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Appendix G.11 Social Impact Assessment

Appendix G.1 Soil, Land Use and Land Capability and Agricultural Potential Assessment

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AGRICULTURAL COMPLIANCE STATEMENT
FOR
THE PROPOSED IGOLIDE WEF ELECTRICAL GRID INFRASTRUCTURE
NEAR FOCHVILLE, GAUTENG PROVINCE

Report by
Johann Lanz

1 July 2024

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EXECUTIVE SUMMARY

The overall conclusion of this assessment is that the proposed development is acceptable because it can provide benefits to agriculture but leads to no loss of potential cropland and therefore minimal loss of future agricultural production potential.

This assessment disputes the high sensitivity classification of the switching station by the screening tool and rates it as being of medium agricultural sensitivity with a maximum land capability of 7 because of its assessed agricultural production potential and current agricultural land use.

Although cropping occurs in the area (on better soils that are off the ridge line), and occurred on the site many years ago, the cropping potential of the site is constrained predominantly by shallow, rocky soils that dominate the higher lying land on the ridge line where the switching station and turbines are situated. Because of these constraints, the site is unsuitable for viable rainfed crop production and its viable agricultural use is limited to grazing.

An agricultural impact is a change to the future agricultural production potential of land. This is primarily caused by the exclusion of agriculture from the footprint of the development. In this case, the entire switching station footprint is considered to be below the threshold for needing to be conserved as agricultural production land because of the limitations that make it unsuitable as viable cropland. The use of this land for non-agricultural purposes will result in minimal loss of agricultural production potential in terms of national food security. The proposed overhead power line has negligible agricultural impact, regardless of its route and design and the agricultural potential and sensitivity of the land it crosses.

Due to the facts that the switching station will exclude only a small area of land from agricultural production, will not occupy scarce, viable cropland, and that its negative impact is offset by economic benefits to farming from the associated wind energy facility, the overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed here as being of low significance and as acceptable.

From an agricultural impact point of view, it is recommended that the proposed 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.

1 INTRODUCTION

Environmental authorisation is being sought for the proposed Igolide Wind Energy Facility (WEF) Electrical Grid Infrastructure (EGI) near Fochville, Gauteng Province (see location in Figure 1).
The proposed Project is located approximately 6 km northeast of Fochville, within the Merafong City Local Municipality in Gauteng Province. The entire extent of the Project is located within the Central Corridor of the Strategic Transmission Corridors.
The proposed development will be constructed on the following farm portions:

- Portion 20 of Kraalkop 147 IQ
- Portion 31 of Kraalkop 147 IQ
- Portion 45 of Kraalkop 147 IQ
- Porton 46 of Kraalkop 147 IQ
- Portion 53 of Kraalskop 147 IQ
- Portion 68 of Kraalkop 147 IQ
- Portion 11 of Leeuwpoort 356 IQ
- Portion 77 of Leeuwpoort 356 IQ

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, because the power line is linear infrastructure with minimal agricultural impact and the substations are located on land of medium agricultural sensitivity, the level of agricultural assessment required by the agricultural protocol is an Agricultural Compliance Statement.

Figure 1. *Locality map of the assessed EGI corridor, substation & switching station (blue lines) south of East Village.*

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

> Will the proposed development cause a significant reduction in 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 8 of this report. Sections 8 and 9 of this report directly address the above question and therefore contain the essence and most important part of the agricultural impact assessment.

As is shown in Section 9, this assessed development will not result in any loss of viable arable land and therefore poses minimal threat to agricultural production potential.

2 PROJECT DESCRIPTION

ENERTRAG South Africa (Pty) Ltd is proposing to develop a 132kV switching station, a 132kV single

or double circuit powerline, and termination point upgrades (as may be necessary), including possible expansion, to allow for the proposed new 132kV powerline connection (hereafter the "Project"). The Project is intended to feed the electricity generated by the approved 100MW Igolide Wind Energy Facility ("WEF") (DFFE reference number: 14/12/16/3/3/2/2385, EA date 31 January 2024) to the national energy grid, with the point of connection being the existing East Drie Five Substation.

The project includes the following components:

- Construction of 1 x 132kV powerline (either single or double circuit). A corridor of up to 250m in width (125m on either side of the centre line) has been identified for the placement of the up to 132kV single or double circuit power line to allow flexibility in the design of the final powerline route, and for the avoidance of sensitive environmental features (where possible).
- Construction of 1 x 132kV switching station. The switching station assessment site is ~2.5ha as the switching station will be located adjacent to the approved 33/132kV on-site IPP substation (DFFE reference number: 14/12/16/3/3/2/2385, EA date 31 January 2024) which was assessed as part of the Igolide WEF Environmental Authorisation process. A 500m buffer around the switching station has been identified to ensure flexibility in routing the powerline.
- Upgrading of the East Drie Five Substation to accommodate the powerline from the Igolide WEF (feeder bay and transformer upgrade), including expansion within the yard, where required, with a footprint of up to 4ha.

The detail of the power line design is irrelevant to agricultural impact because the impact of the power line will be negligible, irrespective of different design options. A power line corridor is not considered to be part of the agricultural footprint of a renewable energy facility in NEMA's agricultural protocol.

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 stipulated in the agricultural protocol, are listed below, and the section number of this report which fulfils each stipulation is given after it in brackets.

1. The Agricultural Compliance Statement must be prepared by a soil scientist or agricultural specialist registered with the South African Council for Natural Scientific Professions

(SACNASP) **(Appendix 3)**.

2. The compliance statement must:
    1. be applicable to the preferred site and proposed development footprint **(Figures 2 and 3)**;
    2. confirm that the site is of "low" or "medium" sensitivity for agriculture **(Section 7)**; and
    3. indicate whether or not the proposed development will have an unacceptable impact on the agricultural production capability of the site **(Section 12)**.
3. The Agricultural Compliance Statement must contain, as a minimum, the following information:
    1. details and relevant experience as well as the SACNASP registration number of the soil scientist or agricultural specialist preparing the statement including a curriculum vitae **(Appendix 1)**;
    2. a signed statement of independence by the specialist **(Appendix 2)**;
    3. a map showing the proposed development footprint (including supporting infrastructure) with a 50 m buffered development envelope, overlaid on the agricultural sensitivity map generated by the screening tool **(Figure 2)**;
    4. confirmation from the specialist that all reasonable measures have been taken through micro-siting to avoid or minimize fragmentation and disturbance of agricultural activities **(Section 11.1)**;
    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)**;
    6. any conditions to which this statement is subjected **(Section 12)**;
    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)**;
    8. where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMPr **(Section 10)**; and
    9. a description of the assumptions made and any uncertainties or gaps in knowledge or data **(Section 5)**.

4 METHODOLOGY OF STUDY

The assessment was based on an on-site investigation of the soils and agricultural conditions conducted on 14 October 2021. 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:

1. ground-truth cropland status;
2. ground truth the land type soil data.

3. gain an understanding of overall agricultural production potential across the site.

Soils were assessed based on the investigation of existing soil exposures in combination with indications of the surface conditions and topography. Soils were classified according to the South African soil classification system (Soil Classification Working Group, 1991). An interview was also conducted with the farmer for information on farming practices on the site.

An assessment of soils and 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 APPLICABLE LEGISLATION AND PERMIT REQUIREMENTS

This section identifies all applicable legislation and permit requirements over and above what is required in terms of NEMA.

The switching station requires approval from the National Department of Agriculture, Land Reform and Rural Development (DALRRD) because it is on agriculturally zoned land. This approval is separate to the Environmental Authorisation. There are two approvals that apply. The first is a No Objection Letter for the change in land use. This letter is one of the requirements for receiving municipal rezoning. This application requires a motivation backed by good evidence that the development is acceptable in terms of its impact on the agricultural production potential of the development site. This agricultural assessment report will serve that purpose.

The second approval is a consent for long-term lease required in terms of the Subdivision of Agricultural Land Act (Act 70 of 1970) (SALA). SALA approval is not required if the lease is over the entire farm portion. If DALRRD approval for the development has already been obtained in the form of the No Objection letter, then SALA approval is likely to be readily forthcoming. SALA approval can only be applied for once the Municipal Rezoning Certificate and Environmental Authorisation has been obtained.

Rehabilitation after disturbance to agricultural land is managed by the Conservation of Agricultural Resources Act (Act 43 of 1983 - CARA). A consent in terms of CARA is required for the cultivation of virgin land. Cultivation is defined in CARA as “any act by means of which the topsoil is disturbed

mechanically". The purpose of this consent for the cultivation of virgin land is to ensure that only land that is suitable as arable land is cultivated. Therefore, despite the above definition of cultivation, disturbance to the topsoil that results from construction of infrastructure does not constitute cultivation as it is understood in CARA. This has been corroborated by Anneliza Collett (Acting Scientific Manager: Natural Resources Inventories and Assessments in the Directorate: Land and Soil Management of the Department of Agriculture, Land Reform and Rural Development (DALRRD)). The construction and operation of the facility will therefore not require consent from the Department of Agriculture, Land Reform and Rural Development in terms of this provision of CARA.

Power lines require the registration of a servitude for each farm portion crossed. In terms of the Subdivision of Agricultural Land Act (Act 70 of 1970) (SALA), the registration of a power line servitude requires written consent of the Minister unless either of the following two conditions apply:

- if the servitude width does not exceed 15 metres; and
- if Eskom is the applicant for the servitude.

If one or both conditions apply, then no agricultural consent is required. The second condition is likely to apply, even if another entity gets Environmental Authorisation for and constructs the power line, but then hands it over to Eskom for its operation. Eskom is currently exempt from agricultural consent for power line servitudes.

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). Agricultural sensitivity is an indication of the capability of the land for agricultural production, based only on its climate, terrain, and soil capabilities and its agricultural land use. The different categories of agricultural sensitivity indicate the priority by which land should be conserved as agricultural production land. However, the screening tool's agricultural sensitivity is often of very limited value for assessing agricultural impact. What is of importance to an agricultural assessment, rather than the site sensitivity verification, is its assessment of the cropping potential and its assessment of the impact significance, both of which are not necessarily correlated with sensitivity.

The screening tool classifies agricultural sensitivity according to two independent criteria, from two independent data sets, both of which may be indicators of the land's agricultural production potential but are limited in that the first is outdated and the second is fairly course, modelled data. The two criteria are:

1. whether the land is classified as cropland or not on the field crop boundary data set (Crop

Estimates Consortium, 2019), and

2. its land capability rating on the land capability data set (DAFF, 2017)

All classified cropland is, by definition, either high or very high sensitivity. Land capability is defined as the combination of soil, climate, and terrain suitability factors for supporting rain-fed agricultural production. It is rated by the Department of Agriculture's updated and refined, country-wide land capability mapping (DAFF, 2017). The higher land capability values (≥8 to 15) are likely to indicate suitability as arable land for crop production, while lower values (<8) are likely to only be suitable as non-arable grazing land. The direct relationship between land capability rating, agricultural sensitivity, and rain-fed cropping suitability is shown in Table 1.

Table 1: Relationship between land capability, agricultural sensitivity, and rain-fed cropping suitability.

Land capability value	Agricultural sensitivity	Rain-fed cropping suitability
1 - 5	low	Unsuitable
6 - 8	medium	Unsuitable to marginally suitable
9 - 10	high	Suitable
11 - 15	very high	Suitable

The agricultural sensitivity of the site, as classified by the screening tool, is shown in Figure 2. However, the screening tool sensitivity requires specialist verification because of the limitations of the data sets on which it is based.

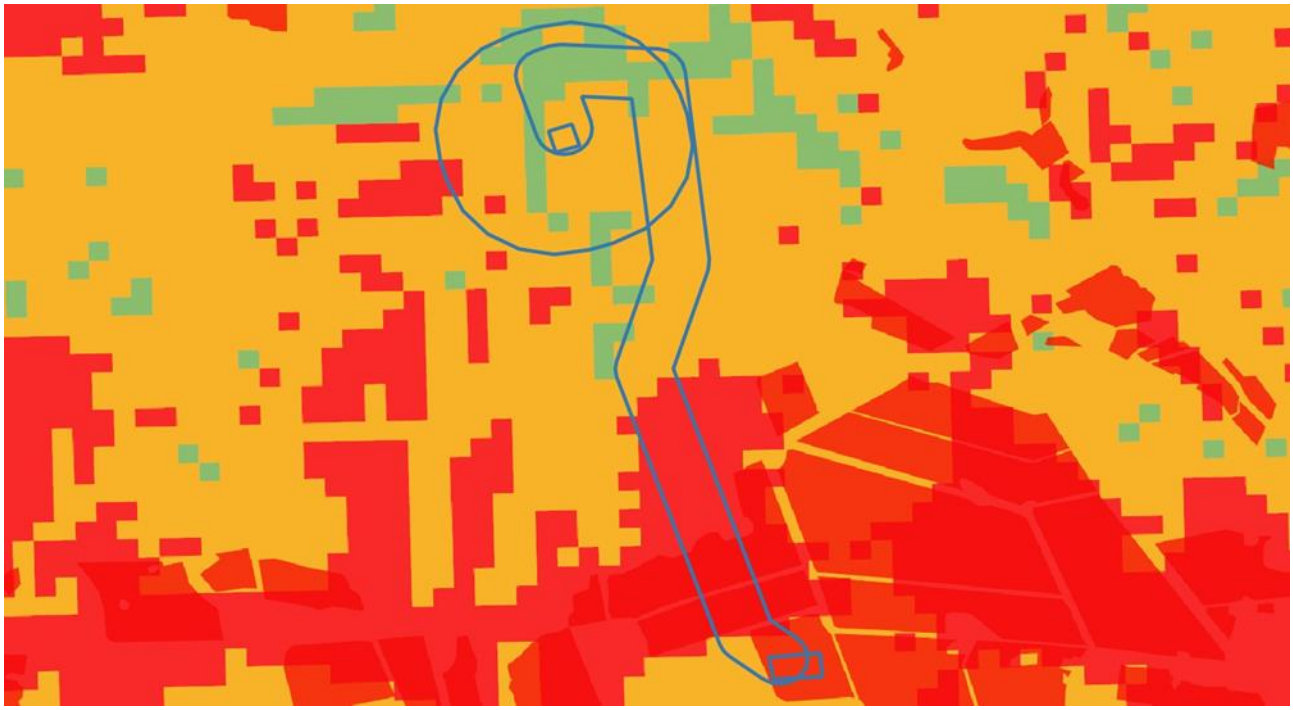

Figure 2. *The grid corridor, substation and switching station overlaid on agricultural sensitivity, as*

classified by the screening tool (green = low; yellow = medium; red = high; dark red = very high). The screening tool's high sensitivity of the switching station footprint is disputed by this assessment, which rates it as being of medium agricultural sensitivity.

Note that there will be no agricultural impact associated with any development at the existing East Drie Five substation because it is non-agricultural land. That part of the site and of the development does not therefore need to be addressed in this report.

This verification of sensitivity for the switching station footprint addresses both components that determine it, namely cropping status and land capability. The screening tool classifies the footprint as high agricultural sensitivity. The high sensitivity classification is due to the land being classified as cropland.

However, the data set used by the screening tool to classify cropland is outdated. All land across the footprint is no longer used or viable as cropland. This land should not, therefore, still be classified as cropland and allocated high sensitivity because of it. This assessment therefore disputes the high sensitivity rating by the screening tool that is based on cropping status.

The classified land capability of the footprint ranges from 6 to 8. This assessment disputes a classified land capability of >7, based on an assessment that the site is unsuitable for viable rain-fed crop production (see Section 8). The appropriate land capability of land that is unsuitable for viable rain-fed crop production is ≤7 because the relationship between land capability and agricultural production potential is such that a land capability of >7 should denote land that is suitable (or at least marginal) for viable rain-fed crop production (see Table 1). This assessment therefore rates the entire proposed footprint as having a maximum land capability of 7.

In conclusion, this assessment disputes the high sensitivity classification of the switching station by the screening tool and rates it as being of medium agricultural sensitivity with a maximum land capability of 7 because of its assessed agricultural production potential and current agricultural land use.

The screening tool sensitivity of a power line corridor has very little relevance to the assessment of its agricultural impact because the impact is negligible (see Section 9), regardless of the agricultural sensitivity of the land which it crosses. The agricultural sensitivity of the corridor, as classified by the screening tool, is included in Figure 2. It ranges from low to high sensitivity. This assessment disputes the high sensitivity classification by the screening tool because of the current agricultural land use and land capability of the corridor and rates it as being medium agricultural sensitivity.

8 BASELINE DESCRIPTION OF THE AGRO-ECOSYSTEM

The purpose of this section is firstly to present the baseline information that controls the agricultural production potential of the site and then to assess that potential. 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 (see Section 9). However, in the case of a power line, one of the three factors, namely total footprint of land that will be lost to agriculture, is negligible and therefore determines the significance of the impact as negligible, regardless of what the value of the other two factors might be. The agricultural production potential of the corridor is therefore irrelevant. In this case, the agricultural production potential of the land is limited to only being suitable as grazing land, anyway, and only used as such, which means that agricultural activity along the grid corridor is completely unaffected.

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

The switching station falls within an area that is classified as a Protected Agricultural Area (PAA) (DALRRD, 2020). A PAA is a demarcated area in which the climate, terrain, and soil are generally conducive for agricultural production and which, historically, has made important contributions to the production of the various crops that are grown across South Africa. Within PAAs, the protection, particularly of arable land, is considered a priority for the protection of food security in South Africa. However, PAAs are demarcated broadly, not at a fine scale, and there may therefore be much variation of agricultural production potential 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. The proposed development footprint is located on land that is not suitable for cropland (see Section 8.1). This land does not therefore deserve prioritised protection as agricultural production land (see Section 9.1), even though it is within a demarcated PAA.

8.1 Assessment of the agricultural production potential

This assessment of the agricultural production potential of the switching station is based on an integration of the existing agricultural potential data and the on-site soil investigation.

Although cropping occurs in the area (on better soils that are off the ridge line), and occurred on the site many years ago, the cropping potential of the site is constrained predominantly by shallow, rocky soils that dominate the higher lying land on the ridge line where the switching station and turbines are situated. Because of these constraints, the site is unsuitable for viable rainfed crop production and its viable agricultural use is limited to grazing.

Although rain-fed cropping may have been done on the site in the past, it is no longer economically viable. It should be noted that cropping potential changes with a changing agricultural economy over time. Poorer lands that may have been cropped with economic viability in the past, are abandoned

as cropland because they become too marginal for viable crop production in a more challenging agricultural economy, with increased input costs.

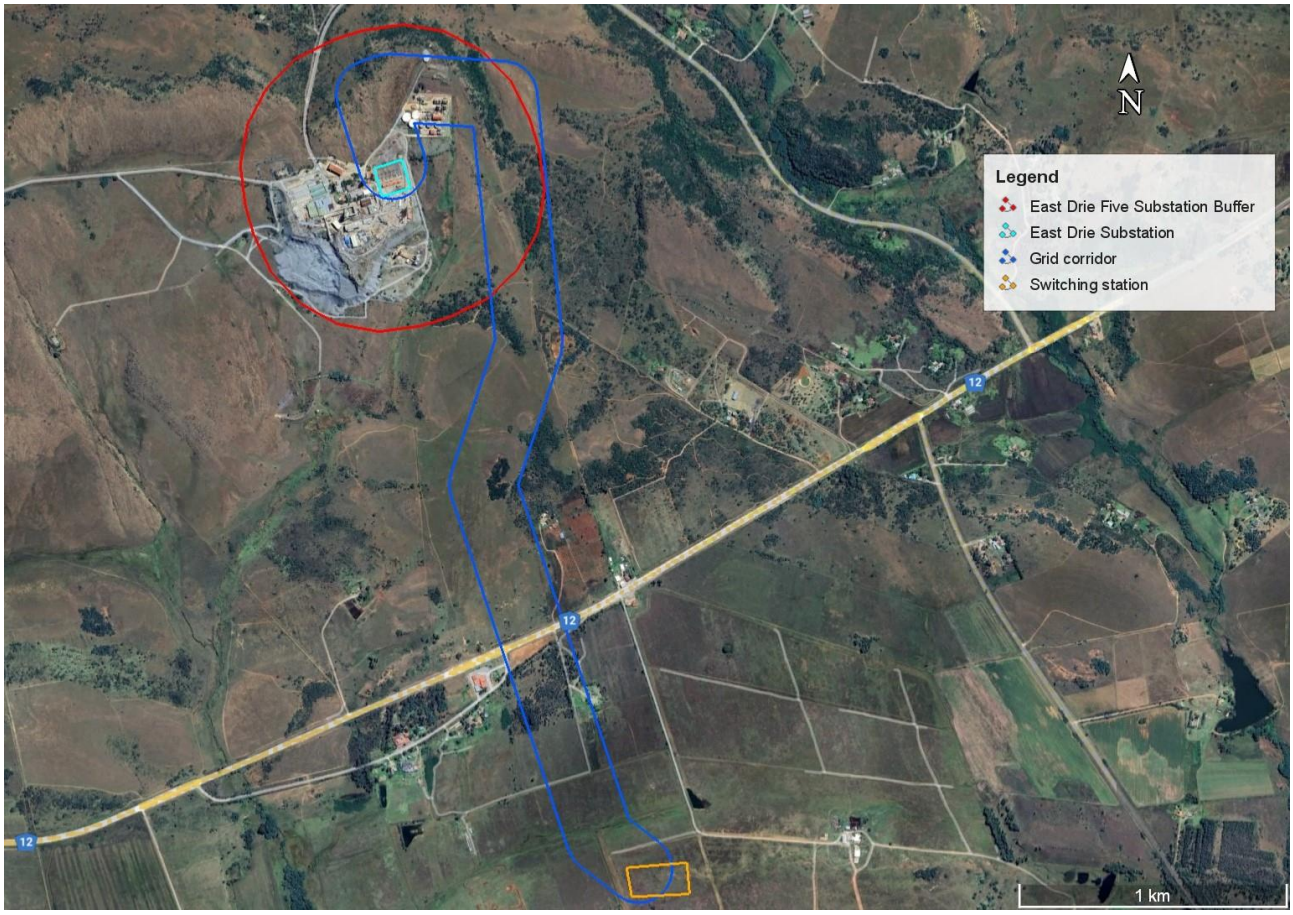

Figure 3. *Satellite image map of the proposed grid corridor, switching station, substation & its buffer.*

9 ASSESSMENT OF AGRICULTURAL IMPACT

9.1 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. In most developments this is primarily caused by the exclusion of agriculture from the footprint of the development. Soil erosion and degradation may also contribute to loss of agricultural production potential. The significance of an agricultural impact is a direct function of the following three factors:

1. the size of the footprint of land from which agriculture will be excluded (or the footprint that will have its potential decreased)

2. the baseline production potential (particularly cropping potential) of that land
3. the length of time for which agriculture will be excluded (or for which potential will be decreased).

The most significant loss of agricultural land possible, for any development anywhere in the country, is of high yielding cropland, and the least significant possible, is of low carrying capacity grazing land.

Cropping potential is highlighted in factor 2, above, because the threshold, above which it is a priority to conserve land for agricultural production, is determined by the scarcity of arable crop production land in South Africa (approximately only 13% of the country's surface area) and the relative abundance of the rest of agricultural land across the country that is only good enough to be used for grazing. If land can support viable and sustainable crop production, then it is considered to be above the threshold and is a priority for being conserved as agricultural production land. If land is unable to support viable and sustainable crop production, then it is considered to be below the threshold and of much lower priority for being conserved.

In this case, the entire switching station footprint is considered to be below the threshold for needing to be conserved as agricultural production land because of the limitations that make it unsuitable as viable cropland. The use of this land for non-agricultural purposes will result in minimal loss of agricultural production potential in terms of national food security.

Due to the facts that the switching station will exclude only a small area of land from agricultural production, will not occupy scarce, viable cropland, and that its negative impact is offset by economic benefits to farming from the associated wind energy facility, the overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed here as being of low significance and as acceptable.

The proposed overhead power line has negligible agricultural impact, regardless of its route and design and the agricultural potential and sensitivity of the land it crosses. The agricultural impact of a power line is negligible in almost all environments but is even more so where agricultural land use is predominantly grazing, which it is in the environment that is the subject of this assessment. All possible agricultural activities can continue entirely unhindered underneath the power line. The direct, permanent, physical footprint that has any potential to interfere with agriculture (pylon bases and servitude track where it is needed (no servitude track is required in croplands), is insignificantly small. The only potential source of impact of the power line is minimal disturbance to the land (erosion and topsoil loss) during construction (and decommissioning). This impact can be completely prevented with standard, generic mitigation measures that are all inherent in the project engineering and/or are standard, best-practice for construction sites, and are included in the EMPr. The power line development will result in negligible loss of future agricultural production potential and its agricultural impact is therefore assessed as being of very low significance.

9.2 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.

The most important concept related to a cumulative impact is that of an acceptable level of change to an environment. A cumulative impact only becomes relevant when the impact of the proposed development will lead directly to the sum of impacts of all developments causing an acceptable level of change to be exceeded in the surrounding area. If the impact of the development being assessed does not cause that level to be exceeded, then the cumulative impact associated with that development is not significant.

The potential cumulative agricultural impact of importance is a regional loss (including by degradation) of future agricultural production potential. The defining question for assessing the cumulative agricultural impact is this:

> What loss of future agricultural production potential is acceptable in the area, and will the loss associated with the proposed development, when considered in the context of all past, present or reasonably foreseeable future impacts, cause that level in the area to be exceeded?

Due to its negligible agricultural impact, the assessed power line cannot exceed acceptable levels of change in terms of agricultural land loss, no matter how many power lines exist and are proposed. It therefore makes no sense to conduct a more formal assessment of cumulative impacts as per DFFE requirements. The cumulative impact of the power line can confidently be assessed as being of very low significance and therefore as acceptable. Because the switching station has low impact on non-cropland, its cumulative impact to loss of future agricultural production potential is also of very low significance. The development will not have an unacceptable negative impact on the agricultural production capability of the area, and it is therefore recommended, from a cumulative agricultural impact perspective, that the development be approved.

9.3 Assessment of alternatives

Specialist assessments for environmental authorisation are required to assess the impacts of alternatives, including the no-go alternative. Because of the insignificant agricultural impact of the power line, there can be no material difference between the agricultural impacts of any route

alternatives within the corridor. All have insignificant agricultural impact and are considered equally acceptable in terms of agricultural impact.

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, but this is not significantly different from the very low impact of the development, and so from an agricultural impact perspective, there is no preferred alternative between the no-go and the development. However, the no-go option would prevent the proposed development plus the dependent renewable energy development, which cannot operate without a grid connection, from contributing to the environmental, social, and economic benefits associated with the development of renewable energy in South Africa.

10 MITIGATION MEASURES

The most important and effective mitigation of agricultural impacts for any development is avoidance of viable, potential cropland. This development has already applied this mitigation by selecting a site on which there is no viable, potential cropland.

There are no additional mitigation measures required, over and above what has already been included in the *Generic Environmental Management Programme (EMPr) For The Development And Expansion For Overhead Electricity Transmission And Distribution Infrastructure* and the *Generic Environmental Management Programme (EMPr) For Substation Infrastructure For The Transmission And Distribution Of Electricity,* as per Government Notice 435, which was published in Government Gazette 42323 on 22 March 2019.

11 ADDITIONAL ASPECTS REQUIRED IN AN AGRICULTURAL ASSESSMENT

11.1 Micro-siting

The agricultural protocol requires confirmation that all reasonable measures have been taken through micro-siting to minimize fragmentation and disturbance of agricultural activities. The micro-siting of the power line within the corridor will make no material difference to agricultural impacts and disturbance. The choice of the switching station has already avoided viable cropland. Further micro-siting will make no material difference to agricultural impacts and disturbance.

11.1 Confirmation of linear activity exclusion

If linear infrastructure has been given exclusion from complying with certain requirements of the agricultural protocol because of its linear nature, the protocol requires confirmation that the land

impacted by that linear infrastructure can be returned to the current state within two years of completion of the construction phase. The overhead power line is the only linear component of the project, to which this provision is applicable. It is hereby confirmed that the land under the overhead power line, where it is not occupied by other facility infrastructure, can be returned to the current state of agricultural production potential within two years of construction, with the obvious disclaimer that the pylons will continue to be present for the duration of the operational lifetime of the power line.

12 CONCLUSIONS

The overall conclusion of this assessment is that the proposed development is acceptable because it can provide benefits to agriculture but leads to no loss of potential cropland and therefore minimal loss of future agricultural production potential.

This assessment disputes the high sensitivity classification of the switching station by the screening tool and rates it as being of medium agricultural sensitivity with a maximum land capability of 7 because of its assessed agricultural production potential and current agricultural land use.

Although cropping occurs in the area (on better soils that are off the ridge line), and occurred on the site many years ago, the cropping potential of the site is constrained predominantly by shallow, rocky soils that dominate the higher lying land on the ridge line where the switching station and turbines are situated. Because of these constraints, the site is unsuitable for viable rainfed crop production and its viable agricultural use is limited to grazing.

An agricultural impact is a change to the future agricultural production potential of land. This is primarily caused by the exclusion of agriculture from the footprint of the development. In this case, the entire switching station footprint is considered to be below the threshold for needing to be conserved as agricultural production land because of the limitations that make it unsuitable as viable cropland. The use of this land for non-agricultural purposes will result in minimal loss of agricultural production potential in terms of national food security. The proposed overhead power line has negligible agricultural impact, regardless of its route and design and the agricultural potential and sensitivity of the land it crosses.

Due to the facts that the switching station will exclude only a small area of land from agricultural production, will not occupy scarce, viable cropland, and that its negative impact is offset by economic benefits to farming from the associated wind energy facility, the overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed here as being of low significance and as acceptable.

From an agricultural impact point of view, it is recommended that the proposed 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.

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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 Consultors 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: **THE PROPOSED IGOLIDE WEF ELECTRICAL GRID INFRASTRUCTURE NEAR FOCHVILLE, GAUTENG 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:

19 May 2024

Date

SPECIALIST DECLARATION FORM – AUGUST 2023

3. UNDERTAKING UNDER OATH/ AFFIRMATION

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

Signature of the Specialist

SoilZA – sole proprietor

Name of Company

19 May 2024

Date

.....7206717-9

N.L. MNYAKWE

Signature of the Commissioner of Oaths

2024-05-19

Date

SUID-AFRIKAANSE POLISIEDIENS
HOUT BAY
19 MAY 2024
COMMUNITY SERVICE
SOUTH AFRICAN POLICE SERVICE

APPENDIX 3: SACNASP REGISTRATION CERTIFICATE

SACNASP

South African Council for Natural Scientific Professions

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 2025**

Chairperson

Chief Executive Officer

To verify this certificate scan this code