



✉ info@soilza.co.za
🌐 www.soilza.co.za
📍 Postnet Suite #500
Private Bag X16
CONSTANTIA, 7848

**AGRICULTURAL COMPLIANCE STATEMENT
FOR THE PROPOSED ENLARGEMENT OF LANGRUGBOONSTE NR1 DAM, ALSO KNOWN AS
HELPMEKAAR DAM AND THE CONSTRUCTION OF A NEW BUFFER DAM, ON RIETRIVIER 202
PORTION 5, NEAR CERES, WESTERN CAPE PROVINCE**

**Report by
Johann Lanz & David Lakey**

11 November 2025

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EXECUTIVE SUMMARY

The overall conclusion of this assessment is that the proposed development enhances future agricultural production potential and therefore has a positive agricultural impact. What is of most significance to agricultural impact is that the aim of the development is to enhance cropping potential through irrigation development. Although a small area of potential cropland will be lost, overall agricultural production will be enhanced. Therefore, the positive benefits of the development in terms of agricultural impact will outweigh the negative impacts.

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

1 INTRODUCTION

Environmental authorisation is being sought for proposed enlargement of Helpmekaar dam and the construction of a new buffer dam on portion 5 of farm 202 Rietrivier near Ceres, Western Cape (see location 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, given that the development is an agricultural one with positive agricultural impact, although the new buffer dam site is verified as high sensitivity, the appropriate level of agricultural assessment is an Agricultural Compliance Statement.

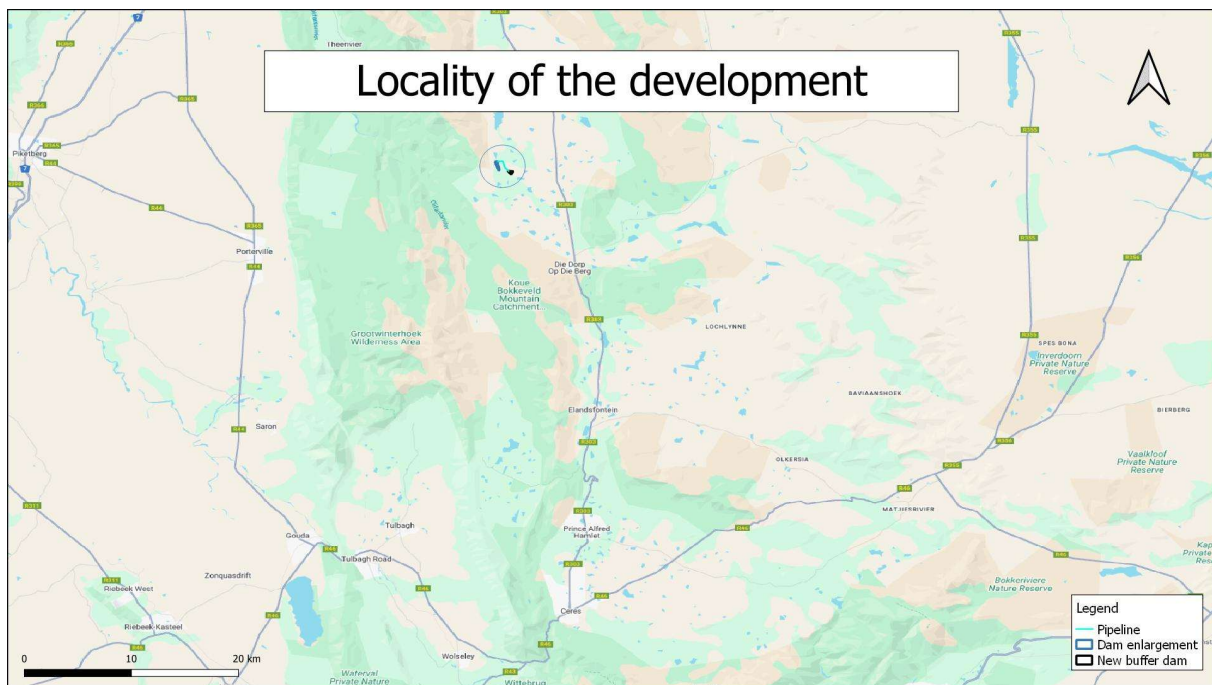


Figure 1: Locality map of the proposed development, north of the Town of Ceres.

The purpose of an agricultural assessment is to answer the 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?

In this case, the development will enhance agricultural production potential and therefore has a positive agricultural impact.

2 PROJECT DESCRIPTION

The larger project entails the construction of both the enlargement of Langrug-Boonste Nr 1 dam,

also known as Helpmekaar dam, and a small new buffer dam with its accompanying ± 2 km connecting pipeline. The Helpmekaar Dam with a provisional total storage in the order of $\pm 800\,000\text{m}^3$.

With the additional taking, the water user, namely *Sterkwater Boerdery*, will be able to convert about 45ha of annual cash crops into permanent fruit orchards. This agricultural expansion in itself will ensure long term economic viability as well as sustainability of the farming entity by creating additional permanent jobs within the agricultural industry.

	Maximum available storage scenarios for both sites	
	Site 1 – Langrug-Boonste Nr 1 Dam (Enlargement of Existing Dam) PREFERRED OPTION	Site 2 (Proposed New Dam)
Wall Height (m)	15,5	15,0
Gross Earthmoving (m ³)	53 000	181 000
Gross Storage Volume (m ³)	1 260 000	570 000
Storage Volume Gain (m ³)	865 000	570 000
Surface Area (ha)	22	8
Ratio (Storage : Earthworks)	16,5	3,2
Proposed Category	2	2

Figure 2: Table of the technical description of the proposed developments.

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 copied exactly from the protocol, are listed in the table below, and included, is the place in this report where each is addressed.

Table 1: Reporting requirements as per NEMA's Agricultural Protocol

Number	Requirement	Where it is addressed
3.	Agricultural Compliance Statement	

3.1.	The Agricultural Compliance Statement must be prepared by a soil scientist or agricultural specialist registered with the SACNASP.	Appendix 3
3.2.	The compliance statement must:	
3.2.1.	be applicable to the preferred site and proposed development footprint;	Figure 8
3.2.2.	confirm that the site is of “low” or “medium” sensitivity for agriculture; and	Section 8
3.2.3.	indicate whether or not the proposed development will have an unacceptable impact on the agricultural production capability of the site.	Section 9.1
3.3.	The Agricultural Compliance Statement must contain, as a minimum, the following information:	
3.3.1.	details and relevant expertise as well as the SACNASP registration number of the soil scientist or agricultural specialist preparing the statement including a curriculum vitae;	Appendix 1
3.3.2.	a signed statement of independence by the specialist;	Appendix 2
3.3.3.	a map showing the proposed development footprint (including supporting infrastructure) with a 50m buffered development envelope, overlaid on the agricultural sensitivity map generated by the screening tool;	Figure 8
3.3.4.	calculations of the physical development footprint area for each land parcel as well as the total physical development footprint area of the proposed development including supporting infrastructure;	Not applicable
3.3.5.	confirmation that the development footprint is in line with the allowable development limits contained in Table 1 above;	Not applicable
3.3.6.	confirmation from the specialist that all reasonable measures have been taken through micro-siting to avoid or minimise fragmentation and disturbance of agricultural activities;	Section 11.1
3.3.7.	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
3.3.8.	any conditions to which this statement is subjected;	Section 12
3.3.9.	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	Not applicable

	returned to the current state within two years of completion of the construction phase;	
3.3.10.	where required, proposed impact management outcomes or any monitoring requirements for inclusion in the EMPr; and	Section 10.2
3.3.11.	a description of the assumptions made and any uncertainties or gaps in knowledge or data.	Section 5
3.4.	A signed copy of the compliance statement must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.	

4 METHODOLOGY OF STUDY

The assessment was based on an on-site investigation conducted on 17 September 2025. 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 verify current cropping status, agricultural land use, and agricultural conditions across the site in order to assess and determine the cropping potential across the site. An assessment of 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 agricultural legislation and permit requirements over and above what is required in terms of NEMA.

The project is likely to require agricultural approval (or at least comment from Department of Agriculture) as part of the required approval process because it is on land currently zoned for agriculture.

7 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).

All the important parameters that control the agricultural production potential of the site are given in Table 2. The land type soil data are given in Appendix 4. A satellite image map of the development site is given in Figure 3 and site photographs are given in Figure 4 to Figure 7.

The site is within 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, or in a regional context, 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.

Table 2: Parameters that control and/or describe the agricultural production potential of the site.

	Parameter	Value
Climate	Köppen-Geiger climate description (Beck <i>et al</i> , 2018)	Temperate, dry summer, warm summer
	Mean Annual Rainfall (mm) (Schulze, 2009)	526
	Reference Crop Evaporation Annual Total (mm) (Schulze, 2009)	1217
	Climate capability classification (out of 9) (DAFF, 2017)	5 (moderate)
Terrain	Terrain type	Valley
	Terrain morphological unit	Varied
	Slope gradients (%)	0 to 20
	Altitude (m)	880
	Terrain capability classification (out of 9) (DAFF, 2017)	3 (low) to 7 (high)
Soil	Geology (DAFF, 2002)	Shale, siltstone and thin sandstone bands with quartzitic sandstone and greywacke of the Bokkeveld Group. Alluvium with mainly shale and feldspathic sandstone of the Ceres Subgroup; Bokkeveld Group.
	Land type (DAFF, 2002)	Fb492, Ca146

	Parameter	Value
	Description of the soils	Very shallow to deep, very light to medium soils with underlying clay and rock
	Dominant soil forms	Glenrosa, Swartland, Dundee
	Soil capability classification (out of 9) (DAFF, 2017)	3 (low) to 5 (moderate)
	Soil limitations	Depth, Drainage
Land use	Agricultural land use in the surrounding area	Oats, Pears, Wheat
	Agricultural land use on the site	None
General	Long-term grazing capacity (ha/LSU) (DAFF, 2018)	108
	Land capability classification (out of 15) (DAFF, 2017)	5 (low) to 8 (moderate)
	Within Protected Agricultural Area (DALRRD, 2020)	Yes, Op die Berg PAA, Rating: C, Type: irrigated

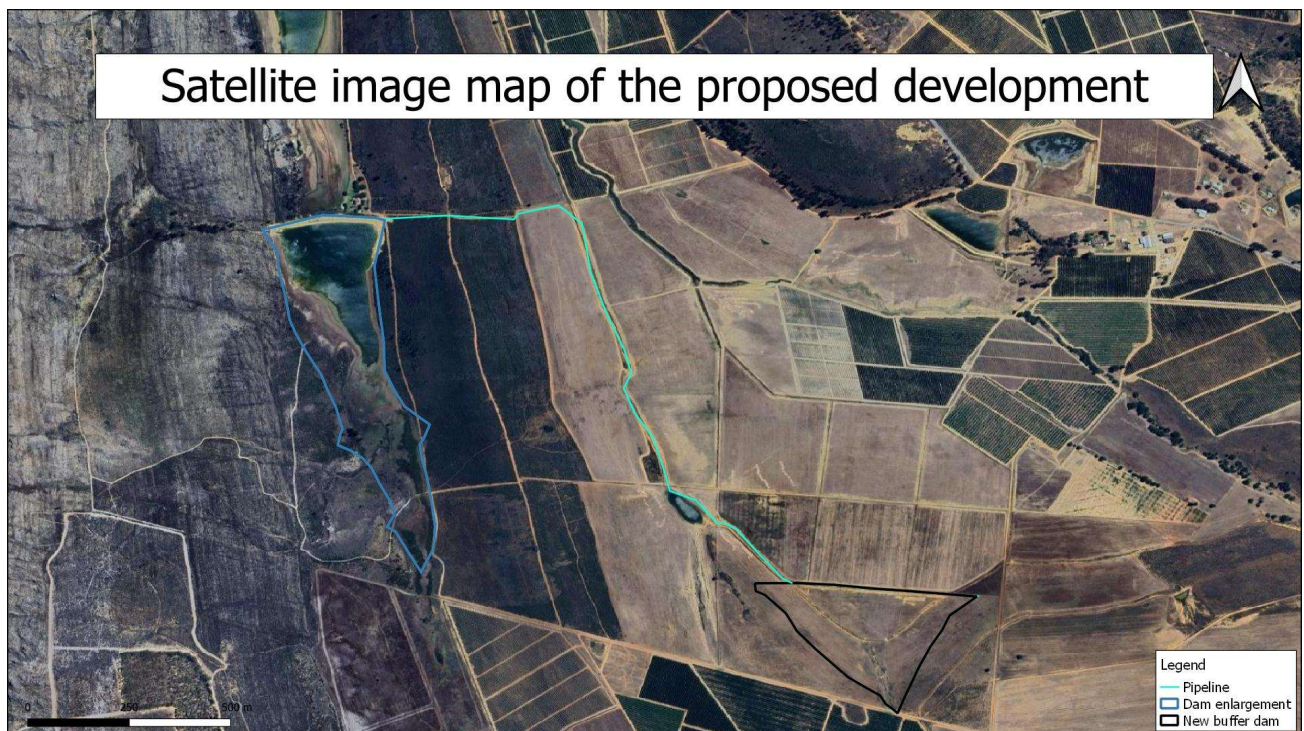


Figure 3. Satellite image map of the development.



Figure 4. From the northern boundary, of the new proposed buffer dam looking south.



Figure 5. The proposed connecting pipeline looking east towards the existing dam.



Figure 6. The proposed connecting pipeline taken from approximately the halfway point looking north.



Figure 7. From the eastern boundary, at the end of the existing dam, looking over the proposed new

dam extension looking S-W.

7.1 Assessment of the agricultural production potential

This assessment of the agricultural production potential of the site is based on an integration of the different parameters in Table 2 above.

The cropping potential of the Helpmekaar dam enlargement footprint is limited by soil constraints (shallow soils and limited drainage). Because of these constraints, the Helpmekaar dam enlargement footprint is unsuitable for viable crop production. The proposed enlargement, however, will enhance the agricultural production potential of the overall farming enterprise.

Despite some potential soil constraints, the new buffer dam is likely to be of high enough agricultural potential to be suitable for viable, rain fed and irrigated crop production such as occurs in the surrounding area and would require soil preparation inputs. There are no existing croplands within the new buffer dam footprint and the site has not been cropped for an extended number of years. However, the proposed new buffer dam will enhance the agricultural production potential of the overall farming enterprise.

8 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). The screening tool's classification of sensitivity is merely an initial indication of what the sensitivity of a piece of land might be, as indicated by the only data that is available. What the screening tool attempts to indicate is whether the land is suitable for crop production (high and very high sensitivity) or unsuitable for crop production (low and medium sensitivity). To do this, the screening tool uses three independent criteria, from three independent data sets, which are all indicators of suitability for crop production but are limited and were not designed for this purpose. The three criteria are:

1. Whether the land is classified as cropland or not on the field crop boundary data set (Crop Estimates Consortium, 2019). All classified cropland is, by definition, either high or very high sensitivity.
2. Its land capability rating as per the Department of Agriculture's updated and refined, country-wide land capability mapping (DAFF, 2017). Land capability is defined as the combination of soil, climate, and terrain suitability factors for supporting rain-fed agricultural production. The direct relationship between land capability rating, agricultural sensitivity, and rain-fed cropping suitability is summarised by this author in Table 3.

- Whether the land is classified as a protected agricultural area (PAA) or not (DALRRD, 2020). All classified PAAs are, by definition, either high or very high sensitivity.

The limitations for determining cropping suitability based on these data are as follows:

- The field crop boundary data set used by the screening tool is very outdated
- Land capability mapping is fairly coarse, modelled data which is not accurate at site scale.
- PAAs are demarcated broadly, not at a fine scale, and there is therefore much variation of cropping suitability 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, and therefore not all land within a PAA necessarily deserves to be classified as more than medium agricultural sensitivity.

These three inputs operate independently, and the screening tool's agricultural sensitivity is simply determined by whichever of these gives the highest sensitivity rating. The agricultural sensitivity of the site, as classified by the screening tool, is shown in Figure 8.

Table 3: Relationship between land capability, agricultural sensitivity, and rain-fed cropping suitability.

Land capability value	Agricultural sensitivity	Rain-fed cropping suitability	
		Summer rainfall areas	Winter rainfall areas
1 - 5	Low	Unsuitable	Unsuitable
6	Medium		
7			
8	High	Suitable	Suitable
9 - 10			
11 - 15	Very High		

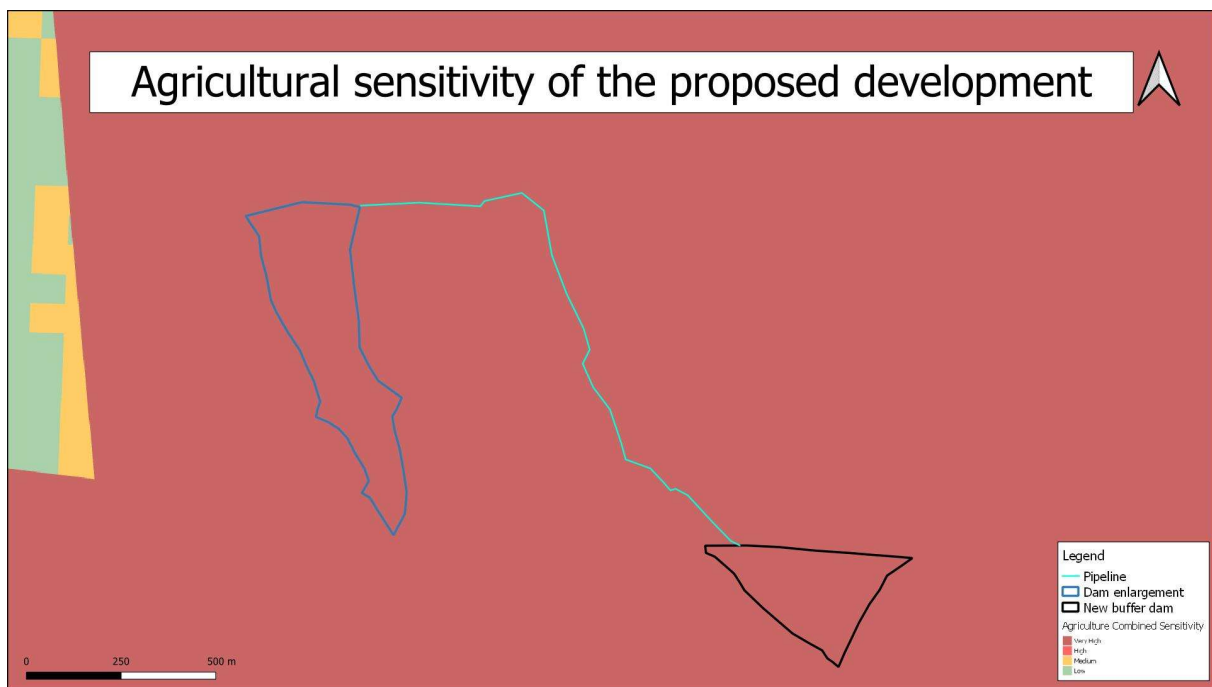


Figure 8. The assessed footprints overlaid on agricultural sensitivity, as given by the screening tool.

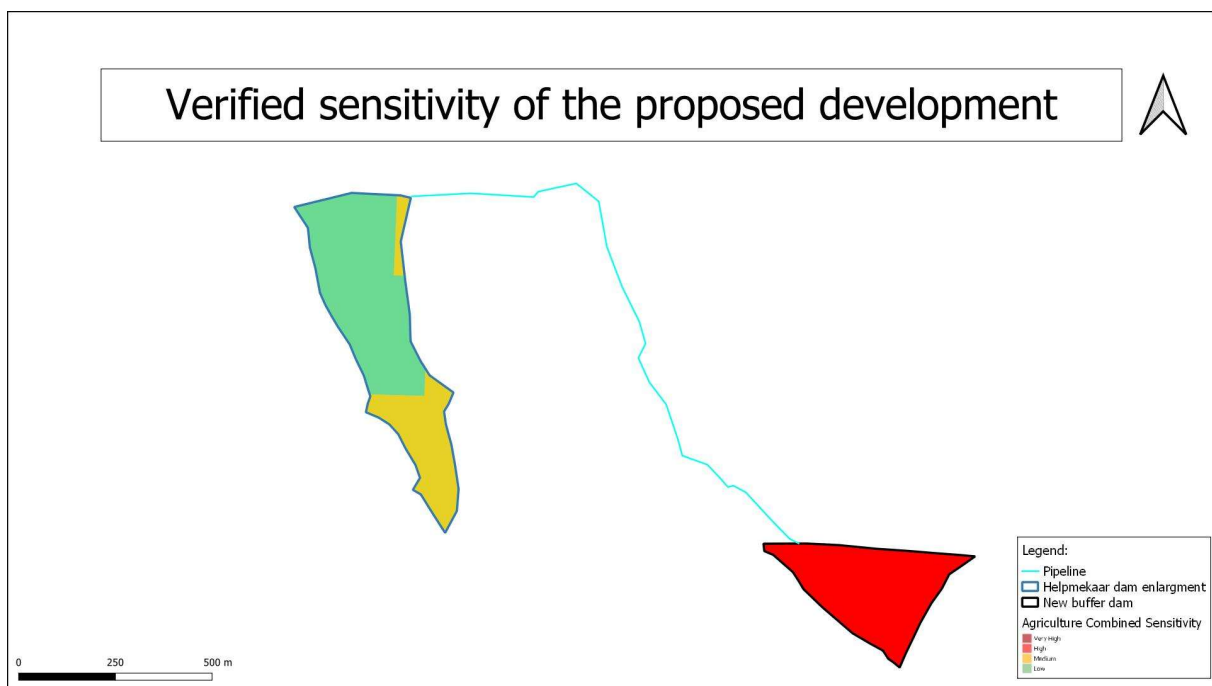


Figure 9. Agricultural sensitivity of the proposed footprints, as verified by this assessment.

The screening tool classifies the assessed sites as being entirely very high agricultural sensitivity. The very high sensitivity classification by the screening tool is due to the PAA status

of the sites.

In the case of the Helpmekaar dam enlargement footprint, as shown in the previous section, the site is not suitable for viable crop production and its true sensitivity, as assessed on the ground, is therefore low to medium. This assessment therefore disputes the very high sensitivity classification of the site by the screening tool and verifies the entire site as being of low to medium agricultural sensitivity because of its assessed cropping potential.

In the case of the proposed new buffer dam, the high sensitivity classification by the screening tool that underlies the PAA layer is due to a combination of some land being classified as cropland (high sensitivity) and some land being classified as high sensitivity because of a classified land capability rating of 8 as per Table above. As has been shown in the previous section, the new buffer dam footprint is suitable for crop production and it is verified as high sensitivity according to its cropping potential. This assessment therefore classifies the new buffer dam footprint of high sensitivity because of the assessed cropping potential.

9 ASSESSMENT OF THE 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 and an agricultural assessment is therefore limited to assessing that change. An assessment of the impacts related to a change of the agricultural sense of place should not be included in an agricultural assessment, except where it directly affects production potential, but should instead be assessed in a visual and cultural heritage assessment, which has the appropriate expertise for such an assessment. Similarly, it is not the place of an agricultural assessment, but rather of a social impact assessment, to consider social issues that may impact the farming community, beyond the extent to which they may impact production potential.

An agricultural impact is a change to the future agricultural production potential of land. In this development, the potential for any change 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. However, these can be effectively prevented by generic mitigation measures that are all inherent in the project engineering of such a development and are standard, best-practice for construction sites. Soil degradation does not therefore pose a significant impact risk. The significance of any exclusion of agriculture from land is a direct function of the following three factors:

1. the size of the footprint of land from which agriculture will be excluded
2. the baseline production potential (particularly cropping potential) of that land
3. the length of time for which agriculture will be excluded

The most significant loss of potential, for any development anywhere in the country, is on high yielding cropland, and the least significant possible, is on 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 development footprints are 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. Furthermore, the proposed developments will enhance the agricultural production potential of the overall farming enterprise. The proposed development on these lands will therefore result in no loss of future agricultural production potential. The overall negative agricultural impact of the development (loss of future agricultural production potential) is therefore assessed as being of low significance and as acceptable.

Due to the facts that the proposed development will not occupy scarce, viable cropland and that the proposed development will enhance the agricultural potential of the overall farming enterprise, the overall negative agricultural impact of the development (loss of future agricultural production potential) is assessed here as being of very low significance and as acceptable. Instead, the proposed development will have a positive agricultural impact.

9.2 Cumulative impact assessment

The potential cumulative agricultural impact of importance is a regional loss of future agricultural production potential. Due to it having a positive agricultural impact, the assessed development will contribute positively to the cumulative impact. 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 include a comparative

assessment of alternatives, including the no-go alternative. There are no proposed alternatives for the development.

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 because the development has a positive impact, it is the preferred alternative if assessed purely from an agricultural impact perspective.

10 MITIGATION

Generic mitigation measures that are effective in preventing soil degradation are all inherent in the engineering of such a project and/or are standard, best-practice for construction sites. These include:

- A system of storm water management, which will prevent erosion on and downstream of the site, will be an inherent part of the engineering design on site. Any occurrences of erosion must be attended to immediately and the integrity of the erosion control system at that point must be amended to prevent further erosion from occurring there.
- Any excavations done during the construction phase, in areas that will be re-vegetated during or at the end of the construction phase, must separate the upper 30 cm of topsoil from the rest of the excavation spoils and store it in a separate stockpile. When the excavation is back-filled, the topsoil must be back-filled last, so that it remains at the surface. Topsoil should only be stripped in areas that are excavated. Across most of the site, including construction lay down areas, it will be much more effective for rehabilitation, to retain the topsoil in place. If levelling requires significant cutting, topsoil should be temporarily stockpiled and then re-spread after cutting, so that there is a covering of topsoil over the entire cut surface.

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. This is not relevant in this case because dam developments cannot be micro-sited because they need to be location specific.

11.2 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. No such exclusion applies to this project.

12 CONCLUSION: AGRICULTURAL COMPLIANCE STATEMENT

The overall conclusion of this assessment is that the proposed development enhances future agricultural production potential and therefore has a positive agricultural impact. What is of most significance to agricultural impact is that the aim of the development is to enhance cropping potential through irrigation development. Although a small area of potential cropland will be lost, overall agricultural production will be enhanced. Therefore, the positive benefits of the development in terms of agricultural impact will outweigh the negative impacts.

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.

13 REFERENCES

Beck, H.E., N.E. Zimmermann, T.R. McVicar, N. Vergopolan, A. Berg, E.F. Wood. 2018. Present and future Köppen-Geiger climate classification maps at 1-km resolution, Nature Scientific Data. Available at: <https://gis.elsenburg.com/apps/cfm/>.

Crop Estimates Consortium, 2019. *Field Crop Boundary data layer, 2019*. Pretoria. Department of Agriculture, Forestry and Fisheries.

Department of Agriculture Forestry and Fisheries (DAFF). 2018. Long-term grazing capacity map for South Africa developed in line with the provisions of Regulation 10 of the Conservation of Agricultural Resources Act, Act no 43 of 1983 (CARA), available on Cape Farm Mapper. Available at: <https://gis.elsenburg.com/apps/cfm/>

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.

Department of Agriculture, Land Reform and Rural Development (DALRRD). 2020. Protected agricultural areas – Spatial data layer. 2020. Pretoria.

Schulze, R.E. 2009. South African Atlas of Agrohydrology and Climatology, available on Cape Farm

Mapper. Available at: <https://gis.elsenburg.com/apps/cfm/>

Soil Classification Working Group. 2018. Soil Classification: A Natural and Anthropogenic System for South Africa. ARC-Institute for Soil, Climate and Water, Pretoria.

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*.



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 ENLARGEMENT OF LANGRUGBOONSTE NR1 DAM, ALSO KNOWN AS HELPMKAAR DAM AND THE CONSTRUCTION OF A NEW BUFFER DAM, ON RIETRIVIER 202 PORTION 5, NEAR CERES, WESTERN CAPE 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:	2 Roeland Terrace, CAPE TOWN, 8001
Postal address:	Postnet Suite #500, Private Bag X16 Constantia, 7848
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:

29 October 2025

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 the purposes of this application is true and correct

Signature of the Specialist

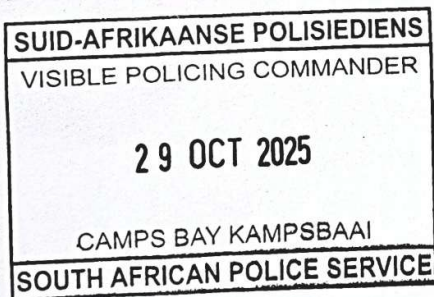
SoilZA – sole proprietor

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 2026



A handwritten signature in black ink, appearing to read 'A. Venter', positioned above a horizontal line.

Chairperson

A handwritten signature in black ink, appearing to read 'N. Erasmus', positioned above a horizontal line.

Chief Executive Officer



APPENDIX 4: LAND TYPE DATA

Table 4: Land type soil data

Land type	Soil series (forms)	Depth (mm)	Clay % A horizon	Clay % B horizon	Depth limiting layer	% of land type
Fb492	Gs	150 - 300	10 - 20	25 - 35	so	41.0
Fb492	Sw	200 - 400	10 - 20	20 - 40	vp	15.5
Fb492	R					9.0
Fb492	Ms	100 - 250	10 - 15		R	9.0
Fb492	Sw	200 - 400	10 - 20	20 - 40	vr	7.8
Fb492	Es	300 - 600	2 - 15	25 - 50	pr	7.8
Fb492	Kd	600 - 900	2 - 15	25 - 50	gc	2.8
Fb492	Oa	900 - 1200	10 - 20	10 - 25	sp,R	2.8
Fb492	Pn	400 - 600	2 - 10	6 - 20	gc	2.5
Fb492	Ss	200 - 400	6 - 20	25 - 35	pr	1.3
Fb492	Av	400 - 600	6 - 10	15 - 20	sp	0.8
Ca146	M					15.3
Ca146	Du	800 > 1200	3 - 15		so,R	10.2
Ca146	Sw	200 - 400	3 - 15	30 - 45	vp,vr	9.7
Ca146	Fw	500 > 1200	0 - 6		so,R	8.8
Ca146	We	50 - 400	3 - 12	3 - 15	sp	7.7
Ca146	Lo	300 - 600	3 - 6	3 - 6	sp	7.7
Ca146	Ms	100 - 200	6 - 12		R	7.5
Ca146	Ss	200 - 300	6 - 15	30 - 45	pr	6.8
Ca146	Kd	150 - 300	3 - 6	15 - 25	gc	6.3
Ca146	Gs	100 - 350	6 - 15	25 - 35	so	4.3
Ca146	Ct	800 > 1200	4 - 8	6 - 12	so,R	3.0
Ca146	Es	150 - 300	3 - 8	30 - 45	pr	3.0
Ca146	Av	500 - 700	2 - 6	2 - 6	sp	3.0
Ca146	Pn	500 - 700	2 - 6	2 - 6	gc,gs	3.0
Ca146	Wa	200 - 600	3 - 8		hp	1.9
Ca146	Ka	200 - 400	10 - 15	20 - 30	G	1.7
Ca146	R					0.2