

**Site sensitivity verification
and Agricultural Compliance Statement
for the construction and operation of
the Sendawo substation, battery energy storage system (BESS), and power line
near Vryburg, North West Province**

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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 low to medium 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 are 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 agricultural production potential by ensuring that development does not unnecessarily exclude existing or potential agricultural production from land, or unnecessarily impact agricultural land to the extent that its production potential is reduced. The primary focus is on preservation of the agricultural production potential of scarce, arable land. This project poses very little threat to agricultural production potential.

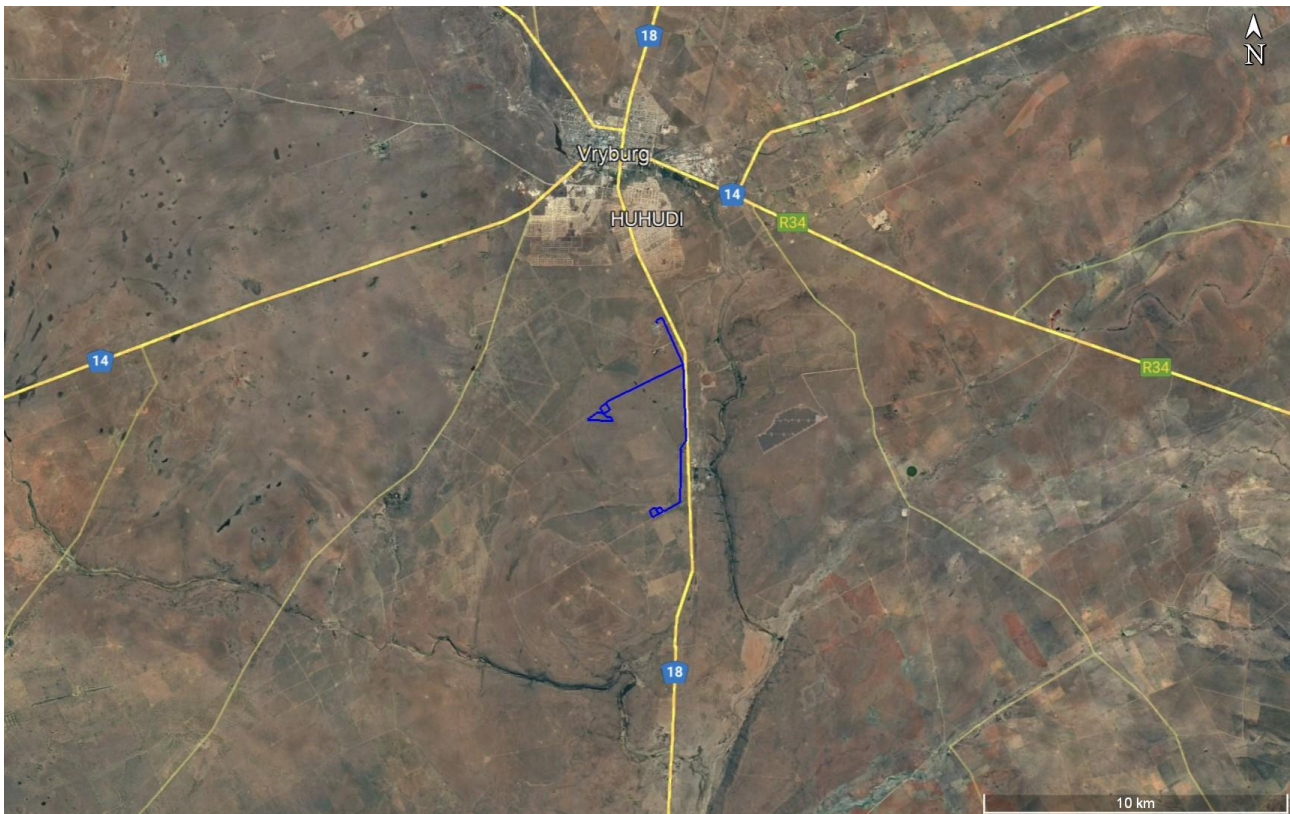


Figure 1. The locality of the development (both alternatives), south of the town of Vryburg.

2 Project description

The substation will have a footprint of up to approximately 6 hectares, the BESS facility will have a footprint of up to approximately 13 hectares, and there will be a temporary laydown area of approximately 2 hectares. However, these are within an already approved solar energy facility and do not therefore constitute a footprint on which agricultural production is excluded.

This assessment includes the power line of the grid connection. However, the agricultural impact of a power line is entirely insignificant in this environment because agriculture is not excluded from the land underneath a power line.

3 Site sensitivity verification

A map of the footprint, overlaid on the screening tool sensitivity, is given in Figure 2. 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 substation and BESS sites 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). The classified land capability of the power line corridors is 4 to 7, but is irrelevant because of the negligible agricultural impact of a power line in this environment.

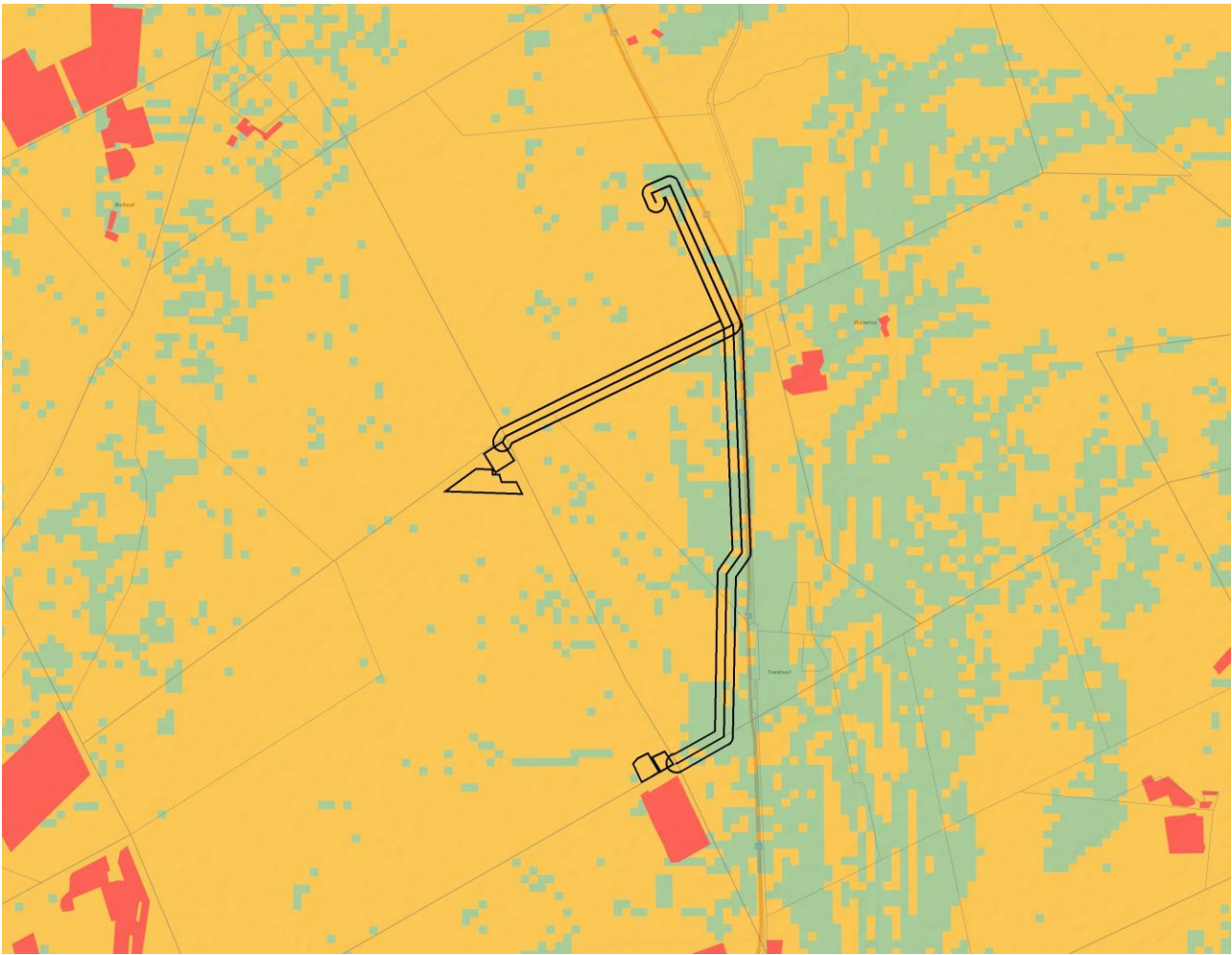


Figure 2. The footprint of the proposed development, including the power line corridors, overlaid on agricultural sensitivity, as given by the screening tool (green = low; yellow = medium; red = high; dark red = very high).

4 Baseline agricultural environment

The purpose of this section of the report is to present the baseline information that controls the agricultural production potential of the site, which in turn determines the significance of the agricultural impact upon it.

A satellite image map of the development is given in Figure 3.

The site has a summer rainfall with an annual mean of approximately 380 mm and a mean annual evaporation of approximately 1640 mm (Schulze, 2009). The site is situated on a plateau with low slope gradients. The geology is andesitic to basaltic lava of the Ventersdorp Supergroup, overlain by calcrete. The site falls within the Ae36 land type. The soils are predominantly shallow, sandy soils on underlying rock or hardpan carbonate of the Hutton, Mispah and Clovelly soil forms. The cropping potential of the site is completely constrained by the combination of low rainfall and shallow soils and agricultural use is confined to grazing. Furthermore, the location of the site within an already approved solar energy facility effectively precludes the use of the land for

agricultural production and therefore renders it of very low agricultural production potential.

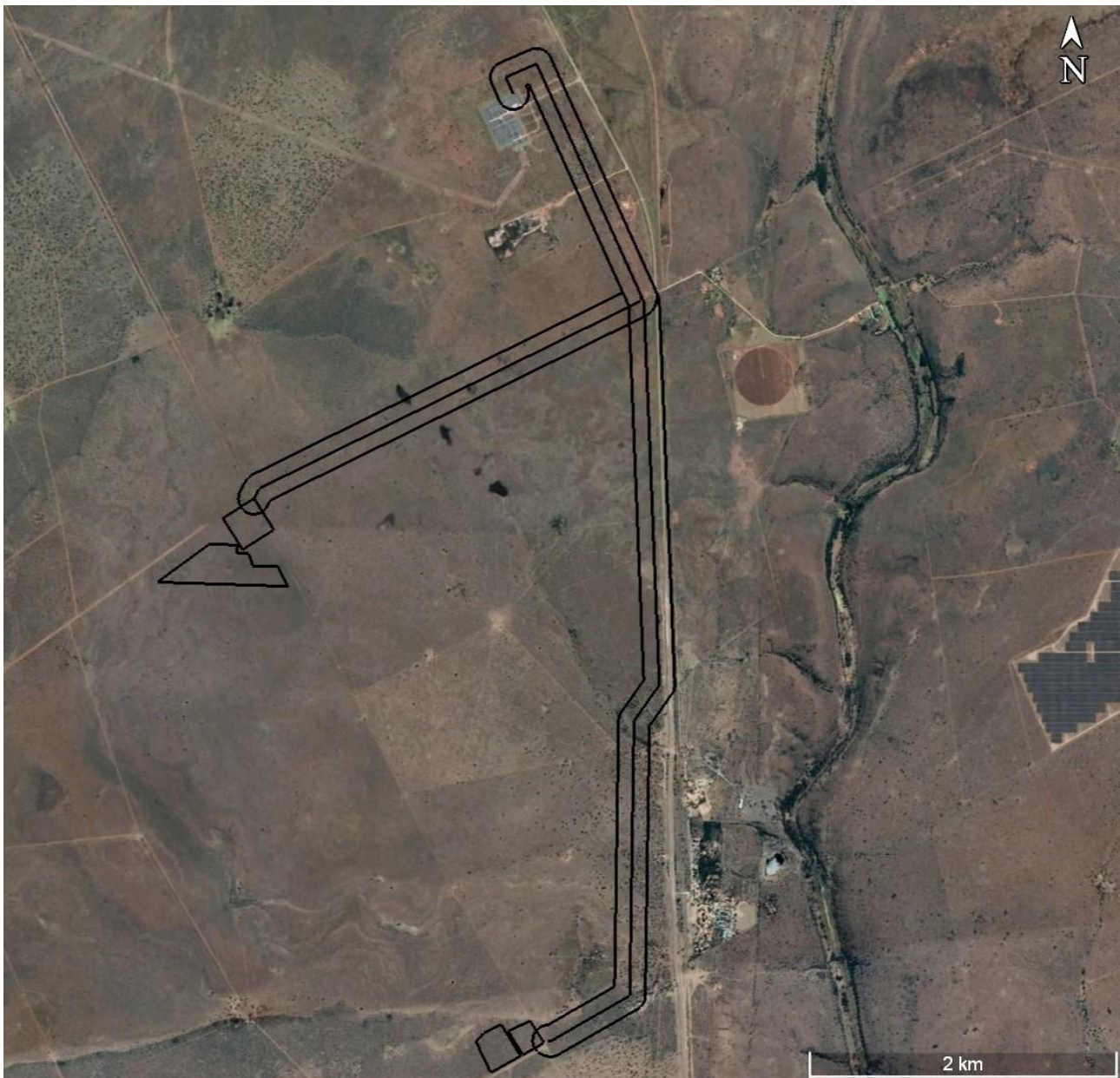


Figure 3. *Satellite image map of the proposed development. Note the map includes both alternatives for all infrastructure, only one of which will be implemented.*

5 Assessment of agricultural impact

An agricultural impact is a temporary or permanent change to the future agricultural production potential of land. The significance of the agricultural impact is directly proportional to the extent of the change in production potential. In this case the extent of the change is very minimal because the land is already limited for agricultural use by being within an approved energy facility as well as being limited by climate and soil constraints. The agricultural impact of the proposed development is therefore assessed as being of very low significance.

6 Agricultural Compliance Statement

The agricultural impact of the proposed development is assessed as being acceptable because it results in very little loss of future agricultural production 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. There are also no required Environmental Management Programme inputs 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.

A handwritten signature in black ink, appearing to read 'J. Lanz', with a stylized flourish above the name.

J. Lanz (Pr. Sci.Nat.)

14 April 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 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*.



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

Appendix 2: Details of the specialist, declaration of interest and undertaking under oath

File Reference Number:

NEAS Reference Number:

Date Received:

(For official use only)

DEA/EIA/

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)

PROJECT TITLE

Proposed Sendawo substation, battery energy storage system (BESS), and power line near Vryburg, North West Province

Kindly note the following:

- This form must always be used for applications that must be subjected to Basic Assessment or Scoping & Environmental Impact Reporting where this Department is the Competent Authority.
- This form is current as of 01 September 2018. 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.environment.gov.za/documents/forms>.
- A copy of this form containing original signatures must be appended to all Draft and Final Reports submitted to the department for consideration.
- All documentation delivered to the physical address contained in this form must be delivered during the official Departmental Officer Hours which is visible on the Departmental gate.
- All EIA related documents (includes application forms, reports or any EIA related submissions) that are faxed; emailed; delivered to Security or placed in the Departmental Tender Box will not be accepted, only hardcopy submissions are accepted.

Departmental Details

Postal address: Department of Environmental Affairs, Attention: Chief Director: Integrated Environmental Authorisations, Private Bag X447, Pretoria, 0001

Physical address: Department of Environmental Affairs, Attention: Chief Director: Integrated Environmental Authorisations, Environment House, 473 Steve Biko Road, Arcadia

Queries must be directed to the Directorate: Coordination, Strategic Planning and Support at:
Email: EIAAdmin@environment.gov.za

1. SPECIALIST INFORMATION

Specialist Company Name:	Johann Lanz – Soil Scientist		
B-BBEE	Contribution level (indicate 1 to 8 or non-compliant)	4	Percentage Procurement recognition
Specialist name:	Johann Lanz		
Specialist Qualifications:	M.Sc. (Environmental Geochemistry)		
Professional affiliation/registration:	Registered Professional Natural Scientist (Pr.Sci.Nat.) Reg. no. 400268/12		
Physical address:	1a Wolfe Street, Wynberg, Cape Town, 7800		
Postal address:	1a Wolfe Street, Wynberg, Cape Town, 7800		
Postal code:	7800	Cell:	082 927 9018
Telephone:	082 927 9018	Fax:	Who still uses a fax? I don't
E-mail:	johann@johannlanz.co.za		

2. DECLARATION BY THE SPECIALIST

I, **Johann Lanz**, declare that -

- I act as the independent specialist in this application;
- 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 Act.

Signature of the Specialist

Johann Lanz – Soil Scientist (sole proprietor)

Name of Company:

Date

3. UNDERTAKING UNDER OATH/ AFFIRMATION

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

Signature of the Specialist

Johann Lanz – Soil Scientist (sole proprietor)

Name of Company

Date

Signature of the Commissioner of Oaths

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 2024**



Chairperson

Chief Executive Officer

