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**AGRICULTURAL COMPLIANCE STATEMENT
FOR A PROPOSED RESIDENTIAL DEVELOPMENT
IN STANFORD, WESTERN CAPE**

**Report by
Johann Lanz**

29 April 2024

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EXECUTIVE SUMMARY

This assessment disputes the high sensitivity classification of the property by the screening tool and rates the entire property as being of medium agricultural sensitivity with a maximum land capability of 8 because of its assessed agricultural production potential and current agricultural land use.

The dryland cropping potential of the site is limited by the combination of climate (aridity) and soil constraints (depth, drainage, water holding capacity). Because of these constraints, the site is very marginal for viable rainfed crop production. The site could be used for crop production of specific crops under irrigation, as is practised on surrounding land. The fact that the property is included within the urban edge is a significant constraint on the potential of the site to practically deliver future agricultural produce.

An agricultural impact is a change to the future agricultural production potential of land. In this case, the cropping potential of the site is limited by the combination of climate and soil, but it could nevertheless still be used for crop production with irrigation. However, the main factor that limits the significance of the loss of this land to agriculture, is that the property is within the urban edge and intended for development. This is a significant constraint on the potential of the site to practically deliver future agricultural produce and its loss as future agricultural production potential is therefore inevitable, of low significance and acceptable.

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

1 INTRODUCTION

Environmental and change of land use authorisation is being sought for a proposed residential development in Stanford, Western Cape (see location 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 medium agricultural sensitivity of the site (see Section 7) and the fact that the property is within the urban edge and intended for development, the level of agricultural assessment required by the protocol is an Agricultural Compliance Statement.

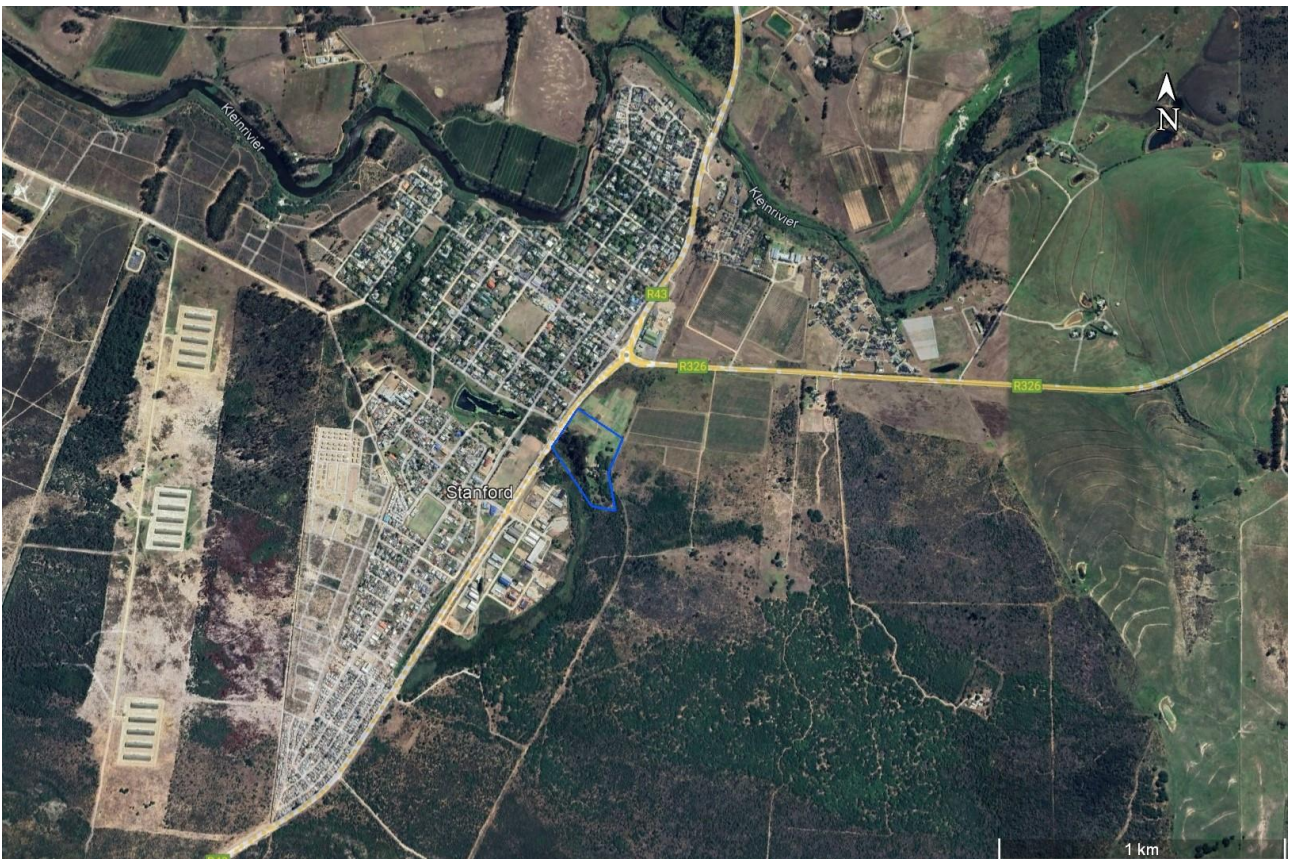


Figure 1. Locality map of the property (blue outline) located in the town of Stanford.

The purpose of an agricultural assessment is to answer the question:

Will the proposed development cause a significant reduction in agricultural production potential, and most importantly, will it result in a loss of arable land?

Section 9 of this report unpacks this question, particularly with respect to what constitutes a significant reduction. To answer the above question, it is necessary to determine the existing agricultural production potential of the land that will be impacted, and specifically whether it is

viable arable land or not. This is done in Section 8 of this report. Section 8 and 9 therefore directly address the above question and contain the essence of the agricultural impact assessment.

As is shown in Section 9, this assessed development will not result in a significant loss of viable arable land and therefore poses minimal threat to agricultural production potential.

2 PROJECT DESCRIPTION

The proposed residential development will cause the permanent exclusion of any potential future agricultural production from the entire site (as shown in Figures 2 and 3). 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 to potential future agricultural production.

3 TERMS OF REFERENCE

The terms of reference for this study are 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 in GN 320 (in terms of Sections 24(5)(A) and (H) and 44 of NEMA, 1998).

The terms of reference for an Agricultural Compliance Statement, as stipulated in the agricultural protocol, are listed below, and the section number of this report which fulfils each stipulation is given after it in brackets.

1. The Agricultural Compliance Statement must be prepared by a soil scientist or agricultural specialist registered with the South African Council for Natural Scientific Professions (SACNASP) **(Appendix 3)**.
2. The compliance statement must:
 1. be applicable to the preferred site and proposed development footprint **(Figures 2 and 3)**;
 2. confirm that the site is of “low” or “medium” sensitivity for agriculture **(Section 7)**; and
 3. indicate whether or not the proposed development will have an unacceptable impact on the agricultural production capability of the site **(Section 12)**.
3. The Agricultural Compliance Statement must contain, as a minimum, the following information:

1. details and relevant experience as well as the SACNASP registration number of the soil scientist or agricultural specialist preparing the statement including a curriculum vitae (**Appendix 1**);
2. a signed statement of independence by the specialist (**Appendix 2**);
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 11.1**);
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 12**);
6. any conditions to which this statement is subjected (**Section 12**);
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 (**Section 11.2**);
8. where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMPr (**Section 10**); and
9. a description of the assumptions made and any uncertainties or gaps in knowledge or data (**Section 5**).

4 METHODOLOGY OF STUDY

The assessment was based on a verification of current agricultural land use on the site and was informed by existing climate, soil and agricultural potential data for the site (see references). The level of agricultural assessment is considered entirely adequate for an understanding of on-site agricultural production potential for the purposes of this assessment.

5 ASSUMPTIONS, UNCERTAINTIES OR GAPS IN KNOWLEDGE OR DATA

There are no specific assumptions, uncertainties or gaps in knowledge or data that affect the findings of this study.

6 APPLICABLE LEGISLATION AND PERMIT REQUIREMENTS

This section identifies all applicable legislation and permit requirements over and above what is required in terms of NEMA.

The project will require agricultural approval (or at least comment from Department of Agriculture) as part of the required approval in terms of applicable municipal land use legislation, as well as in terms of the Subdivision of Agricultural Land Act (Act 70 of 1970 - SALA), if it is on land currently zoned for agriculture.

7 SITE SENSITIVITY VERIFICATION

A specialist agricultural assessment is required to include a verification of the agricultural sensitivity of the development site as per the sensitivity categories used by the web-based environmental screening tool of the Department of Forestry, Fisheries and the Environment (DFFE). Agricultural sensitivity is an indication of the capability of the land for agricultural production, based only on its climate, terrain, and soil capabilities. The different categories of agricultural sensitivity indicate the priority by which land should be conserved as agricultural production land. However, the screening tool's agricultural sensitivity is often of very limited value for assessing agricultural impact. What is of importance to an agricultural assessment, rather than the site sensitivity verification, is its assessment of the cropping potential and its assessment of the impact significance, both of which are not necessarily correlated with sensitivity.

The screening tool classifies agricultural sensitivity according to two independent criteria, from two independent data sets, both of which may be indicators of the land's agricultural production potential but are limited in that the first is outdated and the second relies on fairly coarse data. The two criteria are:

1. whether the land is classified as cropland or not on the field crop boundary data set (Crop Estimates Consortium, 2019), and
2. its land capability rating on the land capability data set (DAFF, 2017)

All classified cropland is, by definition, either high or very high sensitivity. Land capability is defined as the combination of soil, climate, and terrain suitability factors for supporting rain-fed agricultural production. It is rated by the Department of Agriculture's updated and refined, country-wide land capability mapping (DAFF, 2017). The higher land capability values (≥ 8 to 15) are likely to indicate suitability as arable land for crop production, while lower values (< 8) are likely to only be suitable as non-arable grazing land. The direct relationship between land capability rating, agricultural sensitivity, and rain-fed cropping suitability is shown in Table 1.

Table 1: Relationship between land capability, agricultural sensitivity, and rain-fed cropping suitability.

| Land capability value | Agricultural sensitivity | Rain-fed cropping suitability |
|-----------------------|--------------------------|-----------------------------------|
| 1 - 5 | low | Unsuitable |
| 6 - 8 | medium | Unsuitable to marginally suitable |
| 9 - 10 | high | Suitable |
| 11 - 15 | very high | Suitable |

The agricultural sensitivity of the site, as given by the screening tool, is shown in Figure 2. However, the screening tool sensitivity requires specialist verification because of the limitations of the data sets on which it is based.



Figure 2. The assessed property (blue outline) overlaid on agricultural sensitivity, as given by the screening tool (green = low; yellow = medium; red = high; dark red = very high). The screening tool's high sensitivity is disputed by this assessment, which rates the entire assessed area as being of medium agricultural sensitivity.

This verification of sensitivity addresses both components that determine it, namely cropping status and land capability. The screening tool classifies the assessed area as ranging medium to high agricultural sensitivity. The high sensitivity classification is due to a combination of some land being classified as cropland and some being classified with a land capability of 9. However, the data set used by the screening tool to classify cropland is outdated. All land across the footprint is no longer used as cropland. It is used only to produce lawn grass. This land should not, therefore, be classified as cropland and allocated high sensitivity because of it. This assessment therefore disputes the high

sensitivity rating by the screening tool that is based on cropping status.

The classified land capability of the site ranges from 8 to 9. This assessment disputes a classified land capability of >8, based on an assessment that the site is very marginal for viable rain-fed crop production because of a combination of climate and soil limitations (see Section 8). The appropriate land capability of land that is marginal for viable rain-fed crop production is 8. The relationship between land capability and agricultural production potential is such that a land capability of >8 should denote land that is suitable, not marginal, for viable rain-fed crop production (see Table 1). This assessment therefore rates the entire proposed footprint as having a maximum land capability of 8.

In conclusion, this assessment disputes the high sensitivity classification of the property by the screening tool and rates the entire property as being of medium agricultural sensitivity with a maximum land capability of 8 because of its assessed agricultural production potential and current agricultural land use.

8 BASELINE DESCRIPTION OF THE AGRO-ECOSYSTEM

The purpose of this section is firstly to present the baseline information that controls the agricultural production potential of the site and then to assess that potential. Agricultural production potential, and particularly cropping potential, is one of three factors that determines the significance of an agricultural impact, together with size of footprint and duration of impact (see Section 9).

All the important parameters that control the agricultural production potential of the site are given in Table 2. A satellite image map of the development site is given in Figure 3 and photographs of site conditions are shown in Figures 4 and 5.

The site falls outside an area that is classified as a Protected Agricultural Area (PAA) (DALRRD, 2020). A PAA is a demarcated area in which the climate, terrain, and soil are generally conducive for agricultural production and which, historically, has made important contributions to the production of the various crops that are grown across South Africa. Within PAAs, the protection, particularly of arable land, is considered a priority for the protection of food security in South Africa, but the protection of land outside of these areas is generally not considered a food security priority.

Table 2: Parameters that control and/or describe the agricultural production potential of the site.

| | Parameter | Value |
|----------|--|---|
| Climate | Köppen-Geiger climate description (Beck <i>et al</i> , 2018) | Arid, steppe, cold |
| | Mean Annual Rainfall (mm) (Schulze, 2009) | 545 |
| | Reference Crop Evaporation Annual Total (mm) (Schulze, 2009) | 1141 |
| | Climate capability classification (out of 9) (DAFF, 2017) | 6 (low-moderate) |
| Terrain | Terrain type | Coastal plains |
| | Terrain morphological unit | Foot slopes |
| | Slope gradients (%) | 0 to 2 |
| | Altitude (m) | 20 |
| | Terrain capability classification (out of 9) (DAFF, 2017) | 6 (low-moderate) 7 (low-moderate) |
| Soil | Geology (DAFF, 2002) | Mudstone, siltstone, shale and feldspathic sandstone of the Gydo Formation, Bokkeveld Group, partly covered by alluvial and colluvial sand. |
| | Land type (DAFF, 2002) | Db225 |
| | Description of the soils | Shallow to deep, light textured (sandy), light coloured, imperfectly drained soils on underlying clay |
| | Dominant soil forms | Estcourt, Kroonstad, Fernwood |
| | Soil capability classification (out of 9) (DAFF, 2017) | 4 (low-very low) |
| | Soil limitations | Limited soil depth, limited drainage, low water and nutrient holding capacity |
| Land use | Agricultural land use in the surrounding area | Predominantly non-agricultural with some vineyards |
| | Agricultural land use on the site | Lawn grass farming |

| | Parameter | Value |
|---------|---|--------------------------------|
| General | Long-term grazing capacity (ha/LSU) (DAFF, 2018) | 30 |
| | Land capability classification (out of 15) (DAFF, 2017) | 8 (moderate) 9 (moderate-high) |
| | Within Protected Agricultural Area (DALRRD, 2020) | No |



Figure 3. Satellite image map of the property.



Figure 4. View of the site which is used for roll on lawn.



Figure 5. Additional view of the site.

8.1 Assessment of the agricultural production potential

This assessment of the agricultural production potential of the site is based on an integration of the different parameters in Table 2 above.

The dryland cropping potential of the site is limited by the combination of climate (aridity) and soil constraints (depth, drainage, water holding capacity), as identified in Table 2. Because of these constraints, the site is very marginal for viable rainfed crop production. The site could be used for crop production of specific crops under irrigation, as is practised on surrounding land. The fact that the property is included within the urban edge is a significant constraint on the potential of the site to practically deliver future agricultural produce.

9 ASSESSMENT OF THE AGRICULTURAL IMPACT

9.1 Impact identification and assessment

It should be noted that an Agricultural Compliance Statement is not required to formally rate agricultural impacts by way of impact assessment tables.

An agricultural impact is a change to the future agricultural production potential of land. In most developments, including the one being assessed here, this is primarily caused by the exclusion of agriculture from the footprint of the development. The significance of an agricultural impact is a direct function of the following three factors:

1. the size of the footprint of land from which agriculture will be excluded (or the footprint that will have its potential decreased)
2. the baseline production potential (particularly cropping potential) of that land
3. the length of time for which agriculture will be excluded (or for which potential will be decreased).

The most significant loss of agricultural land possible, for any development anywhere in the country, is of high yielding cropland, and the least significant possible, is of low carrying capacity grazing land.

Cropping potential is highlighted in factor 2, above, because the threshold, above which it is a priority to conserve land for agricultural production, is determined by the scarcity of arable crop production land in South Africa (approximately only 13% of the country's surface area) and the relative abundance of the rest of agricultural land across the country that is only good enough to be used for grazing. If land can support viable and sustainable crop production, then it is considered to

be above the threshold and is a priority for being conserved as agricultural production land. If land is unable to support viable and sustainable crop production, then it is considered to be below the threshold and of much lower priority for being conserved.

In this case, the cropping potential of the site is limited by the combination of climate and soil, but it could nevertheless still be used for crop production with irrigation. However, the main factor that limits the significance of the loss of this land to agriculture, is that the property is within the urban edge and intended for development. This is a significant constraint on the potential of the site to practically deliver future agricultural produce and its loss as future agricultural production potential is therefore inevitable, of low significance and acceptable.

9.2 Cumulative impact assessment

Specialist assessments for environmental authorisation are required to assess cumulative impacts. The cumulative impact of a development is the impact that development will have when its impact is added to the incremental impacts of other past, present, or reasonably foreseeable future activities that will affect the same environment.

Agricultural land throughout South Africa is under inevitable pressure from various non-agricultural land uses, including urban expansion. The cumulative impact of agricultural land loss is significant. However, the agricultural priority should be to conserve future agricultural production, not simply agriculturally zoned land. As has been shown above, the site has limited current agricultural production and limited capacity for future agricultural production. Therefore, it is a site which can be used for non-agricultural purposes without a high loss of agricultural production potential. The cumulative agricultural impact of the proposed development is therefore assessed as being of low significance and therefore as acceptable. The development will not have an unacceptable negative impact on the agricultural production capability of the area, and it is therefore recommended, from a cumulative agricultural impact perspective, that the development be approved.

9.3 Assessment of alternatives

Specialist assessments for environmental authorisation are required to assess the impacts of alternatives, including the no-go alternative. As already noted, the exact nature and layout of the different infrastructure within the development site boundary have absolutely no bearing on the significance of agricultural impacts, because agriculture will be completely excluded from within the boundary, regardless of layout. Any alternative layouts within the boundary will have equal agricultural impact and are assessed as equally acceptable.

The no-go alternative considers impacts that will occur to the agricultural environment in the absence of the proposed development. There are no agricultural impacts of the no-go alternative,

and it is therefore the preferred alternative if assessed purely from an agricultural impact perspective.

10 MITIGATION

10.1 Mitigation measures

No mitigation measures are required for the protection of agricultural production potential on the site because the entire site will be permanently excluded from agricultural land use.

11 ADDITIONAL ASPECTS REQUIRED IN AN AGRICULTURAL ASSESSMENT

11.1 Micro-siting

The agricultural protocol requires confirmation that all reasonable measures have been taken through micro-siting to minimize fragmentation and disturbance of agricultural activities. Because the entire property will be non-agricultural, micro-siting will make no material difference to agricultural impacts and disturbance.

11.2 Confirmation of linear activity

The protocol requires confirmation, in the case of a linear activity, that the land can be returned to the current state within two years of completion of the construction phase. This is not relevant in this case because the proposed development is not a linear one.

12 CONCLUSION: AGRICULTURAL COMPLIANCE STATEMENT

This assessment disputes the high sensitivity classification of the property by the screening tool and rates the entire property as being of medium agricultural sensitivity with a maximum land capability of 8 because of its assessed agricultural production potential and current agricultural land use.

The dryland cropping potential of the site is limited by the combination of climate (aridity) and soil constraints (depth, drainage, water holding capacity). Because of these constraints, the site is very marginal for viable rainfed crop production. The site could be used for crop production of specific crops under irrigation, as is practised on surrounding land. The fact that the property is included within the urban edge is a significant constraint on the potential of the site to practically deliver future agricultural produce.

An agricultural impact is a change to the future agricultural production potential of land. In this case, the cropping potential of the site is limited by the combination of climate and soil, but it could

nevertheless still be used for crop production with irrigation. However, the main factor that limits the significance of the loss of this land to agriculture, is that the property is within the urban edge and intended for development. This is a significant constraint on the potential of the site to practically deliver future agricultural produce and its loss as future agricultural production potential is therefore inevitable, of low significance and acceptable.

From an agricultural impact point of view, it is recommended that the proposed development be approved. The conclusion of this assessment on the acceptability of the proposed development and the recommendation for its approval is not subject to any conditions.

13 REFERENCES

Beck, H.E., N.E. Zimmermann, T.R. McVicar, N. Vergopolan, A. Berg, E.F. Wood. 2018. Present and future Köppen-Geiger climate classification maps at 1-km resolution, Nature Scientific Data. Available at: <https://gis.elsenburg.com/apps/cfm/>.

Crop Estimates Consortium, 2019. *Field Crop Boundary data layer, 2019*. Pretoria. Department of Agriculture, Forestry and Fisheries.

Department of Agriculture Forestry and Fisheries (DAFF). 2018. Long-term grazing capacity map for South Africa developed in line with the provisions of Regulation 10 of the Conservation of Agricultural Resources Act, Act no 43 of 1983 (CARA), available on Cape Farm Mapper. Available at: <https://gis.elsenburg.com/apps/cfm/>

Department of Agriculture, Forestry and Fisheries (DAFF). 2017. National land capability evaluation raster data layer, 2017. Pretoria.

Department of Agriculture, Forestry and Fisheries (DAFF). 2002. National land type inventories data set. Pretoria.

Department of Agriculture, Land Reform and Rural Development (DALRRD). 2020. Protected agricultural areas – Spatial data layer. 2020. Pretoria.

Schulze, R.E. 2009. South African Atlas of Agrohydrology and Climatology, available on Cape Farm Mapper. Available at: <https://gis.elsenburg.com/apps/cfm/>

Soil Classification Working Group. 1991. Soil classification: a taxonomic system for South Africa. Soil and Irrigation Research Institute, Department of Agricultural Development, Pretoria.

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*.



forestry, fisheries & the environment

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APPENDIX 2: SPECIALIST DECLARATION FORM AUGUST 2023

Specialist Declaration form for assessments undertaken for application for authorisation in terms of the National Environmental Management Act, Act No. 107 of 1998, as amended and the Environmental Impact Assessment (EIA) Regulations, 2014, as amended (the Regulations)

REPORT TITLE: PROPOSED RESIDENTIAL DEVELOPMENT, STANFORD, WESTERN CAPE

Kindly note the following:

1. This form must always be used for assessment that are in support of applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting, where this Department is the Competent Authority.
2. This form is current as of August 2023. It is the responsibility of the Applicant / Environmental Assessment Practitioner (EAP) to ascertain whether subsequent versions of the form have been published or produced by the Competent Authority. The latest available Departmental templates are available at <https://www.dffe.gov.za/documents/forms>.
3. An electronic copy of the signed declaration form must be appended to all Draft and Final Reports submitted to the department for consideration.
4. The specialist must be aware of and comply with '*the 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 act, when applying for environmental authorisation - GN 320/2020*', where applicable.

1. SPECIALIST INFORMATION

| | |
|--|--|
| Title of Specialist Assessment | Agricultural Assessment |
| Specialist Company Name | SoilZA – sole proprietor |
| Specialist Name | Johann Lanz |
| Specialist Identity Number | 6607045174089 |
| Specialist Qualifications: | M.Sc. (Environmental Geochemistry) |
| Professional affiliation/registration: | Registered Professional Natural Scientist (Pr.Sci.Nat.) Reg. no. 400268/12 Member of the Soil Science Society of South Africa |
| Physical address: | 1a Wolfe Street, Wynberg, Cape Town, 7800 |
| Postal address: | 1a Wolfe Street, Wynberg, Cape Town, 7800 |
| Telephone | Not applicable |
| Cell phone | +27 82 927 9018 |
| E-mail | johann@soilza.co.za |

2. DECLARATION BY THE SPECIALIST

I, **Johann Lanz** declare that –

- I act as the independent specialist in this application;
- I am aware of the procedures and requirements 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 (NEMA), 1998, as amended, when applying for environmental authorisation which were promulgated in Government Notice No. 320 of 20 March 2020 (i.e. “the Protocols”) and in Government Notice No. 1150 of 30 October 2020.
- 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 NEMA Act.



Signature of the Specialist

SoilZA (sole proprietor)

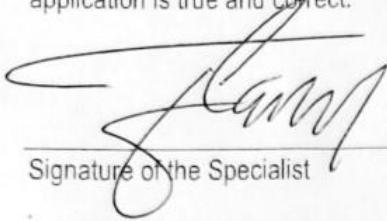
Name of Company:

16 April 2024

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

I, **Johann Lanz**, swear under oath that all the information submitted or to be submitted for the purposes of this application is true and correct.



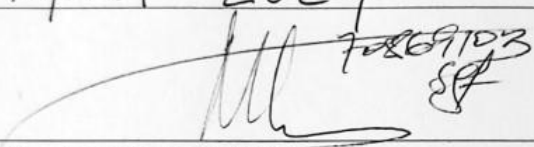
Signature of the Specialist

SoilZA – sole proprietor

Name of Company

16 April 2024

Date


7-2869103
SF

Signature of the Commissioner of Oaths

2024/04/16
Date





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 field(s) of practice (Schedule 1 of the Act)

Soil Science (Professional Natural Scientist)

Effective 15 August 2012

Expires 31 March 2025



A handwritten signature in black ink, appearing to read 'S. van der ...', positioned above a horizontal line.

Chairperson

A handwritten signature in black ink, appearing to read 'N. ...', positioned above a horizontal line.

Chief Executive Officer



APPENDIX 4: SOIL DATA

Table 4: Land type soil data

| Land type | Soil series (forms) | Depth (mm) | Clay % A horizon | Clay % B horizon | Depth limiting layer | % of land type |
|-----------|---------------------|------------|------------------|------------------|----------------------|----------------|
| Db225 | Es | 350 - 500 | 4 - 20 | 40 - 60 | pr | 17.5 |
| Db225 | Sw | 450 - 550 | 20 - 25 | 40 - 60 | so,vp | 15.0 |
| Db225 | Kd | 400 - 600 | 4 - 20 | 40 - 60 | gc | 14.5 |
| Db225 | Ss | 350 - 500 | 10 - 20 | 40 - 60 | pr | 12.0 |
| Db225 | Fw | 800 > 1200 | 0 - 2 | | U | 9.0 |
| Db225 | Gs | 150 - 250 | 10 - 30 | | so | 8.0 |
| Db225 | Ms | 150 - 250 | 10 - 20 | | R | 7.0 |
| Db225 | Du | > 1200 | 0 - 4 | | U | 5.0 |
| Db225 | Gs | 250 - 400 | 10 - 30 | | so | 4.5 |
| Db225 | Cf | 250 - 400 | 12 - 25 | | so | 3.5 |
| Db225 | Cf | 150 - 250 | 12 - 25 | | so | 3.0 |
| Db225 | M | | | | | 1.0 |