

**Site sensitivity verification
and Agricultural Compliance Statement
for proposed phase 2 servicing to the 18 Founders' Estates
on Boschendal Estate**

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1. Introduction

Environmental authorisation is being sought for the above project (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, due to the activity being linear, 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 is to assess whether or not the proposed development will have an unacceptable agricultural impact, and based on this, to make a recommendation on whether or not it should be approved.

The purpose of including an agricultural component in Environmental Authorisation is to ensure that South Africa balances the need for development against the need to ensure the conservation of the natural agricultural resources, including land, required for agricultural production and national food security. The aim of the agricultural protocol of NEMA is primarily to preserve the agricultural production potential of scarce arable land by ensuring that development does not exclude agricultural production from such land or impact it to the extent that the crop production

potential is reduced. However, this project poses an insignificant threat to agricultural production potential.

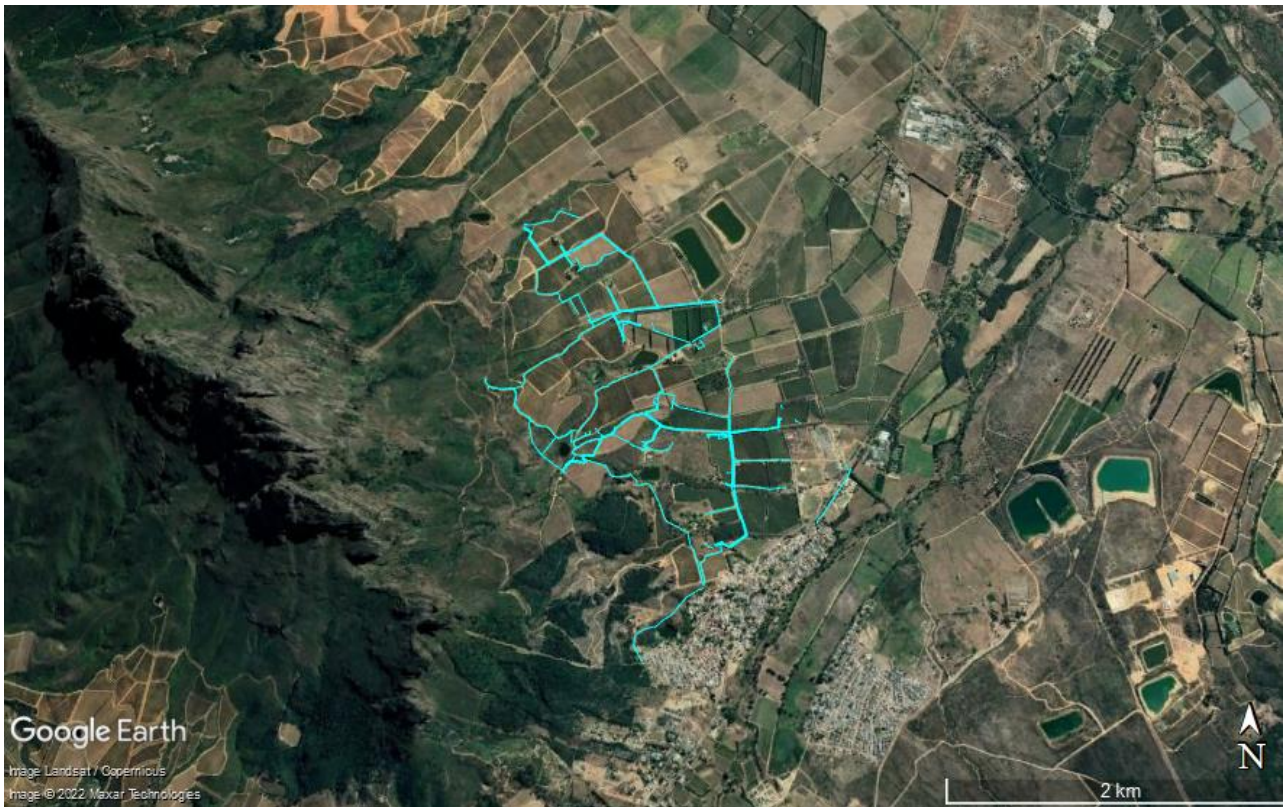


Figure 1. The locality of the project on Boschendal Estate. The lines in the figure include all the different kinds of linear infrastructure.

2. Project description

Boschendal (Pty) Ltd (the proponent) has acquired the land use rights to the subdivision and development of eighteen so-called Founders' Estates on a portion of its landholdings. These are not included in the scope of this environmental application. The subject of this environmental application is the servicing of the estates which entails the installation of services beyond existing roadway, and/or close to, within or across watercourses, which in some areas would entail the clearance of indigenous vegetation. These services include potable water, sewer, electricity, irrigation, fibre internet and stormwater infrastructure. The scope also includes the development of new sections of roadway.

A satellite image map of the project is shown in Figure 2. There is no difference between the agricultural impacts of any of the buried lines, so it is unnecessary to distinguish between them in this assessment. All stormwater infrastructure runs along proposed roadways.

3. Site sensitivity verification

Agricultural sensitivity, in terms of environmental impact, and as used in the national web-based

environmental screening tool, is a direct function of the capability of the land for agricultural production. The screening tool classifies agricultural sensitivity according to only two independent criteria – the land capability rating and whether the land is used for cropland or not. All cropland is classified as at least high sensitivity, based on the logic that if it is under crop production, it is indeed suitable for it, irrespective of its land capability rating.

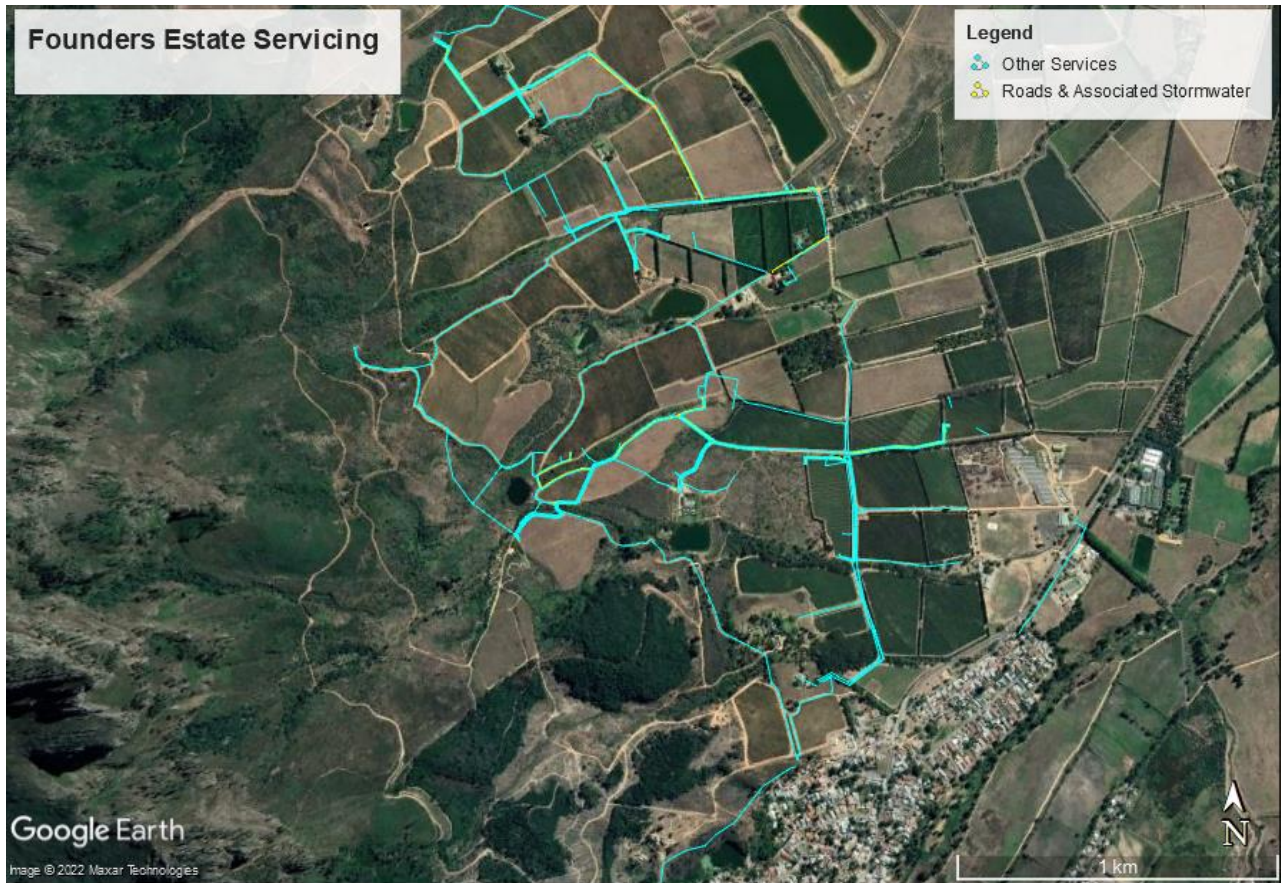


Figure 2. Detailed satellite image map of the project.

It is important to recognise that the agricultural sensitivity of land, in terms of a particular development, is not only a function of the screening tool sensitivity, but is also a function of the severity of the impact which that development poses to agriculture. This is not recognised in the screening tool classification of sensitivity. So, for example, the sensitivity of an agricultural environment to underground pipes and cables is not what the screening tool classifies the sensitivity as, because most agricultural environments have a very low sensitivity to underground pipes and cables because these have negligible agricultural impact, regardless of the agricultural production potential of the land that they cross. Agricultural production can continue unhindered above the pipes and cables once they are buried. Therefore, in the context of the development of underground pipes and cables, almost no land can be considered to have high agricultural sensitivity.

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as at least high sensitivity, based on the logic that if it is under crop production, it is indeed suitable for it, irrespective of its land capability rating.

The screening tool sensitivity categories in terms of land capability are based upon the Department of Agriculture's updated and refined, country-wide land capability mapping, released in 2016. The data is generated by GIS modelling. Land capability is defined as the combination of soil, climate and terrain suitability factors for supporting rain fed agricultural production. It is an indication of what level and type of agricultural production can sustainably be achieved on any land, based on its soil, climate and terrain.

A map of the proposed development area overlaid on the screening tool sensitivity is given in Figure 3. The land capability of the site on the screening tool is predominantly 9 and 10, but varies from 7 to 11. Values of 7 to 8 translate to a medium agricultural sensitivity, values of 9 to 10 translate to a high agricultural sensitivity, and values of 11 translate to a very high agricultural sensitivity. Additionally, much of the general site area is classified as very high sensitivity because it is under vineyards and orchards, although the proposed infrastructure is largely located on farm roads between the vineyards and orchards.

The agricultural sensitivity of the general area, as identified by the screening tool, is confirmed by this assessment because the climate, terrain and soils correspond to the classified categories of land capability and the land is suitable as vineyard and orchard land. However, the agricultural capability of the large scale location of the infrastructure is limited (see following section), and, as noted above, the severity of the impact that this project poses to agriculture is low regardless of sensitivity, and as a result the screening tool sensitivity is largely irrelevant to the agricultural impact of this project.

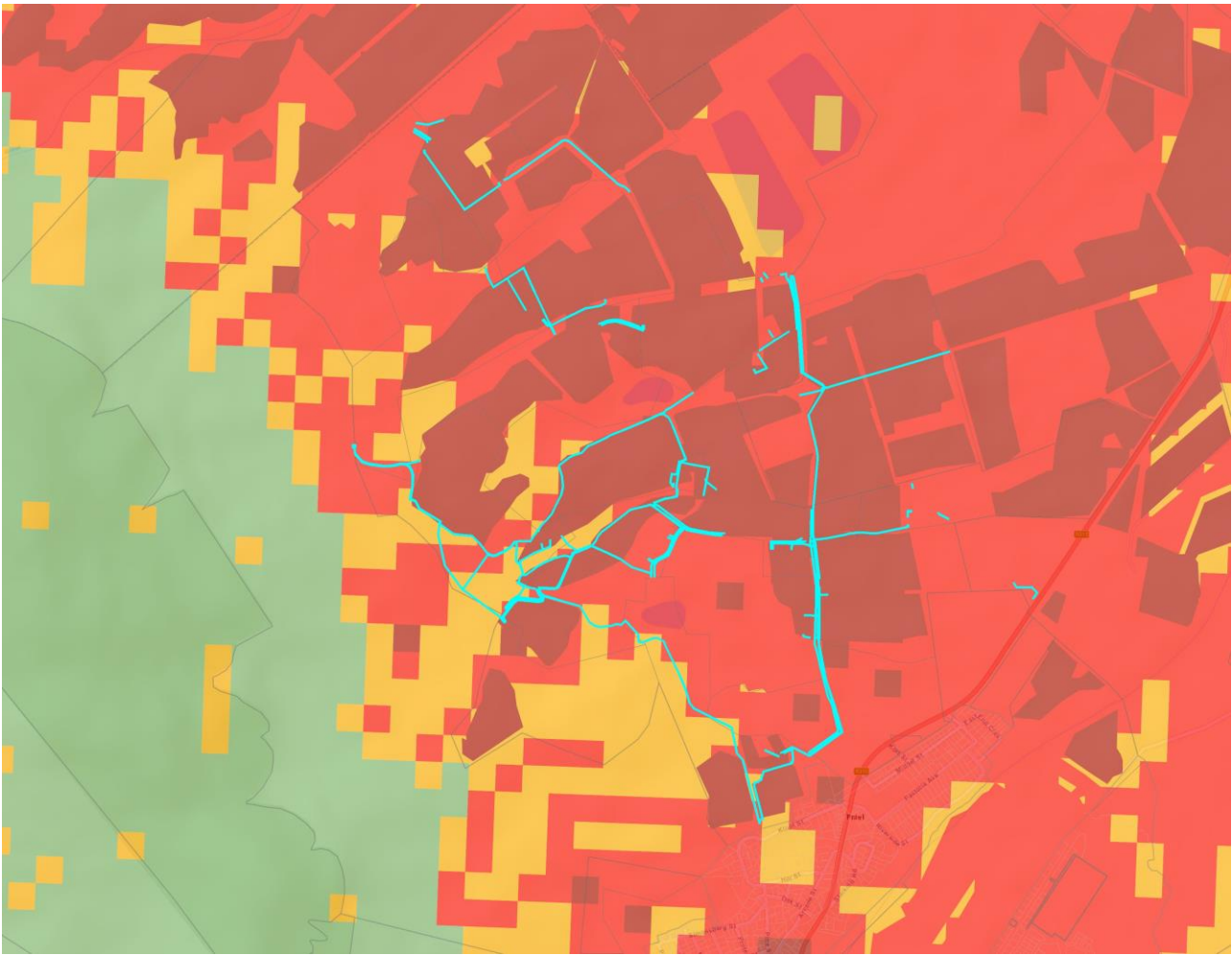


Figure 3. The various service routes (light blue lines) overlaid on agricultural sensitivity as identified by the screening tool (green = low; yellow = medium; red = high; dark red = very high).

4. Assessment of agricultural impact

An agricultural impact is a change to the future agricultural production potential of land. In this case most of the impacted land has no real potential for agricultural production because it is located on the necessary parts of a functioning fruit and wine farm that are between vineyards and orchards, predominantly on farm roads. Impacts to this land cannot therefore affect agricultural production. All proposed roadways and the bioremediation basins are located on non-production land.

Furthermore, as noted above, underground pipes and cables pose minimal threat to agricultural production potential which can continue completely unhindered above them once they are buried. So even where pipes and cables are required to cross under production land, there is insignificant agricultural impact. The burying of irrigation lines in vineyards and orchards is a routine part of all fruit and wine farms and has no negative agricultural impact as long as standard, best practice mitigation measures are applied.

5. Environmental management program inputs

The following steps must be implemented for mitigation of impact where excavation for services is located outside of farm roads:

1. When excavating for the pipeline, the upper 40cm of topsoil must be excavated first and stockpiled.
2. The subsoil must then be excavated and stockpiled **separately** from the topsoil stockpile.
3. When the trench is refilled after the pipeline is installed, the subsoil must first be backfilled into the trench.
4. Thereafter, the stockpiled topsoil must be evenly spread at the surface on top of the subsoil.

6. Agricultural Compliance Statement

An Agricultural Compliance Statement is required to indicate whether or not 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. This is firstly because the actual location of the infrastructure is predominantly on non-productive farm land. Secondly, even where pipes and cables are required to cross under production land, they pose minimal threat to agricultural production potential which can continue completely unhindered above them once they are buried. The proposed project therefore has insignificant agricultural impact.

The services have been laid out to largely follow routes on non-productive farmland and therefore 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 confirmed.

The conclusion of this assessment on the acceptability of the proposed development and the recommendation for its approval is not subject to any conditions other than recommended mitigation. 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 overleaf.

A handwritten signature in black ink, appearing to read 'J. Lanz', with a stylized, flowing script.

J. Lanz (Pr. Sci.Nat.)

9 May 2022

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:

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

Date: **9 May 2022**

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