

Appendix D3

Agricultural Compliance Statement

**Site sensitivity verification
and Agricultural Compliance Statement
for a proposed telecommunications mast and associated infrastructure
on Erf 33, Umzinto North, KwaZulu Natal**

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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.

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.

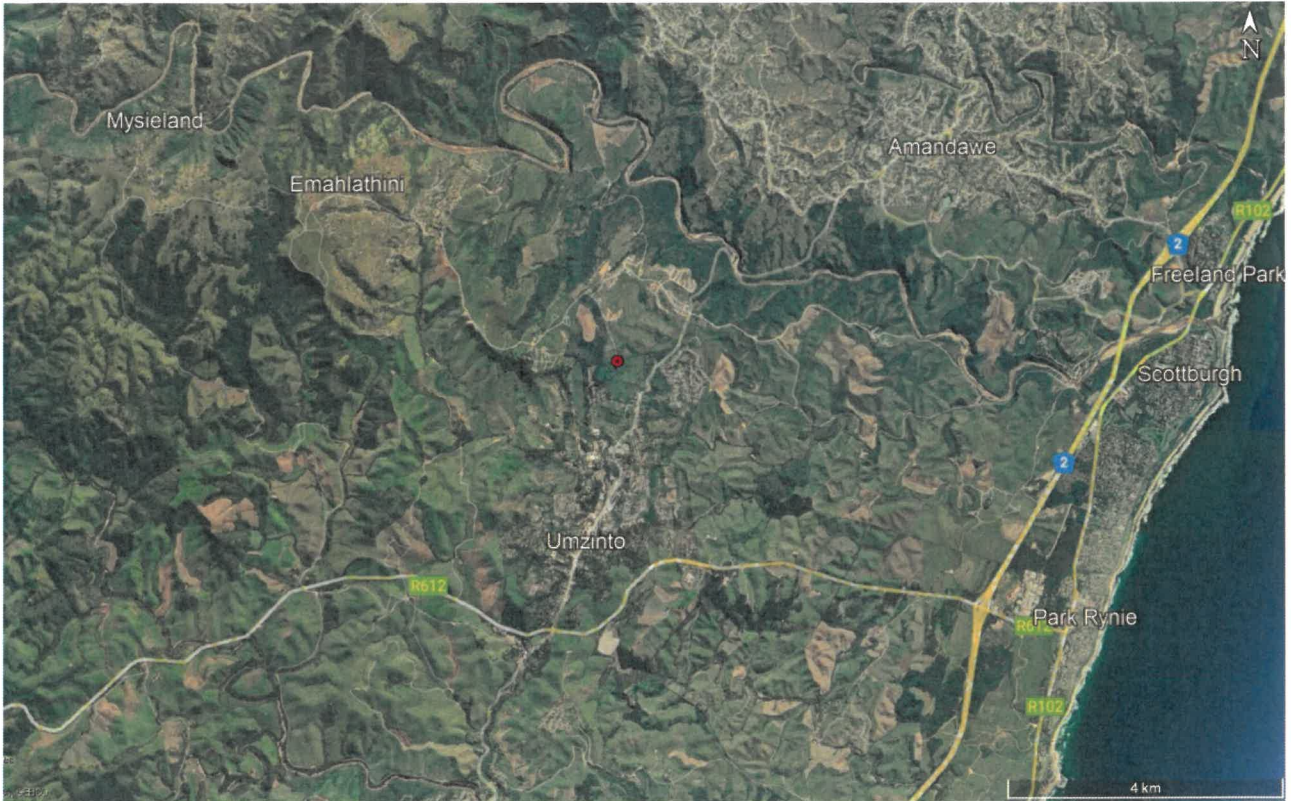


Figure 1. The locality of the proposed mast (red circle) north of Umzinto.

2 Project description

The proposed project is the establishment of an approximately 45 metre high telecommunications mast and associated base station infrastructure. The base station will be approximately 100m² in size and will be fenced off.

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



Figure 2. Satellite image map of the site.

3 Site sensitivity verification

The screening tool classifies agricultural sensitivity according to only two independent criteria – the land capability rating and whether the land is cropland or not. A map of the proposed development site overlaid on the screening tool sensitivity is given in Figure 3. On the screening tool, the site is not classified as cropland and agricultural sensitivity is therefore purely a function of land capability. However, the data set used by the screening tool is outdated. Figure 2 clearly shows that the site is within a sugar cane field.

The classified land capability of the site is 6 to 7 (low–moderate). However, this site sensitivity verification verifies the site as being of high agricultural sensitivity because of its cropland status. All cropland is by definition, high agricultural sensitivity.

4 Baseline agricultural environment

The site has a high mean annual rainfall of approximately 1,017 mm (Schulze, 2009). The site is on a steep slope with a gradient of approximately 25%. The site falls within the land type, Fa591. The geology is sandstone of the Natal Group, tillite of the Dwyka Formation and granite. Soils are predominantly shallow to moderately deep, loamy soils on underlying weathered rock of the Cartref and Glenrosa soil forms. The cropping potential of the site is likely to be limited to some extent by the soil depth.



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)

5 Assessment of agricultural impact

An agricultural impact is a change to the future production potential of land, in this case through the occupation of the land by the footprint of the proposed development. The significance of the agricultural impact is directly proportional to the extent of the change in production potential.

When the agricultural impact of a development involves the permanent or long term occupation of agricultural land, as it does in this case, the focus and defining question of the agricultural impact assessment is:

Does the loss of future agricultural production potential that will result from this development, justify keeping the land solely for agricultural production and therefore not approving the development?

If the loss is small, then it is unlikely to justify non approval. If the loss is big, then it is likely to justify it.

The extent of the loss is a direct function of two things, firstly the amount of land that will be lost and secondly, the production potential of the land that will be lost. The amount of land in this case is only 100 m². However, the occupied land is suitable for the production of sugar cane and so the development will result in some loss of production potential.

An Agricultural Compliance Statement is not required to formally rate agricultural impacts. It is only required to indicate whether or not the proposed development will have an unacceptable impact on the agricultural production capability of the site. Nevertheless, the agricultural impact of the proposed development is assessed as being of medium significance. This is because there will be some loss of future agricultural production potential as a result of the proposed development, even though the area of impacted land is small.

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The impact of the proposed development on the agricultural production capability of the site is assessed as being acceptable, if there is not a suitable alternative site for the mast that would be off cropland. Although the impacted site is small, there will be some loss of future agricultural production potential. If there is no suitable alternative site, then it is recommended that the proposed development be approved.

An effective system of storm water management, which will prevent accumulation of water and down slope erosion, must be in place.

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 is required for this application.

A handwritten signature in black ink, appearing to read 'J. Lanz', with a long horizontal stroke extending to the left.

J. Lanz (Pr. Sci.Nat.)

4 November 2022

7 References

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.

Schulze, R.E. 2009. SA Atlas of Climatology and Agrohydrology, 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.

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*.

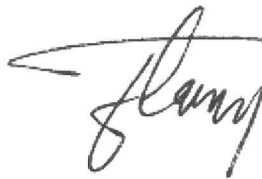
DECLARATION OF THE SPECIALIST

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: **4 November 2022**

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