



**SOIL AND AGRICULTURAL COMPLIANCE  
STATEMENT FOR THE PROPOSED DELPHI  
SUBSTATION EXPANSION PROJECT**

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<b>Report Name</b>	<b>SOIL AND AGRICULTURAL COMPLIANCE STATEMENT FOR THE PROPOSED DELPHI SUBSTATION EXPANSION PROJECT</b>	
<b>Specialist Theme</b>	Soil and Agricultural Theme	
<b>Project Reference</b>	Delphi Substation Expansion Project	
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<b>Declaration</b>	<p>The Biodiversity Company and its associates operate as independent consultants under the auspice of the South African Council for Natural Scientific Professions. We declare that we have no affiliation with or vested financial interests in the proponent, other than for work performed under the Environmental Impact Assessment Regulations, Amended. We have no conflicting interests in the undertaking of this activity and have no interest in secondary developments resulting from the authorisation of this project. We have no vested interest in the project, other than to provide a professional service within the constraints of the project (timing, time, and budget) based on the principals of science.</p>	

## Table of Contents

1	Introduction.....	1
1.1	Background .....	1
1.2	Project Description .....	2
1.3	Scope of Work.....	3
1.4	Assumptions and Limitations .....	3
1.5	Key Legislative Requirements.....	4
1.6	Legislative Framework .....	4
2	Fieldwork .....	5
3	Results and Discussion .....	5
3.1	Desktop Information .....	5
3.1.1	Climate .....	5
3.1.2	Geology & Soils.....	6
3.2	Baseline Findings .....	8
3.3	Sensitivity Verification .....	11
3.3.1	Screening Report – Delphi Substation Expansion Project.....	11
4	Conclusion.....	13
4.1	Management Measures .....	14
4.2	Specialist Statement .....	14
4.3	Statement Conditions.....	14
5	References .....	15
6	Appendix Items.....	16
6.1	Appendix A: Methodology .....	16
6.1.1	Desktop Assessment .....	16
6.1.2	Field Survey .....	16
6.1.3	Land Capability.....	16
6.2	Appendix B: Impact Assessment .....	18
6.3	Appendix C Specialist declarations.....	19
6.4	Appendix D Curriculum vitae.....	21

## List of Tables

Table 1-1	Agricultural Compliance Statement information requirements as per the relevant protocol, including the location of the information within this report.....	4
Table 3-1	Soils expected at the respective terrain units within the Da 102 land type (Land Type Survey Staff, 1972 - 2006).....	7
Table 3-2	Summary of the screening tool vs specialist assigned sensitivities.....	13
Table 6-1	Land capability class and intensity of use (Smith, 2006).....	16
Table 6-2	The combination table for land potential classification.....	17
Table 6-3	The Land Potential Classes .....	17
Table 6-4	National Land Capability Values (DAFF,2017) .....	17

## List of Figures

Figure 1-1	Spatial context of the proposed development.....	1
Figure 1-2	The proposed components of the project .....	2
Figure 2-1	Map illustrating the field tracks of the field survey .....	5
Figure 3-1	Summarised climate for the region (Mucina & Rutherford, 2006).....	6
Figure 3-2	Land type associated with the proposed project area.....	7
Figure 3-3	Illustration of land type Da 102 terrain units (Land Type Survey Staff, 1972 – 2006) ....	7
Figure 3-4	Soil forms found within the proposed project area.....	9
Figure 3-5	Diagnostic soil horizons identified on-site: A) lithic subsoil horizon found in the Glenrosa and Tubatse soil forms; & B) neocutanic subsoil horizon found in the Bethesda and Tubatse soil forms..... .....	9
Figure 3-6	Different land uses found within the proposed project area; A) & B) common vegetation & C) Delphi SS Substation.....	10
Figure 3-7	Land Potential of the proposed project area .....	10
Figure 3-8	Map of Relative Agricultural Theme Sensitivity for the Delphi Substation Expansion Project generated by the Environmental Screening Tool Site Ecological Importance (SEI) .....	11
Figure 3-9	Land Capability Sensitivity (DAFF, 2017) .....	12
Figure 3-10	Overall site verified land capability sensitivity of the project area.....	13

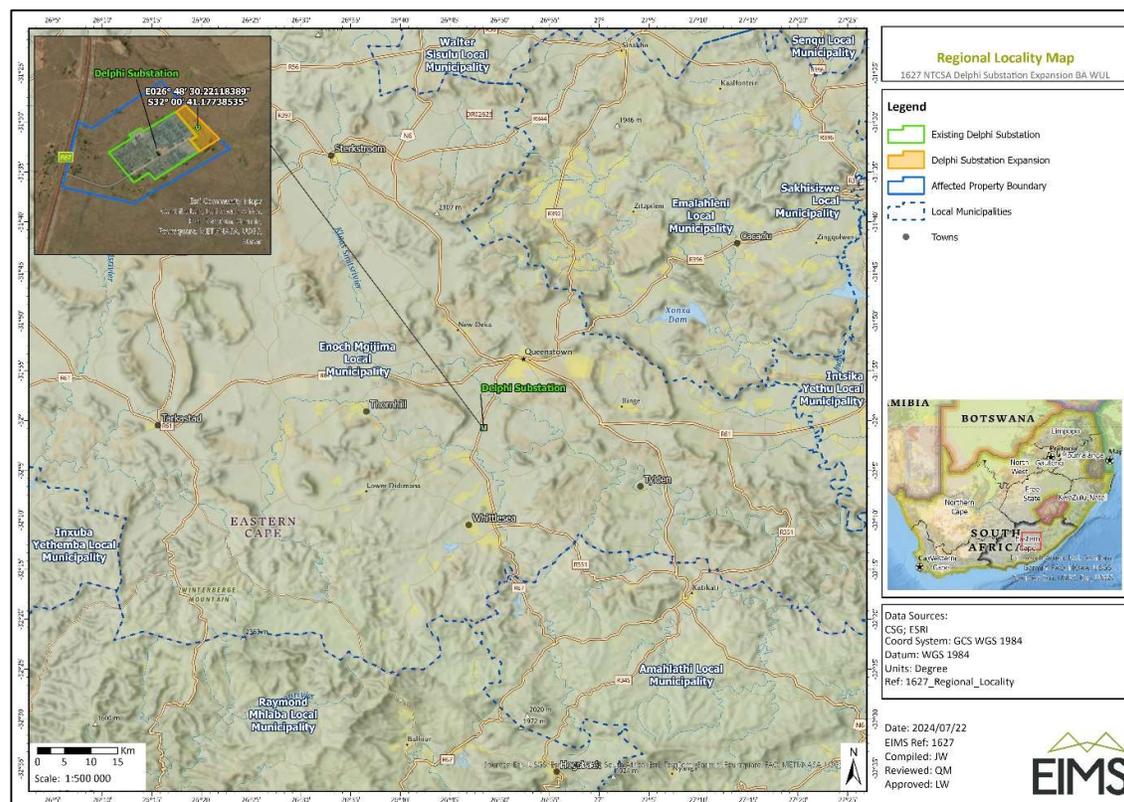
# 1 Introduction

## 1.1 Background

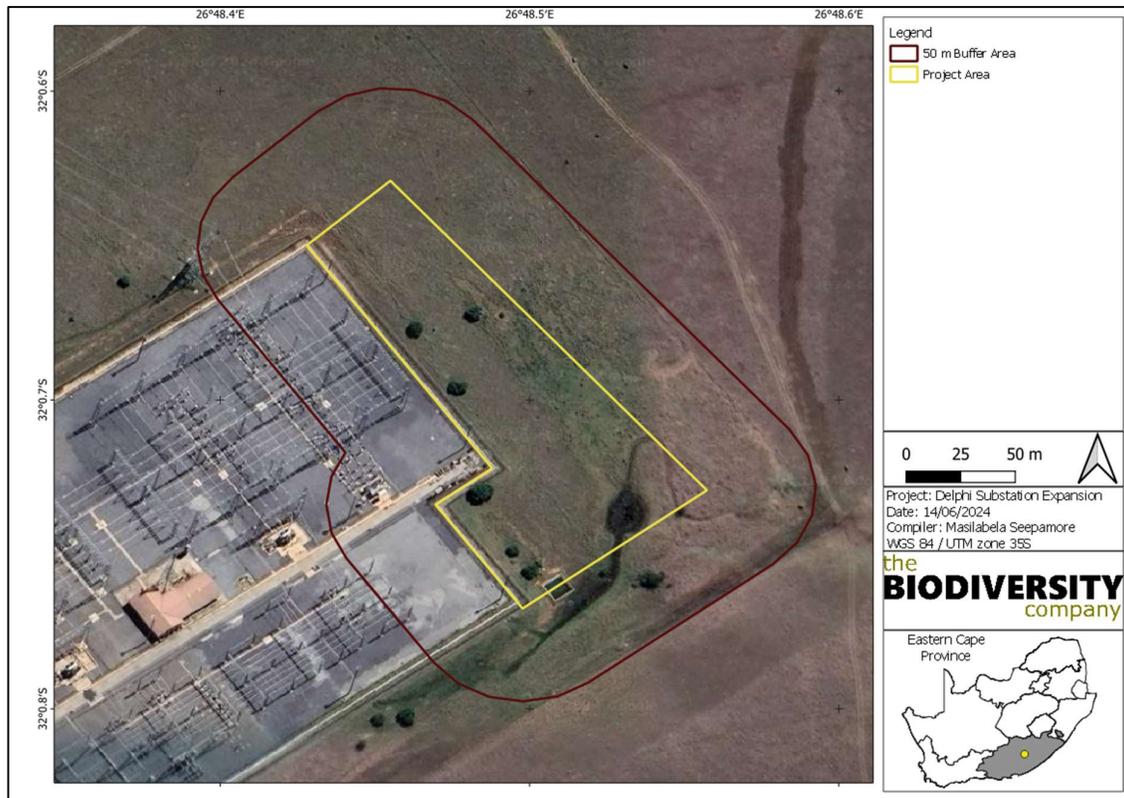
The Biodiversity Company was appointed to conduct a soil and agricultural potential assessment for the proposed Delphi Substation Expansion project. The proposed development falls within Enoch Mgijima Local Municipality, in the Lukhanji NU District Municipality, Eastern Cape Province of South Africa. The proposed project is approximately 14 km southwest of the Komani town.

This assessment was conducted in accordance with the amendments to the Environmental Impact Assessment Regulations. 2014 (GNR 326, 7 April 2017) of the National Environmental Management Act, 1998 (Act No. 107 of 1998) (NEMA). The approach has taken cognisance of the published Government Notices (GN) 320 in terms of NEMA, dated 20 March 2020: "Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation" (Reporting Criteria). The National Web based Environmental Screening Tool (DFFE, 2024) has characterised the agricultural theme sensitivity of the project area as predominantly "Medium", with a key consideration of this assessment being the determination of agricultural theme sensitivities for the project. Therefore, the proposed project area was found to have a "low" sensitivity due to the surrounding cumulative impacts.

The extent of the property/development footprint is referred to as the project area. A map of the project area and buffered area in relation to the local region is presented in Figure 1-1. A map illustrating the proposed layout to be assessed is presented in Figure 1-2. The surrounding land uses include open veld and Delphi substation.



**Figure 1-1** Spatial context of the proposed development as provided by EIMS



**Figure 1-2** The proposed components of the project

This report aims to present and discuss the findings from the soil resources identified within the 50 m buffered area. The report will also identify the soil suitability and land potential of these soils, the land uses within the assessment area and the risks associated with the substation expansion project from an agricultural and soil resources management perspective.

This report should be interpreted after taking into consideration the findings and recommendations provided by the specialist (Section 4 of this report). Further, this report should inform and guide the Environmental Assessment Practitioner (EAP) and regulatory authorities, enabling informed decision making, as to the soil resources of the proposed project.

## 1.2 Project Description

Details pertaining the proposed project, as received from Environmental Impact Management Services (EIMS, June 2024), is listed below:

The proposed works to be undertaken by Eskom Holdings SOC Ltd entails the expansion of Delphi substation.

400 kV Yard:

- Extend the 400 kV in the north easterly (NE) direction by one bay.
- Equip 1 x 400 kV transformer bay.
- Install 1 x 400/132 kV 500 MVA transformer.
- Equip 400 kV B/B 1 B/S 1.

- Equip 400 kV B/C B.

132 kV Yard:

- Extend the 132 kV B/B in the NE by 7 bays.
- Equip 1 x 132 kV transformer bay.
- Equip 132 kV B/B 1 B/S 1.
- Equip 132 kV B/C B in a new position.

Civil/Structural Requirements:

- Fence, yard terrace and road extension.
- Oil dam relocation.
- Special earthworks.
- Deviation of the existing storm water drainage.

### **1.3 Scope of Work**

In addition to the requirements stipulated in GNR 320, the following Terms of Reference apply to the Agricultural Compliance Statement:

- Ensure a thorough assessment, which includes both the desktop assessment of databases and aerial photography; a description of the on-site verification of the agricultural potential of the area; and the soil forms present in the development area;
- Identify and assess potential impacts on both agricultural potential and soil resulting from the proposed project;
- Identify and describe potential cumulative soil, agricultural potential and land capability impacts resulting from the proposed project in relation to proposed and existing developments in the surrounding area; and
- Recommend mitigation, management, and monitoring measures, to minimise impacts and/or optimise benefits associated with the proposed project.

### **1.4 Assumptions and Limitations**

The following aspects were considered as limitations;

- Only the slopes affected by the proposed development have been assessed;
- It has been assumed that the extent of the development area provided by the responsible party is accurate;
- The GPS used for ground truthing is accurate to within five meters. Therefore, the soil and the observation site's delineation plotted digitally may be offset by up to five meters to either side; and

- No heavy metals have been assessed nor fertility been analysed for the relevant classified soils.

### 1.5 Key Legislative Requirements

The report follows the protocols as stipulated for agricultural assessment in Government Notice 320 of 2020 (GNR 320). This Notice provides the procedures and minimum criteria for reporting in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act (No. 107 of 1998) (NEMA).

The above mentioned are supported by additional legislation that aims to manage the impact of development on the environment and the natural resource base of the country. Related legislation to this effect includes:

- Conservation of Agricultural Resources Act (Act 43 of 1983);
- Environment Conservation Act (Act 73 of 1989);
- National Environmental Management Act (Act 107 of 1998); and
- National Water Act (Act 36 of 1998).

### 1.6 Legislative Framework

In line with the protocol for the specialist assessment and minimum report content requirements for environmental impacts on soil and agricultural assessment as per the Government Notice 320 published in terms of NEMA, dated 20 March 2020: “Procedures for the Assessment and Minimum Criteria for Reporting on Identified Environmental Themes in terms of Sections 24(5)(a) and (h) and 44 of the National Environmental Management Act, 1998, when applying for Environmental Authorisation” – the following has been assumed:

- An applicant intending to undertake an activity identified in the scope of this protocol on a site identified on the screening tool as being of:
  - “Low sensitivity” for agriculture, must submit an Agricultural Compliance Statement.

An Agricultural Compliance Statement must contain the information as presented in Table 1-1 below.

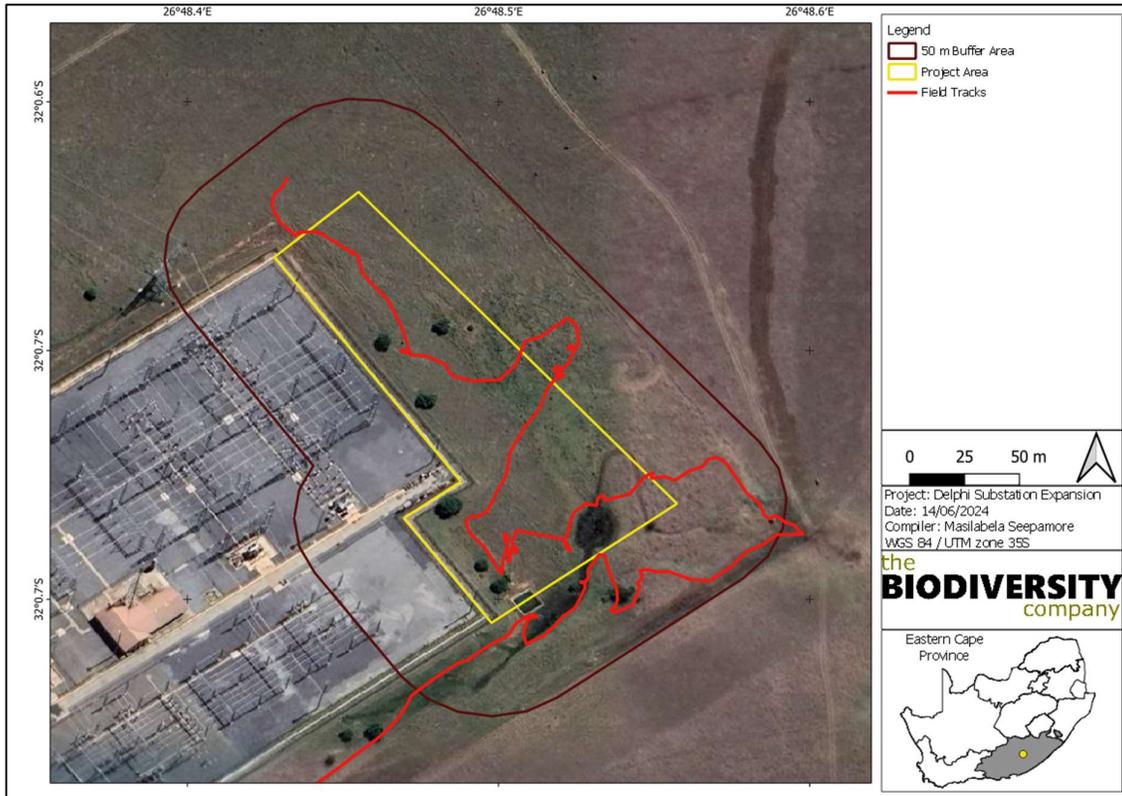
**Table 1-1** *Agricultural Compliance Statement information requirements as per the relevant protocol, including the location of the information within this report*

Information to be Included (as per GN 320, 20 March 2020)	Report Section
details and relevant expertise as well as the SACNASP registration number of the soil scientist or agricultural specialist preparing the statement including a curriculum vitae	Page i, Appendix C
a signed statement of independence by the specialist	Appendix B
a map showing the proposed development footprint (including supporting infrastructure) with a 50 m buffered development envelope, overlaid on the agricultural sensitivity map generated by the screening tool	Section 3.3 or Figure 3-8
confirmation from the specialist that all reasonable measures have been taken through micro-siting to avoid or minimise fragmentation and disturbance of agricultural activities	Section 4
a substantiated statement from the soil scientist or agricultural specialist on the acceptability, or not, of the proposed development and a recommendation on the approval, or not, of the proposed development	Section 4.2
any conditions to which this statement is subjected	Section 4.3
where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMP	Section 4.1

A signed copy of the compliance statement must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.

## 2 Fieldwork

Field assessment for the proposed project area was conducted from the 23<sup>rd</sup> of May 2024, to determine the soil forms and current land uses within the assessed area (Figure 2-1).



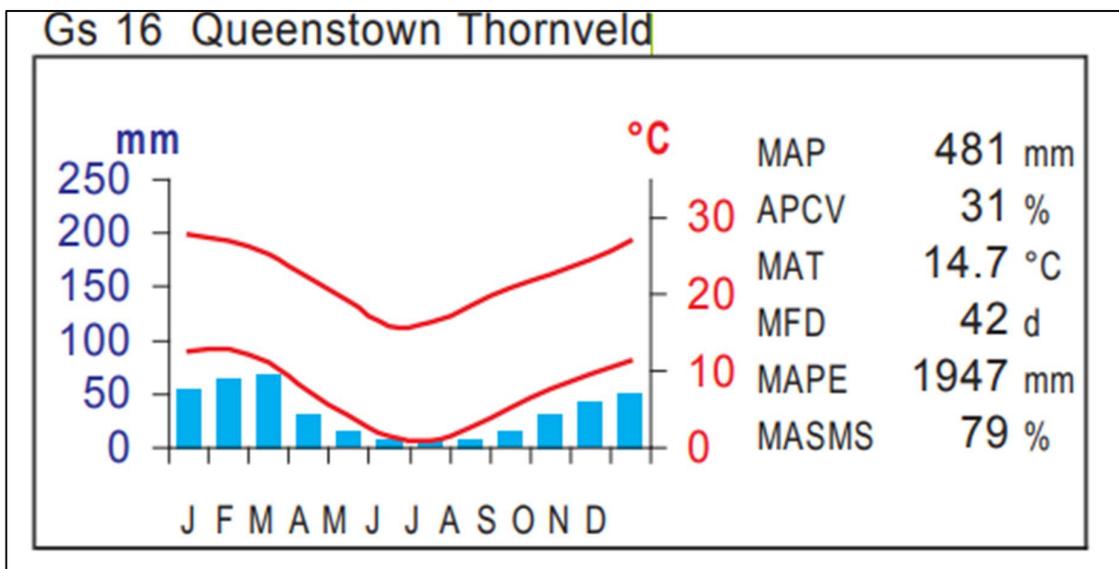
**Figure 2-1** Map illustrating the field tracks of the field survey

## 3 Results and Discussion

### 3.1 Desktop Information

#### 3.1.1 Climate

The project area falls within the Queenstown Thornveld vegetation. It is characterised with late summer-rainfall, high incidence of frost approximately 22 to 58 days. The overall mean average precipitation (MAP) of the proposed project is just above 481 mm. The area has temperatures ranging from 2 °C to maximise reaching 28 °C (Mucina & Rutherford, 2006; Figure 3-1).

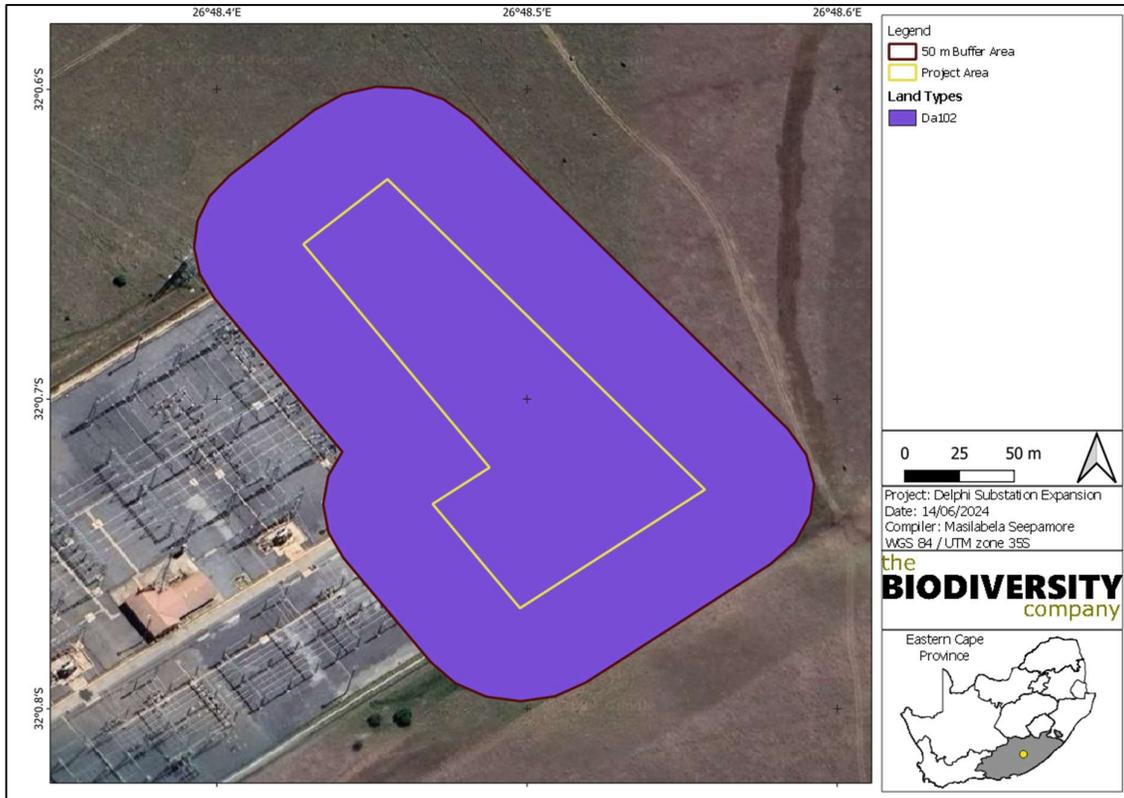


**Figure 3-1 Summarised climate for the region (Mucina & Rutherford, 2006)**

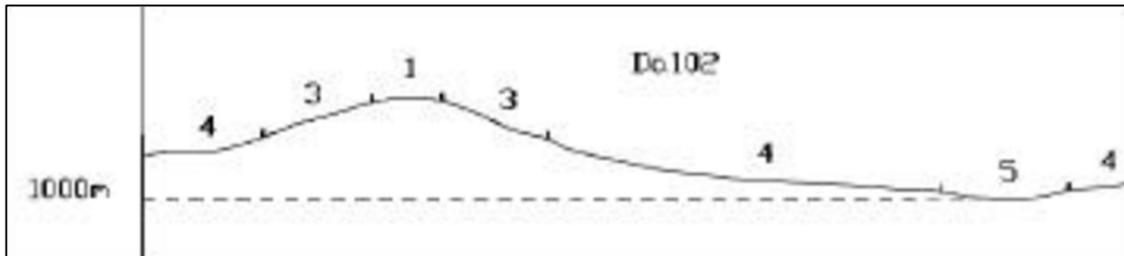
**3.1.2 Geology & Soils**

The geology of the area includes sedimentary rocks of the Tarkastad Subgroup (Beaufort Group, Karoo Supergroup) overlain with clay-loam soils typical of Da and Fc land types.

According to the land type database (Land Type Survey Staff, 1972 - 2006) the assessment area to be focused on mainly falls within the Da 102 land type (Figure 3-2). The Da 102 land type mainly consists of Glenrosa, Swartland and Valsrivier soil forms according to the Soil classification working group (1991), with the occurrence of other soils within the landscape. The Da land type is also characterised by prisma-cutanic and/or pedocutanic diagnostic horizons dominant; red B horizons. The land terrain units for the featured Da 102 land type are illustrated in Figure 3-3 with the expected soils listed in Table 3-1.



**Figure 3-2** Land type associated with the proposed project area



**Figure 3-3** Illustration of land type Da 102 terrain units (Land Type Survey Staff, 1972 – 2006)

**Table 3-1** Soils expected at the respective terrain units within the Da 102 land type (Land Type Survey Staff, 1972 - 2006)

Terrain Units							
1 (5%)		3 (10%)		4 (75%)		5 (10%)	
Glenrosa	40%	Swartland	30%	Swartland	40%	Valsrivier	45%
Swartland	20%	Glenrosa	30%	Valsrivier	15%	Oakleaf	35%
Mispah	20%	Mispah	20%	Glenrosa	10%	Sterkspruit	10%
Sterkspruit	10%	Sterkspruit	10%	Oakleaf	10%	Dundee	10%
Hutton	10%	Hutton	10%	Sterkspruit	10%		
				Hutton	10%		
				Mispah	5%		

### 3.2 Baseline Findings

The three representative soil forms that were identified within the 50 m buffer area include the Tubatse, Bethesda and Glenrosa soil forms. The assessment area is dominated by the restrictive Glenrosa soil form, with partially weathering rock fragments. The Glenrosa soil form is usually shallow, semi-impermeable to impermeable. Due to its restrictive morphology, the soil form has low productivity for crop production.

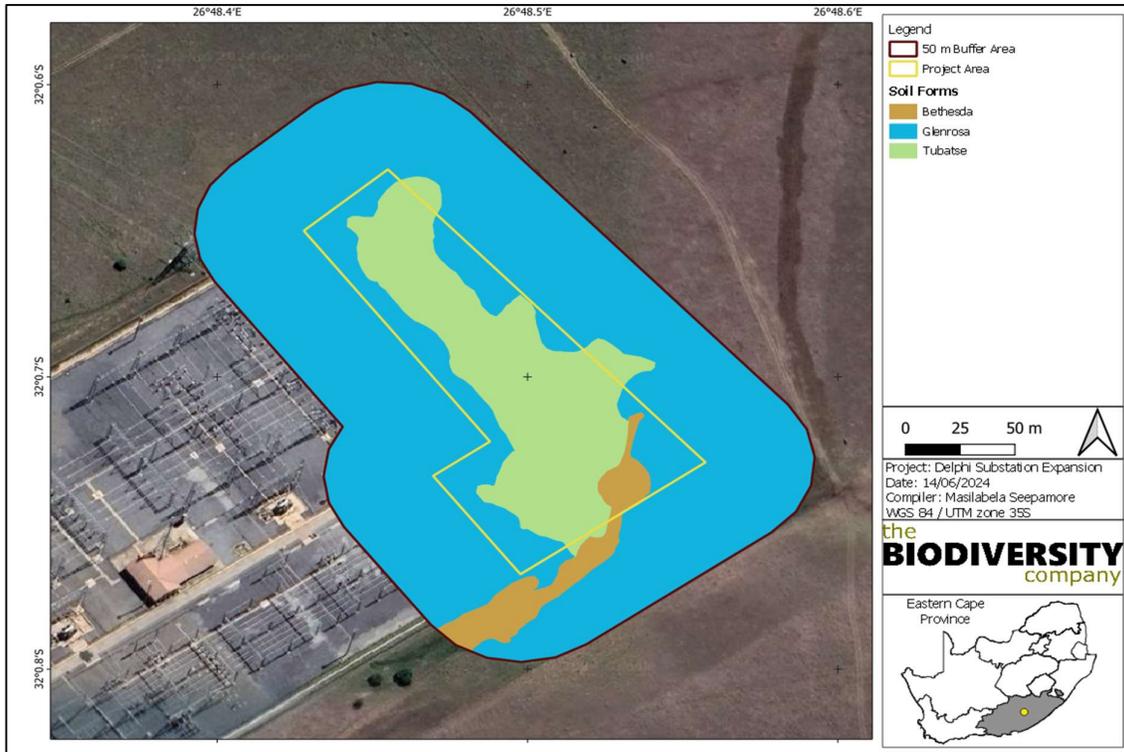
Other identified soil forms include the Tubatse and Bethesda. The Tubatse soil form consists of an orthic topsoil horizon on top of a neocutanic horizon underlain with a lithic horizon below. The Bethesda soil form consists of an orthic topsoil horizon on top of a neocutanic horizon underlain with a hard rock substratum horizon below. These soils comprised of subsoil horizon that have been subjected to intermediate stages of pedogenic alternation. The soils are deep but tends to limit root, water and air permeability which is critical in crop production under rainfed conditions (Figure 3-4). All the identified soil horizons within the proposed project area, as well as the current land use are Figure 3-5 and Figure 3-6, respectively.

The land capability classes of the above-mentioned soils have been determined to be class "III," and "VI," according to Smith (2006). The land capability class "III" is characterised by moderate limitations, with some erosion hazard and, which is suitable for rotation of crops and ley (50%). The land capability class "VI" is characterised by limitations precluding cultivation and is suitable for perennial vegetation, pasture and afforestation. A climate capability level 8 has been assigned to the area given the low Mean Annual Precipitation (MAP) and the high Mean Annual Potential Evapotranspiration (MAPE) rates. By using the determined land capability classes and the determined climate capability, land potential levels "L6" and "L7" were calculated. According to Smith (2006), land potential level "L6" is characterised by very restricted potential with regular and/or moderate limitations due to soil, slope, temperatures, or rainfall. The "L7" land potential level is characterised by low potential with severe limitations due to soil, slope, temperatures, or rainfall. Therefore, the proposed project area is considered non-arable.

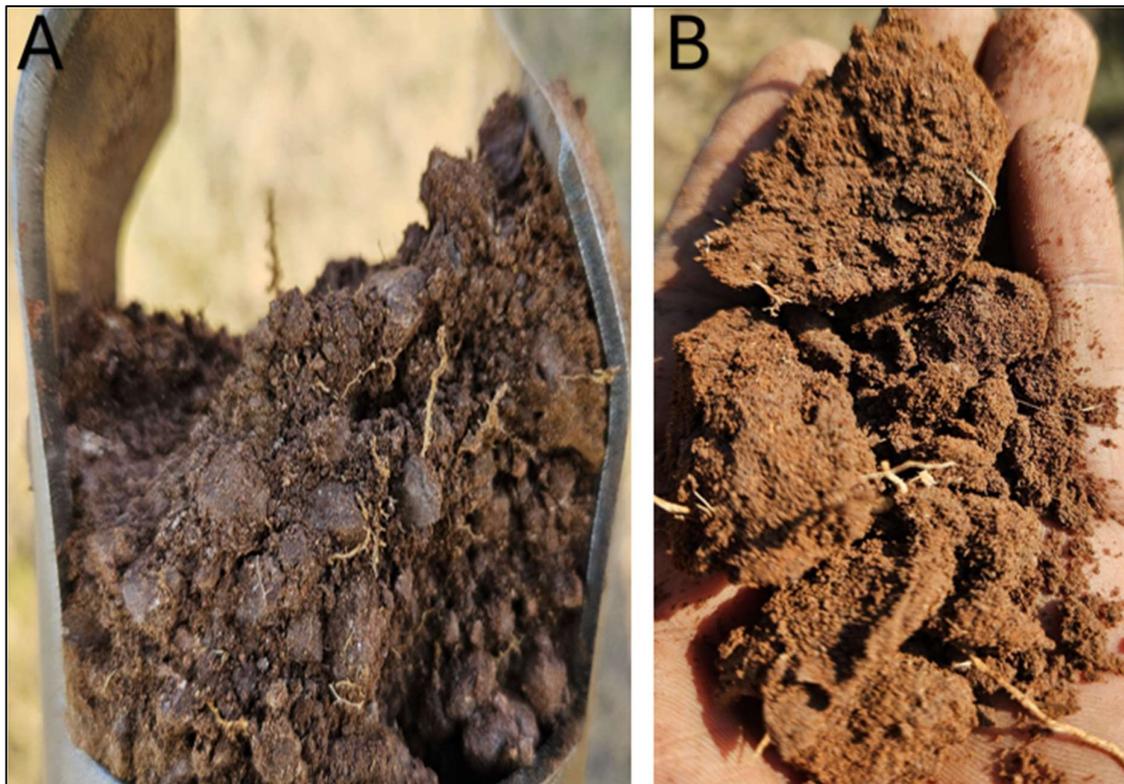
The following land potential levels have been determined;

- Land Potential level 6 (this land potential level is characterised by very restricted potential. Regular and/or severe limitations due to soil, slope, temperatures or rainfall) and;
- Land potential level 7 (this land potential level is characterised by low potential. Severe limitations due to soil, slope, temperatures, or rainfall).

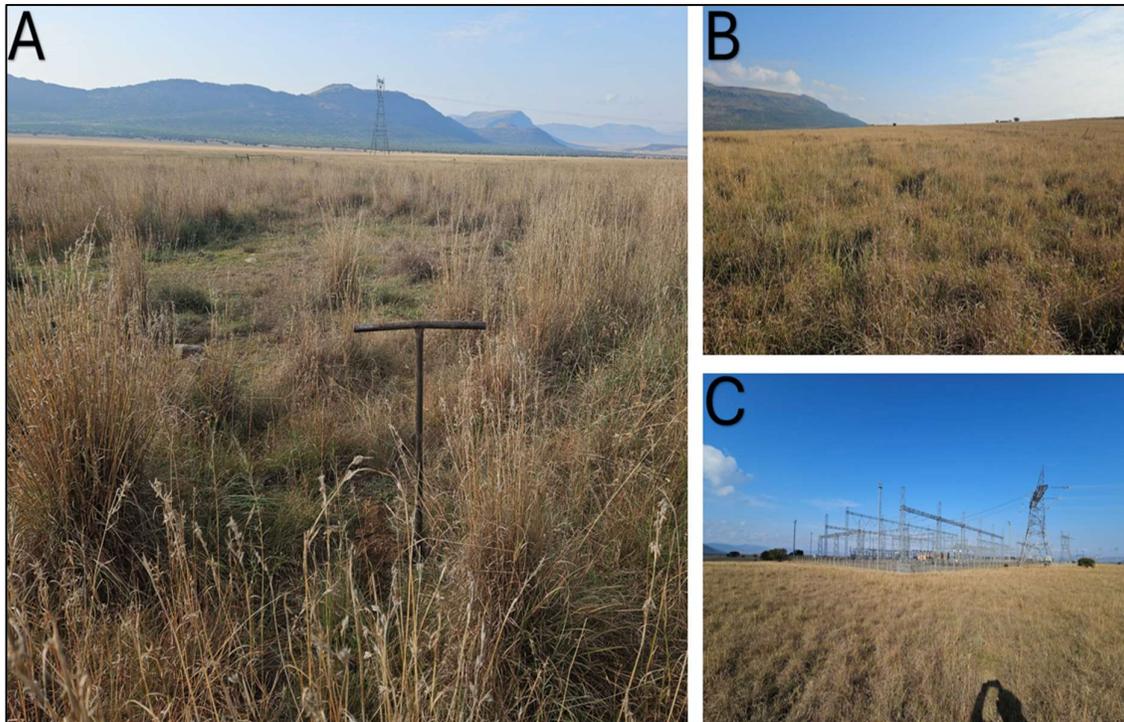
Land potential levels of the proposed area are illustrated in Figure 3-7.



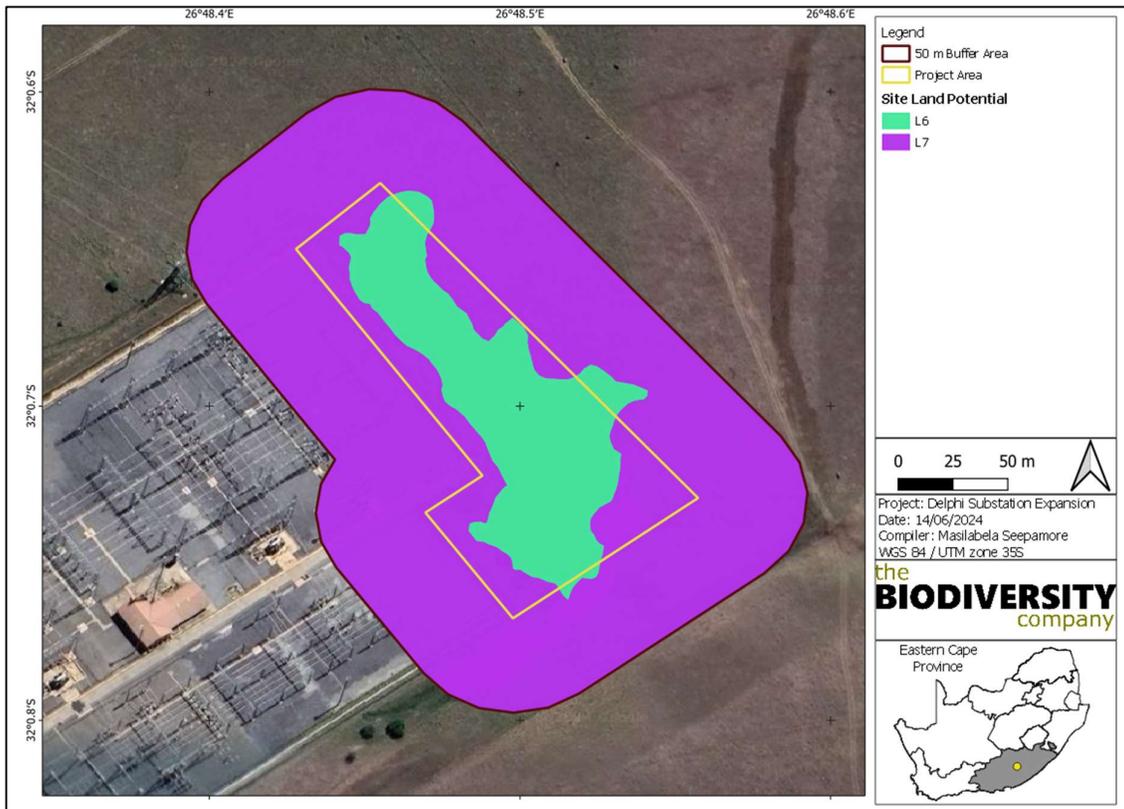
**Figure 3-4** Soil forms found within the proposed project area



**Figure 3-5** Diagnostic soil horizons identified on-site: A) lithic subsoil horizon found in the Glenrosa and Tubatse soil forms; & B) neocutanic subsoil horizon found in the Bethesda and Tubatse soil forms.



**Figure 3-6** Different land uses found within the proposed project area; A) & B) common vegetation & C) Delphi SS Substation.



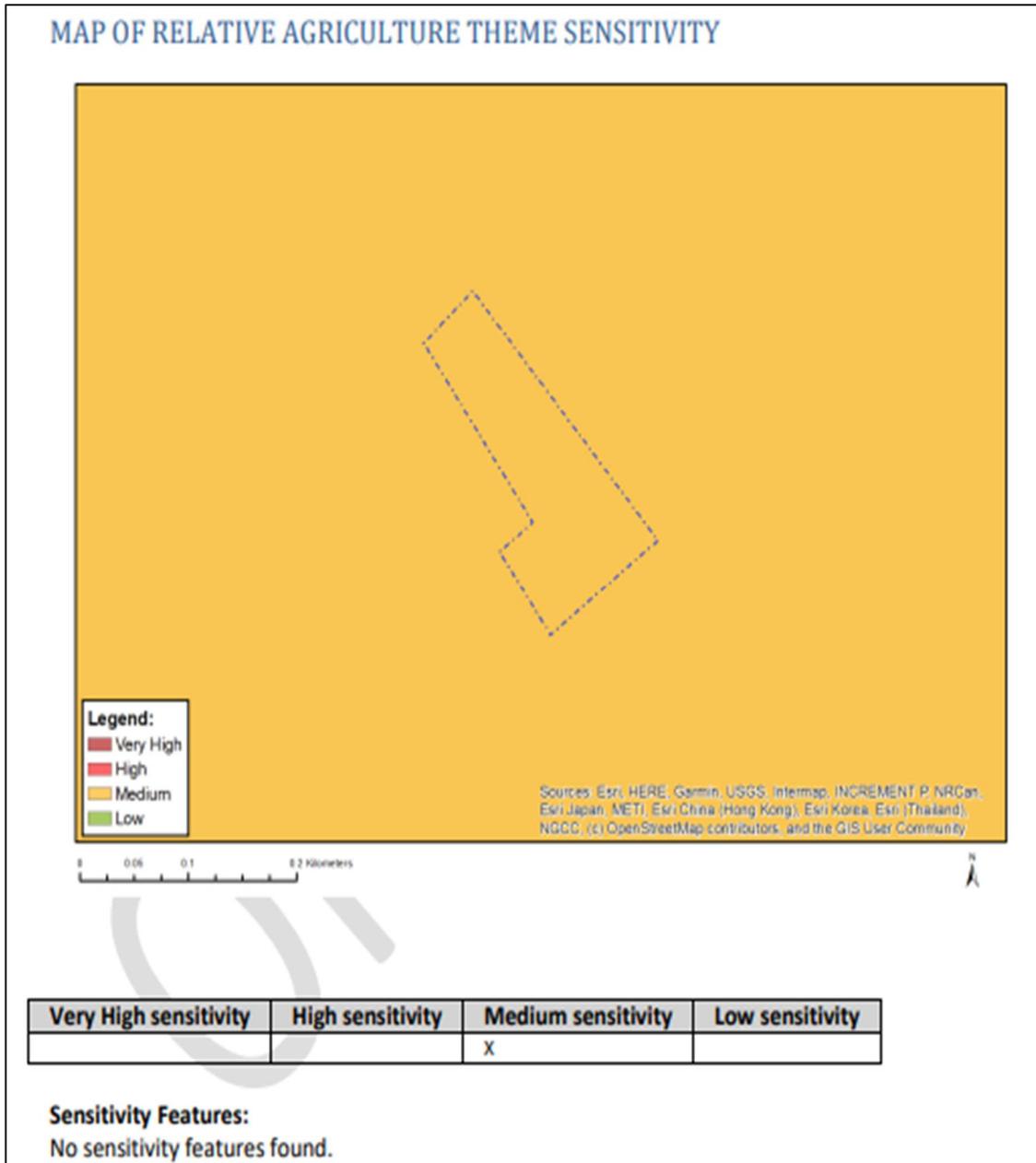
**Figure 3-7** Land Potential of the proposed project area

**3.3 Sensitivity Verification**

**3.3.1 Screening Report – Delphi Substation Expansion Project**

The following is deduced from the National Web-based Environmental Screening Tool Regulation 16(1)(v) of the Environmental Impact Assessment Regulations 2014, as amended):

- Agriculture Theme Sensitivity indicates that the proposed project area falls within the “Medium” agricultural sensitivity (Figure 3-8).



**Figure 3-8** *Map of Relative Agricultural Theme Sensitivity for the Delphi Substation Expansion Project generated by the Environmental Screening Tool Site Ecological Importance (SEI)*

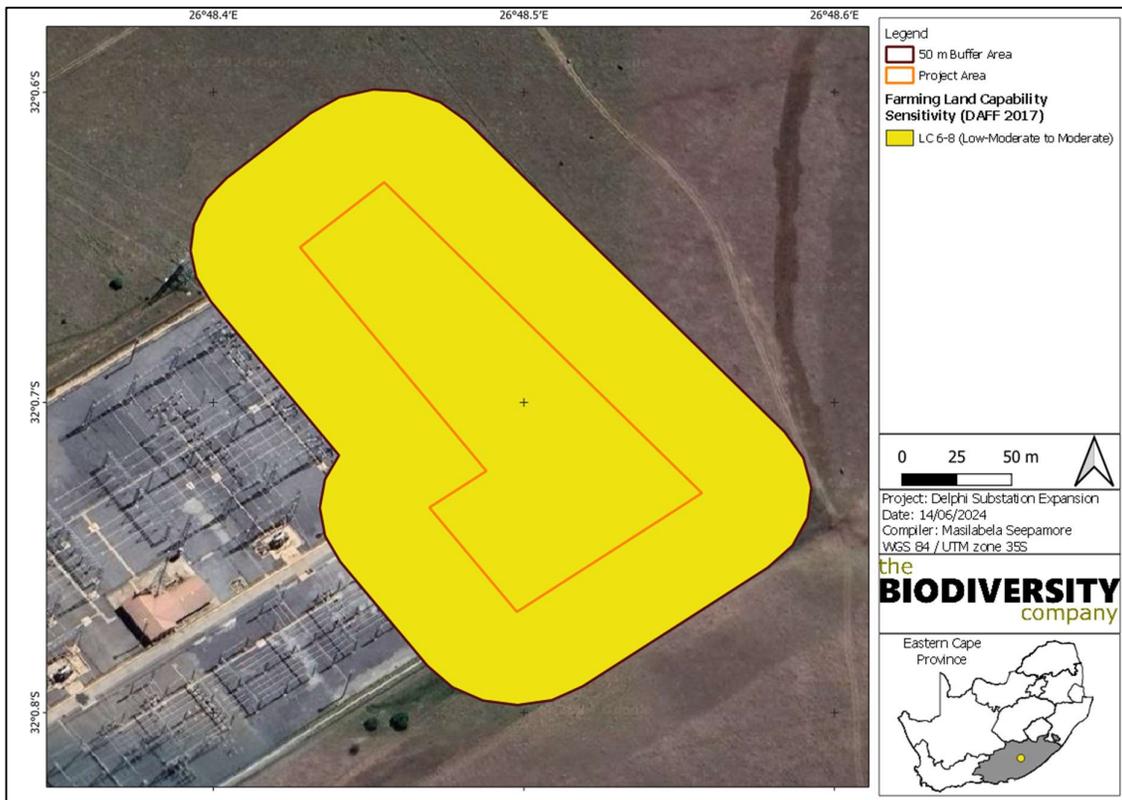
Fifteen land capabilities have been digitised by (DAFF, 2017) across South Africa, of which three potential land capability classes are located within the assessment area, including;

- Land Capability 6 to 8 (Low-Moderate to Moderate Sensitivity).

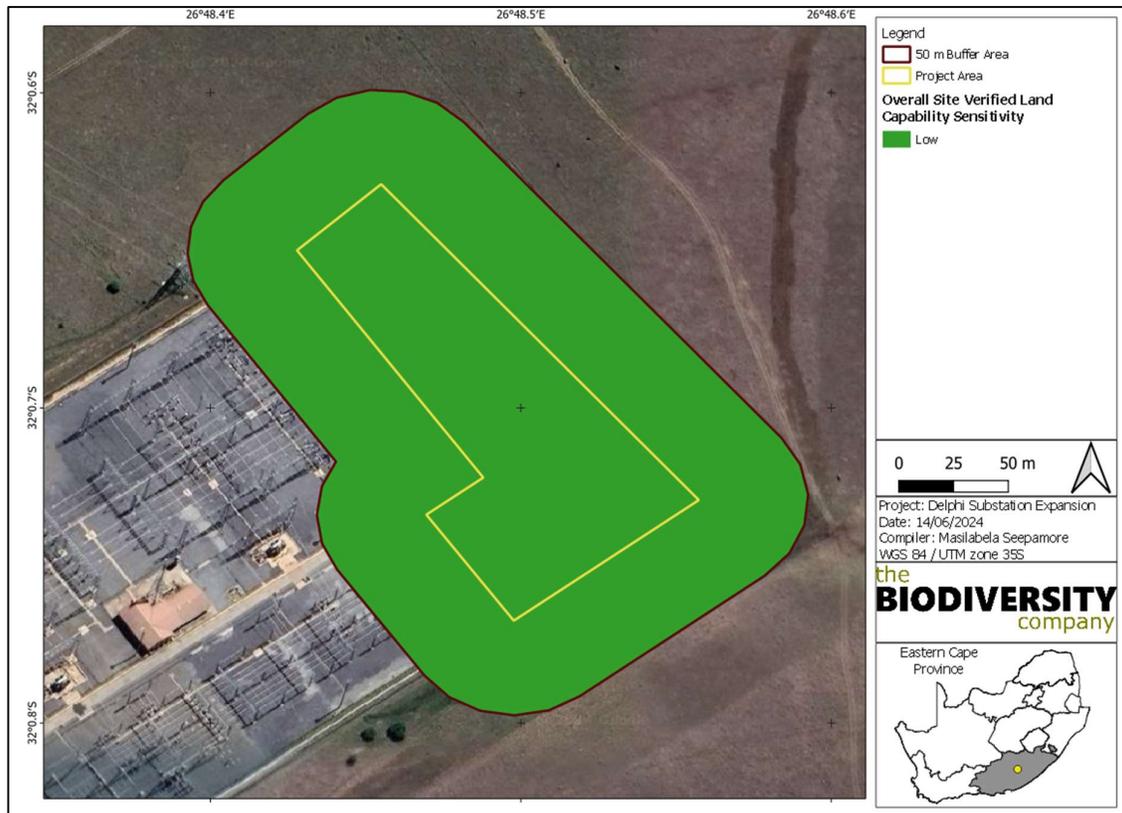
The land capability dataset (DAFF, 2017) indicates that the proposed project area predominately falls within the “Low-Moderate to Moderate” sensitivity (see Figure 3-9). Furthermore, there were no sensitive field crop boundaries identified within the proposed project area by the use of the agricultural theme tool (DFFE, 2024).

The baseline soil findings, current land uses and the calculated land potential dispute the agricultural theme in areas associated with sensitivity of “Low-Moderate to Moderate”. In addition, no crop production under both rainfed and irrigation were identified within the proposed project area.

As a result, based on the verified baseline findings, the proposed substation expansion facility will have negligible impact on the soil resources. Furthermore, the land capability and land potential of the resources in the assessment area are both reclassified with an overall “Low” sensitivity (Figure 3-10).



**Figure 3-9** Land Capability Sensitivity (DAFF, 2017)



**Figure 3-10 Overall site verified land capability sensitivity of the project area**

Considering the soil properties, agricultural potential as well as the current land use of the proposed substation expansion development area, the area has a “Low” agricultural sensitivity. Based on the confirmed sensitivities, the overall sensitivity of the proposed project area is also categorized as “Low” sensitivity. Moreover, the substation expansion and other associated infrastructure, are assigned “Low” sensitivity. The allocated sensitivities for the theme are either disputed or validated in Table 3-2 below.

**Table 3-2 Summary of the screening tool vs specialist assigned sensitivities**

Screening Tool Theme	Screening Tool	Specialist	Tool Validated or Disputed by Specialist - Reasoning
Agricultural Theme	Medium	Low	Disputed – Land capability Low. Presence of restrictive sensitive soil including Glenrosa soil form. No irrigation infrastructure or annual crop fields.

#### 4 Conclusion

The representative soil forms including Tubatse, Bethesda, and Glenrosa found in the proposed project are characterised by low land potential levels of “L6” and “L7”, and ultimately a “Low” sensitivity due to restrictive impermeability of the underlying horizons. Therefore, it can be concluded that the proposed project area has an overall “Low” sensitivity.

The land capability sensitivity (DAFF, 2017) is dominated predominately by land capabilities with “Low-Moderate to Moderate” sensitivity. The verified baseline findings, current land uses and the calculated land potential level disputed the agricultural theme in areas associated with “Low-Moderate to Moderate” sensitivity due to the presence of low sensitive soils and the current land uses.

It is the specialist’s opinion that the proposed Delphi substation expansion project will have an overall low residual impact on the agricultural production ability of the land. That being the case, the proposed project and associate infrastructure may be favourably considered for development.

#### **4.1 Management Measures**

An impact assessment is not required to be included in the Agricultural compliance statement, but where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMPr must be provided. The following measures are provided:

- Vegetation clearance must be restricted to areas authorised for development;
- Land clearing and preparation may only be undertaken immediately prior to construction activities and within authorised areas;
- A stormwater management plan must be developed and implemented for the project; and
- If soil erosion is detected, the area must be stabilised using geo-textiles and facilitated re-vegetation.

#### **4.2 Specialist Statement**

The proposed access road development area will have an overall low residual impact on the agricultural production capability of the area. The proposed development can be favourably considered for authorisation. The following serves to substantiate this statement:

- The site verified land capability of the proposed project area is found to be low;
- The agricultural potential of the area is low;
- No active crop production was found within the project area; and
- The overall agricultural sensitivity for the substation expansion and associated infrastructure is low.

#### **4.3 Statement Conditions**

The conclusion of this assessment on the acceptability of the proposed project and the recommendation for its approval is not subject to any conditions.

## 5 References

Department of Agriculture, Forestry and Fisheries, 2017. *National land capability evaluation raster data: Land capability data layer*, 2017. Pretoria.

National Environmental Screening Tool. 2024. National Environmental Screening Tool, 2024. Available from the Department of Forestry, Fisheries and the Environmental website: <https://screening.environment.gov.za/screeningtool/index.html#/pages/welcome>.

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## 6 Appendix Items

### 6.1 Appendix A: Methodology

#### 6.1.1 Desktop Assessment

As part of the desktop assessment, baseline soil information was obtained using published South African Land Type Data. Land type data for the site was obtained from the Institute for Soil Climate and Water (ISCW) of the Agricultural Research Council (ARC) (Land Type Survey Staff, 1972 - 2006). The land type data is presented at a scale of 1:250 000 and comprises of the division of land into land types. In addition, a Digital Elevation Model (DEM) as well as the slope percentage of the area was calculated by means of the NASA Shuttle Radar Topography Mission Global 1 arc second digital elevation data by means of QGIS and SAGA software.

#### 6.1.2 Field Survey

The site was traversed on foot. A soil auger was used to determine the soil form/family and depth. The soil was hand augured to the first restricting layer or 1.2 m. Soil survey positions were recorded as waypoints using a handheld GPS. Soils were identified to the soil family level as per the “Soil Classification: A Taxonomic System for South Africa” (Soil Classification Working Group, 2018). Landscape features such as existing open trenches were also helpful in determining soil types and depth.

#### 6.1.3 Land Capability

Land capability and agricultural potential will be determined by a combination of soil, terrain, and climate features. Land capability is defined by the most intensive long-term sustainable use of land under rain-fed conditions. At the same time an indication is given about the permanent limitations associated with the different land use classes.

Land capability is divided into eight classes, and these may be divided into three capability groups. Table 6-1 shows how the land classes and groups are arranged in order of decreasing capability and ranges of use. The risk of use increases from class I to class VIII (Smith, 2006).

**Table 6-1 Land capability class and intensity of use (Smith, 2006)**

Land Capability Class	Increased Intensity of Use									Land Capability Groups
I	W	F	LG	MG	IG	LC	MC	IC	VIC	Arable Land
II	W	F	LG	MG	IG	LC	MC	IC		
III	W	F	LG	MG	IG	LC	MC			
IV	W	F	LG	MG	IG	LC				
V	W	F	LG	MG						Grazing Land
VI	W	F	LG	MG						
VII	W	F	LG							Wildlife
VIII	W									
<b>W - Wildlife</b>		MG - Moderate Grazing			MC - Moderate Cultivation					
<b>F - Forestry</b>		IG - Intensive Grazing			IC - Intensive Cultivation					
<b>LG - Light Grazing</b>		LC - Light Cultivation			VIC - Very Intensive Cultivation					

The land potential classes are determined by combining the land capability results and the climate capability of a region as shown in the table below. The final land potential results are then described in the subsequent table.

**Table 6-2 The combination table for land potential classification**

Land capability class	Climate capability class							
	C1	C2	C3	C4	C5	C6	C7	C8
I	L1	L1	L2	L2	L3	L3	L4	L4
II	L1	L2	L2	L3	L3	L4	L4	L5
III	L2	L2	L3	L3	L4	L4	L5	L6
IV	L2	L3	L3	L4	L4	L5	L5	L6
V	Vlei	Vlei	Vlei	Vlei	Vlei	Vlei	Vlei	Vlei
VI	L4	L4	L5	L5	L5	L6	L6	L7
VII	L5	L5	L6	L6	L7	L7	L7	L8
VIII	L6	L6	L7	L7	L8	L8	L8	L8

**Table 6-3 The Land Potential Classes**

Land potential	Description of land potential class
L1	Very high potential: No limitations. Appropriate contour protection must be implemented and inspected.
L2	High potential: Very infrequent and/or minor limitations due to soil, slope, temperatures, or rainfall. Appropriate contour protection must be implemented and inspected.
L3	Good potential: Infrequent and/or moderate limitations due to soil, slope, temperatures, or rainfall. Appropriate contour protection must be implemented and inspected.
L4	Moderate potential: Moderately regular and/or severe to moderate limitations due to soil, slope, temperatures, or rainfall. Appropriate permission is required before ploughing virgin land.
L5	Restricted potential: Regular and/or severe to moderate limitations due to soil, slope, temperatures, or rainfall.
L6	Very restricted potential: Regular and/or severe limitations due to soil, slope, temperatures, or rainfall. Non-arable
L7	Low potential: Severe limitations due to soil, slope, temperatures, or rainfall. Non-arable
L8	Very low potential: Very severe limitations due to soil, slope, temperatures, or rainfall. Non-arable

The land capability of the proposed footprint will be compared to the National Land Capability which was refined in 2014- 2016. The National Land Capability methodology is based on a spatial evaluation modelling approach and a raster spatial data layer consisting of fifteen (15) land capability evaluation values (Table 6-4), usable on a scale of 1:50 000 – 1:100 000 (DAFF, 2017). The previous system is based on a classification approach, with 8 classes (Table 6-1). Land capability and land potential will also be determined in consideration of the screening tool to ultimately establish the accuracy of the land capability sensitivity from (DAFF, 2017).

**Table 6-4 National Land Capability Values (DAFF,2017)**

Land Capability Evaluation Value	Land Capability Description
1	Very low
2	
3	Very Low to Low
4	
5	Low
6	Low to Moderate
7	
8	Moderate

9	Moderate to High
10	
11	High
12	High to Very High
13	
14	
15	Very High

**6.2 Appendix B: Impact Assessment**

Impact	Phase	Pre-Mitigation							Post Mitigation							Priority Factor Criteria		Priority Factor	Final score	
		N a t u r e	E x t e n t	D u r a t i o n	M a g n i t u d e	R e v e r s i b i l i t y	P r o b a b i l i t y	P r e - m i t i g a t i o n E R	N a t u r e	E x t e n t	D u r a t i o n	M a g n i t u d e	R e v e r s i b i l i t y	P r o b a b i l i t y	P o s t - m i t i g a t i o n E R	C o n f i d e n c e	C u m u l a t i v e I m p a c t			I r r e p l a c e a b l e l o s s
Loss of land capability, Soil compaction, Soil erosion, Land degradation	Planning	-1	1	1	1	2	1	-1,25	-1	1	1	1	1	1	-1	Low	1	1	1,00	-1
	Construction	-1	3	3	3	3	3	-9	-1	2	2	2	3	3	-6,75	Medium	2	3	1,38	-9,2812
	Operation	-1	2	3	2	3	2	-5	-1	2	2	2	2	2	-4	Low	2	3	1,38	-5,5
	Decommissioning	-1	2	2	2	3	3	-6,75	-1	2	2	1	3	2	-4	Low	2	2	1,25	-5
	Rehab and closure	-1	2	2	2	2	2	-4	-1	2	2	1	2	1	-1,75	Low	1	2	1,13	-1,9688

### 6.3 Appendix C Specialist declarations

#### DECLARATION

I, Matthew Mamera, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of Section 24F of the Act.



**Dr Matthew Mamera**

**Soil Scientist**

The Biodiversity Company

June 2024

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**DECLARATION**

I, Masilabela Seepamore, declare that:

- I act as the independent specialist in this application;
- I will perform the work relating to the application in an objective manner, even if this results in views and findings that are not favourable to the applicant;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting the specialist report relevant to this application, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, regulations and all other applicable legislation;
- I have no, and will not engage in, conflicting interests in the undertaking of the activity;
- I undertake to disclose to the applicant and the competent authority all material information in my possession that reasonably has or may have the potential of influencing any decision to be taken with respect to the application by the competent authority; and the objectivity of any report, plan or document to be prepared by myself for submission to the competent authority;
- All the particulars furnished by me in this form are true and correct; and
- I realise that a false declaration is an offence in terms of Regulation 48 and is punishable in terms of Section 24F of the Act.



**Masilabela Seepamore**

**Agricultural Scientist**

The Biodiversity Company

June 2024

**6.4 Appendix D Curriculum vitae**

# Matthew Mamera

PhD Soil Science (*Cand Nat Sci*)

Cell: +27 785 772 668

Email: [matthew@thebiodiversitycompany.com](mailto:matthew@thebiodiversitycompany.com)

Identity Number: 8810315983183

Date of birth: 31 October 1988



**Profile Summary**

Working experience throughout South Africa

Specialist experience with pedology and agriculture.

Specialist expertise include hydropedology, pedology, land contamination, agricultural potential, land rehabilitation, rehabilitation management and wetlands resources.

Experience hydropedological modelling

**Areas of Interest**

Mining, Farming, Soil and Water quality contamination, Soil Sanitation management, Soil Carbon, Sustainability and Conservation.

**Key Experience**

- Environmental Impact Assessments (EIA)
- Environmental Management Programmes (EMP)
- Wetland delineations
- Rehabilitation Plans
- Soil taxonomic classification (SA forms and WRB groups)
- Soil Hydropedology assessments
- Agriculture potential assessments
- Land contamination assessments

**Country Experience**

- South Africa: All Provinces
- Zambia - Kitwe and Mufulira
- Angola- Zenza – Cacusó;
- Luena - Saurimo

**Nationality**

South African Permanent Residence

**Languages**

English – Proficient  
 Ndebele, Xhosa, Shona – Proficient

**Qualifications**

- PhD (University of the Free States)- Soil Science (Hydropedology, Sanitation and Water quality management)
- MSc (University of Fort Hare) – Soil Science (Hydropedology, Sanitation and Water quality management)
- BSc Honours *Cum laude* (University of Fort Hare) – Soil Science (Hydropedology, wetlands delineation and rehabilitation)
- BSc Agricultural Soil Science
- Cand Nat Sci 116356
- SSSSA- SSSSA 201

## Masilabela Klaas Seepamore

MSc Soil Science (*Cand Nat Sci*)

Cell: +27 788151878

Email: [masilabela@thebiodiversitycompany.com](mailto:masilabela@thebiodiversitycompany.com)

Identity Number: 8806085781088

Date of birth: 08 June 1988



### Profile Summary

Working experience in South Africa

Specialist experience with soil science, agronomy and agrometeorology.

Specialist expertise include production agronomy, pedology, fertilizer recommendation, trial management, data analysis and crop modelling.

### Areas of Interest

Farming, resource use efficiency production agronomy, soil classification, soil and crop research, climate change adaptation and mitigation strategies,

### Key Experience

- Land suitability studies and report writing
- Soil taxonomic classification SA forms
- Fertilizer recommendation
- Crop research
- Data analysis
- Farm visit
- Technology transfer

### Country Experience

South Africa

### Nationality

South African

### Languages

English – Proficient

Setswana, Sesotho – Proficient

### Qualifications

- BASOS-FACTS Course (FERTASA)
- MSc Agriculture *Cum laude* (University of the Free State) – Soil Science (soil science, agronomy, and production agronomy)
- BSc Agriculture Honours (University of the Free State) – Soil Science (soil science, agronomy, crop nutrition)
- BSc Agricultural Agronomy and Soil Science
- Cand Nat Sci 113907