

**Site sensitivity verification
and Agricultural Compliance Statement
for the proposed development of a Battery Energy Storage System (BESS)
and associated infrastructure
at the Cuprum Substation located within Copperton**

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1 Introduction

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

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

The purpose of the agricultural component in the environmental assessment process is to preserve the agricultural production potential, particularly of scarce arable land, by ensuring that development does not exclude existing or potential agricultural production from such land or impact the land to the extent that its production potential is reduced. However, this project poses zero threat to agricultural production potential.

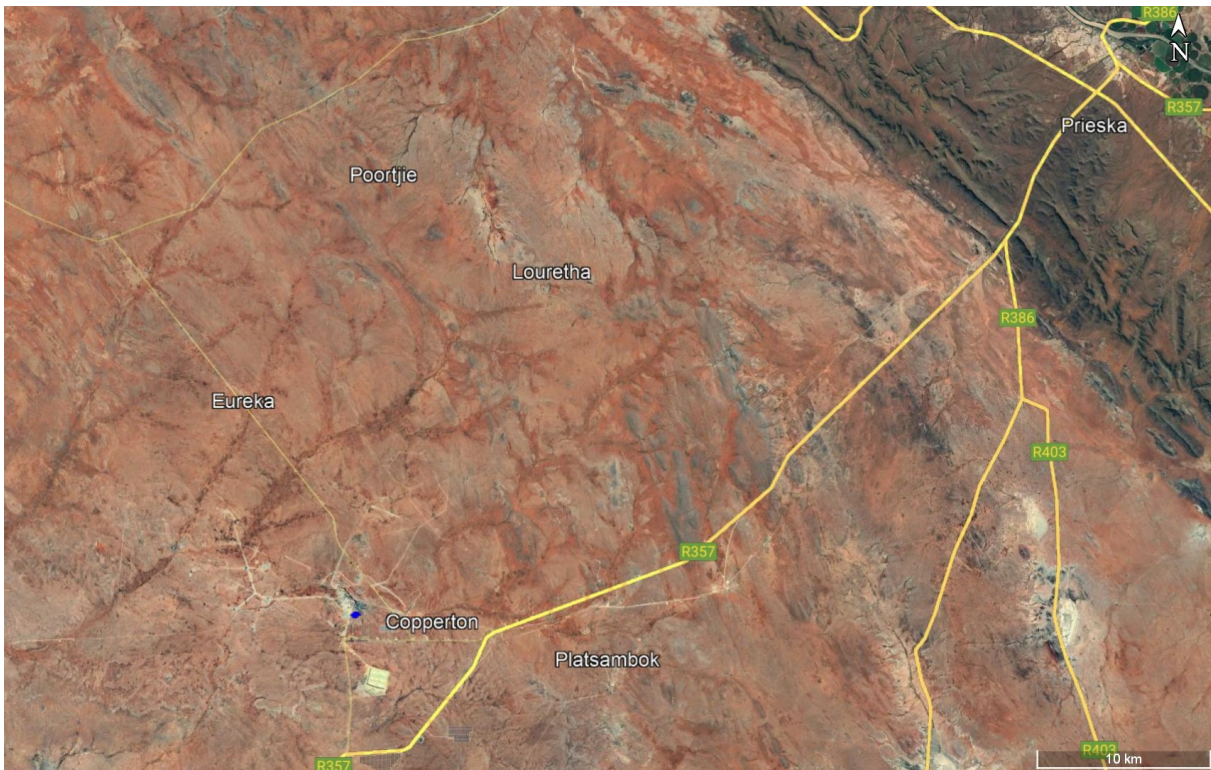


Figure 1. The locality of the proposed development (blue rectangle) just west of the Copperton the label in the map.

2 Project Description

The project involves the development of a Battery Energy Storage System (BESS) and associated infrastructure adjacent to the existing Cuprum Substation. The project will cause the exclusion of potential agricultural production from the entire site. 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 its footprint 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 site of approximately 3.57 hectares to potential agricultural production.

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



Figure 2. Satellite image map of the BESS site (blue outline).

3 Site Sensitivity Verification

A map of the proposed development site, overlaid on the screening tool sensitivity, is given in Figure 3. The screening tool classifies agricultural sensitivity according to only two independent criteria – the land capability rating and whether the land is cropland or not.

None of the land is classified as cropland and agricultural sensitivity is therefore purely a function of land capability. The classified land capability of the site is 5, which translates to a low agricultural sensitivity

Agricultural sensitivity is an indication of the production potential of land. Classified agricultural sensitivity only takes biophysical factors (soil, climate, terrain) into account. However, agricultural production potential is not only a function of these things. There are a number of other factors that influence whether a piece of land can practically deliver agricultural produce or not and which therefore influence its agricultural production potential. In this case, the location of the site within a mining area and disturbances to the soil from related activity reduce the agricultural potential of the site.

This site sensitivity verification verifies the site as being of low agricultural sensitivity. The low

sensitivity is in keeping with the aridity and other limitations that effectively negate any agricultural production potential on the site. The required level of agricultural assessment is confirmed as an Agricultural Compliance Statement due to the site's verified low agricultural sensitivity.

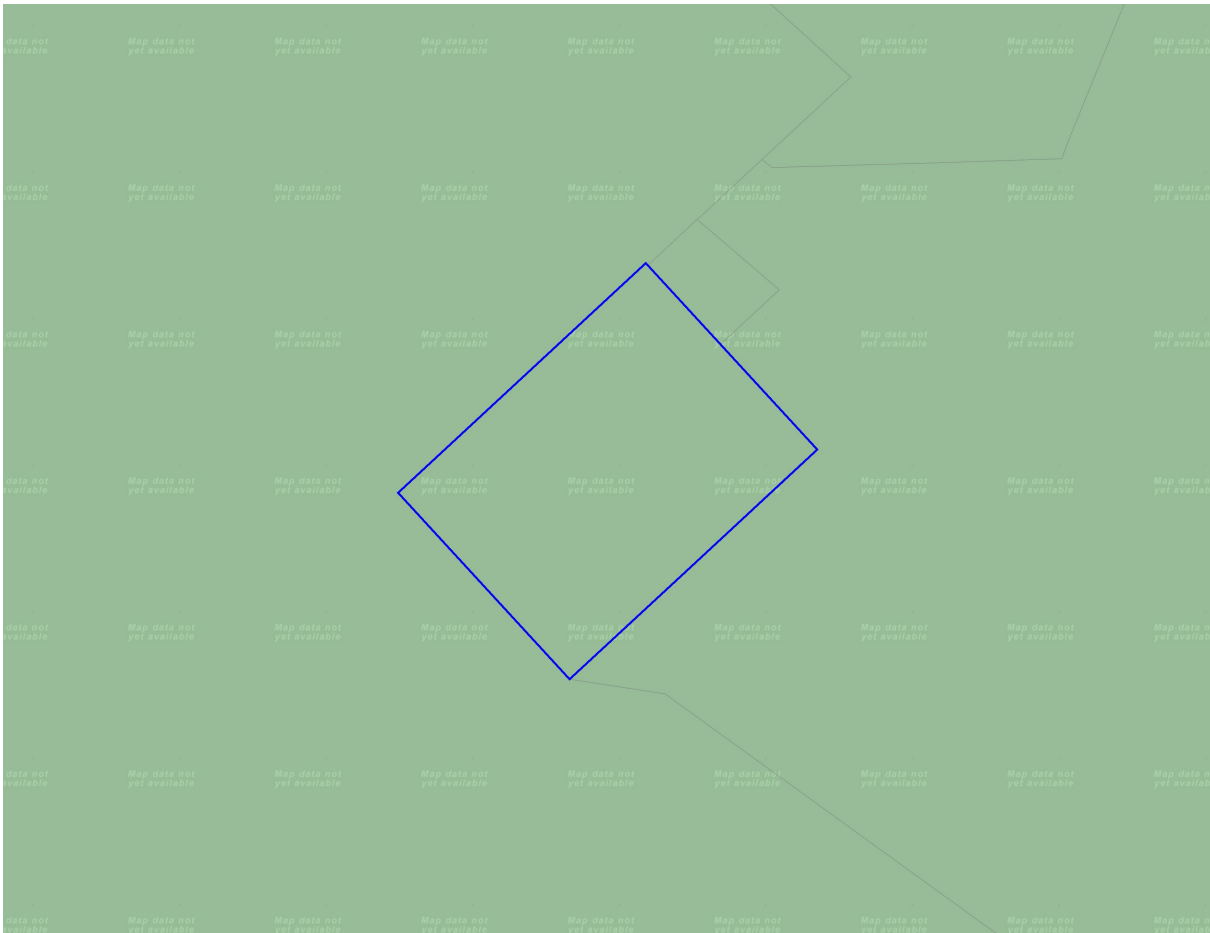


Figure 3. The proposed development site overlaid on agricultural sensitivity, as given by the screening tool (green = low; yellow = medium; red = high; dark red = very high)

4 Baseline Agricultural Environment

The arid climate (very low rainfall of approximately 181 mm per annum and high evaporation of approximately 1,623 mm per annum) (Schulze, 2009) is the limiting factor for land capability. Because climate is the limiting factor that controls production potential, it is the only aspect of the agro-ecosystem description that is required for assessing the agricultural impact of this development. All other agricultural potential parameters become irrelevant under the dominant limitation of aridity.

5 Assessment of Agricultural Impact

An agricultural impact is a change to the future production potential of land, in this case, through the loss of the footprint of the development to potential future agricultural use. The significance of this impact is assessed as being negligible because there is negligible loss of future production potential. This is because the site is currently not used for agricultural production and effectively has zero future agricultural production potential.

6 Agricultural Compliance Statement

An Agricultural Compliance Statement is required to indicate whether the proposed development will have an unacceptable impact on the agricultural production capability of the site. It must provide a substantiated statement on the acceptability, or not, of the proposed development and a recommendation on the approval, or not of the proposed development.

The impact of the proposed development on the agricultural production capability of the site is assessed as being acceptable because, as discussed above, there will be no loss of future agricultural production potential as a result of the proposed development. It is therefore 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 Environmental Management Programme inputs required for the protection of agricultural potential on the site.

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

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



J. Lanz (Pr. Sci.Nat.)

3 November 2022

7 References

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

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

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*.

DECLARATION OF THE SPECIALIST

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

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

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

Signature of the specialist:



Date: **3 November 2022**

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