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Site sensitivity verification and Agricultural Compliance Statement for the residential development of Portion 21 of Farm number 195, George

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1 Introduction

Environmental authorisation is being sought for the above development (see locality in Figure 1). In terms of the National Environmental Management Act (Act No 107 of 1998 - NEMA), an application for environmental authorisation requires an agricultural assessment. In this case, based on the verified sensitivity of the site (see Section 3), the level of agricultural assessment required is an Agricultural Compliance Statement.

Johann Lanz was appointed as an independent agricultural specialist to conduct the agricultural assessment. The objective and focus of an agricultural assessment is to assess whether or not the agricultural impact of the proposed development will be acceptable, and based on this, to make a recommendation on whether or not it should be approved.

The purpose of the agricultural component in the environmental assessment process is to preserve the agricultural production potential, particularly of scarce arable land, by ensuring that development does not exclude existing or potential agricultural production from such land or impact the land to the extent that its production potential is reduced. However, this project poses little threat to agricultural production potential because the impacted land is not utilised for agricultural production and has significant limitations for future production. This site is therefore not considered a priority for preserving as agricultural production land.

Figure 1. *The locality of the proposed development (blue outline) on the eastern outskirts of George.*

2 Project description

The development proposal is for subdivision into a residential estate. The project will cause the exclusion of potential future agricultural production from the entire property. Once agriculture is excluded from the site, there can be no further on-site agricultural impact. There is also no off-site agricultural impact. The design and layout of the development within the property is therefore of no relevance to agricultural impacts and it is unnecessary to consider it any further in this assessment. All that is of relevance is the loss of the total property (23 hectares) to potential future agricultural production.

A more detailed satellite image map of the property is shown in Figure 2.

Figure 2. *Detailed **s**atellite image map of the site.*

3 Site sensitivity verification

A map of the property, overlaid on the screening tool sensitivity, is given in Figure 3. The screening tool classifies agricultural sensitivity according to only two independent criteria – the land capability rating and whether the land is cropland or not. The classified land capability of the site is 6 (low-moderate) and it is not cropland. It is therefore classified as medium agricultural sensitivity, which is confirmed by this assessment based on the agricultural production potential of the site (see following section).

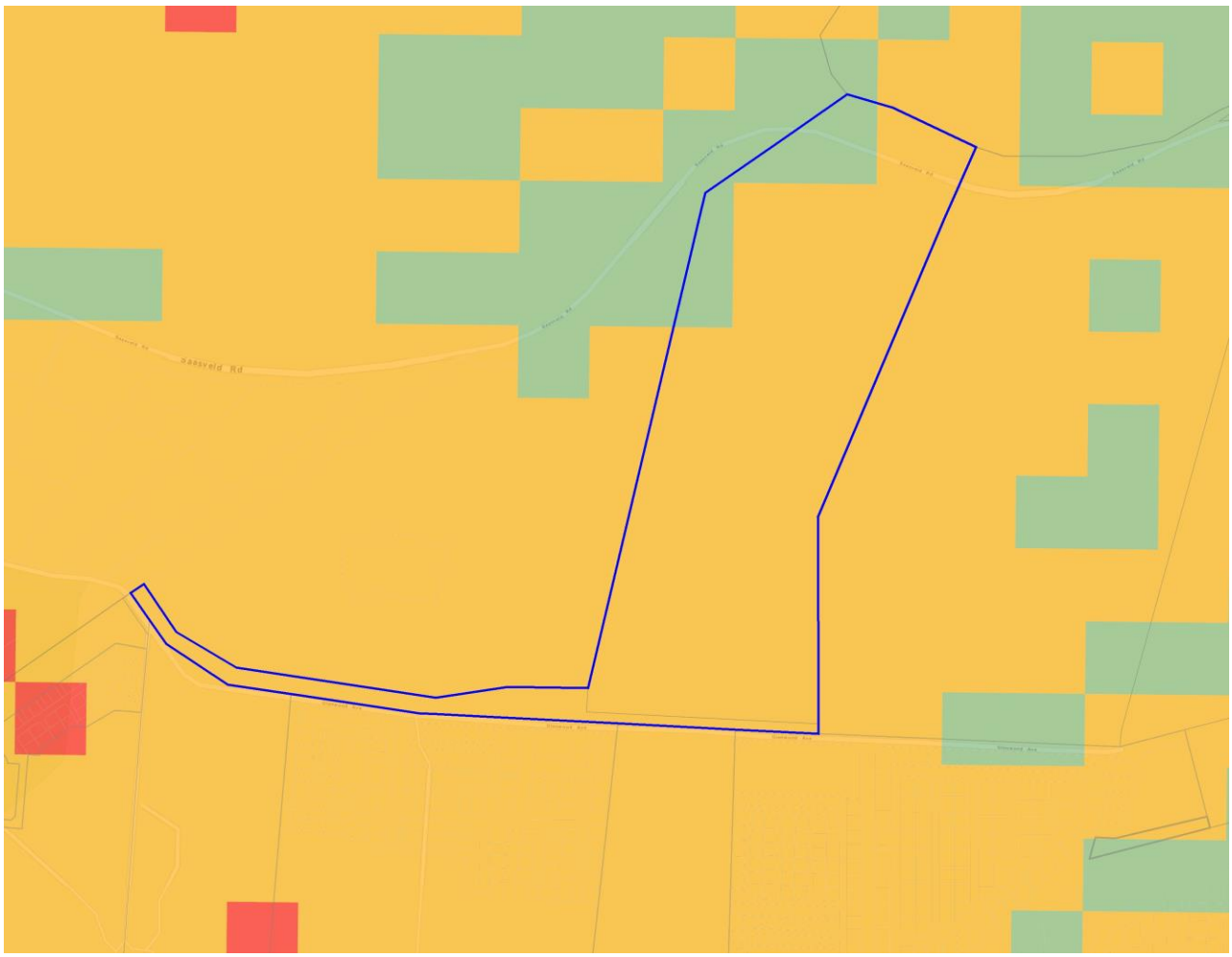

Figure 3. *The proposed development site (blue outline) overlaid on agricultural sensitivity, as given by the screening tool (green = low; yellow = medium; red = high; dark red = very high)*

4 Baseline agricultural environment

The climate of the area is obviously suitable for various agricultural activities, but the site has other limitations. The site is on a ridge, the southern part of which is fairly flat but it drops off steeply in a range of northerly directions. The geology is gneissic granite and granodiorite, as well as phyllite, schist, grit, hornfels and quartzite of the Kaaimans Group, and quartzitic sandstone of the Table Mountain Group, Cape Supergroup. The land type soil data is given in Appendix 4. The entire site falls within one land type, Db33. The land type is dominated by shallow to moderately deep sandy, duplex soils. Duplex soils are those that have a distinct transition from sandy upper horizons to underlying dense clay in the subsoil. Dominant soils are of the Estcourt, Sterkspruit, Longlands and Kroonstad soil forms. The duplex nature of the soils limits both the effective rooting depth and the drainage, both of which limit the soil potential for crop production.

There has never been any crop production on the farm. Much of the property was covered in plantations, but these were burnt in fires in 2022. Surrounding land use is forestry plantations, unutilised fallow land, and adjacent residential developments to the south. The small size of the property (23 hectares) and the lack of any existing agricultural infrastructure or inputs limits it

viability for agricultural production.

5 Assessment of agricultural impact

An agricultural impact is a temporary or permanent change to the future production potential of land. The significance of the agricultural impact is directly proportional to the extent of the change in production potential, which in turn, when it involves a loss of agricultural land as it does in this case, is a function of two things, firstly the amount of land that will be lost and secondly, the production potential of the land that will be lost.

This site has not been used for agricultural production for many years and has limitations on its future production potential, predominantly in terms of soil and property size. The impact is therefore the loss of 23 hectares of land that has very limited future production potential. The agricultural impact of the proposed project is therefore assessed as being of low significance.

6 Agricultural Compliance Statement

An Agricultural Compliance Statement is not required to formally rate agricultural impacts. It is only required to assess whether or not the impact of the proposed development on the agricultural production capability of the site is acceptable and therefore whether or not approval should be recommended.

The impact of the proposed development on the agricultural production capability of the site is assessed as being acceptable because the loss of agriculturally zoned land does not represent a significant loss of future agricultural production potential because of the limitations on the site's potential. From an agricultural impact point of view, it is recommended that the development be approved.

The protocol requirement of confirmation that all reasonable measures have been taken through micro-siting to avoid or minimise fragmentation and disturbance of agricultural activities, is not relevant in this case because the whole site will be lost to future agricultural activities. For the same reason, there are also no Environmental Management Programme inputs required for the protection of agricultural potential on the site.

The conclusion of this assessment on the acceptability of the proposed development and the recommendation for its approval is not subject to any conditions. In completing this statement, no assumptions have been made and there are no uncertainties or gaps in knowledge or data that are relevant to it. No further agricultural assessment of any kind is required for this application.

The required relevant experience, proving the specialist's fitness for completing this assessment, is given in the curriculum vitae below.

J. Lanz (Pr. Sci.Nat.)
22 March 2023

Appendix 1: Specialist Curriculum Vitae

Johann Lanz
Curriculum Vitae

Education

M.Sc. (Environmental Geochemistry)	University of Cape Town	1996 - 1997
B.Sc. Agriculture (Soil Science, Chemistry)	University of Stellenbosch	1992 - 1995
BA (English, Environmental & Geographical Science)	University of Cape Town	1989 - 1991
Matric Exemption	Wynberg Boy's High School	1983

Professional work experience

I have been registered as a Professional Natural Scientist (Pri.Sci.Nat.) in the field of soil science since 2012 (registration number 400268/12) and am a member of the Soil Science Society of South Africa.

Soil & Agricultural Consulting **Self employed** **2002 - present**

Within the past 5 years of running my soil and agricultural consulting business, I have completed more than 170 agricultural assessments (EIAs, SEAs, EMPRs) in all 9 provinces for renewable energy, mining, electrical grid infrastructure, urban, and agricultural developments. I was the appointed agricultural specialist for the nation-wide SEAs for wind and solar PV developments, electrical grid infrastructure, and gas pipelines. My regular clients include: Zutari; CSIR; SiVEST; SLR; WSP; Arcus; SRK; Environamics; Royal Haskoning DHV; ABO; Enertrag; WKN-Windcurrent; JG Afrika; Mainstream; Redcap; G7; Mulilo; and Tiptrans. Recent agricultural clients for soil resource evaluations and mapping include Cederberg Wines; Western Cape Department of Agriculture; Vogelfontein Citrus; De Grendel Estate; Zewenwacht Wine Estate; and Goedgedacht Olives.

In 2018 I completed a ground-breaking case study that measured the agricultural impact of existing wind farms in the Eastern Cape.

Soil Science Consultant **Agricultural Consultors International (Tinie du Preez)** **1998 - 2001**

Responsible for providing all aspects of a soil science technical consulting service directly to clients in the wine, fruit and environmental industries all over South Africa, and in Chile, South America.

Contracting Soil Scientist **De Beers Namaqualand Mines** **July 1997 - Jan 1998**

Completed a contract to advise soil rehabilitation and re-vegetation of mined areas.

Publications

- Lanz, J. 2012. Soil health: sustaining Stellenbosch's roots. In: M Swilling, B Sebitosi & R Loots (eds). *Sustainable Stellenbosch: opening dialogues*. Stellenbosch: SunMedia.
- Lanz, J. 2010. Soil health indicators: physical and chemical. *South African Fruit Journal*, April / May 2010 issue.
- Lanz, J. 2009. Soil health constraints. *South African Fruit Journal*, August / September 2009 issue.
- Lanz, J. 2009. Soil carbon research. *AgriProbe*, Department of Agriculture.
- Lanz, J. 2005. Special Report: Soils and wine quality. *Wineland Magazine.*

I am a reviewing scientist for the *South African Journal of Plant and Soil*.

Appendix 2: Declaration of the specialist

Note: Duplicate this section where there is more than one specialist.

I, **Johann Lanz**, as the appointed Specialist hereby declare/affirm the correctness of the information provided or to be provided as part of the application, and that I:

- in terms of the general requirement to be independent:
  - ~~o~~ other than fair remuneration for work performed/to be performed in terms of this application, have no business, financial, personal or other interest in the activity or application and that there are no circumstances that may compromise my objectivity; or
  - ~~am not independent, but another specialist that meets the general requirements set out in Regulation 13 have been appointed to review my work (Note: a declaration by the review specialist must be submitted);~~
- in terms of the remainder of the general requirements for a specialist, am fully aware of and meet all of the requirements and that failure to comply with any the requirements may result in disqualification;
- have disclosed/will disclose, to the applicant, the Department and interested and affected parties, all material information that have or may have the potential to influence the decision of the Department or the objectivity of any report, plan or document prepared or to be prepared as part of the application; and
- am aware that a false declaration is an offence in terms of regulation 48 of the 2014 NEMA EIA Regulations.

Signature of the specialist: 

Date: **22 March 2023**

Name of company: **Johann Lanz – soil scientist (sole proprietor)**

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Johan Lanz

Registration Number: 400268/12

is a registered scientist

in terms of section 20(3) of the Natural Scientific Professions Act, 2003
(Act 27 of 2003)
in the following fields(s) of practice (Schedule 1 of the Act)

Soil Science (Professional Natural Scientist)

Effective **15 August 2012** Expires **31 March 2024**

Chairperson

Chief Executive Officer

To verify this certificate scan this code

Appendix 4: Soil data of land type

Land type	Soil series (forms)	Depth (mm)	Clay % A horizon	Clay % B horizon	Depth limiting layer	% of land type
Db33	Estcourt	250 - 700	3 - 12	30 - 65	pr	50.0
Db33	Sterkspruit	250 - 400	3 - 12	40 - 60	pr	13.0
Db33	Longlands	500 - 800	6 - 15	20 - 35	sp	9.0
Db33	Kroonstad	500 - 800	8 - 20	40 - 50	gc	8.5
Db33	Swartland	200 - 500	10 - 20	40 - 60	vp	4.5
Db33	Wasbank	400 - 600	3 - 12		hp	4.1
Db33	Westleigh	300 - 500	6 - 15	10 - 35	sp	3.0
Db33	Glenrosa	400 - 600	3 - 12	10 - 20	so	2.5
Db33	Pans					2.5
Db33	Rock outcrop					1.0
Db33	Mispah	50 - 200	3 - 6		R	1.0
Db33	Hutton	800 > 1200	10 - 25	20 - 45	R	0.9