TERRESTRIAL PLANT SPECIES COMPLIANCE STATEMENT

PROPOSED BENTONITE AND ZEOLITE PROSPECTING ON FARM DORINGRIVIER RE/593, HEIDELBERG - WESTERN CAPE

Prepared by: Nicolaas Hanekom
Pri.Sci.Nat (Ecology) 400274/11
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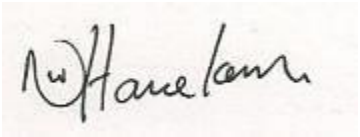
March 2026

DECLARATION OF THE SPECIALIST

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

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

- In terms of the general requirement to be independent:
    - other than fair remuneration for work performed in terms of this application, have no business, financial, personal or other interest in the development proposal or application and that there are no circumstances that may compromise my objectivity; or
- In terms of the remainder of the general requirements for a specialist, have throughout this EIA process met all of the requirements;
- I have disclosed to the applicant, the EAP, the Review EAP (if applicable), the Department and I&APs all material information that has 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
- I am aware that a false declaration is an offence in terms of Regulation 48 of the EIA Regulations.



Nicolaas Hanekom
Pri.Sci.Nat (Ecology) 400274/11 **13 March 2026**
Signature of the ~~EAP~~/ Specialist: Date:

Enviro-EAP (Pty) Ltd
Name of company (if applicable):

TABLE OF CONTENTS

1. INTRODUCTION

1.1. Background & Competency

Nicolaas Hanekom is a registered Professional Natural Scientist in the ecological science field with the South African Council for Natural Scientific Professions (“SACNASP”), (Ecology field) and a qualified registered Environmental Assessment Practitioner (“EAP”) who holds a Masters Technologiae, Nature Conservation (“Vegetation Ecology and Biodiversity Assessment”) degree from the Cape Peninsula University of Technology (Refer to Appendix A, CV). Nicolaas Hanekom is suitably qualified SACNASP registered specialist.

1.2. Conditions Relating to this Report

The findings, results, observations, conclusions and recommendations given in this report are based on the author’s best scientific and professional knowledge as well as available information and knowledge of the area.

This report may not be altered or added to without the prior written consent of the author. This restraint also refers to electronic copies of this report which are supplied as sub portion of other reports, including main reports. Similarly, any recommendations, statements, or conclusions drawn from or based on this report must specifically refer to this report. If such comments form part of a main report for this investigation, the report must be included in its entirety as an appendix or separate section to the main report.

1.3. Terms of Reference

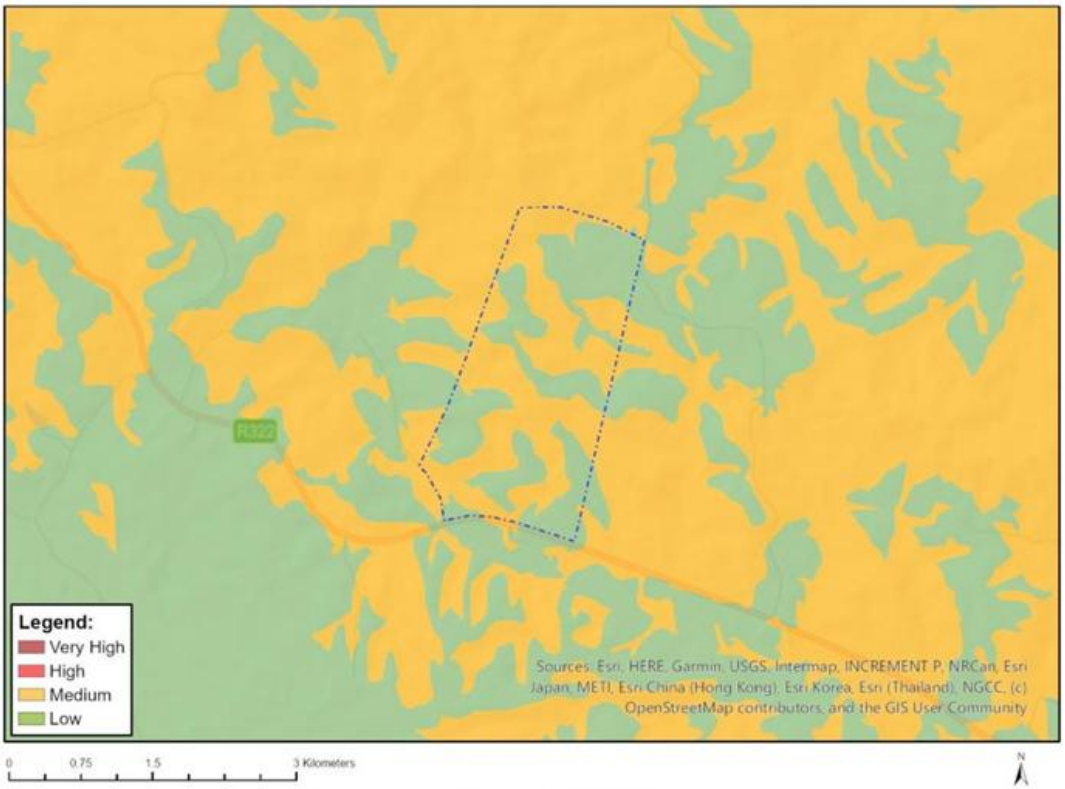
Step 1: Site Sensitivity Verification Report
Prior to beginning the assessment, the current use of the land and the potential environmental sensitivity of the site as identified by the national web based environmental screening tool must be confirmed by undertaking an Initial Site Sensitivity Verification. The Initial Site Sensitivity Verification must be undertaken by an environmental assessment practitioner or a registered specialist with expertise in the relevant environmental theme being considered. The Initial Site Sensitivity Verification must be undertaken through the use of:
(a) a desk top analysis, using satellite imagery;
(b) a preliminary on-site inspection to;
(c) any other available and relevant information.

The outcome of the Initial Site Sensitivity Verification must be recorded in the form of a report that:
(a) confirms or disputes the current use of the land and the environmental sensitivity as identified by the screening tool, such as new developments or infrastructure, the change in vegetation cover or status etc.;
(b) contains a motivation and evidence (e.g. photographs) of either the verified or different use of the land and environmental sensitivity; and
(c) is submitted together with the relevant assessment report prepared in accordance with the requirements of the Environmental Impact Assessment Regulations.
The site sensitivity verification report was completed by the environmental assessment practitioner and was included in the Scoping and Environmental Impact Assessment reports.

The outcome of the site sensitivity verification report concerning plant sensitivity of proposed development site and surrounds can be summarised as below:
The Department of Environmental Affairs screening report from the national web based environmental screening tool reported a "Medium sensitivity for plant species theme". Figure 1 depicts the property on which prospecting activities area proposed which falls within Medium to Low Plant Species Sensitivity areas (refer to figure 1 below). During the site inspections, it was found that all proposed prospecting activities are on annually cultivated agricultural land with no indigenous vegetation species of conservation concern recorded on the proposed prospecting areas therefore a Low Sensitivity is proposed by the specialist and therefore a Plant Species Compliance Statement would suffice:

- *All proposed prospecting activities are on annually cultivated agricultural land with no indigenous vegetation species of conservation concern recorded on the proposed prospecting areas therefore a Low Sensitivity is proposed by the specialist.*
- *The proposed prospecting areas are to be restricted to completely transformed cultivated land therefore no natural indigenous habitat will be disturbed during the proposed prospecting activities*

MAP OF RELATIVE PLANT SPECIES THEME SENSITIVITY



Where only a sensitive plant unique number or sensitive animal unique number is provided in the screening report and an assessment is required, the environmental assessment practitioner (EAP) or specialist is required to email SANBI at eiadatarequests@sanbi.org.za listing all sensitive species with their unique identifiers for which information is required. The name has been withheld as the species may be prone to illegal harvesting and must be protected. SANBI will release the actual species name after the details of the EAP or specialist have been documented.

Very High sensitivity	High sensitivity	Medium sensitivity	Low sensitivity
		X	

Sensitivity Features:

Sensitivity	Feature(s)
Low	Low Sensitivity
Medium	Trichodiadema pygmaeum
Medium	Liparia striata
Medium	Aspalathus calcarata
Medium	Aspalathus campestris
Medium	Aspalathus grobleri
Medium	Aspalathus hypnoides
Medium	Aspalathus joubertiana
Medium	Aspalathus millefolia
Medium	Aspalathus steudeliana
Medium	Aspalathus zeyheri
Medium	Aspalathus microlithica
Medium	Otholobium bowieanum

Medium	Otholobium pungens
Medium	Lotononis viborgioides
Medium	Leucadendron coriaceum
Medium	Leucadendron tradouwense
Medium	Treichelia dodii
Medium	Hesperantha fibrosa
Medium	Freesia fergusoniae
Medium	Sensitive species 157
Medium	Sensitive species 402
Medium	Sensitive species 700
Medium	Sensitive species 802
Medium	Sensitive species 499
Medium	Oxalis duriuscula
Medium	Hermannia lavandulifolia
Medium	Sebaea rara
Medium	Sensitive species 439
Medium	Sensitive species 1142
Medium	Sensitive species 339
Medium	Duvalia elegans
Medium	Cynanchum zeyheri
Medium	Sensitive species 96
Medium	Gnidia ericoides
Medium	Osteospermum hispidum var. hispidum
Medium	Chrysocoma flava
Medium	Stoebe rugulosa
Medium	Relhania garnotii
Medium	Diosma tenella
Medium	Agathosma minuta
Medium	Acmadenia macropetala
Medium	Euchaetis avisylvana
Medium	Euchaetis longicornis
Medium	Cliffortia lanceolata
Medium	Cliffortia monophylla
Medium	Cliffortia grandifolia
Medium	Muraltia acerosa
Medium	Sensitive species 692
Medium	Sensitive species 980
Medium	Orthochilus litoralis
Medium	Sensitive species 822
Medium	Drosanthemum lavisii
Medium	Drosanthemum micans
Medium	Drosanthemum striatum
Medium	Romulea jugicola
Medium	Sensitive species 521
Medium	Sensitive species 142
Medium	Elegia squamosa
Medium	Diosma passerinoides
Medium	Agathosma microcarpa

Figure 1: Plant sensitivity map and features generated by the national web based environmental screening tool for proposed prospecting activities on Farm Doringrivier RE/593, Heidelberg indicating plant sensitivity of the proposed prospecting property.

Step 2: Terrestrial Plant Species Compliance Statement

This compliance statement reports on the findings of the terrestrial plant sensitivity verification and site survey that was conducted by Nicolaas Hanekom.

The compliance statement must:

- be applicable to the study area;
- confirm that the study area is of "low" sensitivity for terrestrial plant species; and
- indicate whether or not the proposed development will have any impact on SCC.

The terrestrial plant compliance statement, must contain, as a minimum, the following information:

- contact details and relevant experience as well as the SACNASP registration number of the specialist preparing the compliance statement including a curriculum vitae; **Refer to cover page, section 1.1. and Appendix A of this report**
- A signed statement of independence by the specialist; **Refer to page 2 of this report**
- A statement on the duration, date and season of the site inspection and the relevance of the season to the outcome of the assessment; **Refer to section 2.**
- a description of the methodology used to undertake the site survey and prepare the compliance statement, including equipment and modelling used where relevant; **Refer to section 3**
- where required, proposed impact management actions and outcomes or any monitoring requirements for inclusion in the EMPr; **Refer to Section 4**
- a description of the assumptions made as well as any uncertainties or gaps in knowledge or data; and **Refer to Section 5**
- the mean density of observations/ number of samples sites per unit area; **Refer to Section 6**
- any conditions to which the compliance statement is subjected. **Refer to Sections 4 and 7**

Step 3: Reporting

A signed copy of the compliance statement must be appended to the Basic Assessment Report or Environmental Impact Assessment Report.

2. BASELINE PROFILE DESCRIPTION OF BIODIVERSITY AND ECOSYSTEMS, INCLUDING A STATEMENT ON THE DURATION, DATE AND SEASON OF THE SITE INSPECTION AND THE RELEVANCE OF THE SEASON TO THE OUTCOME OF THE ASSESSMENT

Imerys Refractory Minerals South Africa (Pty) Ltd t/a Cape Bentonite Mine is an existing Bentonite and Zeolite mining company operating on various farms in close proximity to the towns of Heidelberg and Riversdale that fall within the Hessequa Local Municipality and Garden Route District Municipality in the Western Cape Province.

Cape Bentonite Mine proposes to apply for a prospecting right to prospect for bentonite and zeolite on the Farm Doringrivier RE/593 near Heidelberg in the Western Cape.

The ***proposed prospecting activities*** will entail the following phases:

- ***Phase 1 – Field Mapping and Surveying***

A qualified geologist will survey/explore the transformed cultivated areas on the proposed prospecting property by foot and map potential visible bentonite and zeolite outcrops. If such visible outcrops are found on the transformed cultivated areas of property the geologist will map these areas for potential sampling during phase 3.

- ***Phase 2 – Literature Review***

A qualified geologist will research known geological literature of the property and surrounds to assist in deterprospecting approximate location of viable bentonite and zeolite deposits on the transformed cultivated areas of the property.

After the completion of phases 1 and 2 the geologist will produce potential bentonite and zeolite deposits maps for the property which will serve as guidelines for the next phase which will entail drilling and sampling.

- ***Phase 3 –Drilling and Sampling***

Direct push sampler drilling and sampling **–** using the maps as produced by the geologist during phases 1 and 2 the geologist will determine which orebodies must be investigated further by direct push sampler drilling. This is conducted by the mining company itself and involves the use of a direct push sampler drill rig.The drill rig will push a stainless steel tube of 50-60cm long into the ground, once full it will bring it up and the sample will be taken out. This process will be carried out until bentonite is found or reaches the depth of around 6m. The hole will then immediately be rehabilitated by backfilling and a month later the site is revisited to determine if any the holes reopened due to decompaction. The sampler holes will have the following maximum temporary footprints – Diameter 60mm; depth 6m = 3.6m^3 overburden material produced by drilling to be backfilled immediately after sample has been taken. Samples would be collected according to the geology. **Approximately 350 sampler holes are proposed for the property, but the final proposed direct sampler holes's amount will be determined during the completion of phases 1 and 2 therefore proposed direct sampler holes amount might increase or decrease.**

Boreholes and sampling - following the results of the samples collected during the direct push sampler drilling, a qualified drilling contractor will be appointed by the mining company and under the guidance and supervision of the qualified geologist conduct the following drilling activities on the areas as identified by the geologist. Drilling involves using a rotary percussion drilling rig bringing samples to the surface in the form of chips. The drilled boreholes will have the following maximum temporary footprints - diameter 0.2m by 0.2m; depth 30m = 12 m^3 maximum overburden material produced per borehole to be replaced immediately after sample has been taken. <1kg of sample material is collected by the geologist from each borehole for testing. The drilling samples collected are sent to the laboratory at the cape bentonite mine processing plant near Heidelberg and tested for specific properties to establish the quality of ore as well as determine approximate extension and volume of the available ore body. **Approximately 60 drilling sections/lines with 10 boreholes each are proposed for the property = approximately 600 boreholes in total for the property, but final proposed boreholes amount will be determined during the completion of phases 1 and 2 and direct push sampler drilling results and the number of proposed drilling boreholes therefore might increase or decrease.**

Rehabilitation – immediately (same day) following samples taken during both types of drilling as described above the displaced material will be replaced and existing agricultural land contour structures will be reinstated. The disturbed prospecting areas will be monitored for signs of erosion for at least six months after sampling and erosion rectification and prevention measures will be implemented as and if required. Alien invasive and weed vegetation monitoring and removal will be undertaken for at least a year after sampling on disturbed prospecting areas or until the landowner starts with the annual cultivation activities on the affected land. This must be done by the applicant, landowner or their appointed contractor, using CapeNature approved methodology depending on the contract agreement that the applicant has with the landowner.

- ***Phase 4 – Sample Analysis***

<1kg of sample material is collected by the geologist from each borehole for testing. The

samples collected are sent to the laboratory at the cape bentonite mine processing plant near Heidelberg and tested for specific properties to establish the quality of ore as well as determine approximate extension and volume of the available ore body.

- ***Phase 5 – Maps, Reserve and Resource Modelling***

Maps will be produced showing the location, depth and extent of physical prospecting work, together with, sampling points and the lithology, mineral content and mineral distribution identified, relative to the prospecting area. Following the results of sample analysis conducted the geological reserve modelling is done by using SURPAC geological software to determine the grades and quantities of available bentonite and zeolite resources and produce the feasibility reports for the property as investigated/surveyed.

Natural Environmental Features of the Site:

Farm Doringivier RE/593 is approximately 530ha of this only about 270ha are part of annually cultivated lands, and this is mainly due to the undulating topography and steep slopes throughout the property which only allows for cultivation along flat to moderate slopes.

Due to the undulating topography of the property secondary non-perennial drainage lines are present throughout with some man-made farm dams also within these drainage lines. The only surface water run-off that is occasionally present in the drainage lines is storm water runoff during heavy rains. There are no remaining untransformed drainage lines on the proposed prospecting areas which falls within the annually cultivated agricultural land. Runoff from the drainage lines on the property mainly runs from north to south into the non-perennial drainage lines feeding the Doringrivier catchment area.

The indigenous vegetation remnants remaining within the northern half of the property within the higher lying areas is part of Endangered – Swellendam Silcrete Fynbos. The remaining indigenous vegetation remnants are in a moderate to good condition and located in-between the transformed cultivated areas and along the drainage line areas and associated with steep slopes which are too steep for cultivation. No remaining indigenous vegetation remnants are located on the proposed prospecting areas which are proposed only on existing cultivated areas.

Mapped CBA areas occur throughout the property and most of the remaining indigenous vegetation areas are mapped as CBA. Although not all the remaining indigenous vegetation areas on the property are mapped as CBA these areas are still considered as CBA because it is ecologically connected with other mapped CBAs. No prospecting is to take place within any of the remaining indigenous vegetation areas nor within any mapped CBA or NFEPA areas.

It was found during the site sensitivity verification that all the proposed prospecting activities are to be located on completely transformed cultivated agricultural lands and not within any remaining natural watercourses/wetlands or indigenous vegetation areas.

No new roads would have to be constructed to provide access to the proposed prospecting areas. The prospecting area is accessed directly off existing farm roads to remain as is throughout the prospecting process.

The site was visited by the specialist on 18 February 2026 and lasted for ±2.5hours to confirm current land use, plant sensitivity of the site and potential plant species impacts of proposed prospecting activities. Seeing that all proposed prospecting activities are located

on completely transformed annually cultivated agricultural land with no sensitive terrestrial or aquatic habitat features i.e. wetlands or indigenous vegetation areas the survey can be conducted any time of the year. No indigenous plant species of conservation concern (SCC) were recorded at the time of the site survey on the proposed prospecting areas and surrounding good condition indigenous vegetation areas excluded from proposed prospecting areas.

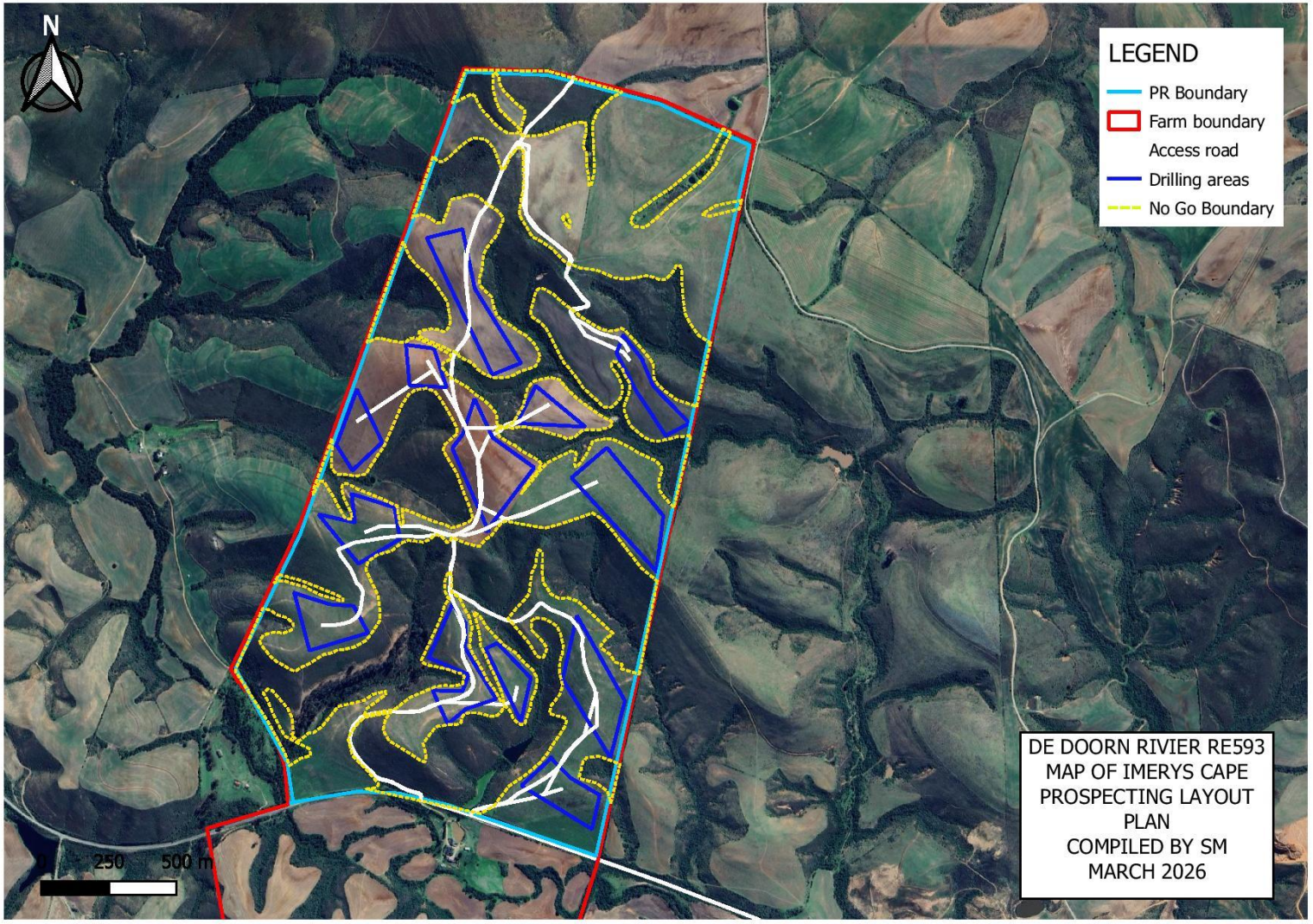
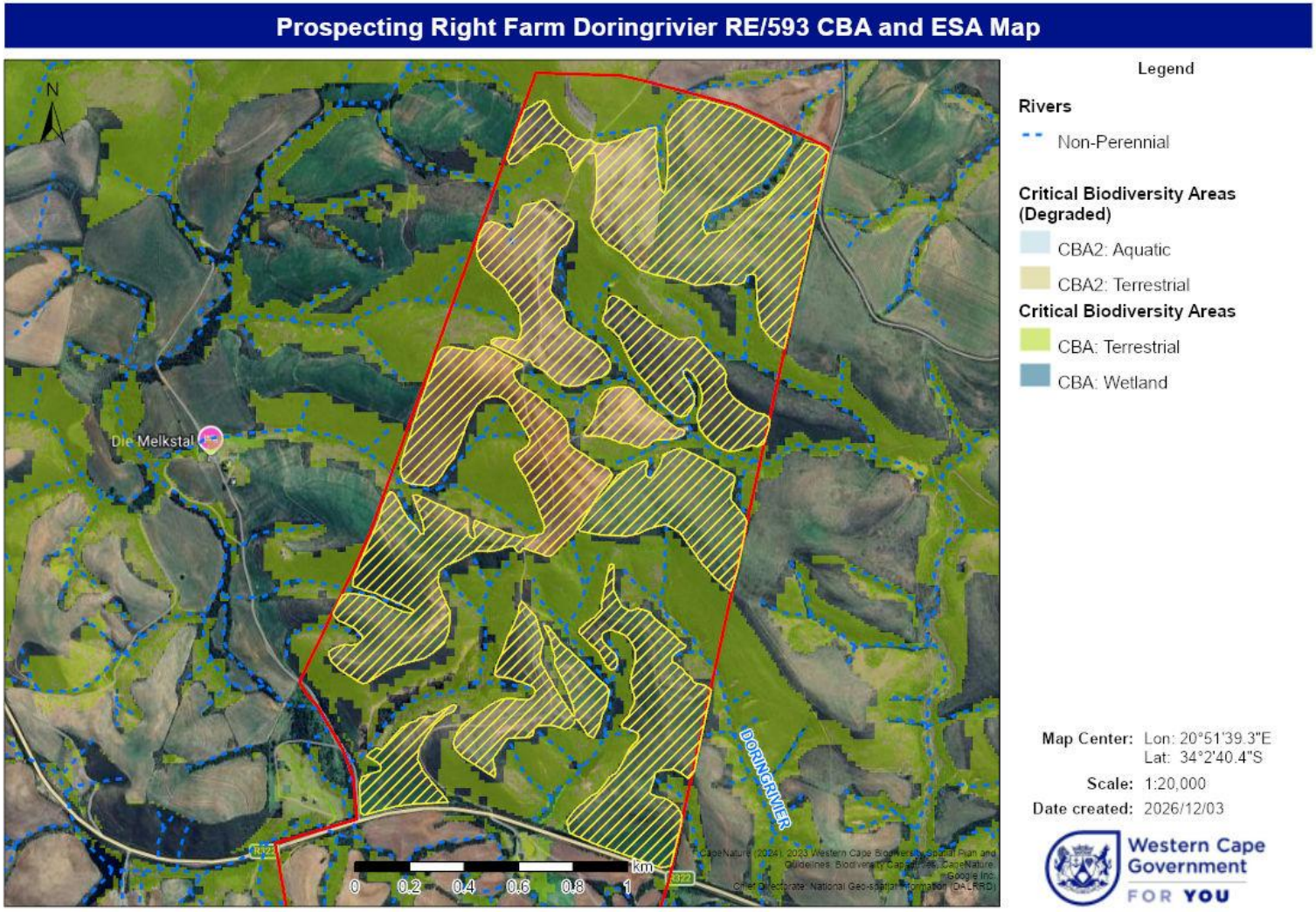
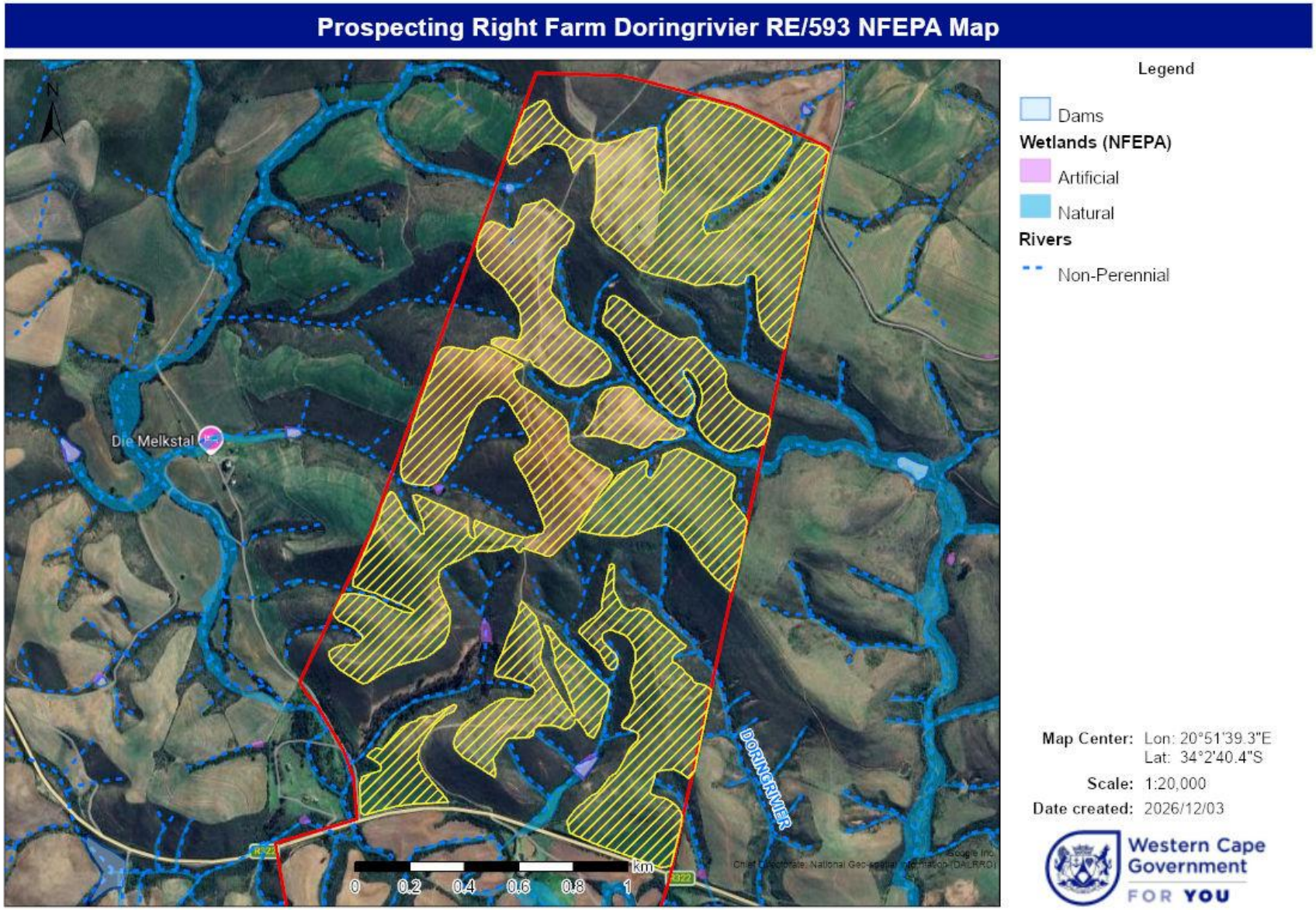


Figure 2: Proposed prospecting activity areas (demarcated in blue) on Farm Doringrivier RE/593 near Heidelberg in the Western Cape.



Figures 3: WCBSP 2023 CBA and ESA map for potential prospecting activities areas assessed on Farm Doringrivier RE/593, Heidelberg.



Figures 4: NFEPA map for Hessequa in relation to the potential prospecting activities areas assessed on Farm Doringrivier RE/593 near Heidelberg in the Western Cape

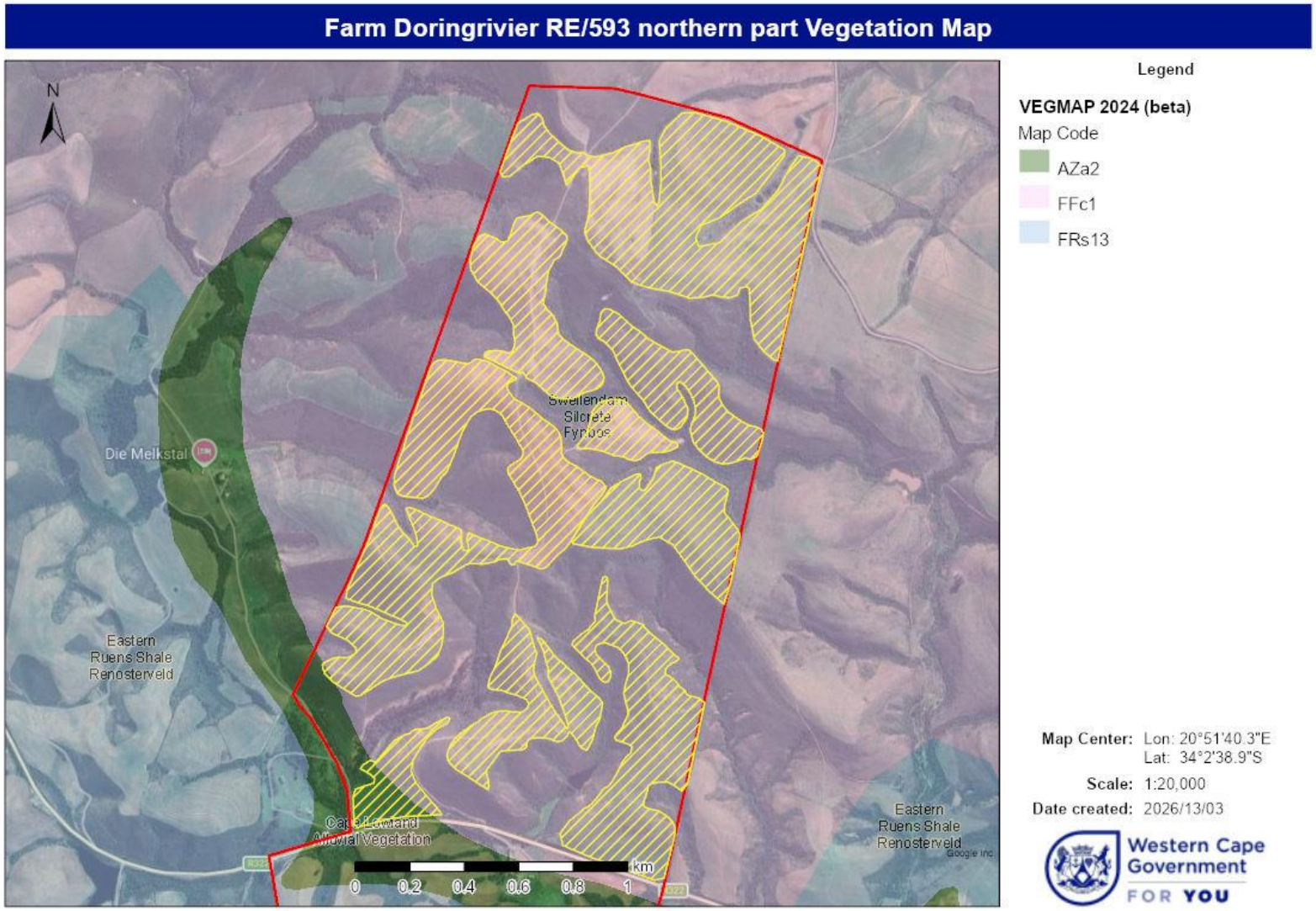


Figure 5: Vegetation map of surveyed area on Farm Doringrivier RE/593, Heidelberg.

Site Photo 1: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 2: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 3: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593.

Site Photo 4: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 5: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 6: Proposed prospecting areas on transformed cultivated land of Farm Doornrivier RE/593.

Site Photo 7: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 8: Proposed prospecting areas on transformed cultivated land and transformed drainage line of Farm Doringrivier RE/593.

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Site Photo 9: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 10: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 11: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 12: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 13: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

Site Photo 14: Proposed prospecting areas on transformed cultivated land of Farm Doringrivier RE/593

3. A DESCRIPTION OF THE METHODOLOGY USED TO UNDERTAKE THE SITE SURVEY AND PREPARE THE COMPLIANCE STATEMENT, INCLUDING EQUIPMENT AND MODELLING USED WHERE RELEVANT

A literature review and desktop analysis were undertaken prior to the field investigation, utilizing various sources including the South African National Biodiversity Institute (SANBI) data and other relevant sources. Recent and historical aerial imagery of the site was reviewed in order to identify points for investigation during the field survey. Utilising the above information, a field investigation was undertaken whereby:

- Where present sites of geomorphological or topographic variance were identified and subjected to an evaluation of species present within transects established across the selected site.
- Where present indigenous species were identified and collated.
- Additional random sample points were selected from other similar sites (if present) surrounding the proposed impacted areas for comparative purposes.

The assessments entailed both a literature review of the region, as well as on site evaluations, during which specific primary data was collected and evaluated. In addition, the identification of key ecological features was undertaken allowing for the interpretation of the prevailing habitat form and associated processes.

All data collected in the field and during the literature review was evaluated and interpreted in order to provide an understanding of the nature of the prevailing environment at a landscape and habitat level. In addition, specific evaluation of data relating to habitat form and structure was undertaken, aiding in the identification of bio-physical anomalies within the prevailing environment. Such variance may be considered to be indicative of differing forms, which under consideration, may be of higher order ecological value in relation of the prevailing environment.

The study area was surveyed on foot and per vehicle, and all indigenous plant species recorded if present on the proposed development site. Indigenous plants species within the immediate surrounds were not recorded, but the overall state and coverage of the remaining indigenous vegetation remnants were noted. Various transects were conducted to cover the area. Particular attention was paid to the presence of potential flora Species of Conservation Concern on the proposed prospecting activities areas. Site photographs were taken.

4. WHERE REQUIRED, PROPOSED IMPACT MANAGEMENT ACTIONS AND OUTCOMES OR ANY MONITORING REQUIREMENTS FOR INCLUSION IN THE EMPR

Prospecting can have both direct and indirect impacts on plant species of the development sites and surrounds. Direct impacts are those that destroys indigenous plant species habitats. Indirect impacts are those that may overtime lead to degradation or transformation of indigenous plant species habitats such as erosion.

The proposed prospecting activities can have the following potential impacts on indigenous plant species of the site and surrounds:

- Destruction/removal of indigenous vegetation due to clearance and erosion.
- Degradation of adjacent indigenous vegetation areas due to alien vegetation encroachment.

The following impact management measures must be implemented and included in the EMPr,

and should they be implemented the proposed prospecting activities should not have any significant negative impacts on any indigenous plant species on the site or surrounds:

- Clearly demarcate an 8m wide buffer area as measured from the edge of all remaining indigenous vegetation areas (no-go areas) within cultivated lands and undertake prospecting activities only in identified and specifically demarcated areas as proposed on completely transformed and cultivated areas.
- Demarcation method to be approved by an Environmental Control Officer (ECO).
- No disturbance should be allowed within the remaining indigenous vegetation areas. This includes no dumping of fill, no roads, and all forms of temporary disturbance.
- No natural vegetation areas edges may be cleared or impacted upon by the proposed prospecting activities.
- The proposed buffer areas to be located within existing cultivated land may only be used as roads and for stormwater management and no other activities associated with the proposed prospecting of the site may occur within the buffer areas.
- Implement erosion and storm water runoff management measures as according to EMP requirements to prevent (or if prevention is not possible limit) any erosion from occurring on the prospecting activity areas and surrounds.
- Backfill prospecting areas (same day) with onsite drilled material after samples have been collected.
- Monitor prospecting areas for signs of erosion for at least six months after sampling or until the landowner plants the lands (whichever comes first) and implement erosion rectification and prevention measures as and if required.

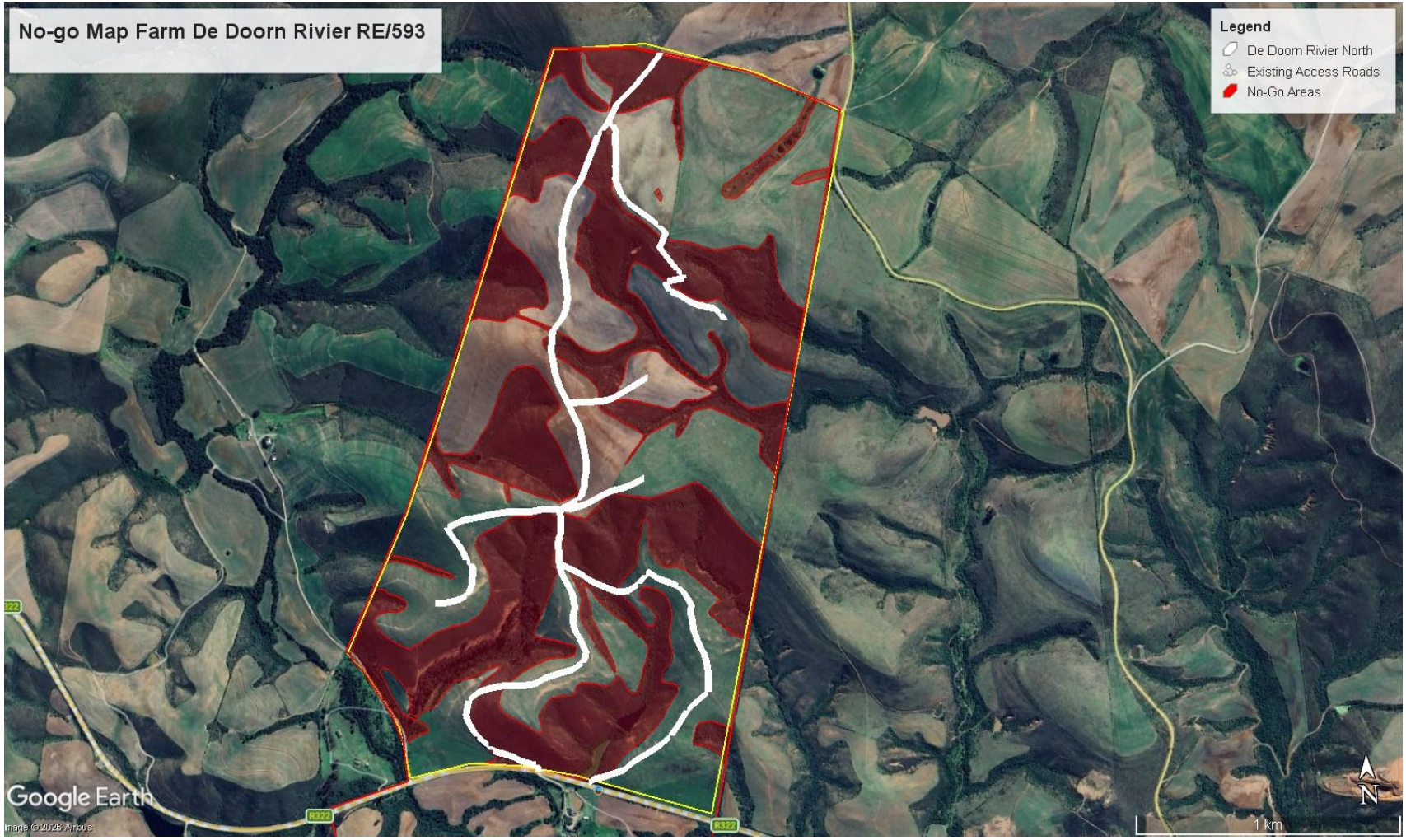


Figure 6: The No-go map above depicts the areas not to be prospected upon (in red) on Farm Doringrivier RE/593 to be treated as no-go areas from which a minimum buffer of 8m must be maintained.

5. A DESCRIPTION OF THE ASSUMPTIONS MADE AND ANY UNCERTAINTIES OR GAPS IN KNOWLEDGE OR DATA

The timing of the survey is regarded as adequate in terms of accurately assessing the terrestrial plant species presence on the site. An accurate idea of the priority indigenous habitat areas and sensitive ecological features was gained by inspecting the proposed development sites and surrounds and recording distribution and/or presence of indigenous vegetation habitats (if present), and confidence in the accuracy of the findings is very high. The overall confidence in the completeness and accuracy of the terrestrial plant species findings is considered to be very good. A follow-up survey is not considered essential for decision-making.

6. THE MEAN DENSITY OF OBSERVATIONS/ NUMBER OF SAMPLES SITES PER UNIT AREA

Sampling was focused so as to obtain the best overall understanding of landscape and biodiversity conditions of the specific proposed mining expansion areas, access roads and immediate surrounds. Photographs were taken to show the overall condition and land use of the proposed development areas and if present GPS co-ordinates were recorded for any species of conservation concern recorded on the site or immediate surrounds.

Refer to the maps under point 2 above indicating proposed prospecting areas and associated access routes surveyed.

7. ANY CONDITIONS TO WHICH THE COMPLIANCE STATEMENT IS SUBJECTED

It was concluded that should the proposed mitigation measures as listed under point 4 above be implemented and all proposed prospecting to remain within cultivated cropland with same day rehabilitation and existing access roads to be used as is that the overall significance of the impacts on plant sensitivity of the site and surrounds will be of overall low negative significance. All of the mitigation and monitoring measures as listed under point 4 above must he included as part of the Environmental Management Programme conditions to be adhered to before, during and after the proposed prospecting activities.

8. REFERENCES

Turner, A.A. (ed.) 2017. Western Cape Province State of Biodiversity. CapeNature Scientific Services, Stellenbosch

Mucina, L. and M. Rutherford. *Eds.* 2012 update. Vegetation map of South Africa, Lesotho, nd Swaziland. *Strelitzia 19*. South African National Biodiversity Institute, Pretoria.

APPENDIX A
SPECIALIST CV

CURRICULUM VITAE – NICOLAAS WILLEM HANEKOM

Profession: Environmental Scientist and Environmental Assessment Practitioner

Date of Birth: 01/02/1967

BIOGRAPHICAL SKETCH

Nicolaas Hanekom is a qualified Environmental Assessment Practitioner (”EAP”) who holds a Masters Technologiae, Nature Conservation (“Vegetation Ecology and Biodiversity Assessment”) degree from the Cape Peninsula University of Technology. Nicolaas is certified in terms of section 20(3)(a) of the Natural Scientific Professions Act, 2003 (Act 27 of 2003), as a Professional Natural Scientist (Ecological Science) Registration Number: 4008274/11. He further qualified in Environmental Management Systems ISO 14001:2004, at the Centre for Environmental Management, North-West University, as well as Environmental Management Systems ISO 14001:2004 Audit: Internal Auditors Course to ISO 19011:2003 level, from the Centre for Environmental Management, North-West University qualifying him to execute audits to ISO/SANS environmental compliance and EMS standards.

He has also completed the suite of Greener Governance courses with certificates in;

- An Overview of Environmental Management at the Local Government Level, Centre for Environmental Management, North-West University;
- Greener Governance for Local Authorities, Centre for Environmental Management, North-West University;
- Tools for Integrated Environmental Management and Governance, Centre for Environmental Management, North-West University.

He further attended and obtained a certificate on Integrated Protected Area Planning at the Centre for Environmental Development, University of Kwa Zulu Natal and a certificate in Project Management (Theory and Practical), through CS Holdings. Nicolaas has lectured in two subjects at the Cape Peninsula University of Technology. He has 26 years of environmental planning experience, working for Free State and Western Cape departments of environmental affairs, where he reviewed and commented on development (EIA) applications, in the West Coast Region.

He has, as practising EAP been responsible for many environmental impact assessments and EIA applications, waste license and atmospheric emission license applications.

He has also been involved in the implementation of several environmental management systems. He has engaged successfully with various clients as set out below.

Areas of specialisation:	• Ecosystem (terrestrial and aquatic) monitoring and assessments

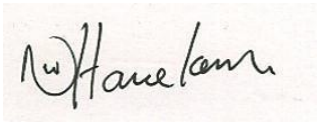
	• Design of monitoring programmes for ecosystems (terrestrial and aquatic) • Environmental Impact Assessments • River classification and environmental water requirements • Wetlands Delineation • River and Wetlands management • Water Use Authorization Applications • Water quality management • River Health Assessments
Countries of Work Experience:	South Africa (Northern Cape, Western Cape, Free State, Mpumalanga, Gauteng)
Employment Record	• Student at Bontebok National Park (1992) • Assistant Reserve Manager at Gariep Dam Nature Reserve, Free State (1993 - 1998) • Reserve Manager, Conservation Services Manager for Western Cape Nature Conservation Board (1998 - 2006) • External Lecturer at Cape Peninsula University of Technology (2003 - 2005) • Director: Environmental Management at Cape Lowlands Environmental Services (2006 – 2010) • Director, Environmental Management and lead Environmental Impact Assessment Practitioner at Eco Impact (Pty) Ltd (2010 – to August 2019) • Director, Environmental Management and lead Environmental Impact Assessment Practitioner at Enviro-EAP (Pty) Ltd (September 2019 – to date)
Professional membership, accreditations and courses	• South African Council for Natural Scientists Professions Pri.Sci.Nat (Ecological Science) • Riparian vegetation identification and health assessment. Internal Western Cape Nature Conservation short course presented by Dr C Boucher (Stellenbosch University) in 2000. • SASS5 Aquatic Biomonitoring Training Course. 2 to 5 September 2013. Ground Truth Water and Environmental Engineering consultancy in partnership with the Department of Water Affairs. • Workshop on “Section 21(c) and (i) Water Use Training: Understanding Watercourses and Managing Impacts to their Characteristics”. 10 May 2017. Presented by Dr Wietsche Roets of the Department of Water and Sanitation (Sub-Directorate: Instream Water Use).
Summary of experience	1992: South African National Parks. Student at Bontebok National Park with management and monitoring actions related to the Breede River. 1993 -1998: Free State Nature Conservation. Ecological management and monitoring actions related to the Gariep Dam, Orange and Caledon Rivers. 1998 -2006: CapeNature. Ecological management and monitoring actions related to the Berg River Estuary, Verlorenvlei, Lamberts bay’s Jackalsvlei, Wadrift Soutpanne, Oliphant’s River mouth, Rocherpan Nature Reserve, etc. Review and assessment of EIA applications, inclusive of Freshwater ecology. Did some site visits with Department of Water Affairs and Forestry (Hester Lyons) to confirm the presence of aquatic ecological features during EIA water use registration applications. 2006 to date: Cape Lowland Environmental Services, Eco Impact Legal Consultant and Enviro-EAP. Ecological (Freshwater and aquatic) Specialist input, assessment, monitoring and reports.

Publications and assessment reports	Just to name a few. Was involved in many Ecological Assessments, monitoring and inputs in EIA applications. • Elandskloof Farm 475 Citrusdal Biodiversity Baseline Survey. August 2010. This Biodiversity Assessment Covering Terrestrial and Aquatic Aspects to Inform Decisions Regarding The Proposed Elandskloof Weir Flood Damage Project On Farm 475, In The Citrusdal Area. • Cape Solar Energy Electricity Generation Facility. Farm 187/3 & 187/13 Kenhardt. Biodiversity And Ecological Baseline Survey. January 2011. (Included Terrestrial and aquatic ecological assessments and water use authorization applications) • Prieska Photvoltaic Power Generation Project. Prieska Commonage Northern Cape. Biodiversity And Ecological Baseline Survey. July 2011. (Included Terrestrial and aquatic ecological assessments and water use authorization applications) • Witteklip Erf 123 Extension, Vredenburg. Biodiversity Baseline Survey. Updated - October 2012 (Included Terrestrial and aquatic ecological assessments and water use authorization applications) • Baseline Biodiversity Survey And Wetland Delineation for ECCA Holdings: Cape Bentonite Mine on Erf 1412 Near Heidelberg. Prepared for: Shangoni Management Services Pry (Ltd). October 2014. • Freshwater Impact Assessment Laingsburg Flood Damage Repairs & Storm Water Infrastructure. 18 February 2016. • Ecological Assessment for Swartland Municipality - Upgrades To Voortrekker/Bokomo Road And Voortrekker/Rozenburg Road Intersections and Upgrade to the Diep River Bridge, Malmesbury on A Portion Of Erf 327, Malmesbury (Road) Erf 1530, Diep River Bridge Crossing, and Erf 1528, Property South of Diep River where Road Widening and Turning Circle Will Be Constructed. March 2016. (Freshwater Ecology Inputs and Water Use Registration) • Freshwater Impact Assessment. McGregor Bridge, Robertson Bridge and Willem Nels River Maintenance Management Plan. 24 June 2016. (Freshwater Ecology assessment and input as well as Water Use Registration) • Water Use Authorization Application Risk Matrix. Orange Grove Trust Vegetation Clearing and Agricultural Development on Portion 4 of Farm Glen Heatlie No 316, Worcester. 12 June 2017. (Freshwater ecological inputs in EIA process and Water Use Registration). • Water Use Authorization Application Risk Matrix Prepared For: Witzenberg Municipality Sand Mine Farm 1 Prince Alfred Hamlet. 28 March 2017. (Freshwater ecological inputs in EIA process and Water Use Registration). • Proposed Hartmanshoop Agri Vegetation Clearing Project and Irrigation on Erf 686, Laingsburg. 12 August 2017. (Freshwater ecological inputs in Water Use Registration). • County Fair: Hocraft Abattoir And Rendering Facility Waste Water Treatment Works “CF Hocraft WWTW” Mosselbank River Second Quarter 2018 Biomonitoring Report. June 2018. (Done quarterly biomonitoring for the last three years).

CERTIFICATION

I, the undersigned, certify that to the best of my knowledge and belief, these data correctly

describe my qualifications, my experience, and me.



Nicolaas Hanekom Pri Sci Nat (Ecology).
Registration number 004415

SACNASP

South African Council for Natural Scientific Professions

herewith certifies that

Nicolaas Willem Hanekom

Registration Number: 004415

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)

Ecological Science (Professional Natural Scientist)
Aquatic Science (Candidate Natural Scientist)
Conservation Science (Candidate Natural Scientist)
Zoological Science (Candidate Natural Scientist)

Effective **27 July 2011** Expires **31 March 2026**

Chairperson

Chief Executive Officer

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