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**SITE SENSITIVITY VERIFICATION
AND
AGRICULTURAL COMPLIANCE STATEMENT
FOR
PROPOSED DEVELOPMENT OF A "NEW RETREAT"
ON PORTION 11 OF FARM 1674, BOSCHENDAL, FRANSCHHOEK.**

**Report by
Johann Lanz**

27 November 2021

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

In the past 5 years of running my soil and agricultural consulting business, I have completed more than 120 agricultural assessments (EIAs, SEAs, EMPRs) in all 9 provinces for renewable energy, mining, urban, and agricultural developments. My regular clients include: Aurecon; CSIR; SiVEST; Arcus; SRK; Environamics; Royal Haskoning DHV; Jeffares & Green; JG Afrika; Juwi; 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 Consultants 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*.

THE INDEPENDENT PERSON WHO COMPILED A SPECIALIST REPORT OR UNDERTOOK A SPECIALIST PROCESS

I **Johann Lanz**, as the appointed independent specialist hereby declare that I:

- act/ed as the independent specialist in this application;
- regard the information contained in this report as it relates to my specialist input/study to be true and correct, and
- do not have and will not have any financial interest in the undertaking of the activity, other than remuneration for work performed in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- have and will not have no vested interest in the proposed activity proceeding;
- have disclosed, to the applicant, EAP and competent authority, any material information that have or may have the potential to influence the decision of the competent authority or the objectivity of any report, plan or document required in terms of the NEMA, the Environmental Impact Assessment Regulations, 2010 and any specific environmental management Act;
- am fully aware of and meet the responsibilities in terms of NEMA, the Environmental Impact Assessment Regulations, 2010 (specifically in terms of regulation 17 of GN No. R. 543) and any specific environmental management Act, and that failure to comply with these requirements may constitute and result in disqualification;
- have ensured that information containing all relevant facts in respect of the specialist input/study was distributed or made available to interested and affected parties and the public and that participation by interested and affected parties was facilitated in such a manner that all interested and affected parties were provided with a reasonable opportunity to participate and to provide comments on the specialist input/study;
- have ensured that the comments of all interested and affected parties on the specialist input/study were considered, recorded and submitted to the competent authority in respect of the application;
- have ensured that the names of all interested and affected parties that participated in terms of the specialist input/study were recorded in the register of interested and affected parties who participated in the public participation process;
- have provided the competent authority with access to all information at my disposal regarding the application, whether such information is favourable to the applicant or not; and
- am aware that a false declaration is an offence in terms of regulation 71 of GN No. R. 543.

Note: The terms of reference must be attached.

Signature of the specialist:



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

Date: **27 November 2021**

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1 INTRODUCTION

The proposed development is not permitted as of right in terms of the primary and / or additional rights permitted in terms of the ZSBL, 2019 because it will exceed the permissible thresholds for the proposed tourist accommodation and tourist facilities within the proposed Retreat, to be located on a portion of Portion 11 of Farm 1674. Therefore, a land use application will be made in terms of the Stellenbosch Municipality Zoning Scheme By-law (ZSBL) of 2019. An application for Environmental Authorisation will be made to the Department of Environmental Affairs and Development Planning in terms of the EIA Regulations, 2014 (as amended) and the National Environmental Management Act (no. 107 of 1998) (as amended).

The proposal is for the conversion of existing farm cottages, and a small area around it, to guest accommodation. The development will include surrounding berms for flood protection. The proposal includes a potable water pipeline from the Lanquedoc municipal network. The pipeline is located within the road reserve on land outside of Boschendal Estate and then in the gravel road within the farm. The development will also include a temporary 160 diameter water supply taken off the nearby Boschendal bulk irrigation main, to supply the Retreat until the Lanquedoc main is approved.

This report provides all of the inputs required by the *Protocol for the specialist assessment and minimum report content requirements of environmental impacts on agricultural resources*, gazetted on 20 March 2020. Johann Lanz was appointed as an independent agricultural specialist to provide these inputs.

The locality map is shown in Figure 1.

2 TERMS OF REFERENCE

The terms of reference for this study is to fulfill the requirements of the *Protocol for the specialist assessment and minimum report content requirements of environmental impacts on agricultural resources*, gazetted on 20 March 2020.

The proposed site is identified by the national web-based environmental screening tool as being of high sensitivity for agricultural resources.

The protocol states:

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 very high or high sensitivity for agricultural resources must submit an Agricultural Agro-Ecosystem Specialist Assessment unless:

information gathered from the site sensitivity verification differs from the designation of very high or high agricultural sensitivity, and it is found to be of a medium or low sensitivity.

If the above applies, an Agricultural Compliance Statement must be submitted.

In this case, the above exception does apply (see Section 4, below), and the required level of agricultural assessment is therefore an Agricultural Compliance Statement.



Figure 1. Locality map of the site (blue outline) plus the water pipelines (blue line), the permanent one to the west of the retreat site and the temporary one to the east.

The protocol further states that an Agricultural Compliance Statement must be prepared by a competent soil scientist/agricultural specialist registered with SACNASP

The compliance statement must:

(The section of this report that fulfils each requirement is given in brackets after it)

1. be applicable to the preferred site and proposed development footprint;
2. confirm that the site is of “low” or “medium” sensitivity for agriculture (Section 4); and
3. indicate whether or not the proposed development will have an unacceptable impact on the agricultural production capability of the site (Section 5).

It must contain, as a minimum, the following information:

1. contact details and relevant experience as well as the SACNASP registration number of the soil scientist or agricultural specialist preparing the statement including a curriculum vita (following title page);
2. a signed statement of independence (following CV);
3. 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 (Figure 2);
4. confirmation from the specialist that all reasonable measures have been taken through micro-siting to avoid or minimize fragmentation and disturbance of agricultural activities (Section 5);
5. 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 5);
6. any conditions to which this statement is subjected (Section 5);
7. in the case of a linear activity, confirmation from the agricultural specialist or soil scientist, that in their opinion, based on the mitigation and remedial measures proposed, the land can be returned to the current state within two years of completion of the construction phase (not applicable);
8. where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMPr (Section 5); and
9. a description of the assumptions made and any uncertainties or gaps in knowledge or data (Section 5).

3 METHODOLOGY OF STUDY

This assessment required a check on the land capability of the site. The high sensitivity classification of the site by the screening tool is based on its land capability evaluation values of 9 and 10. Mapping of land capability is however only accurate to a certain scale. This evaluation

relied therefore on detailed soil mapping that was completed by Dr Freddy Ellis of Stellenbosch University in 2005. Although the data was collected some time ago, it is still entirely relevant as the soil characteristics used in soil mapping and in the determination of agricultural potential do not change within time scales of hundreds of years. The detailed soil mapping provides soil data at a larger scale than that on which the land capability classification is based, and is therefore more accurate at the scale of the proposed site.

4 SITE SENSITIVITY VERIFICATION

In terms of the gazetted agricultural protocol, a site sensitivity verification must be submitted that:

1. 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;
2. contains a motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity.

Agricultural sensitivity, in terms of environmental impact, and as used in the national web-based environmental screening tool, is a direct function of the capability of the land for agricultural production. The screening tool classifies agricultural sensitivity according to two criteria - the cultivation status and the land capability. All cultivated land is classified as high sensitivity, and if it is irrigated, is classified as very high sensitivity.

Uncultivated land is classified by the screening tools in terms of the land capability. Land capability is defined as the combination of soil, climate and terrain suitability factors for supporting rain fed agricultural production. It is an indication of what level and type of agricultural production can sustainably be achieved on any land. The screening tool sensitivity categories for uncultivated land are based upon the Department of Agriculture's updated and refined, country-wide land capability mapping, released in 2016.

The proposed site is identified by the screening tool as being entirely of high sensitivity for agricultural resources. This is as a result of the site's land capability evaluation values being 9 and 10. A map of the proposed development area overlaid on the screening tool sensitivity is given in Figure 2.

The agricultural sensitivity, as identified by the screening tool, is disputed by this assessment. The motivation for disputing the sensitivity is that the detailed soil mapping identifies the soil map unit, on which the site is located, as being of medium-low soil potential and not recommended for

cultivation (see Figure 3). The detail of the soil map unit is that it is a poorly drained, 80cm deep, sandy soil of the Kroonstad 2000 soil family with a high rock content and a soil potential rating of 3.5. Its soil potential rating is in a category that is not recommended for crop production.

Further evidence of the soil being unsuitable for crop production is the fact that this soil map unit has not been cultivated within at least the last 17 years (which is the limit of Google Earth historical imagery), while the surrounding map units, with higher potential rating, are under cultivation.

Because of the poor soils, the site does not deserve a land capability of more than 7 and the correct agricultural sensitivity, in terms of the four screening tool sensitivity categories (low; medium; high; very high), should therefore be medium.

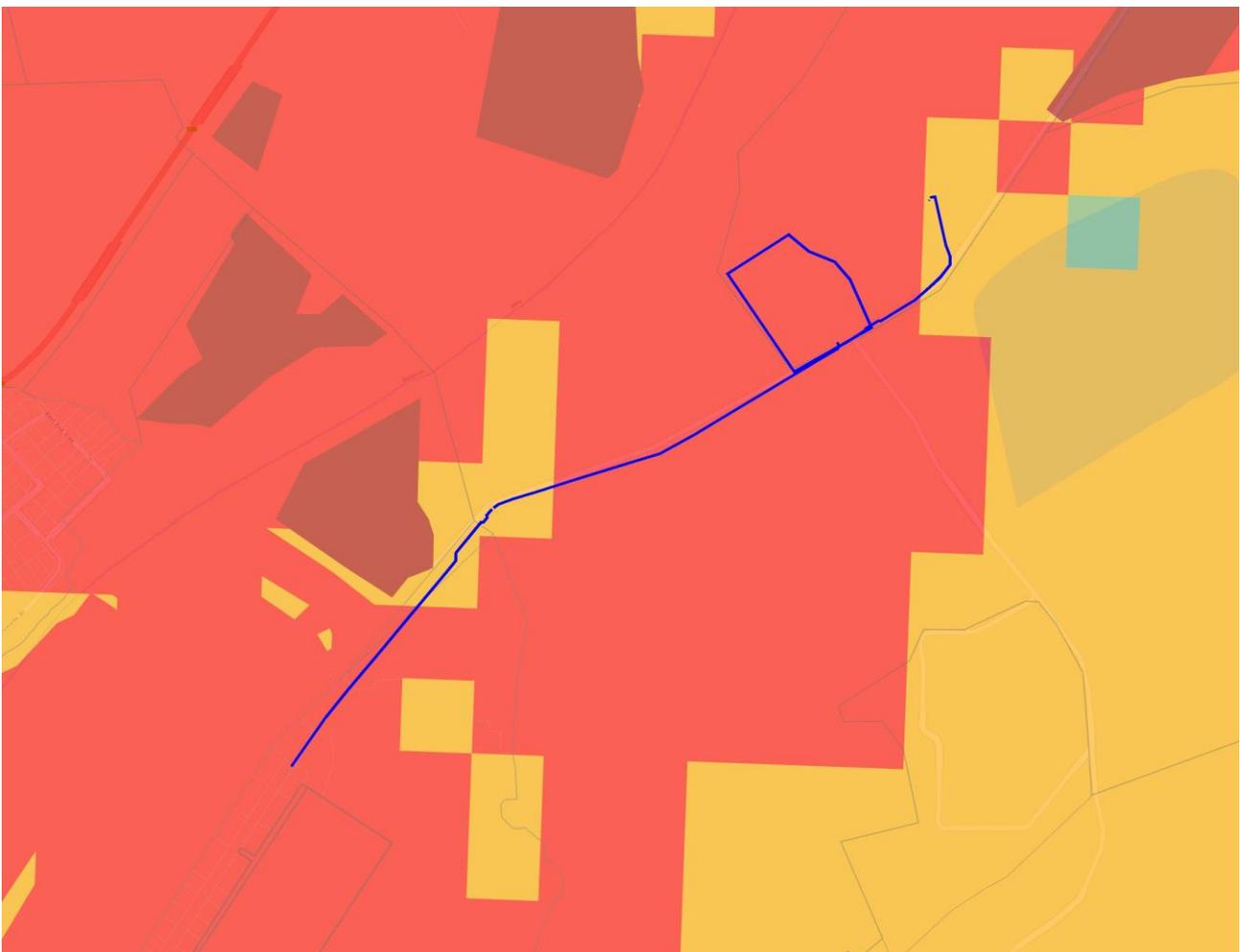


Figure 2. The proposed development area (blue outline) overlaid on agricultural sensitivity as identified by the screening tool (low = green; medium = yellow; red = high; dark red = very high).

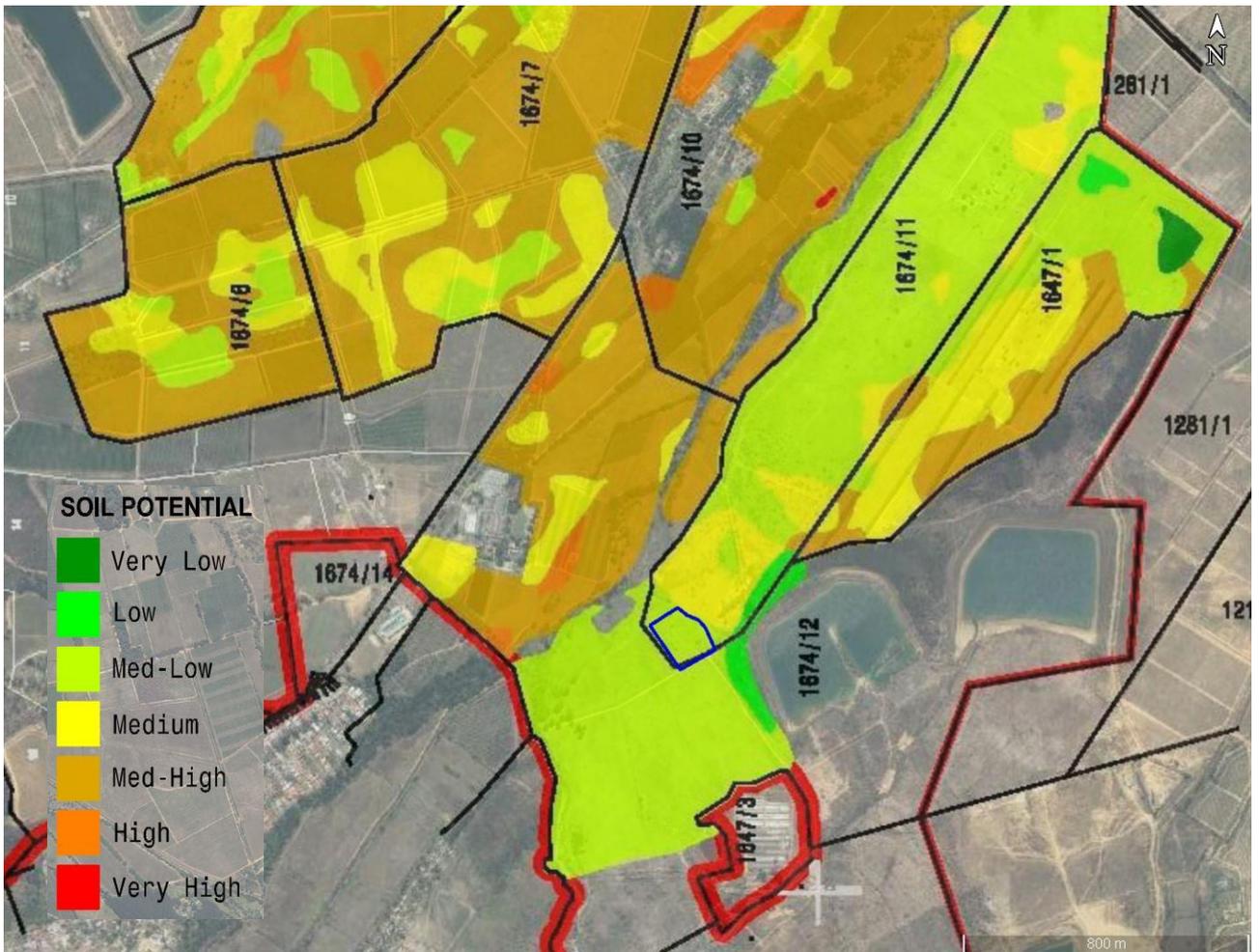


Figure 3. A portion of the existing Boschendal soil map showing the site in blue outline, located within a soil map unit of medium-low potential.

5 AGRICULTURAL COMPLIANCE STATEMENT

The agricultural impact of the proposed development is a loss of agricultural land use on the site, which is likely to be permanent.

The conclusion of this assessment is that the proposed development will not have an unacceptable negative impact on the agricultural production capability of the site. The proposed development is therefore acceptable. This is substantiated by the fact that the site has soil of limited agricultural potential which makes it unsuitable for cultivation. Agricultural production potential will not therefore be lost as a result of this small (1.75 ha) site being excluded from agricultural use.

The permanent pipeline will be located within the road, so will have no impact on or cause loss of potential agricultural land. The temporary pipeline will also have no impact on or cause loss of potential agricultural land.

Therefore, from an agricultural impact point of view, it is recommended that the development be approved.

The entire site will be excluded from agricultural use. Therefore, 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. For the same reason, there are 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. The soil mapping data used in this assessment was sufficiently comprehensive to confidently and accurately assess the agricultural potential and therefore the agricultural sensitivity. No further agricultural assessment of any kind is required.