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AGRICULTURAL IMPACT ASSESSSMENT FOR THE PROPOSED ARLINGTON MULTIPLE-USE DEVELOPMENT ON ERVEN 3988, 4195 AND 6991 ALONG GLENDORE ROAD IN WALMER, GQEBERHA, NELSON MANDELA BAY MUNICIPALITY, EASTERN CAPE

Date
12 February 2024

Client

JG Afrika (Pty) Ltd

SPECIALIST ASSESSMENT DETAILS & DECLARATION OF INDEPENDENCE

Document Title	**AGRICULTURAL IMPACT ASSESSSMENT FOR THE PROPOSED ARLINGTON MULTIPLE-USE DEVELOPMENT ON ERVEN 3988, 4195 AND 6991 ALONG GLENDORE ROAD IN WALMER, GQEBERHA, NELSON MANDELA BAY MUNICIPALITY, EASTERN CAPE**	
Report No.	**W45**	
Version	**V1**	
Date	**12 February 2024**	
Report completed by	**Wayne Jackson** *Cert.Sci.Nat.* [redacted]	
Client	**JG Afrika (Pty) Ltd**	
Fieldwork and Report Writing	**Wayne Jackson**	

I, Wayne Jackson, hereby declare that this report has been prepared independently of any influence or prejudice as may be specified by the Department of Environmental Affairs.

Wayne Jackson

Wetland & Soils Specialist

Eco-Assist

12th February 2024

Specialist Details

Specialist	Role	Details
Wayne Jackson *Cert.Sci.Nat. (Registration* [redacted]	**Field work and author (Soils)**	Wayne Jackson graduated from the University of KwaZulu-Natal, Pietermaritzburg, with a BSc. degree in Soil Science & Hydrology. Wayne has 14 years' experience in Wetlands & Soils Scientist with a demonstrated history of working in the environmental services industry. He is skilled in Soil Classification, Wetlands, Hydropedology, and Surface Water Hydrology. He has a strong Environmental mitigation and rehabilitation knowledge. He has also gained experience in large post-mining rehabilitation projects, providing specialist inputs on land capability and soil utilisation. He has extensive exposure to a wide range of projects in many sectors across South Africa, and parts of Africa. He is knowledgeable on how soils, wetlands, and hydrological systems are linked in the landscape and how activities could impact all these aspects. Wayne is a registered Natural Scientist with the South African Council for Natural Scientific Professionals (SACNASP) – Registration No. 1[redacted]

The relevant experience of specialist team members involved in the compilation of this report are briefly summarized above. Curriculum Vitae of the specialist team are available on request.

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1 INTRODUCTION

Eco-Assist Environmental Consultants (here after Eco-Assist) were appointed by JG Afrika (Pty) Ltd to conduct an Agricultural Impact Assessment for the proposed multiple-use development that will be in Walmer, Gqeberha (Port Elizabeth) within the Nelson Mandela Bay Metropolitan Municipality (NMBM) of the Eastern Cape Province.

1.1 Background

The Applicant intends to establish a multiple-use development, comprising of 25 clusters as well as an internal road network, on erven 3988, 4195 and 6991, along Glendore Road in Walmer. The consolidated development footprint will be 614 409 m² (61,4 Ha) in extent. Approximately 3 000 residential units are proposed which will be divided amongst nine (9) clusters designated for General Residential Zone 2 and General Residential Zone 4. In addition, 13 clusters designated for both Business Zone 1 and Business Zone 2 are planned, as well as one (1) cluster for Community Purposes and two (2) clusters for Special Purposes Infrastructure (solar power & wastewater treatment).

This development will aim to promote social, economic, and environmental sustainability. The project will be resource efficient through resource management ideas such as the improvement of the water distribution network, rainwater management, digital smart meters, renewable energy generation, sustainable drainage, reduction of water generation, optimisation of waste management.

The development in its entirety will include the following components:

a) Retail/Business Infrastructure.
b) Office/Storage Facilities.
c) Medical Use/Office Facilities.
d) Special Use High Tech Industrial facility/infrastructure.
e) Warehouse Facilities.
f) Community Zone (i.e., child aftercare facilities).
g) Mixed-residential Housing Units including Social Housing – approximately 3000 units are proposed.
h) Club House and Sport Facilities.
i) A Business Incubator / Substation Area.
j) Parking/Solar Charging Stations.
k) Special Purposes Infrastructure – solar photovoltaic power park & wastewater treatment plant.
l) Open spaces.
m) Installation of internal infrastructure services, such as water, sanitation, irrigation, stormwater, roads, and electricity, to service the proposed infrastructure. See further details below; and
n) Installation of external infrastructure services, such as stormwater and sanitation connection lines as well as a pedestrian walkway along Racecourse Road and two traffic circles along Glendore Road. An additional road will be constructed between the south-western corner of the site and the northern circle.

1.2 Project Locality

The study area is located in the Eastern Cape province in the southern part of Gqeberha (see Figure 1-1). The proposed development site is set adjacent to existing urban developments. The area is located on the old Arlington horse racecourse (see Figure 1-2).

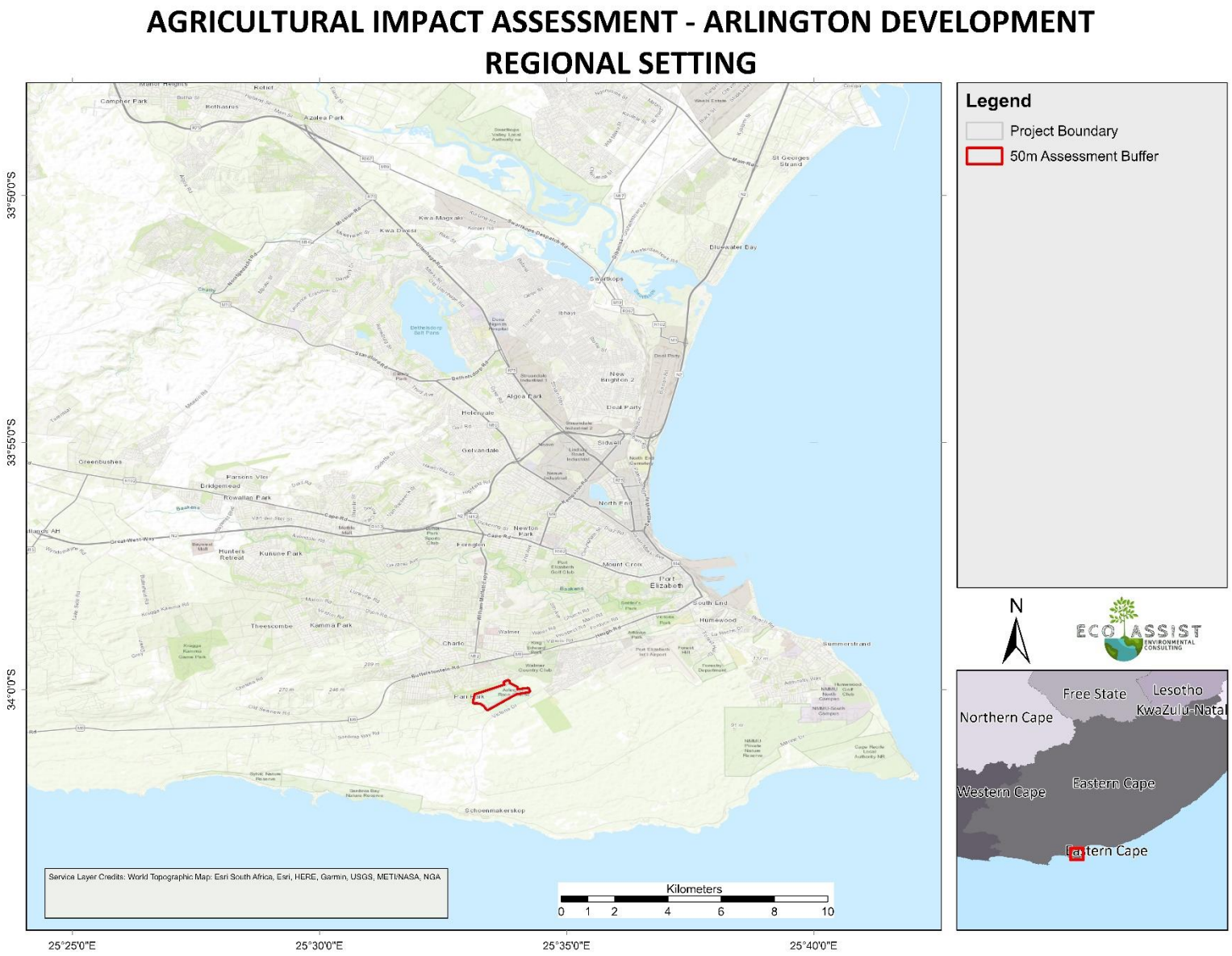

Figure 1-1: Regional setting for the Arlington project area.

Figure 1-2: Local setting for the Arlington project area (Supplied by client).

1.3 Terms of Reference

JG Afrika requires that prior to commencing with a specialist assessment, the current use of the land and the environmental sensitivity of the site under consideration, identified by the screening tool, will be confirmed by undertaking a site sensitivity verification.

1. The site sensitivity verification must be undertaken by an environmental assessment practitioner or a specialist.
2. The site sensitivity verification must be undertaken through the use of:
    a. a desktop analysis, using satellite imagery;
    b. a preliminary on-site inspection; and
    c. any other available and relevant information.
3. The outcome of the site sensitivity verification will be recorded in the form of a report that:
    a. confirms or disputes the current use of the land and the environmental sensitivity as identified by the screening tool, such as new developments or infrastructure, the change in vegetation cover or status etc.;
    b. contains a motivation and evidence (e.g., photographs) of either the verified or different use of the land and environmental sensitivity; and
    c. is submitted together with the relevant assessment report prepared in accordance with the requirements of the Environmental Impact Assessment Regulations.

Based on the findings of the site sensitivity assessment the agricultural specialist will compile the relevant assessment (full agricultural impact assessment or agricultural compliance statement).

1.4 Scope of Work

JG Afrika requires that a soil survey be conducted and that the following be assessed as per the Provincial and National Departments of Agriculture recommendations:

- Assess and discuss historic climate statistics;
- Assess and discuss geological information;
- Assess and discuss the terrain features using 5m contours;
- Source best recent satellite or aerial imagery and georeferenced;
- Assess and discuss current agricultural land use on site and comment on crop performance and estimated yields (if any);
- Conduct soil assessment as described in the methodology;
- Assess and discuss agricultural land potential (eight class scale);
- Discuss the impact of the proposed land use change on loss of agricultural land production (If any);
- Recommend best location for proposed development to reduce any impacts;
- Compile informative reports and maps on current land use and agricultural land potential;

- Discuss the impact of the proposed land use change on loss of agricultural land production; and
- A basic soil management guideline will be completed.

The results will be mapped in GIS format and will include the following maps:

- A soil distribution map;
- A current land use map; and
- An agricultural potential map.

An Impact assessment of the proposed development will be conducted, and the recommendations can be used in the Environmental Management Plan (EMP).

2 KEY LEGISLATION

Relevant environmental legislation pertaining to the soil/agricultural resources in South Africa is listed below, but is not limited to:

- The Constitution of the Republic of South Africa (Act 108 of 1996);
- Sub-division of Agricultural Land Act (Act 70 of 1970);
- Municipal Structures Act (Act 117 of 1998);
- Municipal Systems Act (Act 32 of 2000); and
- Spatial Planning and Land Use Management Act, 16 of 2013.

The above is 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).

3 SENSITIVITY ANALYSIS BASED ON THE ENVIRONMENTAL SCREENING TOOL

The result of the Department of Forestry, Fisheries, and the Environment (DFFE) screening tool for the Arlington Development project area is shown in Figure 3-1. The screening tool was accessed on the 12th of February 2024 by Wayne Jackson.

The screening tool showed that the project area has a Medium to Very-High agricultural sensitivity. The screening tool requires the specialist to verify or dispute the screening tool sensitivities. The screening tool shows a dominant High sensitivity and a small portion of Very-High and Medium sensitivity. The verification completed later in the report has disputed the High sensitivity and therefore a compliance statement is sufficient.

The DFFE screening tool is a guideline, and it is up to the specialists to verify these results in the field. The screening tool is based on coarse datasets and the areas may not be accurate.

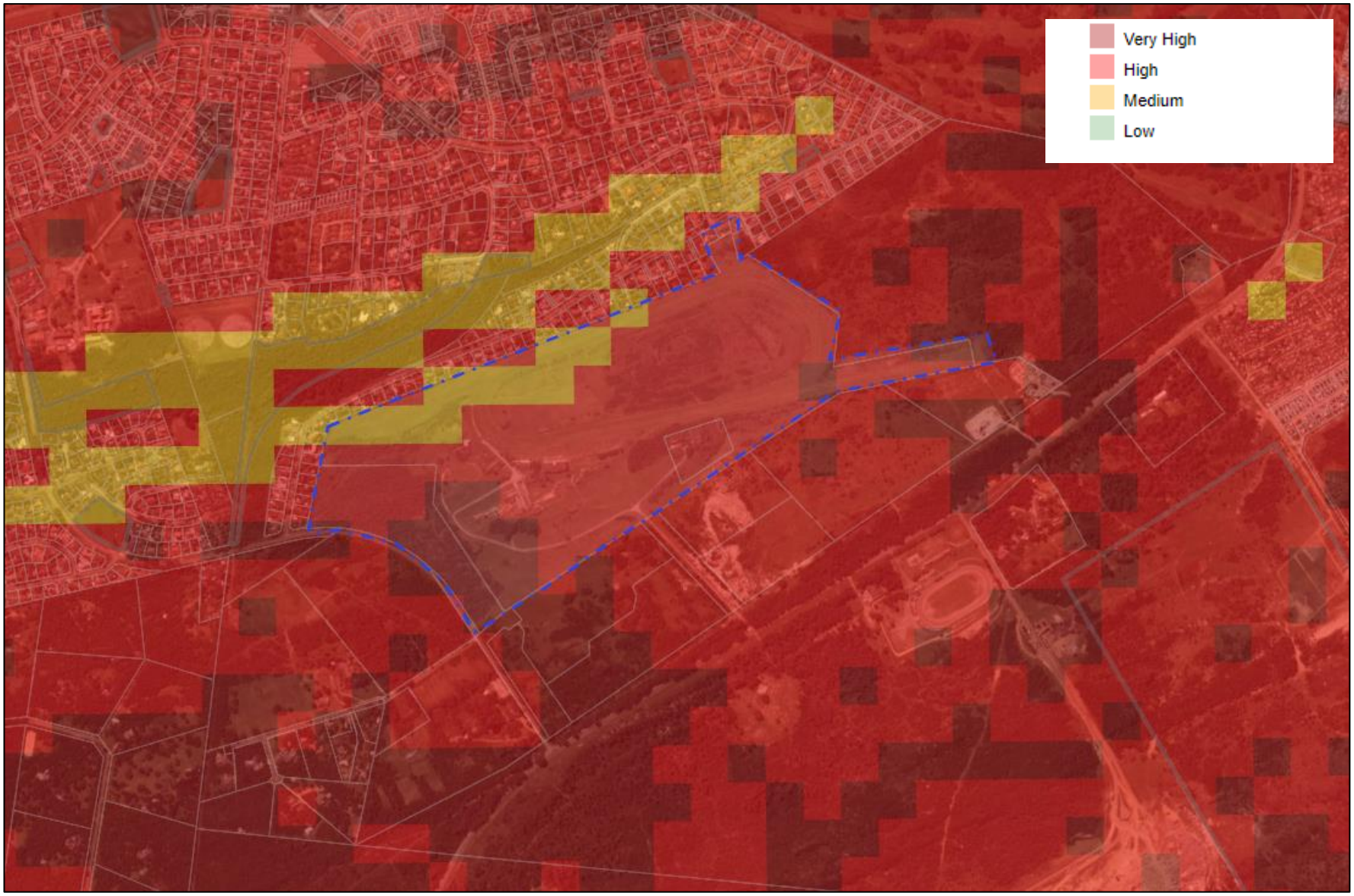

Figure 3-1: DFFE screening tool results for the agricultural sensitivity theme on the Arlington project area.

4 METHODOLOGY

4.1 Desktop Assessment

The following data layers were assessed to determine whether the development could have an impact on important national & provincial feature:

- Aerial imagery (Google Earth™);
- Land Type Data (Land Type Survey Staff, 1972 - 2006);
- National land capability evaluation raster data layers (Department of Agriculture, Forestry and Fisheries, 2017);
- Topographical data;
- Contour data (5 m).

4.2 Field Procedure

The site was traversed by vehicle and 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 1.5 m. Soil survey positions were recorded as waypoints using a GPS device.

Soils were identified to the soil family level as per the "Soil Classification: A Natural and Anthropogenic 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.

4.3 Land Capability and Land Potential Assessment

Land capability and agricultural potential is 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 (Smith, 2006).

Land capability is divided into eight (8) classes, and these may be divided into three (3) capability groups. Table 4-1 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 4-1: 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	N/A	LG	MG						Grazing Land
VI	W	F	LG	MG						
VII	W	F	LG							

VIII	W									Wildlife

W - Wildlife	MG - Moderate Grazing	MC - Moderate Cultivation
F- Forestry	IG - Intensive Grazing	IC - Intensive Cultivation
LG - Light Grazing	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 Table 4-2. The final land potential results are then described in Table 4-3.

Table 4-2: 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 4-3: 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

5 LIMITATIONS

The following aspects were considered as limitations of the assessment:

- Hand augers were used, and the limiting layer was the depth to which the auger could drill;
- The assessment is based on the design and layout information provided by the client;
- 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 observation site's delineation plotted digitally may be offset by up to five meters to either side; and
- A soil auger was used for this assessment, as well as existing open pits from the Geotechnical field assessment.

6 RESPONSES TO INTERESTED AND AFFECTED PARTIES

To this point no concerns have been raised yet. If any concerns are raised with regards to the agricultural impact assessment it will be address in an amended report.

7 RESULTS FROM DESKTOP ASSESSMENT

7.1 Climate

According to Climate-Data.org (accessed on the 15th of March 2022) the climate for the area is summarised below:

- The average temperature ranges from 22.1ºC to 14.4ºC.
- The mean annual precipitation is 563mm.
- The area receives rainfall in both summer and winter months.

	January	February	March	April	May	June	July	August	September	October	November	December
Avg. Temperature °C (°F)	21.9 °C (71.4) °F	22.1 °C (71.7) °F	20.9 °C (69.7) °F	18.7 °C (65.7) °F	16.9 °C (62.3) °F	14.9 °C (58.8) °F	14.4 °C (57.9) °F	14.8 °C (58.7) °F	15.8 °C (60.4) °F	17.5 °C (63.5) °F	18.8 °C (65.8) °F	20.6 °C (69.1) °F
Min. Temperature °C (°F)	18.7 °C (65.7) °F	19 °C (66.1) °F	17.7 °C (63.9) °F	15.3 °C (59.5) °F	12.9 °C (55.3) °F	10.6 °C (51) °F	10.1 °C (50.1) °F	10.6 °C (51.1) °F	11.8 °C (53.3) °F	13.8 °C (56.9) °F	15.4 °C (59.6) °F	17.4 °C (63.3) °F
Max. Temperature °C (°F)	25.4 °C (77.8) °F	25.7 °C (78.2) °F	24.8 °C (76.7) °F	23 °C (73.4) °F	21.7 °C (71.1) °F	20.1 °C (68.2) °F	19.7 °C (67.5) °F	19.9 °C (67.8) °F	20.3 °C (68.6) °F	21.5 °C (70.7) °F	22.4 °C (72.4) °F	24.2 °C (75.5) °F
Precipitation / Rainfall mm (in)	39 (1.5)	42 (1.7)	49 (1.9)	49 (1.9)	41 (1.6)	45 (1.8)	42 (1.7)	56 (2.2)	42 (1.7)	53 (2.1)	58 (2.3)	47 (1.9)
Humidity(%)	73%	74%	75%	74%	70%	65%	64%	68%	70%	71%	71%	72%
Rainy days (d)	6	6	6	6	5	6	5	6	6	6	7	6
avg. Sun hours (hours)	8.7	8.1	8.0	7.8	7.8	7.9	7.8	8.0	8.3	8.2	8.8	8.8

Figure 7-1: Climate summary for the Arlington project area (Climate-Data.org).

The land capability evaluation 2016 data layer is a refined and updated spatial modelled data layer depicting the land capability evaluation values for the country. The climate capability data

layer is a sub-set data layer that contributes to the land capability data layer. It includes both the spatial as well as attributes description of the climate capability values (Department of Agriculture, Forestry and Fisheries, 2017). The climate capability as per Figure 7-2 shows a Moderate-High to High rating for the project area.

The climate class was determined to be Moderate C4 (Smith, 2006) – Moderately restricted growing season due to low temperatures and severe frost. Good yield potential for a moderate range of adapted crops but planting date options more limited than C3.

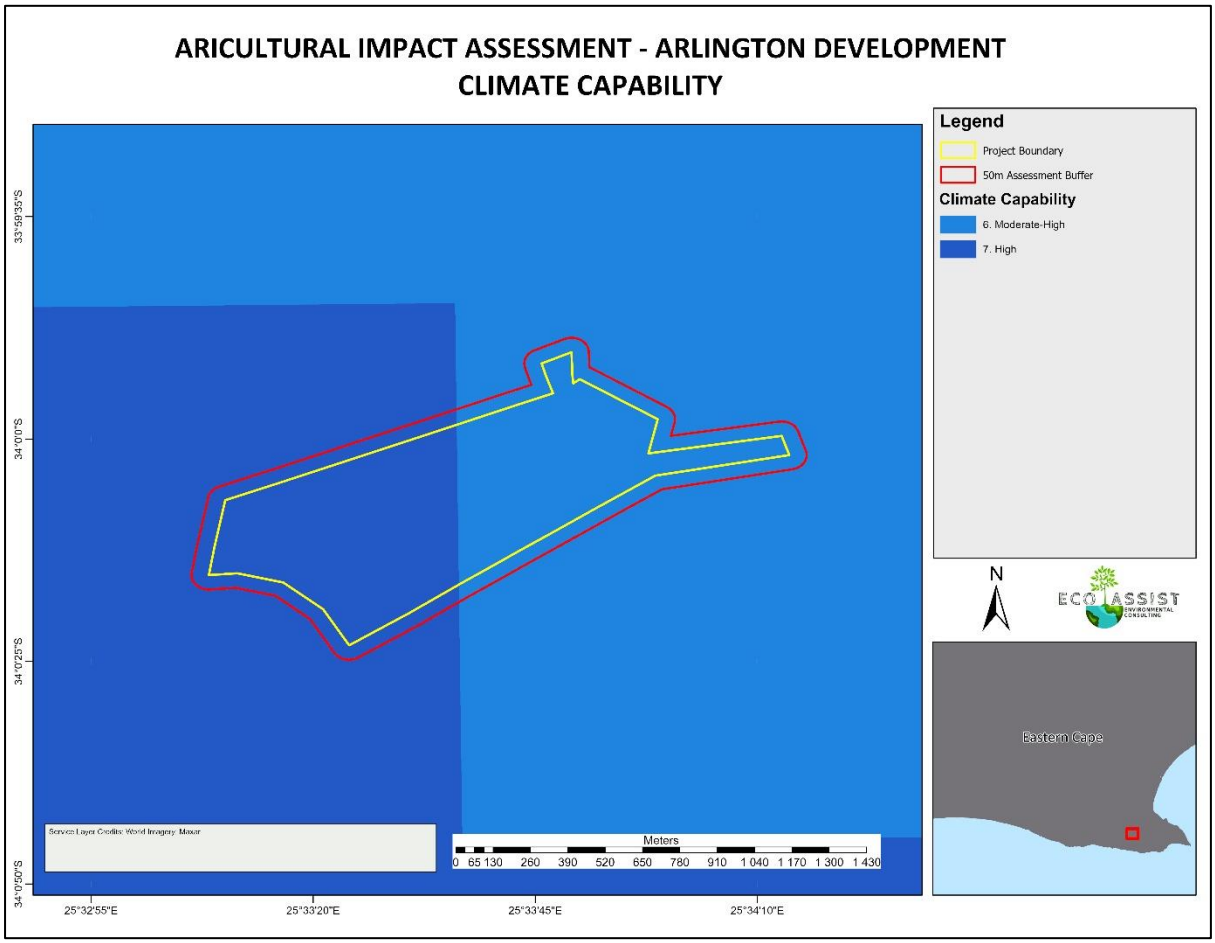

Figure 7-2: Climate capability for the Arlington project area (Department of Agriculture, Forestry and Fisheries, 2017).

7.2 Terrain

In land capability modelling, terrain plays an important role not only from a plants' physiological growth requirements but also from a sensitivity and accessibility perspective (Department of Agriculture, Forestry and Fisheries, 2017). Two main terrain modelling concerns were included in the terrain capability modelling exercise namely:

- Plant physiology; and
- Terrain sensitivity

The terrain capability for the Arlington development area ranged from Low (class 3) on the northern boundary to Moderate (class 5) in the central portion of the area (see Figure 7-3).

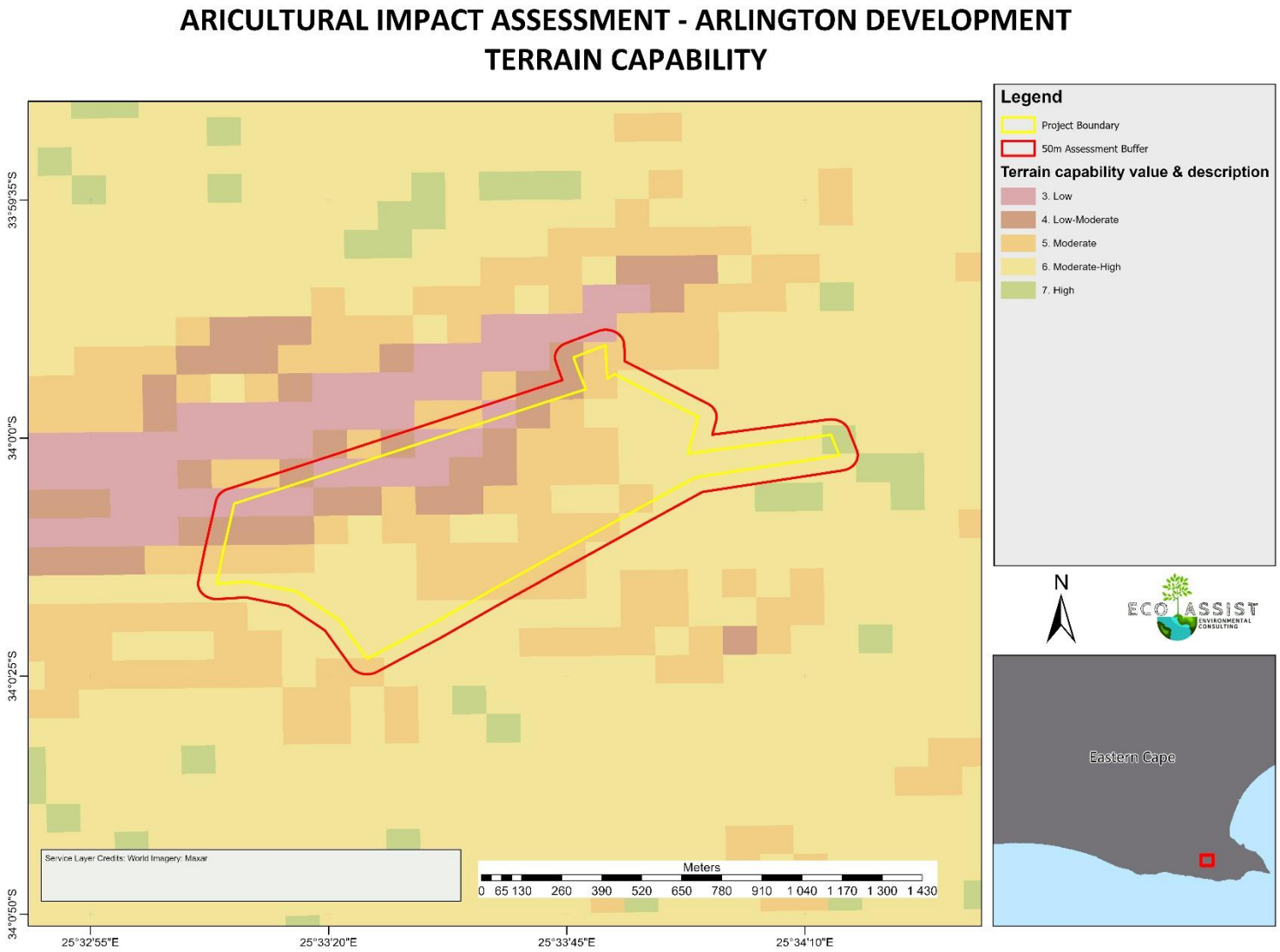

Figure 7-3: The terrain capability for the Arlington project area (Department of Agriculture, Forestry and Fisheries, 2017).

7.3 Desktop Soils & Geology

7.3.1 Geology

The land type database describes the geology for land type Ha54 as aeolian sand and quartzitic sandstone of the Peninsula Formation; Table Mountain Group. (Land Type Survey Staff, 1972 - 2006) (see Figure 7-5).

7.3.2 Land Types

The Land Type data was used to obtain generalised soil patterns and terrain types for the site. Land Type data exists in the form of published 1:250 000 maps. These maps indicate delineated areas of similar terrain types, pedosystems (uniform terrain and soil pattern) and climate (Land Type Survey Staff, 1972 - 2006).

The Arlington Development footprint falls within land type Ha54 (see Figure 7-6). This land type is dominated by the midslope and footslope landscape positions (see Figure 7-4). The land type consists largely of albic soils of the Fernwood soil form, with small patches of Mispah. The average slope for this land type ranges from 2 – 20%. Clay content in the soil is estimated at between 0% and 8%.

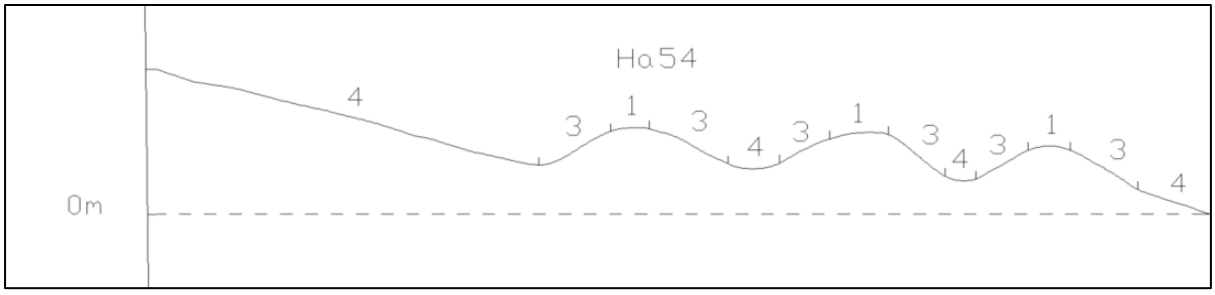

Figure 7-4: Hillslope catena for land type Ha54.

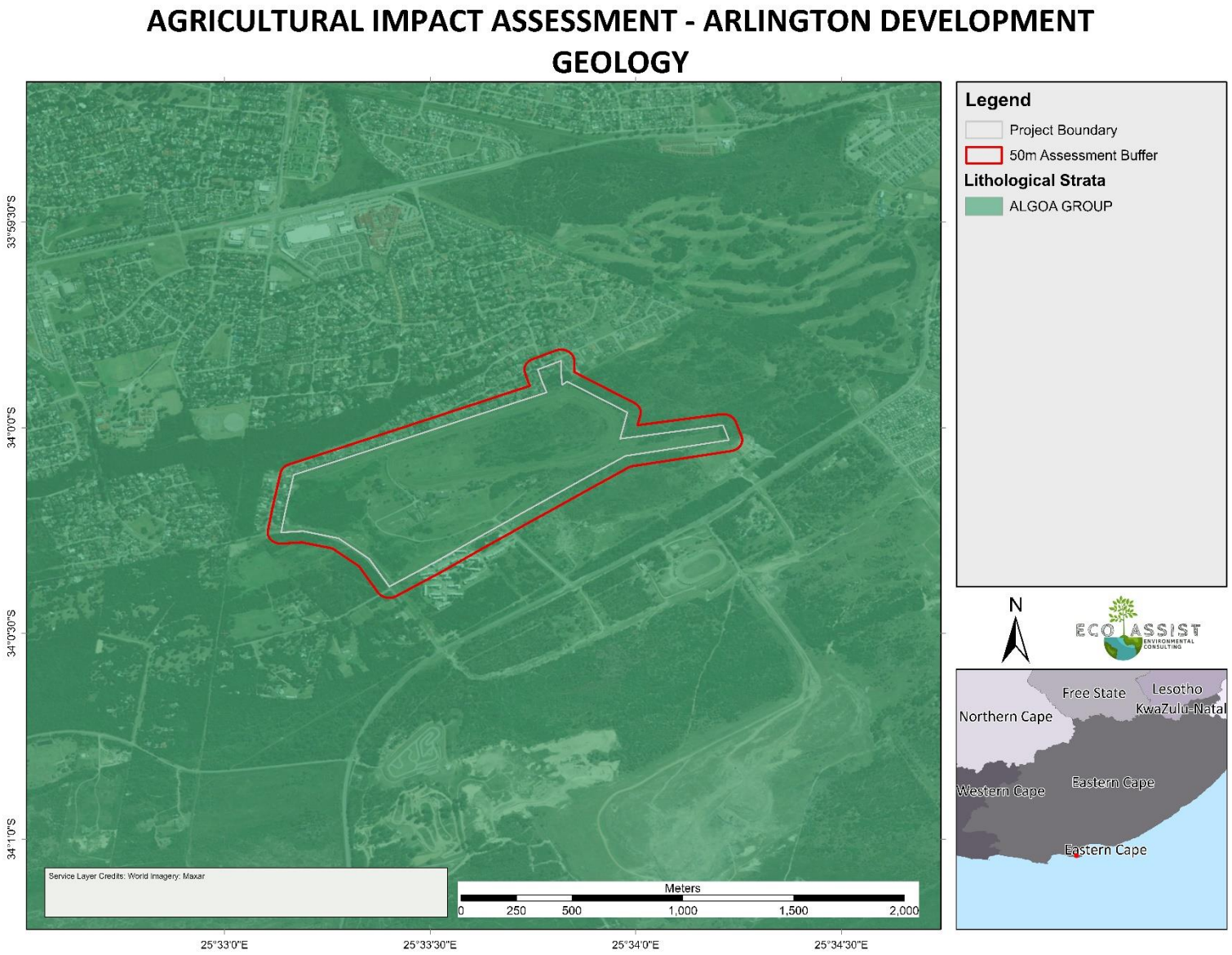

Figure 7-5: Regional geology for the Arlington project area.

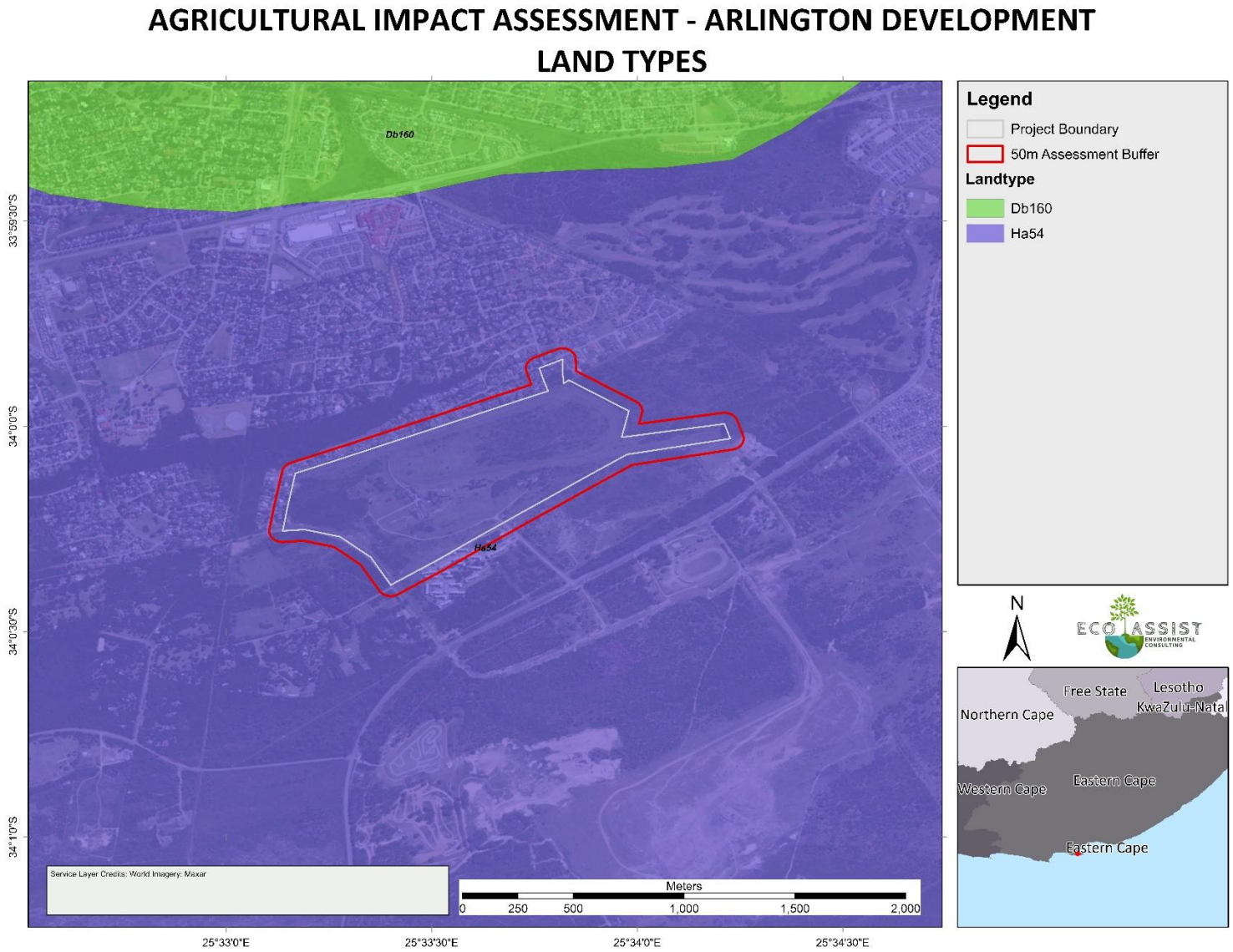

Figure 7-6: Land types for the Arlington project area.

7.3.3 Soil Capability

Soil capability takes into consideration all aspects pertaining to the characteristics of the soil and their contributions towards plant production (Department of Agriculture, Forestry and Fisheries, 2017).

Three databases were used a part of the soil capability modelling:

- Land type data modelled and mapped into topographical units (Beukes). The data were modelled and rasterised form the original land type data base and the 90 m SRTM DEM. All the soil attributes are linked to fixed boundary zones. The soil concerns, issues and data are therefore aimed at an attribute rather than a spatial level;
- The land type soil attribute data base (ARC); and
- Soil fertility data (DAFF).

Three main modelling concerns formed part of the soil capability modelling:

- Plant available water;
- Soil sensitivity; and
- Soil fertility.

The soil capability for project area was rated as High (class 7) (see Figure 7-7). This is potentially based on the deep soil profiles and shallow slopes.

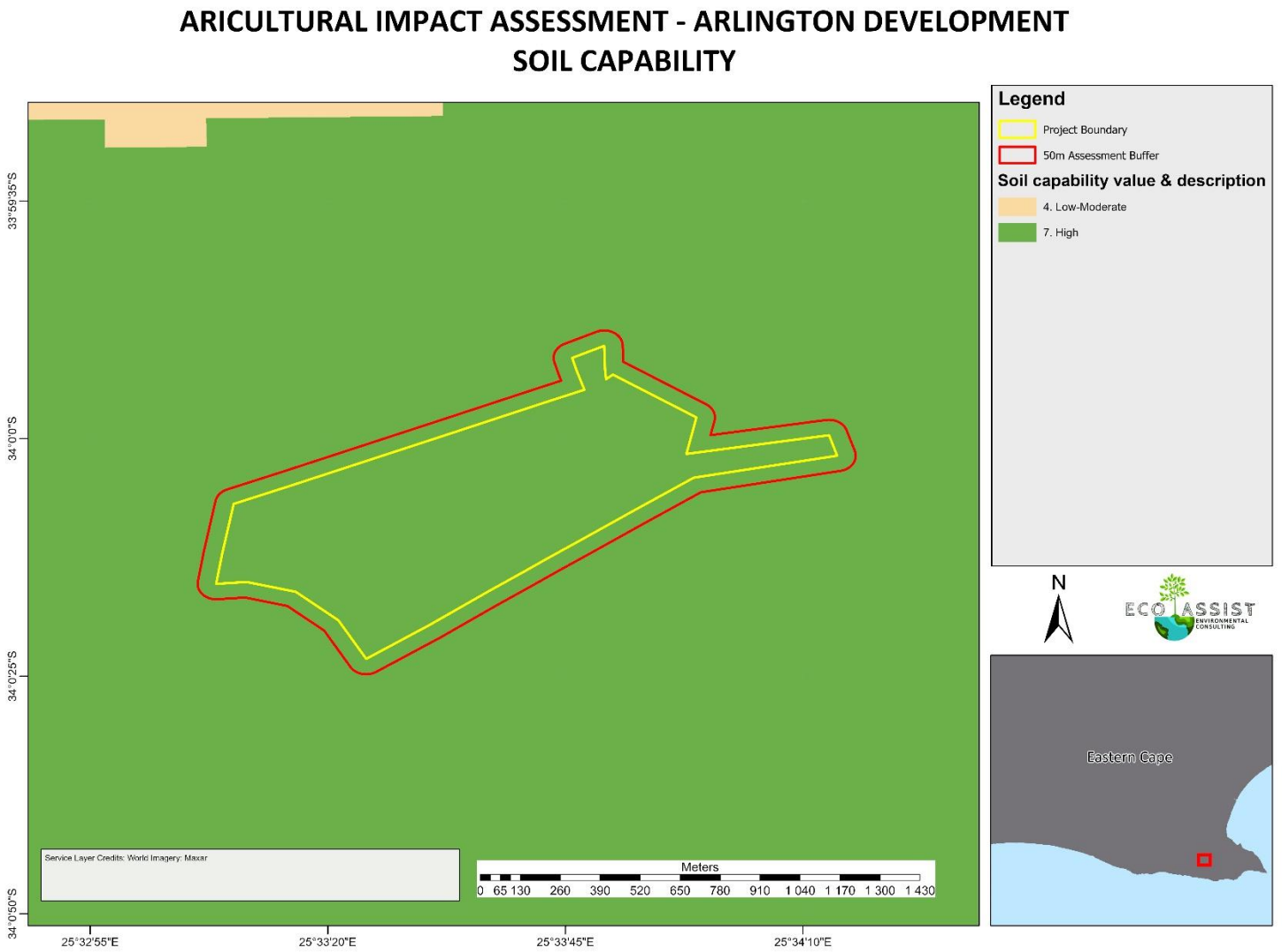

Figure 7-7: Soil capabilities for the Arlington project area (Department of Agriculture, Forestry and Fisheries, 2017).

7.4 Land Capability

Land capability is defined as the most intensive long-term use of land for purposes of rainfed farming determined by the interaction of climate, soil, and terrain.

To represent the distribution of the land capability evaluation values in the country, used as one of the input data layers to determine and demarcate all high value agricultural land for ensuring that these areas, pending availability, are preserved for continued agricultural production, thereby ensuring long-term national food security (Department of Agriculture, Forestry and Fisheries, 2017).

The data layer is a seamless data layer and does not exclude permanently transformed areas (built up; waterbodies; mining etc.).

The land capability ratings for the project area show that the overall desktop land capability ranged from Low-Moderate (class 7) on the northern boundary to High (class 11) in the southern portion of the area (see Figure 7-8).

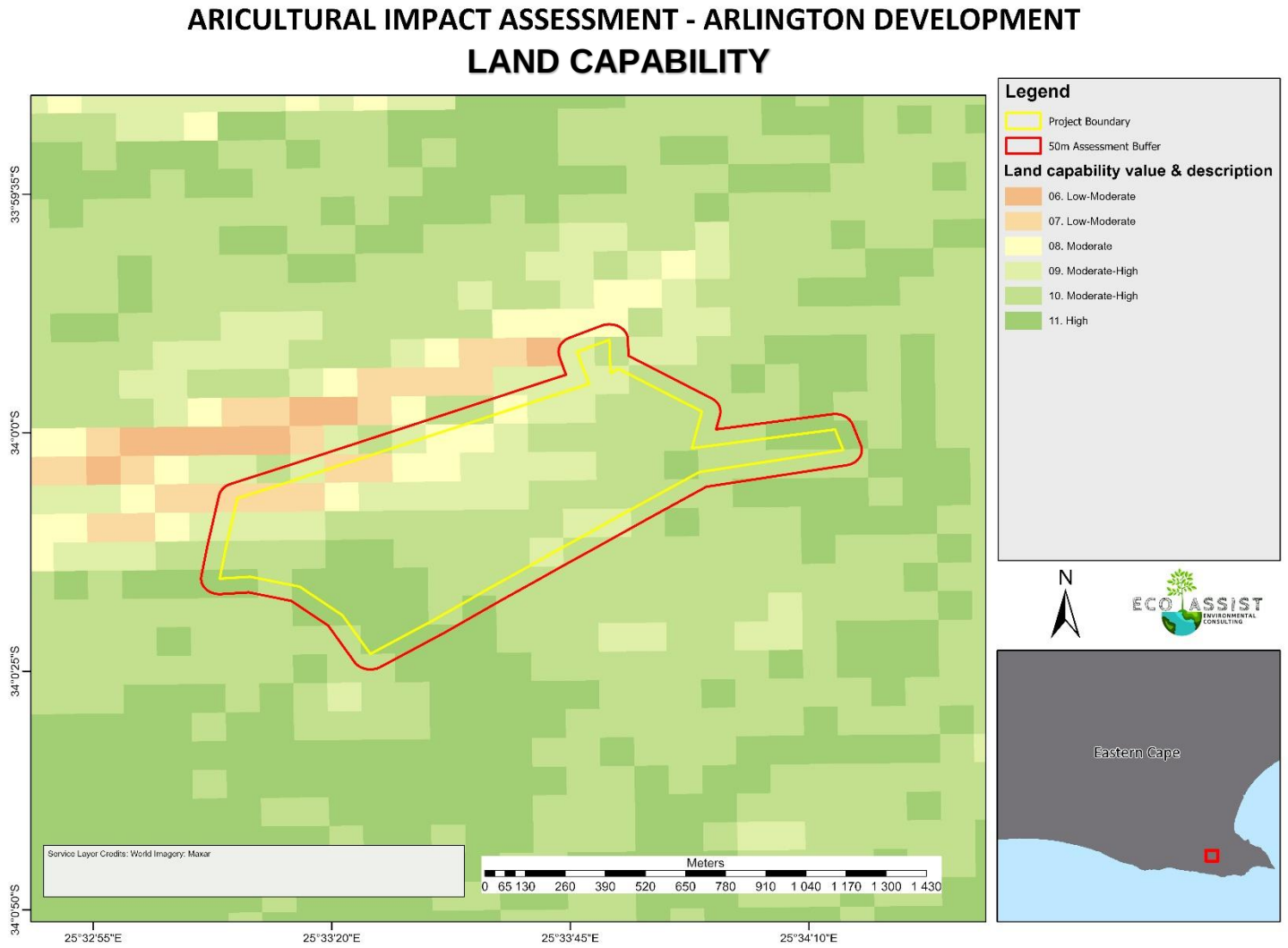

Figure 7-8: Desktop land capabilities for the Arlington project area (Department of Agriculture, Forestry and Fisheries, 2017)

7.5 Grazing Capacity

The long-term production potential of the herbaceous layer (grasses and forbs) of an area of vegetation that is required to maintain an animal with a weight of 450 kg (1 Large Stock Unit (*LSU*)) with an average fodder intake of 10 kg dry mass per day over a period that vegetation is suitable for grazing (mostly 1 year) without degrading the natural resources (vegetation and soil) and is measured in “Hectares per Large Stock Unit” (ha/LSU) (South Africa (Republic), 2018).

The long-term sustainable grazing capacity for the project area was rated as 9 ha per large stock unit (see Figure 7-9). With the overall site being around 62 ha in size, indicates that a maximum of 6 large stock units can utilise this area, and therefore, this is not feasible.

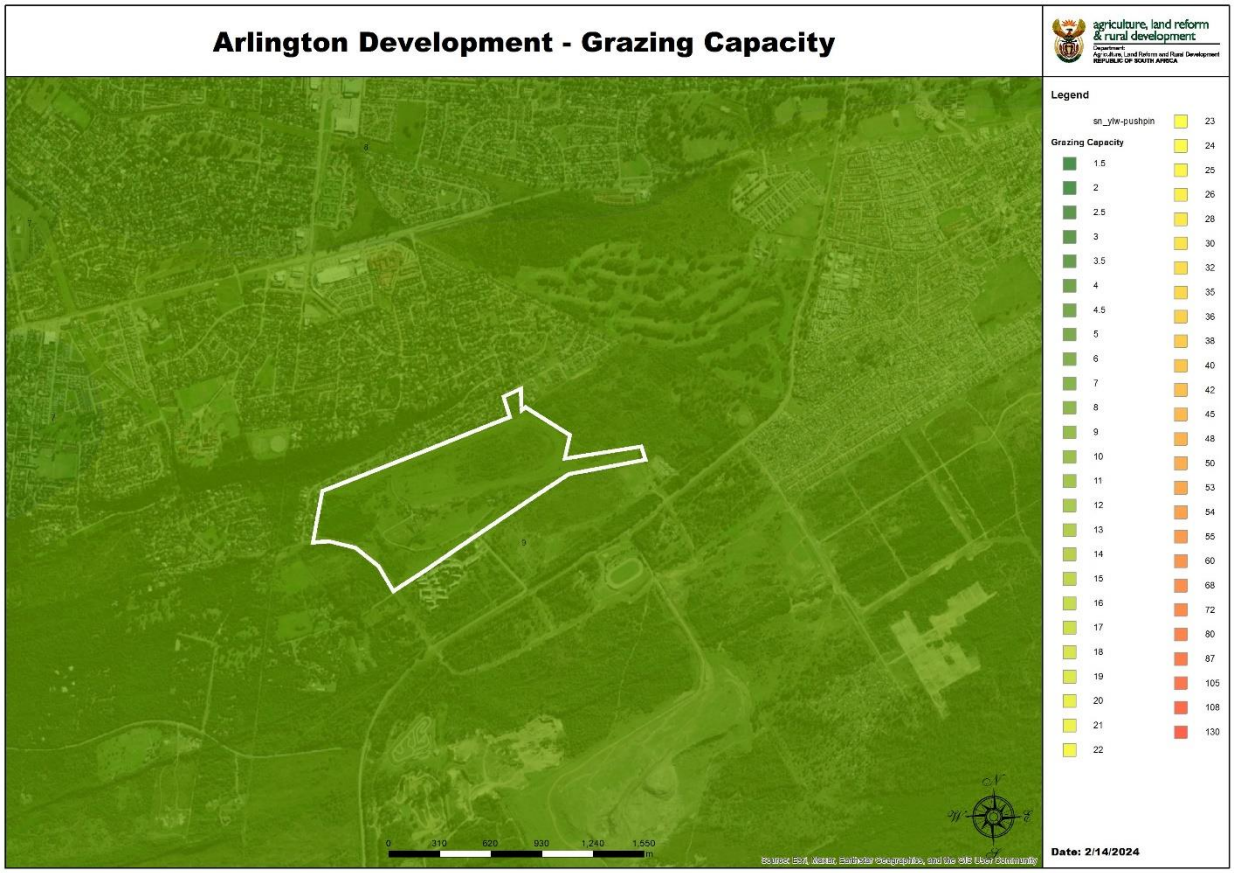

Figure 7-9: The grazing capacity for the Arlington project area (South Africa (Republic), 2018).

8 SITE ASSESSMENT RESULTS

A soil survey was conducted for the Arlington Development project area on the 11th of February 2022 using a hand-held auger and a GPS to log all information in the field. The soils were classified to the family level as per the “Soil Classification: A Natural and Anthropogenic System for South Africa” (Soil Classification Working Group, 2018). The soil forms found are described in the subsequent sections and the extents are shown in Figure 8-3.

8.1 Soil Forms

The following soil forms were identified within the Arlington development area are shown in Table 8-1;

- Cartref (Orthic topsoil over an Albic B-horizon, with a Lithic C-horizon);
- Fernwood (Orthic topsoil over a deep Albic B-horizon);
- Tubatse (Orthic topsoil over a Neocutanic B-horizon, with a Lithic C-horizon);
- Johannesburg (Urban built up sites);
- Witbank (Ex-natural soil covering natural soil).

The project area is dominated by sandy soil. The project area was historically used as a horse racing track and several areas have been reshaped and landscaped. The dominant soil forms were deep Fernwood soils. The soil where bedrock was reached were classified as Tubatse and Cartref soil forms. The depth of the Fernwood soils exceeded 1200mm, whereas the depth of the Tubatse and Cartref soils ranged from 300mm to 800mm.

Table 8-1: Soil forms within the Arlington project area.

Soil Form	Soil Family	Area (ha)
Cartref	1120	6.8
Tubatse	3112	36.0
Fernwood	2110	21.7
Witbank	1100	7.3
Urban Technosols - Johannesburg	2200	13.3
Total		85.1

Figure 8-1: The sandy soil properties of the Cartref and Fernwood soil forms of the Arlington project area.

Figure 8-2: The brown B-horizon in the Tubatse soil form of the Arlington project area.

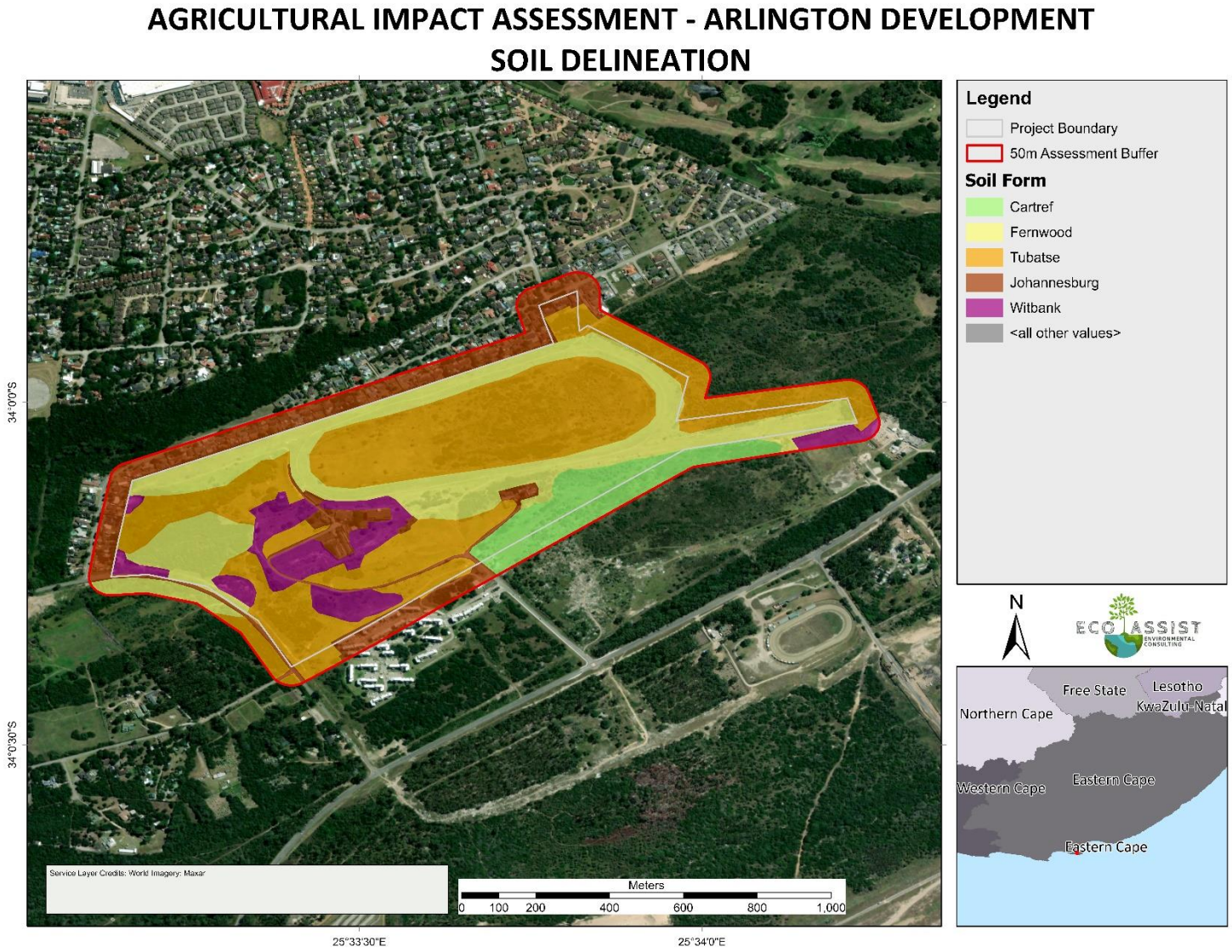

Figure 8-3: The soil delineation for the Arlington project area.

8.2 Land Capability Classification

Agricultural potential is determined by a combination of soil, terrain, and climate features. Land capability classes reflect the most intensive long-term use of land under rain-fed conditions.

The land capability is determined by the physical features of the landscape including the soils present. The land potential or agricultural potential is determined by combining the land capability results and the climate capability for the region.

The land capability is determined by using the guidelines described in “The farming handbook” (Smith, 2006). A breakdown of the land capability classes is shown in Table 4-1.

The land capability for the project area is shown in Figure 8-4. The classification of the soil forms to the associated land capabilities is shown in Table 8-2, with the breakdown of the areas each land capability class represents being shown

Table 8-3.

The Cartref, Fernwood, and Tubatse soil forms were all classified as having a class IV (light cultivation/intensive grazing) capability. This is due to the sandy nature of the project area. Land capability class IV accounted for 64.5 ha and is described as having a low arable potential with severe limitations.

Table 8-2: Soil forms and their associated land capability within the Arlington project area.

Soil Form	Land Capability
Cartref	Class IV
Tubatse	Class IV
Fernwood	Class IV
Witbank	N/A
Urban Technosols - Johannesburg	N/A

Table 8-3: Land capability within the Arlington project area.

Land Capability	Area (ha)
IV	64.5
N/A	20.6
Total	85.1

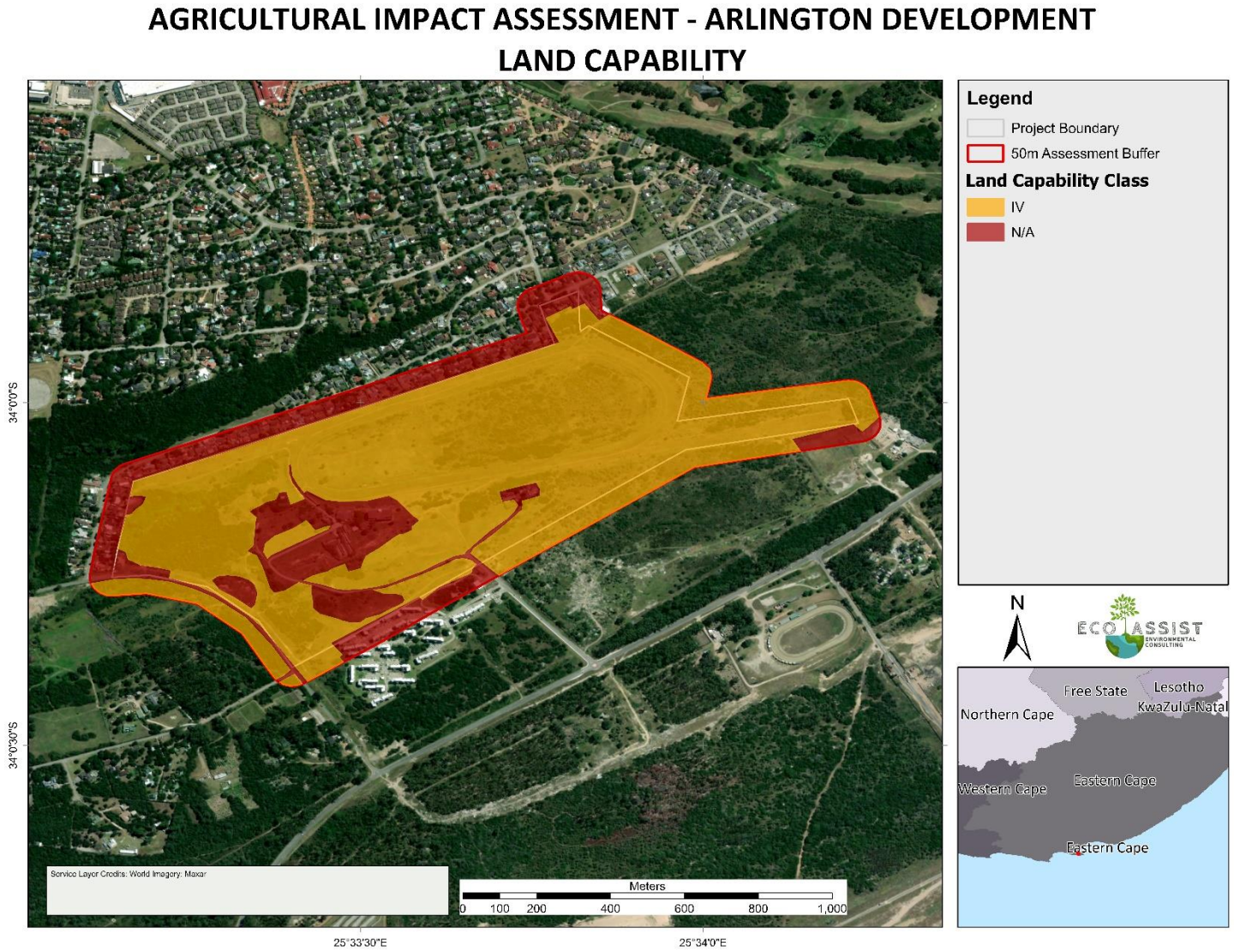

Figure 8-4: The land capability for the Arlington project area.

8.3 Land Potential Classification

The climate capability for the project area is determined to be Moderate C4 (Smith, 2006) – Moderately restricted growing season due to low temperatures and severe frost. Good yield potential for a moderate range of adapted crops but planting date options more limited than C3.

The Land potential / Agricultural potential of the project area is shown in Figure 8-5, with the breakdown of the areas shown in Table 8-4. The class IV land capability was determined to be class **L4 (Moderate potential),** accounting for 64.5 ha.

L4 - Moderate potential: Moderately regular and/or severe to moderate limitations due to soil, slope, temperatures, or rainfall. Appropriate permission is required prior to ploughing virgin land.

Table 8-4: Land potential within the Arlington project area.

Land Potential	Area (ha)
L4	64.5
N/A	20.6
Total	85.1

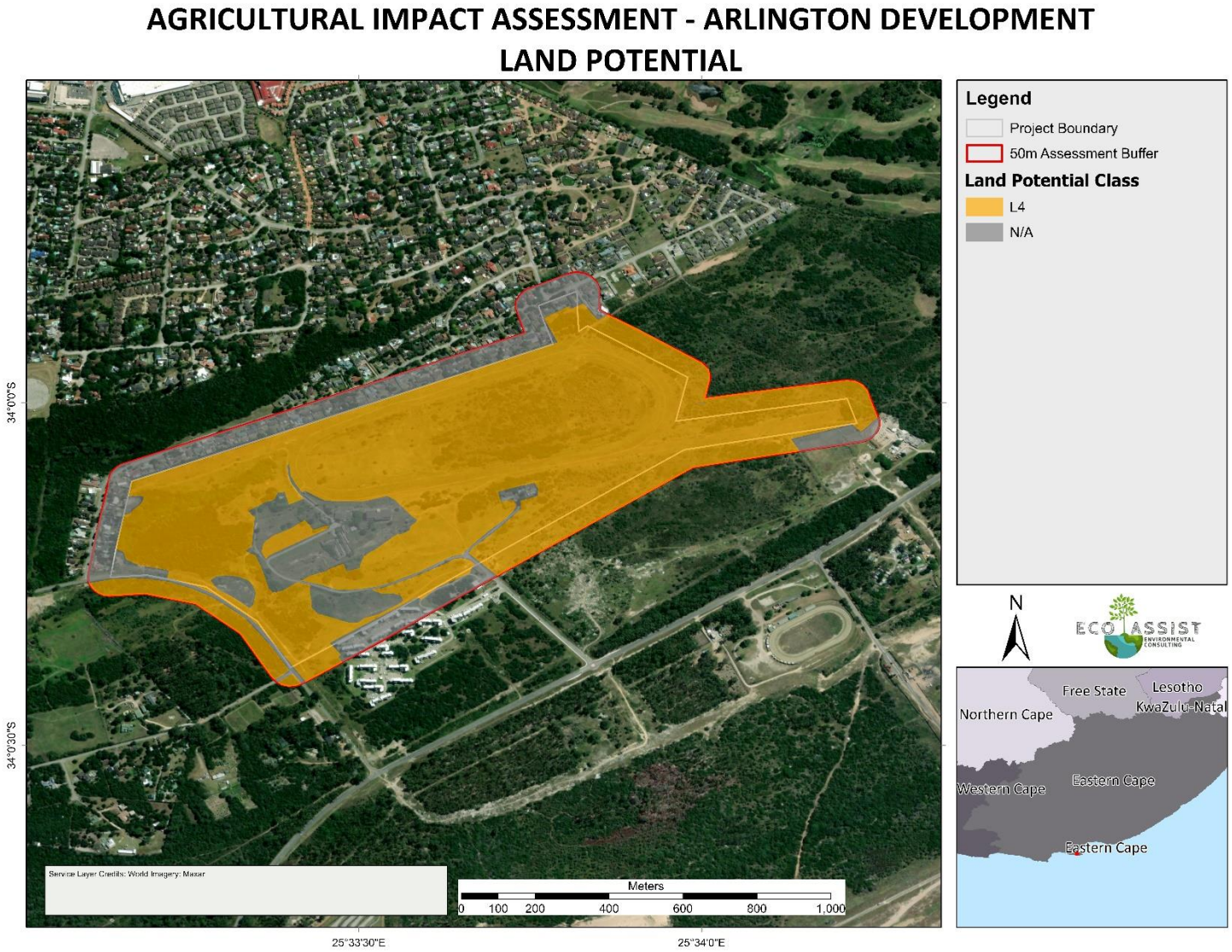

Figure 8-5: The land potential for the Arlington project area.

8.4 Current Land Use

The project area had a combination of the following land uses namely;

- Urban infrastructure;
- Natural veld with some alien woody species; and
- Landscaped areas for the racecourse.

Figure 8-6: Shows the urban built up land use in the Arlington project area.

Figure 8-7: Shows veld with alien woody species land use in the Arlington project area.

Figure 8-8: Shows the landscaped areas in the Arlington project area.

8.5 Verified Site Sensitivity

The screening assessment rated the agricultural sensitivity as dominated by High sensitivity and a small area of Very-High and Medium sensitivities. The desktop results as well as the field verification and detailed soils assessment have disputed the High agricultural potential, and the verified land potential is rated as Medium based on the soils and terrain restrictions that are limiting the potential for sustainable yields. Therefore, an agricultural compliance statement will be sufficient for Arlington development.

9 AGRICULTURAL COMPLAINCE STATEMENT

The sensitivity analysis has identified that the Arlington development area has a Medium sensitivity. The following supports the above-mentioned findings:

- Desktop Results;
  - DFFE screening assessment determined the agricultural sensitivity to be dominantly High sensitivity;
  - The project is not within a crop field boundary;
  - The desktop soil capability rated the project area as High;
  - The desktop land capability rated the project area as Moderate-High.

- Site Assessment Results;
  - Land capability was determined as low arable potential with severe limitations;
  - Land potential was determined to be L4 (Moderate potential); and
  - Land use showed no agricultural activity with large areas being landscaped.

10 RECOMMENDATIONS

The potential impacts from the Arlington development include;

- Erosion of exposed soil surfaces;
- Hydrocarbon contamination by heavy machinery;
- Contamination from human waste, both organic and inorganic;
- Proliferation of alien vegetation in disturbed areas; and
- Increased runoff and altered surface and sub-surface flow dynamics.

These aspects are to be managed to minimise any potential impacts;

- Erosion control;
- Ablution blocks;
- General waste from people moving into the area;
- Stormwater management; and
- Risks from oil/hydrocarbon spills from vehicles should be mitigated.

11 ACCEPTABILITY STATEMENT

The specialist opinion is that the proposed project be considered favourably as the DFFE screening tool value of High sensitivity was disputed to be Medium only for the Arlington development by confirming the project was not within any crop farming boundaries. This was further strengthened by the detailed in-field survey confirming the land potential to have a moderate land potential with severe limitations to agriculture.

12 REFERENCES

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