



 [info@soilza.co.za](mailto:info@soilza.co.za)

 [www.soilza.co.za](http://www.soilza.co.za)

 1A Wolfe St Wynberg  
Cape Town, 7800  
South Africa

---

**AGRICULTURAL COMPLIANCE STATEMENT FOR PROPOSED INSTALLATION OF SERVICES  
ASSOCIATED WITH THE KOEBERG NUCLEAR POWER STATION, DUYNEFONTEIN, CITY OF CAPE  
TOWN METROPOLITAN MUNICIPALITY, WESTERN CAPE PROVINCE.**

**Report by  
Johann Lanz**

**26 June 2025**

## Table of Contents

1	Introduction.....	3
2	Project description .....	4
3	Terms of reference.....	4
4	Methodology of study .....	6
5	Assumptions, uncertainties or gaps in knowledge or data .....	6
6	Baseline description of the agro-ecosystem .....	6
7	Site sensitivity verification.....	10
8	Assessment of the agricultural impact.....	13
8.1	Impact identification and assessment.....	13
8.2	Cumulative impact assessment.....	13
8.3	Assessment of alternatives .....	13
9	Mitigation .....	13
10	Conclusion: Agricultural Compliance Statement.....	13
11	References .....	14
	Appendix 1: Specialist Curriculum Vitae .....	15
	Appendix 2: Specialist declaration form August 2023 .....	16
	Appendix 3: SACNASP registration certificate .....	19

## 1 INTRODUCTION

Environmental authorisation is being sought for the proposed unearthing and upgrading of services on site in Melkbosstrand (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 verified low to medium agricultural sensitivity of the site (see Section 8), the level of agricultural assessment required by NEMA's agricultural protocol is an Agricultural Compliance Statement.



**Figure 1.** Locality map of the development (blue outline), north of Melkbosstrand

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

Will the proposed development cause a significant reduction in future 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 7 of this report. Sections 7 and 9 of this report directly address the above question and therefore contain the essence and most important part of the agricultural impact assessment.

## 2 PROJECT DESCRIPTION

It is proposed to unearth and upgrade the services located in a specific portion of the plant (referred to as the Area of Investigation for the purpose of the compilation of this report), located North of the reactors, to the modern standard for construction and safety requirements, on the Farm Duynfontyn No. 1552, Melkbosstrand, City of Cape Town Metropolitan Municipality, Western Cape Province

As recording of infrastructure installation was not standardised in the 1980s, the unearthing of services will prove to be challenging as, although marked, the exact location of infrastructure is not known.

Therefore, as part of the modernisation and upgrading of the infrastructure, vegetation would have to be sporadically cleared within a predetermined area. The proposed installation is located in an area identified as Cape Flats Dune Strandveld, listed as an Endangered Ecosystem, in terms of the List of Ecosystems that are Threatened and in need of Protection, promulgated by the Department of Forestry, Fisheries and Environment (DFFE) and will potentially be partially located within 100 m of the highwater mark of the Atlantic Ocean.

The following infrastructure will be installed as part of the activities associated with the proposed cable infrastructure upgrades:

- Electrical cables with a transmission capacity of 48V, 22V and 380V; and
- Fibreoptic cables to service the security cameras of the plant.

## 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 copied exactly from the protocol, are listed in the table below, and included, is the place in this report where each is addressed.

**Table 2:** Reporting requirements as per NEMA's Agricultural Protocol

Number	Requirement	Where it is addressed
3.	Agricultural Compliance Statement	
3.1.	The compliance statement must be prepared by a soil scientist or agricultural specialist registered with the SACNASP.	Appendix 3
3.2.	The compliance statement must:	
3.2.1.	be applicable to the preferred site and proposed development footprint;	Figure 2
3.2.2.	confirm that the site is of “low” or “medium” sensitivity for agriculture; and	Section 8
3.2.3.	indicate whether or not the proposed development will have an unacceptable impact on the agricultural production capability of the site.	Section 9.1
3.3.	The compliance statement must contain, as a minimum, the following information:	
3.3.1.	contact details and relevant experience as well as the SACNASP registration number of the soil scientist or agricultural specialist preparing the assessment including a curriculum vitae;	Appendix 1
3.3.2.	a signed statement of independence;	Appendix 2
3.3.3.	a map showing the proposed development footprint (including supporting infrastructure) with a 50m buffered development envelope, overlaid on the agricultural sensitivity map generated by the screening tool;	Figure 7
3.3.4.	confirmation from the specialist that all reasonable measures have been taken through micro-siting to avoid or minimise fragmentation and disturbance of agricultural activities;	Section 11.1
3.3.5.	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
3.3.6.	any conditions to which the statement is subjected;	Section 12
3.3.7.	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
3.3.8.	where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMP; and	None required
3.3.9.	a description of the assumptions made as well as any uncertainties or gaps in knowledge or data.	Section 5
3.4.	A signed copy of the compliance statement must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.	

#### **4 METHODOLOGY OF STUDY**

The assessment was based on an on-site investigation conducted on 17 June 2025. It was also informed by existing climate, soil, and agricultural potential data for the site (see references). The aim of the on-site assessment was to verify current cropping status, agricultural land use, and agricultural conditions across the site in order to assess and determine the cropping potential across the site. An assessment of long-term agricultural potential is in no way affected by the season in which the assessment is made, and therefore the date on which this assessment was done has no bearing on its results. 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 BASELINE DESCRIPTION OF THE AGRO-ECOSYSTEM**

The purpose of this section of an agricultural assessment report is to present the baseline information that controls the agricultural production potential of the site so that an assessment of that potential can be made. 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.

In this case the site has zero agricultural production potential because of its location within a nuclear power plant and its zoning as risk industry.



**Figure 2.** Map of the site.





**Figure 3.** Typical site conditions.





**Figure 4.** Typical site conditions showing pipes to be installed



**Figure 5.** *Current activity on site*

## **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). The screening tool's classification of sensitivity is merely an initial indication of what the sensitivity of a piece of land might be, as indicated by the only data that is available. What the screening tool attempts to indicate is whether the land is suitable for crop production (high and very high sensitivity) or unsuitable for crop production (low to medium sensitivity). To do this, the screening tool uses three independent criteria, from three independent data sets, which are all indicators of suitability for crop production but are limited and were not designed for this purpose. The three criteria are:

1. Whether the land is classified as cropland or not on the field crop boundary data set (Crop Estimates Consortium, 2019). All classified cropland is, by definition, either high or very high sensitivity.
2. Its land capability rating as per the Department of Agriculture's updated and refined, country-wide land capability mapping (DAFF, 2017). Land capability is defined as the

combination of soil, climate, and terrain suitability factors for supporting rain-fed agricultural production. The direct relationship between land capability rating, agricultural sensitivity, and rain-fed cropping suitability is summarised by this author in Table 2.

3. Whether the land is classified as a protected agricultural area (PAA) or not (DALRRD, 2020). All classified PAAs are, by definition, either high or very high sensitivity.

The limitations for determining cropping suitability based on these data are as follows:

1. The field crop boundary data set used by the screening tool is very outdated
2. Land capability mapping is fairly coarse, modelled data which is not always accurate at site scale.
3. PAAs are demarcated broadly, not at a fine scale, and there is therefore much variation of cropping suitability within a PAA. All land within these demarcated areas is not necessarily of sufficient agricultural potential to be suitable for crop production, due to finer scale terrain, soil, and other constraints.

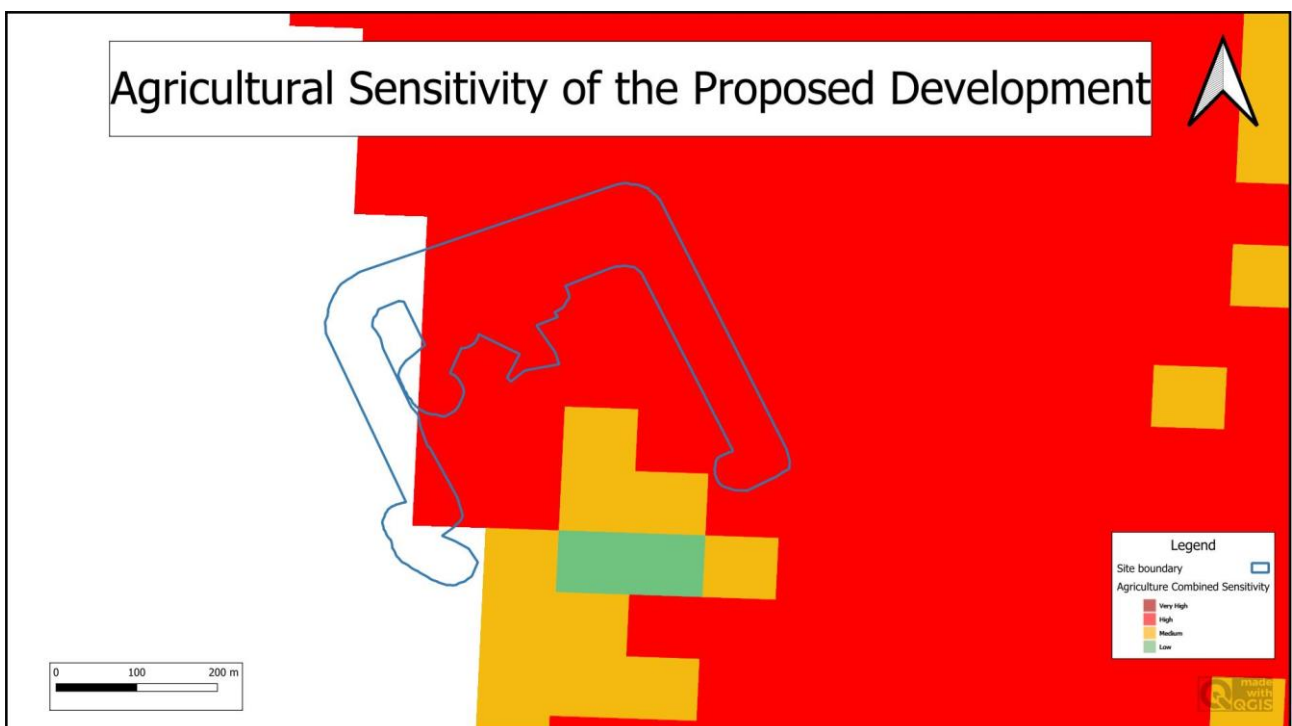
These three inputs operate independently, and the screening tool's agricultural sensitivity is determined by whichever of these gives the highest sensitivity rating. The agricultural sensitivity of the site, as classified by the screening tool, is shown in Figure 6.

The true agricultural sensitivity of any land is equivalent to its actual suitability for crop production on the ground, rather than being determined by a parameter that serves as a proxy for crop suitability in a dataset, which is how the screening tool determines sensitivity. The land's suitability for cropping directly determines how important it is to conserve that land as agricultural production land. To determine suitability for crop production, and hence sensitivity, requires a site-specific assessment, as has been conducted in this assessment.

Despite the detail in this section above, the determinants of agricultural sensitivity are actually very straightforward and may be summed up as follows. If land is suitable for viable crop production - that is if it has the capability to deliver an above break-even crop yield on a sustainable basis - then it is of high or very high agricultural sensitivity. If it has limitations that prevent it from being able to deliver an above break-even crop yield on a sustainable basis, then it is of medium or low agricultural sensitivity.

**Table 2:** Relationship between land capability, agricultural sensitivity, and rain-fed cropping suitability.

Land capability value	Agricultural sensitivity	Rain-fed cropping suitability	
		Summer rainfall areas	Winter rainfall areas
1 - 5	Low	Unsuitable	Unsuitable
6	Medium		
7			
8 - 10	High	Suitable	Suitable
11 - 15	Very High		



**Figure 6.** The assessed area overlaid on agricultural sensitivity, as classified 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 low agricultural sensitivity.

The screening tool classifies the assessed site as high agricultural sensitivity. The high sensitivity classification by the screening tool is because of its land capability rating of 8 to 9.

However, the site is not suitable for viable crop production and its true sensitivity, as assessed on the ground, is therefore low, because the site is located within the Koeberg nuclear Power Plant. This assessment therefore disputes the high sensitivity classification of the site by the screening tool and verifies the entire site as being of low agricultural sensitivity because of its assessed cropping

potential, and the likely hood that the site would never be used for agricultural production.

## **8 ASSESSMENT OF THE AGRICULTURAL IMPACT**

### **8.1 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. Because the site has zero potential for agricultural production, the development cannot cause a change in production potential. Therefore, the overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed as being of zero significance and therefore as acceptable.

### **8.2 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. Due to its lack of agricultural impact, the assessed development will not contribute anything to the cumulative impact.

### **8.3 Assessment of alternatives**

Specialist assessments for environmental authorisation are required to assess the impacts of alternatives including the no-go alternative. 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 there are no agricultural impacts of the development and there is therefore no preferred alternative between the development and the no-go, if assessed purely from an agricultural impact perspective.

## **9 MITIGATION**

No mitigation measures are required for the protection of agricultural production potential on the site because the site will never be utilised as agricultural production land.

## **10 CONCLUSION: AGRICULTURAL COMPLIANCE STATEMENT**

The agricultural impact of the proposed development is assessed as being acceptable because it

results in zero loss of future agricultural production potential. From an agricultural impact point of view, it is recommended that the 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.

## **11 REFERENCES**

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

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

Department of Agriculture, Land Reform and Rural Development (DALRRD). 2020. Protected agricultural areas – Spatial data layer. 2020. 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 23 years of running my soil and agricultural consulting business, I have completed more than 1000 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; SRK; Environamics; Royal Haskoning DHV; ABO; Enertrag; WKN-Windcurrent; JG Afrika; Mainstream; Redcap; G7; Mulilo; and Tiptrans. 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*.





## forestry, fisheries & the environment

Department:  
Forestry, Fisheries and the Environment  
REPUBLIC OF SOUTH AFRICA

Private Bag X447, Pretoria, 0001, Environment House, 473 Steve Biko Road, Pretoria, 0002 Tel: +27 12 399 9000, Fax: +27 86 625 1042

### 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: AGRICULTURAL COMPLIANCE STATEMENT FOR PROPOSED INSTALLATION OF SERVICES ASSOCIATED WITH THE KOEBERG NUCLEAR POWER STATION, DUYNEFONTEIN, CITY OF CAPE TOWN METROPOLITAN MUNICIPALITY, WESTERN CAPE PROVINCE.**

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:

22 May 2025

---

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

Date

22 May 2025

Signature of the Commissioner of Oaths

7175165-3

O. CAROLUS

Date

2025-05-22





**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 2026



Chairperson

Chief Executive Officer

