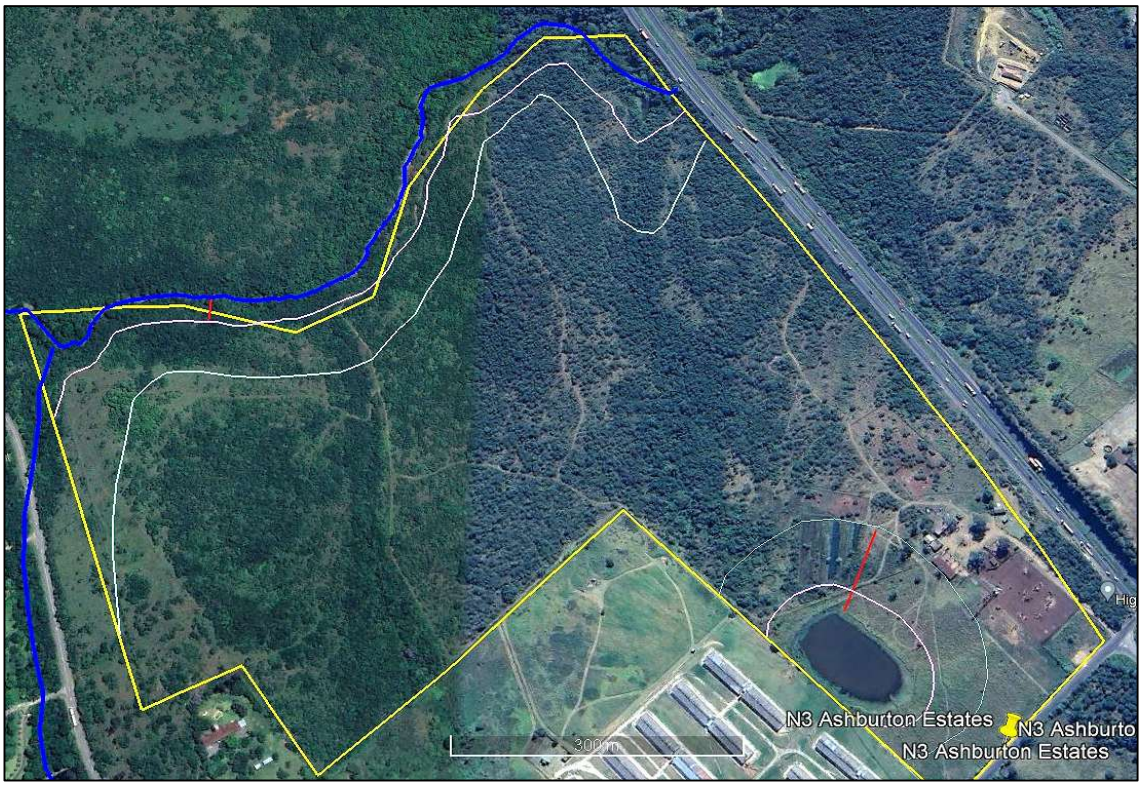


Figure 12: Drainage lines

The 32 m and 100m controlled zone boundaries are illustrated in the figure above. Given the steep slope of the terrain and the dense vegetation cover, it is recommended that the proposed electric vehicle (EV) panels not encroach beyond the 100 m buffer zone. This precautionary approach still allows for substantial land to be available for development while minimising environmental impact.

The vegetation in the area is classified as Eastern Valley Bushveld, which is currently listed as Least Threatened. Although the exact width of the riparian zone may be subject to interpretation, leaving additional land undisturbed adjacent to the river would be beneficial for conservation purposes. This would enhance ecological integrity, provide further protection for the watercourse, and contribute to maintaining the site's natural character.

5.8 AGRICULTURE

A site verification has been undertaken and the preliminary findings are included in this report, but will be expanded on and supplemented during the EIA phase in the form of an Agricultural Compliance Statement, which aims to identify and assess the agricultural theme associated with the proposed development area and the environmental interactions it imposes.

A Screening Tool Report was generated and classified the proposed development area's agricultural sensitivity theme as a high sensitivity. The agricultural sensitivity is high due to the moderate-high land capability.

5.8.1 Site verification

On November 7, 2023, a field survey was conducted by the specialist, Darren Bouwer, using a soil auger. The soils were observed, described, and classified in accordance with the guidelines provided by the Soil Classification Working Group (2018).

The site was characterised by shallow soils, with most variation arising from differences in the parent material, which influenced the degree of weathering observed within the soil profiles. Mispah soils, commonly underlain by shale, exhibited minimal weathering and remained shallow. Glenrosa soils were also identified on site and were associated with better weathering characteristics. The parent material varied across the site but included igneous rocks.

No high-potential soils were identified during the assessment. As a result, the agricultural sensitivity of the site was deemed to be moderate. While agricultural activities such as feedlots were noted, these are non-permanent structures that can be relocated and are therefore not considered site-specific.

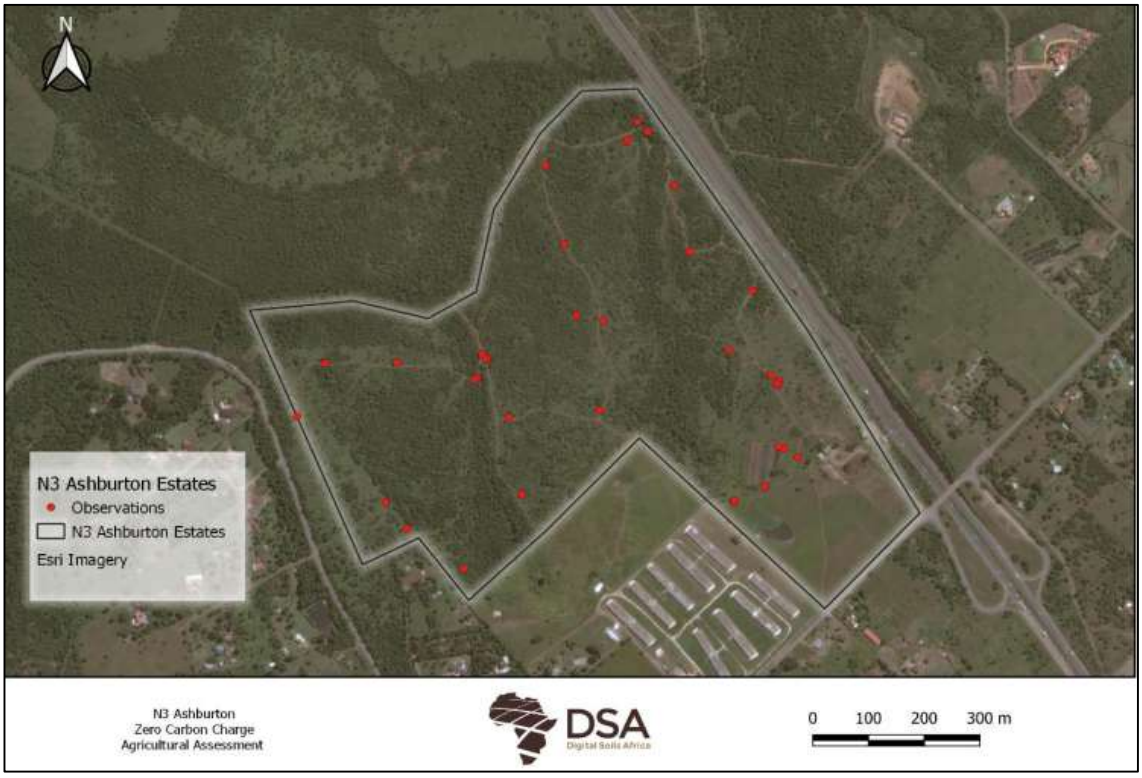


Figure 13: Observations made during the site visit

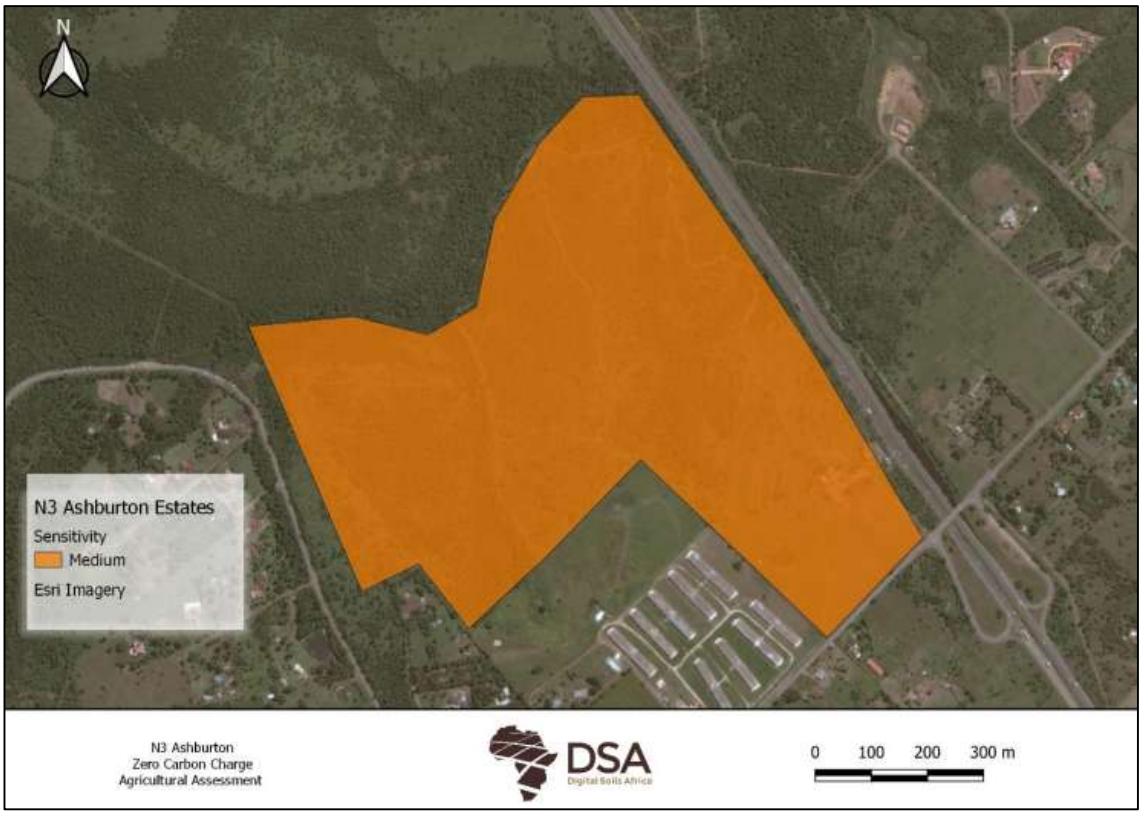


Figure 14: The agricultural sensitivity of the site

5.9 HERITAGE / ARCHAEOLOGICAL & PALAEONTOLOGICAL

A Heritage / Archaeological site verification 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 5.2) and classified the proposed development area's environmental sensitivity themes as follows:

- Archaeology and Cultural Heritage (Low)
- Palaeontology (medium)

5.9.1 Heritage & Archaeological findings

Much of the area is situated on a slope, which is not conducive to (pre-) historical settlement. Any artefacts found on these slopes are likely to be in a secondary context and are therefore considered to be of low archaeological significance.

Figure 15: Ashburton heritage site

- An extensive scatter of stone tools dating to the Early, Middle, and Late Stone Age. All artefacts are located on the surface and are in a secondary context. They are therefore considered to be of low significance.
- Two pottery sherds were recorded. These are adiagnostic and appear to have rolled down from the top of the hill. They likely date to the Late Iron Age or early Historical Period and are also of low significance.
- A stone cairn, which may represent a possible grave, was recorded on site.
- A lower maize grinding stone was observed on a slope. It, along with the pottery sherds, likely originated further upslope. The grinding stone is considered to be of low significance.
- Most of the existing farm buildings pre-date 1937.

5.9.2 Palaeontological findings

The palaeontological sensitivity of the site is considered medium, according to the DFFE Screening Tool. The underlying geology includes the Estcourt Formation and possibly Karoo Dolerite, which may contain fossil material of palaeontological interest. Based on this sensitivity rating, a desktop Palaeontological Impact Assessment (PIA), supported by a Chance Find Protocol, is considered sufficient if the proposed development involves excavation to depths less than 2 metres. This approach is justified given the shallow footprint of solar infrastructure and the fact that the site has already been partially disturbed by prior infrastructure development.

However, if any excavation exceeds 2 metres, a palaeontological field survey should be undertaken during construction to assess potential impacts and ensure compliance with heritage legislation.

Table 5: 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	Uknown	These areas will require a minimum of a desktop study. As more information comes to light, SAHRA will continue to populate the map.

Figure 16: Palaeontological sensitivity map

5.10 SOCIO-ECONOMIC CONTEXT

5.10.1 uMgungundlovu District Municipality

Figure 17: uThukela District Municipality[8]

5.10.2 Msunduzi Local Municipality

The proposed Solar Charging Facility at the Ashburton site is well aligned with the Msunduzi Local Municipality's developmental priorities, particularly in the context of socio-economic upliftment and sustainable infrastructure development. As outlined in the Municipality's Integrated Development Plan (IDP), there is a strong focus on promoting green economic growth, job creation, and inclusive spatial transformation. The project contributes to these goals by introducing a clean energy initiative that not only reduces carbon emissions but also offers local employment opportunities during both the construction and operation phases. Located along a key transport corridor, the facility supports the region's economic connectivity and may encourage further investment and eco-tourism in the area. Additionally, by making use of low-impact, renewable energy infrastructure, the development aligns with the Municipality's commitment to environmental protection and resilience to climate change, while respecting the rural character and cultural landscape of Ashburton.

[8] https://municipalities.co.za/

6 ENVIRONMENTAL ISSUES AND POTENTIAL IMPACTS

Environmental issues were raised through desktop analysis, site visits, informal discussions with the project team, specialists and authorities, and by Interested and Affected Parties through the initial public participation period. All issues raised will be assessed in the specialist reports and will form part of the Environmental Impact Report. Additional issues raised during the public participation will be listed in the Final Scoping Report.

The following potential issues have been identified:

6.1 BIODIVERSITY IMPACT

The proposed Solar Charging Facility at the Ashburton site is located within a landscape that supports a mosaic of natural habitats, including Eastern Valley Bushveld vegetation, riparian corridors, and areas of bush-encroached valley thicket. These ecosystems contribute to local biodiversity by providing habitat for a range of faunal species, including birds of prey, small mammals, amphibians, and invertebrates, some of which may be of conservation concern.

Key environmental issues related to biodiversity include:

- Loss or fragmentation of natural habitat, particularly if development extends into areas with medium to high ecological sensitivity (e.g. bush-encroached areas and riparian buffers).
- Disturbance to fauna, especially avifaunal species, due to construction noise, human activity, and potential collision risks associated with solar infrastructure.
- Impacts on riparian zones, which are sensitive ecological corridors that support high species diversity and are important for ecosystem functioning.
- Edge effects and habitat degradation from increased access, potential illegal harvesting of fauna/flora, and introduction of invasive species.
- Soil erosion and sedimentation, particularly on steep slopes, may affect nearby watercourses and downstream aquatic habitats.

Potential biodiversity impacts of the development may include:

- Reduction in local species richness and habitat integrity, particularly in undisturbed or moderately disturbed vegetation.
- Potential displacement or mortality of species of conservation concern, particularly birds and small mammals, if preconstruction surveys and mitigation measures are not implemented.
- Altered movement patterns and ecological connectivity due to fencing, infrastructure, or disturbance along natural corridors.

6.2 FRESHWATER IMPACT

The proposed Solar Charging Facility at the Ashburton site is situated in a landscape intersected by several freshwater features, including the Mkhondeni River, natural drainage lines, and a man-made farm dam. These aquatic systems play a critical role in maintaining hydrological balance, water quality, and biodiversity, and they provide ecosystem services such as erosion control, flood attenuation, and groundwater recharge.

Key environmental issues associated with freshwater impacts include:

- Encroachment into regulated zones: The presence of rivers and drainage lines triggers regulatory buffers (typically 32 m and 100 m from the watercourse), and development within these zones may disrupt ecological functioning.

- Alteration of natural hydrology, including surface runoff patterns and infiltration capacity, especially if extensive hard surfaces or infrastructure are introduced.
- Water quality degradation through sedimentation, erosion, hydrocarbon spills, or waste runoff during construction and operation.
- Disturbance or destruction of riparian vegetation, which acts as a buffer and filter for runoff and provides habitat for aquatic and semi-aquatic species.
- Cumulative impacts on downstream aquatic ecosystems if multiple developments in the catchment alter flow regimes or contribute pollutants.

Potential freshwater impacts of the development may include:

- Increased sedimentation in the Mkhondeni River and its tributaries during site clearing and earthworks, particularly on steep slopes.
- Erosion and bank instability, especially in areas where vegetation is removed near drainage lines.
- Disruption of natural drainage pathways, potentially altering flow direction or causing localised flooding.
- Contamination risk from construction activities and machinery, particularly if fuel or hazardous materials are not properly managed.
- Reduction in ecological health of aquatic systems due to the loss of riparian vegetation and associated habitat functions.

6.3 AVIFAUNAL IMPACT

The proposed Solar Charging Facility at the Ashburton site is located in a landscape that includes natural valley bushveld, riparian corridors, and open grassland areas, which are known to support a range of bird species, including several raptors and other Species of Conservation Concern (SCC). Avifaunal activity was noted to be high across the site during preliminary field assessments, and the proximity to freshwater systems, bushveld, and open foraging areas increases the likelihood of interactions between local bird populations and the proposed infrastructure.

Key environmental issues associated with avifauna include:

- Habitat loss and fragmentation, particularly in natural and semi-natural areas used for nesting, foraging, or roosting by birds.
- Disturbance and displacement due to increased human activity, noise, and the presence of infrastructure during construction and operation.
- Collision risk with solar infrastructure, fencing, or transmission lines, especially for larger, slow-flying birds such as raptors and storks.
- Altered predator-prey dynamics due to changes in vegetation structure and removal of natural cover.
- Barrier effects, where infrastructure may restrict the natural movement patterns of species, especially in narrow ecological corridors.

Potential avifaunal impacts of the development include:

- Loss of nesting and foraging habitat for raptor species and ground-nesting birds, particularly in areas of bush-encroached valley bushveld and near drainage lines.
- Displacement of sensitive or territorial species, which may abandon breeding territories due to disturbance.
- Increased collision-related mortality, particularly if reflective solar panels, perimeter fences, or overhead lines are installed without bird-friendly design measures.
- Indirect effects, such as reduced prey availability or increased exposure to predators due to vegetation clearance.

6.3.1 Summary of Recommendations and Reporting Requirements

The proposed development at the Ashburton site presents several environmental sensitivities related to avifauna, freshwater ecosystems, and biodiversity. The northern half of the site is considered medium-high to highly sensitive due to the presence of the Mkhondeni River, associated drainage lines, and natural bush-encroached valley bushveld, much of which falls within a Critical Biodiversity Area (CBA). These areas support a high diversity of fauna, particularly birds of prey and other avifaunal species of conservation concern and serve as important ecological corridors. From a freshwater perspective, the river, wetlands, and drainage lines are highly sensitive due to their ecological functions, erosion potential, and the need for maintaining natural buffers to protect water quality and riparian habitats. The broader terrestrial biodiversity of the site is also significant, with habitat loss, fragmentation, and species disturbance being key concerns. As such, avoidance of high-sensitivity areas is the primary recommended mitigation, while pre-construction avifaunal monitoring, erosion control, and ecological buffer zones should be implemented in moderately sensitive areas where development may be more acceptable.

Table 6: Recommended avifaunal assessment regimes (Jenkins et al., 2017)

Type	Size	Avifaunal Sensitivity*		
		Low	**Medium**	**High**
All solar technologies except Concentrated Solar Power (CSP)	**Small** (<30 ha / <10 MW)	***Regime 1*** One site visit of 1-5 days	***Regime 1*** One site visit of 1-5 days	***Regime 2*** 2-3 seasonal visits of 3-5 days over 6 months Pre- & post-con monitoring mortality searches
	Medium (30-150 ha / 10-50 MW)	***Regime 1*** One site visit of 1-5 days	***Regime 2*** 2-3 seasonal visits of 3-5 days over 6 months Pre- & post-con monitoring mortality searches	***Regime 2*** 2-3 seasonal visits of 3-5 days over 6 months Pre- & post-con monitoring mortality searches
	Large (>150 ha / >50 MW)	***Regime 2*** 2-3 seasonal visits of 3-5 days over 6 months Pre- & post-con monitoring mortality searches	***Regime 2*** 2-3 seasonal visits of 3-5 days over 6 months Pre- & post-con monitoring mortality searches	***Regime 3*** 4-5 seasonal visits of 4-8 days over 12 months Pre- & post-con monitoring mortality searches
CSP	All	***Regime 3*** 4-5 seasonal visits of 4-8 days over 12 months Pre- & post-con monitoring and mortality searches		

To minimise timeframes during the Environmental Impact Assessment (EIA) process, it is recommended that areas with high avifaunal sensitivity be avoided when selecting development sites. The faunal assessment must be conducted in accordance with the Protocol for the Specialist Assessment and Minimum Report Content Requirements for Environmental Impacts on Animal Species (GN R. 1150 of 30 October 2020, as amended on 28 July 2023). This protocol requires that assessments adhere to the Species Environmental Assessment Guidelines (SANBI, 2020). Furthermore, where birds are a concern, the assessment must follow the Best Practice Guidelines for Best Practice Guidelines for Birds and Solar Energy (Jenkins et al., 2017), as prescribed by both the protocol and SANBI guidelines.

The duration and scope of data collection are determined by the size of the proposed photovoltaic (PV) array and the site sensitivity for avifauna, as identified in the Preliminary Avifaunal Assessment. To reduce assessment timelines, it is therefore advised that sites or portions of sites with low to medium

avifaunal sensitivity be prioritised for development, particularly where the proposed PV array is classified within the small to medium size category**.** Refer to the table below for further guidance.

6.4 HERITAGE / ARCHAEOLOGICAL IMPACT

The potential impact of the proposed development at the Ashburton site on heritage resources, including archaeological and palaeontological features, has been identified as a possible environmental concern. Based on the preliminary heritage assessment, the following findings and recommendations apply:

1. No mitigation is required for the stone tools, which are surface finds in a secondary context and considered to be of low significance.
2. No mitigation is required for the pottery sherds, which are adiagnostic, displaced, and of low archaeological significance.
3. No mitigation is required for the grinding stone, which likely originated from higher up the slope and is also of low significance.
4. The area surrounding the recorded stone cairn (possible grave) must be surveyed after vegetation clearance, including the densely vegetated area upslope. This sensitive area is indicated as the red polygon in the figure below.
5. Buildings on the site, most of which pre-date 1937, will need to be assessed by a Built Environment Specialist if they are to be altered, damaged, or demolished. These structures are likely of low significance, but a permit will be required for any changes. Where feasible, it is recommended to retain and reuse the buildings as part of the development.

The study area is of medium palaeontological sensitivity. A desktop study, along with the implementation of a Chance Find Protocol, is considered sufficient to address potential palaeontological concerns.

Figure 18: Ashburton heritage site

6.5 LANDSCAPE / VISUAL IMPACT

The proposed development at the Ashburton site may result in very high visual impacts due to the area's varied topography, natural vegetation, and proximity to visually sensitive receptors as per the DFFE Screening Tool Report. The landscape is characterised by rolling hills, natural valley bushveld, and riparian corridors, which contribute to the scenic quality of the KwaZulu-Natal Midlands.

The following key visual issues and considerations have been identified:

- The elevated areas of the site may increase the visibility of infrastructure, particularly solar arrays and associated structures, from surrounding viewpoints.
- Sensitive receptors in the vicinity include nearby residences, tourism accommodations (e.g., B&Bs and lodges), and nature reserves, all of which may be affected by changes to the visual landscape.
- The site lies approximately 1.3 km from the Mpushini Protected Environment, and visual intrusion into this conservation area must be carefully managed.
- The semi-natural condition of the landscape, including areas of natural grassland and bushveld, increases the importance of maintaining visual harmony through design.
- The presence of existing infrastructure such as power lines, farm buildings, and roadways provides opportunities to visually integrate the proposed development into the existing landscape.

6.6 AGRICULTURAL IMPACT

The proposed site is situated on a property that is zoned for agricultural use. At present, large portions of the property are actively utilised for agricultural activities, primarily livestock grazing. Due to the scale and nature of the proposed development, only a small portion of agricultural land will be permanently lost.

6.6.1 Compliance Statement

An Agricultural Compliance Statement was compiled for the proposed development as part of the pre-application Scoping Report. The following key findings were made, based on the site assessment:

- The study area is characterised by Katspruit soils in the wetlands, which are associated with long-term saturation, and duplex soils upslope, which are prone to erosion. Neither soil type is considered to be of high agricultural potential, which contrasts with the land type data.
- Previously cultivated fields on the property have been abandoned and are now overgrown with invasive wattle.
- The majority of the property is currently used for livestock grazing and grass cutting.

As a result, the lower-lying areas are considered to be of low agricultural sensitivity, while the upslope areas are of moderate sensitivity, although they are well-suited to grazing rather than crop cultivation. There is evidence of historical agricultural use, but no signs of recent cultivation were observed.
The findings of the site assessment do not align with the national Screening Tool designation of high agricultural sensitivity. No evidence of active cultivation was found, and the soils present on-site are not suitable for intensive agricultural use.

Given the low impact on existing agricultural activities and the site's classification as medium sensitivity, it is the specialist’s opinion that the proposed development can proceed without significant impact on agricultural land use or food security. From an agricultural perspective, the development should be permitted to continue.

6.6.2 Financial incentive for agriculture

An agreement structure that includes financial incentives for agriculture between the applicant and the landowner(s), who are farmers by profession, should be considered. If the proposed development results in only a minor loss of agricultural land that does not significantly impact food security or reduce the area of arable land, the opportunity to diversify income sources can be viewed as positive for the agricultural sector. Such an agreement could provide landowners with a share of the revenue generated by the solar recharging facility, thereby offering an additional income stream independent of farming activities. This model promotes economic resilience and supports the long-term sustainability of agricultural enterprises in the region.

6.6.3 Regulatory Approvals Required from DALRRD

The proposed development requires approval from the National Department of Agriculture, Land Reform and Rural Development (DALRRD) if it is located on land zoned for agricultural use. There are two primary DALRRD-related approvals that may apply:

1. No Objection Letter (for change in land use):

This letter is a key requirement for municipal rezoning and should be obtained as early as possible in the development process. Failure to secure this approval constitutes a fatal flaw for the project. Importantly, the issuance of a positive Environmental Authorisation (EA) does not guarantee DALRRD's approval. The application for the No Objection Letter must include a well-motivated submission supported by evidence demonstrating that the proposed development will not significantly impact the agricultural production potential of the site. A formal Agricultural Compliance Statement will be undertaken.

2. Consent for Long-Term Lease in terms of the Subdivision of Agricultural Land Act (Act 70 of 1970) – SALA:

If the No Objection Letter has been granted, the SALA application process is generally straightforward. SALA approval is required only when a long-term lease is proposed over a portion of the farm. If the lease encompasses the entire farm portion, SALA approval is not required. Note that SALA approval (if applicable) can only be applied for once both the Municipal Rezoning Certificate and the Environmental Authorisation have been obtained.

6.7 SOCIO-ECONOMIC IMPACT

Although the socio-economic specialist study has not yet been undertaken, the Solar Charging Facility at the Ashburton site is expected to result in positive socio-economic impacts at both the local and regional levels. The development aligns with key policy objectives of the Msunduzi Local Municipality's Integrated Development Plan (IDP) and Spatial Development Framework (SDF), particularly in promoting green economic growth, infrastructure development, and employment creation. During the construction phase, the project will create temporary employment opportunities, particularly for local labour, contributing to skills development and income generation in the surrounding communities. The operational phase will also offer a limited number of long-term jobs related to facility management, maintenance, and security.

In addition, the project will support economic diversification for local landowners, who are currently engaged in agricultural activities, by introducing a stable, non-agricultural income stream. This can improve overall financial resilience and reduce vulnerability to agricultural market fluctuations or climate variability. The location of the facility along the N3 transport corridor further enhances its strategic value, potentially benefiting the regional logistics and transport sectors.

Importantly, the project is not expected to cause any significant displacement of existing land uses, nor does it threaten local food security, as the agricultural sensitivity of the site is considered low to moderate, and no active crop production is taking place. With appropriate community engagement and adherence to social safeguards, the development is likely to contribute positively to the local socio-economic environment.

6.7.1 Recommendations

- **Community Engagement and Consultation:**
  Engage proactively with local stakeholders, including residents, community organisations, local businesses, and municipal representatives. This should form part of the Public Participation Process (PPP) and ensure that local communities are informed of potential benefits and concerns related to the development.

- **Local Employment and Procurement Strategy:**
  Develop a strategy to prioritise local labour and local procurement of goods and services during both the construction and operational phases. This supports economic inclusion and maximises local benefits.

- **Skills Development and Training:**
  Where feasible, offer skills development or on-the-job training to local workers to enhance their employability beyond the duration of the project.

- **Monitor Socio-Economic Indicators:**
  Track key socio-economic indicators (e.g., number of jobs created, procurement spend in local areas, number of local businesses supported) to demonstrate the project's contribution to local development.

- **Promote Inclusive Participation:**
  Ensure that vulnerable and historically disadvantaged groups (e.g., women, youth, and persons with disabilities) are given a fair opportunity to benefit from employment and business opportunities arising from the development.

- **Alignment with Municipal Development Goals:**
  Align the project's socio-economic objectives with those of the Msunduzi Local Municipality's Integrated Development Plan (IDP) and Spatial Development Framework (SDF) to ensure synergy with broader regional development goals.

- **Prepare a Socio-Economic Monitoring and Management Plan (if required):**
  Should the authorities request further socio-economic oversight, prepare a plan to guide monitoring, mitigation, and enhancement of socio-economic benefits throughout the project lifecycle.

7 DETAILS OF THE PUBLIC PARTICIPATION PROCESS

Interested and Affected Parties (I&APs) have been and will be identified throughout the process. Landowners adjacent to the proposed site, relevant organs of state, organisations, ward councillors and the Local and District Municipality were added to this database. A complete list of organisations and individual groups identified to date is shown in Appendix 4.

Public Participation will be conducted for the proposed development in accordance with the requirements outlined in Regulation 41 of the NEMA EIA Regulations 2014. The issues and concerns raised during the scoping phase will be dealt with in the EIA phase of this application.

As such, each subsection of Regulation 41 contained in Chapter 6 of the NEMA EIA Regulations 2014 will be addressed separately to thereby demonstrate that all potential Interested and Affected Parties (I&APs) were notified of the proposed development.

Table 7: 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 a person other than the 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.	The written authorisation from the landowner or the individual responsible for the land has been secured to conduct the proposed activities on the premises, as per a formal agreement established between the parties.
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 phase, a 30-day commenting period occurred between 25 September 2024 and 25 October 2024. All potential or registered interested and affected parties, including the competent authority, were invited and allowed to submit comments regarding 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 were sent to — a) The KwaZulu-Natal Department of Economic Development and Environmental Affairs (KZN EDTEA) was 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;	

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
	c) all organs of state which have jurisdiction in respect of the activity to which the application relates; and	b & c) The following state departments are responsible for administering laws that pertain to matters affecting the environment in relation to a specific application, as well as the governmental entities that possess jurisdiction concerning the activity associated with the application in question. - Department of Agriculture and Rural Development - Co-operative Governance and Traditional Affairs - Eskom - Department of Energy - Department of Water and Sanitation - KZN AMAFA and Research Institute - Department of Public Works - Department of Transport - N3 Toll concession - SANRAL - Transnet - Ezemvelo KZN Wildlife d) All potential, or, where relevant, registered interested and affected parties. These initial notification letters were sent to inform the parties described above about the proposed activity/development and to invite their input.
	d) all potential, or, where relevant, registered interested and affected parties.	

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, were 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, a notice board of A2 size was fixed in both English and isiZulu on the boundary fence of the site where the proposed activity is to be conducted. Additionally, multiple English and isiZulu A3-sized notice boards were 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 were 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 were 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 was sent to the relevant municipal ward councillor at the Msunduzi Local Municipality. No ratepayer organisation was 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 was sent to a representative of the Msunduzi Local Municipality and the uMgungundlovu 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 were 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 - KZN AMAFA and Research Institute - Department of Public Works - Department of Transport - N3 Toll concession - SANRAL - Transnet - Ezemvelo KZN Wildlife
	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.

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
	c) placing an advertisement in— i. one local newspaper; or	An English and isiZulu advertisement was placed in the Estcourt News, a local newspaper, on 20 September 2025.
	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. Please refer to Appendix 4 for proof of the written notices.
	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	
	iv. the manner in which and the person to whom representations in respect of the application or proposed application may be made.	

Sub	Regulations of Chapter 6 of NEMA EIA Regulations, 2014 (as amended 2021)	Applicability to the development
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 in size and displayed the required information in a legible format. Please refer to Appendix 4 for proof of the notice boards.
	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;	A register of interested and affected parties was opened and is maintained.
	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.	
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, were notified of the proposed application and invited to provide 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 from interested and affected parties are documented along with corresponding responses in a Comment and Response Report (CRR). Where applicable, these comments and responses are integrated into relevant 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.	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.

8 PLAN OF STUDY FOR THE EIA

8.1 TASKS TO BE UNDERTAKEN

Due to the nature of the proposed development, there are a number of activities that will still need to be undertaken during the next phase of the project. The proposed process is as described as follows (this follows from a Scoping process to be accepted by the KwaZulu-Natal Department of Economic Development and Environmental Affairs (KZNEDTEA)):

The NEMA application form will be submitted to KZNEDTEA along with the Draft Scoping Report which will also be made available for viewing and comment for a 30-day comment period. Comments received during the Public Participation Process will be incorporated into the Final Scoping Report, to be submitted to KZNEDTEA for a decision.

The following is a list of tasks to be performed as part of the EIA Process. Should the process be modified significantly, changes will be copied to KZNEDTEA.

Table 8: EIA process - Timeline

EIA Process	
Task	**Timeframes**
Submit NEMA Application and Draft Scoping Report (DSR) and Plan of Study for EIA to KZNEDTEA and distribute to registered I&APs for comment.	June 2026
Submit the Final Scoping Report (FSR) and Plan of Study to KZNEDTEA for a decision.	July 2026
Receive approval for the FSR and the Plan of Study for EIA.	August 2026
Undertake specialist studies and compile the Draft Environmental Impact Report (EIR) for public comment based on specialist information.	November 2025 – June 2026
Submit Draft EIR for public comment.	August 2026
Receive responses to the Draft EIR.	September 2026
Preparation of a FINAL EIR and submission to KZNEDTEA	October 2026

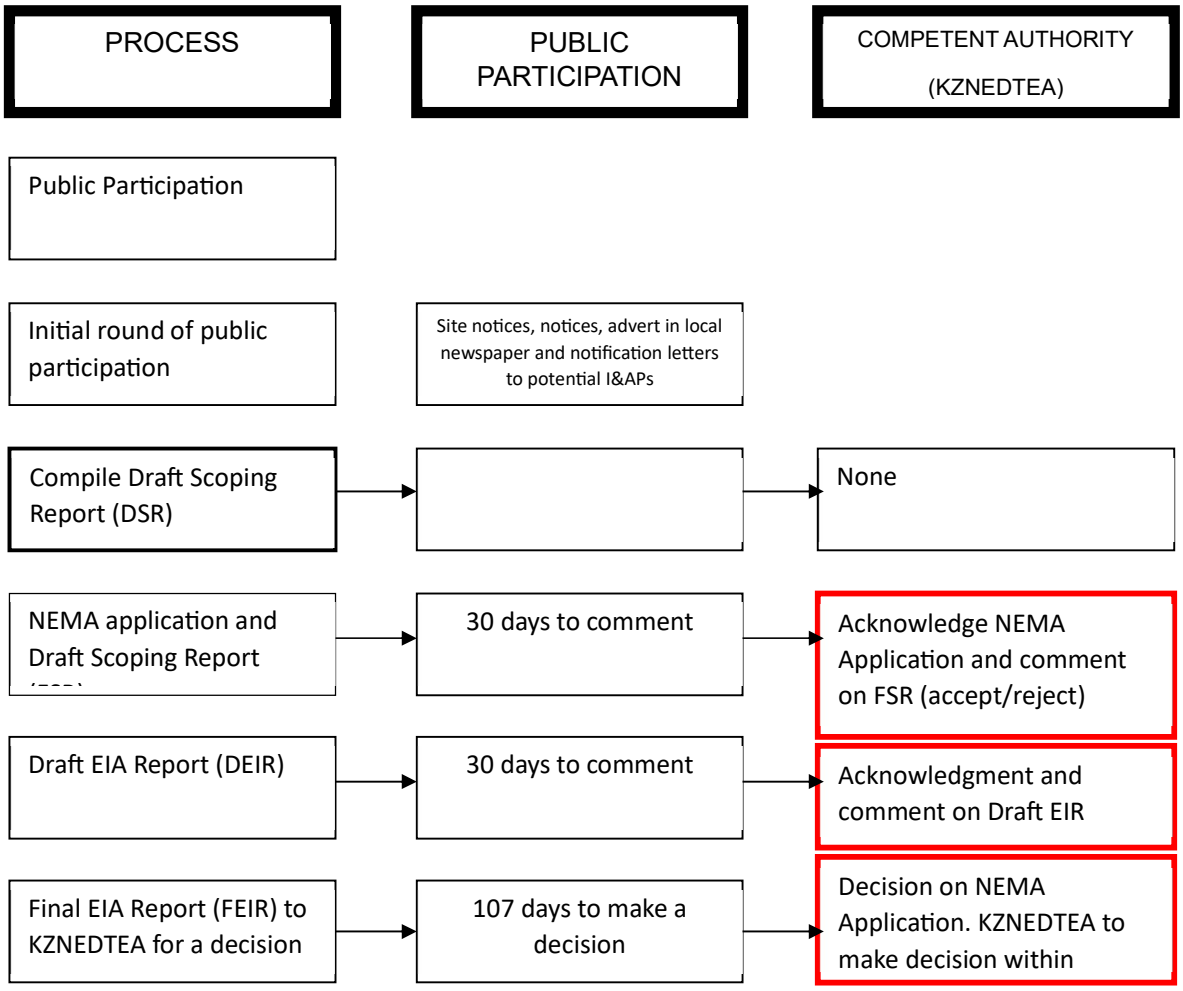


Figure 19: Summary of the EIA process and public participation process. The red indicates the stages where the competent authority will be consulted during the process

8.2 PUBLIC PARTICIPATION AND INTERESTED AND AFFECTED PARTIES

Please refer to Figure 19 to see where the public participation process is present in the environmental impact assessment. The Interested and Affected Parties will have a chance to view and comment on all the reports that are submitted. The figures also indicated what timeframes are applicable to what stage in the process. If required, meetings with key stakeholders will be held.

At the end of the comment period, the EIR will be revised in response to feedback received from I&APs. All comments received and responses to the comments will be incorporated into the Final Environmental Impact Report (EIR). The Final EIR will then be submitted to KZNEDTEA for consideration and decision-making.

Correspondence with I&APs will be via post, fax, telephone, email and/or newspaper advertisements. Should it be required, this process may be adapted depending on input received during the on-going process and as a result of public input. KZNEDTEA will be informed of any changes in the process.

8.3 CRITERIA FOR SPECIALIST ASSESSMENT OF IMPACTS

As a result of the environmental issues and potential impacts identified in Section 6, 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 Potential Assessment
- Avifauna Impact Assessment: Earthworm and invertebrate study

These specialist studies have been conducted and some have been concluded. The findings of some of the studies have already been included in this report; however, the studies will be finalised and the findings included during the EIA phase.

The impacts of the proposed activity on the various components of the receiving environment will be evaluated in terms of duration (time scale), extent (spatial scale), magnitude and significance as outlined in Table 9. These impacts could either be positive or negative. This includes an assessment of the alternatives, including the option of not proceeding with the proposed development (see Section 4).

The magnitude of an impact is a judgment value that rests with the individual assessor, while the determination of significance rests on a combination of the criteria for duration, extent and magnitude. Significance, thus, is also a judgment value made by the individual assessor.

In addition to determining the individual impacts against the various criteria, the element of mitigation, where relevant, will also be brought into the assessment. In such instances, the impact will be assessed with a statement on the mitigation measure that could/should be applied. An 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. Cognisance of the minimum report content requirements of the various specialist assessments as per the Assessment Protocols (Government Notice 320, Government Gazette No. 43110 of 20 March 2020).

Table 9: 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	**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)

Criteria	Category
components with mitigations); or permanent.	**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 a broader area, or on a wider scale)	**Site Specific:** Expanding only as far as the activity itself *(onsite)* **Small:** restricted to the site's immediate environment within 1 km of the site *(limited)* **Medium:** Within 5 km of the site *(local)* **Large:** Beyond 5 km of the site *(regional)*
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 actually 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 effect **Negative:** The activity will be socially/ economically/ environmentally harmful
Degree of Confidence in Predictions State the degree of confidence in predictions based on the 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 (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 with and without mitigations. 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:	**No change:** A potential concern which was found to have no impact when evaluated **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 adjust 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 the 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

Criteria	Category
	development, in spite of any mitigation measures that could be implemented.

Table 10: The stated assessment and information will be determined for each individual issue or related groups of issues and presented in a 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 ***WITH*** 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):		

9 CONCLUSION AND RECOMMENDATIONS

A scoping exercise is being undertaken to present the proposed activities to the I&APs and to identify environmental issues discussed in this report and concerns raised as a result of the proposed development alternatives to date. The issues and concerns were raised by I&APs, authorities, the project team, as well as specialist input, based on baseline studies undertaken.

This pre-application Draft 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 Potential Assessment
- Avifauna Impact Assessment

These specialist studies have been conducted and some have been concluded. The findings of some of the studies have already been included in 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 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 significance of the issues raised during the ongoing Public Participation Process and Scoping Phase, it is evident that an Environmental Impact Assessment (EIA) is required. ***It is therefore recommended that authorisation for the commencement of an EIA for the proposed development be granted.*** Should the EIA process be authorised, the issues raised in the process to date will be addressed and the specialist studies noted in this report will be undertaken.

9.1 PRELIMINARY RECOMMENDATIONS / CONDITIONS FOR AUTHORISATION

- In cases where there is not a significant impact on agricultural land, a diversification of income sources should be considered by the landowner(s). Through establishing an agreement between the applicant and the landowner(s), landowner(s) will be enabled to share in the profit generated from the facility, thereby offsetting their probable financial loss sustained through the loss of agricultural land (utilised or grazing mainly) over the development area.

10 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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